

NTSB SYMPOSIUM
ON
OVER THE COUNTER MEDICATION

DEPARTMENT OF TRANSPORTATION

SUBMISSIONS

FOR THE

RECORD

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Docket
DIN-0397

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C8

Training Materials

Dealing with Medications

PowerPoint Presentations (also used as handouts)

1. Non-Prescription Self Medication Among Flight Personnel ----- entire presentation
Henry Boren, D.O.
2. A Potpourri of Certification Subjects, 2001 ----- pp. 1, 3, 5
Warren Silberman, D.O.
3. Use of Prescription Medications in Flight Crews ----- entire presentation
Henry Boren, D.O.
4. How to be an AME ----- pp. 2, 3
Steve Carpenter, M.D.
5. Aeromedical Certification ----- p. 6
Larry Wilson, M.D.

Video Tapes

"Fifteen Disqualifying Conditions"

This video tape, a part of the Medical Certification Standards and Procedures course, is mandatory training for all new and prospective AMEs. It is a humorous scenario which emphasizes the fact that some medications are disqualifying, and others, though not disqualifying, are indications of disqualifying conditions.

"Self-Imposed Stress"

This video tape is presented to pilots and flight crews who are interested in various aspects of flight physiology. It emphasizes the hazards of "Over the Counter Medications", as one of the problems in aviation safety relating to hypoxia, trapped gas, decompression sickness, and many other areas of aviation physiology.

Multimedia AME Refresher Course Video Tape (MAMERC)

At various points throughout the 30 certification scenarios, AMEs encounter medications as they would in their office setting. The emphasis is on recognizing medications which, though not necessarily disqualifying, may disclose an underlying condition which is disqualifying. Also, some of the medications encountered are specifically disqualifying. This video tape, a part of the MAMERC computer based course, is used on alternate 3-year training cycles for AMEs who are not able to attend the AME Seminar. The course is also used for supplemental training for AMEs.

Computer-Based & Internet Courses

- Medical Certification Standards and Procedures ----- pp. 28
Aviation Physiology ----- ch. 11
Multimedia AME Refresher Course ----- pp. 14, 20, 31, 32, 34, 35, 84,
85, 91, 110, 168, 170, 171,
172, 176, 190, & 191

NOTE: Individual speakers also discuss medications, as they relate to specific medical specialties, in conjunction with their presentations.

NOTE: The AME Guide, pp. 22, item 17a. "Do you currently use any medication (prescription or non-prescription)?" is an integral part of each AME seminar. This is a key item involving medical certification. This item is referenced many times in an AME seminar, during specific medical specialty lectures. **The emphasis is not only on the medication, but on the underlying cause for taking specific medications.**

NOTE: Airman education program instructors present lectures on self-imposed stress and distribute pamphlets on over-the-counter medications to flight crews to approximately 3,000 airmen per year attending fly-ins, safety meetings, and other aviation related activities. These lectures create an awareness of the harmful affects of over-the-counter medications to flight crews and flight operations. The following are some of these presentations conducted during FY2001:

1. Wings Weekend, Lynchburg, VA. October 6-8, 2000
2. Houston, Texas, October 20-22, 2000, in support of the Wings Weekend.
3. E. Lansing, Michigan to support the Great Lake International Aviation Safety Conference, January 26-28, 2001. There were 450 plus pilots in attendance at the Kellogg Hotel and Conference center
4. The Petaluma, CA trip February 9-14.
5. The Eureka, CA trip February 15-18. The total number of flights in the Gyro was 1400. Approximately 400 handouts were distributed
6. The National Soaring Conference, Indianapolis, Indiana. February 7-10.
7. Women in Aviation Conference, Reno, Nevada, March 21-24, 2001. More then 3500 members were present.
8. Eastern Region Wings Weekend, Atlantic City Technology Center, March 22-25, 2001.
9. EAA fly-in Sun-N-Fun, Lakeland, FL. April 7 through April 15, 2001. Over 5,500 handouts were distributed during the week.
10. Nashua, New Hampshire, The New England Aviation. Jim Spanyers will be traveled to Washington DC to present a survival program on April 28, 2001. A total of 65 pilots were in attendance.
11. Georgia Wings Weekend 2001, Lawrenceville, GA.
12. ASMA Meeting, Reno, NV, May 6-10.
13. Safety day at the Pratt and Whitney Plant, East Hartford, CT. A total of 120 pilots attended.
14. Wings Weekend with the Gyro-1, Mattoon, IL. July 6-8, 2001, A presentation was given on Aeronautical Decision Making with a total of 50 pilots in attendance.
15. Rogers Shaw traveled to Wichita, KS., July 9, 2001 and gave a presentation to the Wichita FSDO on Human Factors. Also in attendance were representatives from Cessna, Learjet, and other operators from the Wichita airport. A total of 50 personnel were in attendance.
16. The EAA Fly-in, Oshkosh Wisconsin, two presentations were given at the FAA forum. On Tuesday a two-hour presentation "Human Factors and Spatial Disorientation" was presented to 100 pilots. Wednesday a two-hour presentation "High Altitude Physiology Training" was presented with 100 pilots in attendance. Seventy of the 100 pilots received the high altitude physiology sign-off. There were 8000 handouts distributed.
17. The International Comanche Society on High Altitude Physiology. A total of 15 personnel were in attendance.
18. McCall, ID. August 9-13, 2001, the Mountain Fly-in Weekend. A total of 150 pilots flew the Gyro-1. Rogers Shaw gave two presentations on Aeronautical Decision-Making and Spatial Disorientation with a total of 80 pilots in attendance.
19. Learjet Safety, Wichita, Kansas. August 15-17, 2001. 150 pilots attended.
20. Safety Airfest, Iowa City, Iowa. August 25-26, 2001. A total of 27 pilots flew the Gyro-2 before it had a catastrophic failure.
21. Wings Weekend, Louisville, KY. September 28 – October 1, 2001. A total of 120 pilots were in attendance. The topics were medical physiology, survival, spatial disorientation, and human factors.

Tours/Visits/International:

Airman education instructors, as part of their presentations, cover the safety aspects of over-the-counter medications.

1. Global Survival/Physiology/Human Factor Course: Ten pilots from Ecuador attended a weeklong course. Airman Education provided instruction in physiology, altitude chamber, global survival, and human factor training.
2. Global Survival/Physiology/Human Factor Course: A pilot, flight engineer, and 6 flight attendants from Columbia, South America attended a weeklong course, December 11-15, 2000. Airman Education is providing instruction in physiology, altitude chamber, global survival, and human factor training.
3. Global Survival/Physiology/Human Factor Course: Four doctors from Columbia, South America attended a weeklong course, September 4-7. Airman Education is provided instruction in physiology, altitude chamber, and global survival. Additional instruction will be from all of the other divisions at CAMI.

Transportation Safety Institute (TSI) Support:

The Transportation Safety Institute, located at the Mike Monroney Aeronautical Center in Oklahoma City, is a part of the Department of Transportation. They are tasked with teaching safety related courses to all DOT organizations. Airman education instructors, as part of their presentations, cover the safety aspects of over-the-counter medications.

1. The Transportation Safety Institute (TSI), October 24 and 26, 2000. This was in support of the Human Factors class offered by TSI. A total of 100 students were in attendance.
2. The Transportation Safety Institute (TSI), November 28 and 30, 2000. This was in support of the Human Factors class offered by TSI. A total of 110 students were in attendance.
3. The Accident Investigation Course at TSI, June 12 and 13, 2001. A total of 80 were in attendance.
4. The Accident Investigation Course at TSI, June 14 and 15, 2001. A total of 120 pilots were in attendance.
5. The Accident Investigation Course at TSI, September 26 and 27, 2001. There was a total of 80 personnel in attendance.

Other:

1. The University of Oklahoma flight school, Norman, Human Factors, Tuesday evening April 2, 2001. There were a total of 40 students.
2. The 552 Wing (AWAC), Tinker AFB, Oklahoma, quarterly flight safety meeting, September 10. Approximately 200 flight personnel were in attendance for the Human Factor brief.

Technical Report Documentation Page

1. Report No. DOT/FAA/AM-00/21		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Prevalence of Drugs and Alcohol in Fatal Civil Aviation Accidents Between 1994 and 1998				5. Report Date June 2000	
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7. Author(s) Canfield, D. ¹ , Hordinsky, J. ¹ , Miller, D. ² , Endecott, B. ¹ , and Smith, R. ¹				8. Performing Organization Report No.	
9. Performing Organization Name and Address ¹ FAA Civil Aeromedical Institute P.O. Box 25082 Oklahoma City, Oklahoma 73125		² FAA Southern Region Medical Div. P.O. Box 30557 Atlanta, Georgia 30320		10. Work Unit No. (TRIS)	
12. Sponsoring Agency name and Address Office of Aviation Medicine Federal Aviation Administration 800 Independence Ave., S.W. Washington, D.C. 20591				11. Contract or Grant No.	
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16. Abstract The use of drugs and alcohol in aviation is closely monitored by the FAA Office of Aviation Medicine's (OAM's) Civil Aeromedical Institute (CAMI) through the toxicological analysis of specimens from pilots who have died in aviation accidents. This information on the use of drugs in aviation is helpful to the FAA in developing programs to reduce the usage of dangerous drugs and identify potentially incapacitating medical conditions that may cause an accident. Data collected from this research can be used to evaluate the effectiveness of the FAA drug testing program. The toxicology reports prepared by the CAMI Forensic Toxicology Research Section are used by the FAA and the National Transportation Safety Board to determine the cause of aviation accidents. Specimens (blood, urine, liver, kidney, vitreous fluid, and other bodily specimens) were collected by pathologists near the accident and placed in evidence containers provided by CAMI. These samples were refrigerated and shipped by overnight air. Upon receipt, the specimens were inventoried and accessioned for the analysis of drugs, alcohol, carbon monoxide, and cyanide. All data collected by the laboratory were entered into a computer database for future analysis. The database was searched using a Microsoft Access TM program developed by a local contractor. The database was sorted based on the class of drug, controlled dangerous substance schedules I and II, controlled dangerous substance schedules III-V, prescription drugs, over-the-counter drugs, and alcohol. The Toxicology and Accident Research Laboratory received specimens from 1683 pilots for postmortem toxicology analysis between 1994 to 1998. Controlled dangerous substances, CDS, (schedules I and II) were found in 89 of the pilots analyzed. Controlled dangerous substances (schedules III - V) were found in 49 of the pilots tested. Prescription drugs were found in 240 of the pilots analyzed. Over-the-counter drugs were found in 301 of the pilots analyzed. Alcohol at or above the legal limit of 0.04% was found in 124 pilots. The number of positive drug cases has doubled over the past 5 years. Over-the-counter medications are the most frequently found drugs in fatal aviation accidents and many of these drugs, or the medical conditions for which they are being used, could impair a pilot's ability to safely fly an aircraft. The increased number of positive cases found in this research is most likely the result of improved methods of analysis, rather than an increase in the use of drugs. The low incidence of CDS III-V drugs found in fatal aviation accidents may be a result of the difficulty in finding and identifying the new benzodiazepines commonly prescribed in this class.					
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Table 1. Fatal Aviation Accidents with Drugs and Alcohol

Year	C1	C1%	C3	C3%	Rx	Rx%	OT	OT%	AI	AI%	Fatal
1994	23	7.0	6	2.0	34	10.0	60	17.0	24	7.0	346
1995	16	5.0	16	5.0	53	15.0	68	19.0	14	4.0	350
1996	18	5.0	12	4.0	51	15.0	59	18.0	27	8.0	334
1997	21	7.0	10	3.0	50	15.0	64	20.0	29	9.0	323
1998	11	3.0	5	2.0	52	16.0	50	15.0	30	9.0	330
Total	89	5.0	49	3.0	240	14.0	301	18.0	124	7.0	1683

C1 = Controlled Dangerous Substance Schedules I and II
Marihuana, Cocaine, etc.

C3 = Controlled Dangerous Substance Schedules III-V
Diazepam, Phentermine, etc.

Rx = Prescription Drugs
Amitriptyline, Imipramine, etc.

OT = Over-the Counter-Medications
Pseudoephedrine, Acetaminophen, etc.

AI = Alcohol levels equal to or greater than 0.04% (40.0mg/dL)
The values included in this tabulation incorporate cases in which the source of the alcohol is both known and unknown.

Fatal = Fatal pilots only

Table 2. Fatal Aviation Accidents With Drugs and Alcohol

Year	C1	C1%	C3	C3%	Rx	Rx%	OT	OT%	AI	AI%	Fatal
1989	8	2.3	7	2.0	7	2.0	24	6.9	28	8.0	349
1990	14	3.8	5	1.4	24	6.5	32	8.7	29	7.9	367
1991	22	5.7	3	0.8	24	6.2	42	10.8	30	7.7	389
1992	17	4.3	3	0.8	24	6.0	52	13.0	29	7.3	400
1993	13	3.8	10	2.9	31	9.1	57	16.8	30	8.8	340
Total	74	4.0	28	1.5	110	6.0	207	11.2	146	7.9	1845

C1 = Controlled Dangerous Substance Schedules I and II
Marihuana, Cocaine, etc.

C3 = Controlled Dangerous Substance Schedules III-V
Diazepam, Phentermine, etc.

Rx = Prescription Drugs
Amitriptyline, Imipramine, etc.

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AI = Alcohol levels equal to or greater than 0.04% (40.0mg/dL)
The values include in this tabulation incorporate cases in which the source of the alcohol is both known and unknown.

Fatal = Fatal pilots only

periods. For 1994-1998 controlled dangerous substances (CDS, schedules I and II) were found in 89 (5%) of the pilots analyzed, which is a 25 % increase over the cases received between 1989 and 1993. The present procedure used to screen and confirm CDS I and II drugs is the same procedure used from 1989 to 1993 and this 25% increase does appear to be a real increase in the use of CDS I and II drugs. Controlled dangerous substances (schedules III - V) were found in 49 (3%) of the pilots tested, an increase of 48% over the earlier study (4). New screening methods were adopted in 1994 to detect CDS III-V drugs using HPLC/UV/FL and this could be the cause of the increased number of positive CDS III-V drugs detected. Prescription drugs were found in 240 (14%) of the pilots analyzed. This constitutes an increase of 58% for prescription drugs over the original 5-year study (4). Methods have been implemented that did not exist between 1989 and 1993 to detect prescription drugs. This could account for the increased number of prescription drugs found between 1994 and 1998. Over-the-counter (OTC) drugs were found in 301 (18%) of the pilots analyzed which constitutes an increase of 37% from the OTC drugs detected between 1989 to 1993. The methods used to screen and confirm OTC drugs have not changed over the past 10 years and the increased number of positives could be the result of an increased use of these drugs by pilots. Alcohol at or above the upper limit of 0.04% for pilots was found in 124 (7%) cases. No change was observed in the positive rate for alcohol between 1994 and 1998, compared with the positive cases found between 1989 and 1993. The reported positive alcohol increase does not differentiate between ingested and postmortem alcohol (5). In 1995 the number of positive alcohols dropped from the normal 8% positive alcohols to 4%. This low positive rate only lasted for 1 year and returned to the normal 8% in 1996. There is no clear-cut explanation for the drop in 1995. One possible explanation could be the implementation of the DUI/DWI rule, which required the FAA to check for DUI/DWI convictions of pilots and to take action to suspend medical certificates where necessary. This rule was enacted in 1991, but full implementation did not occur until about 1993.

The actual drugs identified in this study are listed in Table 3. Some drugs, such as antihistamines, included in a given category may also be available in another category. Multiple drug positives were found in several of the cases. It should be noted that drugs in Table 3 are classified based on the pure drug, and that some of these drugs may be classified differently, depending on the formulation of the drug.

Most airline transport and commercial pilots are subject to drug testing for the presence of marijuana, amphetamine/methamphetamine, morphine/codeine, cocaine, and phencyclidine (PCP). This study examined the positive drug rate based on the medical classification (Class 1, Class 2, or Class 3) of the pilot and the type of pilot certificate (A - Airline Transport, C - Commercial, O - Other). The percentage of pilots with positive CDS I-II drugs in a given medical class is within 1% of each other (Table 4). Controlled Dangerous Substances I-II were found in 9 (4%) of the 244 class 1 pilots compared with the 5% in Class 2 pilots and 6% in Class 3 pilots.

A Class 1 commercial pilot flying under CFR Part 91 (general aviation) was found to be taking cocaine; however, the 0.034 ug/mL found in urine is below the 0.150 ug/mL in urine cut off set under 49 CFR Part 40.29 (e). This pilot would have been classified as negative for cocaine under the FAA drug-testing program. The cause of the accident was reported by the NTSB to be pilot error.

Marijuana was found in 3 Class 1 commercial pilots, 1 Class 2 air transport pilot, and 10 Class 2 commercial pilots. The Class 2 airline transport pilot was flying under CFR Part 135 (air taxi and commercial) at the time of the crash. Marijuana is by far the most abused CDS drug found in commercial aviation. Morphine/Codeine was found in 1 Class 1 airline transport pilot, 3 Class 1 commercial pilots, 1 Class 2 airline transport pilot, and 3 Class 2 commercial pilots. The morphine detected in the Class 1 airline transport pilot is most likely from emergency medical treatment because other drugs, such as lidocaine, were also found that are typically used by emergency medical staff. The 0.140 ug/mL of morphine found in the urine of a Class 1 commercial pilot is below the cut-off for the FAA drug-testing program and would have been reported as negative.

Table 3. All Drugs Identified between 1994 and 1998.

DRUG SCHEDULE	Drug	PILOTS CLASS 1	PILOTS CLASS 2	PILOTS CLASS 3	TOTAL PILOTS
CI and CII	Amphetamine/Methamphetamine	0	3	6	11
	Barbiturates	0	4	5	9
	Cocaine	1	3	8	13
	Cocaine/Morphine	4	5	8	17
	Marihuana	4	17	21	43
	Methaqualone	0	0	0	0
	PCP	0	0	0	0
CIII - CV	Synthetic Opiates	0	4	6	10
	Benzodiazepines	3	8	18	33
	Fenfluramine	0	0	3	5
	Pentazocine	0	0	1	1
	Phendimetrazine	0	0	0	0
	Phentermine	0	0	4	7
Rx	Propoxyphene/Norpropoxyphene	1	4	3	10
	Amitriptyline/Nortriptyline	0	0	0	1
	Atenolol	1	2	9	13
	Azacyclonol	0	1	3	5
	Brompheniramine	0	2	5	7
	Carbamazepine	0	0	1	1
	Cimetidine	0	2	3	6
	Diltiazem	0	2	6	10
	Diphenhydramine	5	17	30	54
	Fluoxetine/Norfluoxetine	1	3	12	18
	Genfibrozil	0	0	1	1
	Ibuprofen	1	4	3	9
	Imipramine/Desipramine	1	0	2	5
	Ketamine	0	0	1	1
	Lidocaine	4	10	14	32
	Metoprolol	0	3	1	5
	Minoxidil	0	1	0	1
	N-Acetylprocainamide/Procainamide	0	0	1	1
	Naproxen	0	1	4	7
	Nizatidine	0	1	1	2
	Phenytoin	1	3	4	9
	Promethazine	1	1	1	3
	Propranolol	1	0	2	3
	Scrraline/Desmethylsertraline	0	1	4	5
	Sildenafil (Viagra)/ Sildenafil Metabolite	0	1	0	1
	Theophylline	0	2	2	4
	Triamterene	0	3	4	7
Verapamil/Norverapamil	2	5	10	18	
OTC	Acetaminophen	14	31	35	81
	Chlorpheniramine/Norchlorpheniramine	5	15	24	44
	Dextromethorphan	2	8	8	18
	Dextrophan/Nordextrophan	3	1	4	8
	Doxylamine	2	6	7	15
	Ephedrine	4	21	21	47
	Guaiphenesin	0	1	0	1
	L-Methamphetamine	0	0	1	1
	Meclizine	0	1	0	1
	Melatonin	1	0	0	1
	Methylephedrine	0	0	1	1
	Naphazoline	1	0	0	1
	Oxymetazoline	0	1	1	2
	Phenylpropanolamine	9	35	37	82
	Pseudoephedrine	9	38	35	84
	Quinine	3	7	9	19
	Salicylates	11	42	61	114

Table 4. Fatal Aviation Accidents with Drugs and Alcohol 1994 to 1998

Class	C1	C1%	C3	C3%	Rx	Rx%	OT	OT%	Al	Al%	Fatal
1	9	4.0	4	2.0	18	7.0	36	15.0	11	5.0	244
2	31	5.0	12	2.0	69	11.0	118	19.0	43	7.0	610
3	46	6.0	25	3.0	136	18.0	144	19.0	64	8.0	762
Total	86	5.0	41	3.0	223	14.0	297	18.0	118.	7.0	1616

- C1 = Controlled Dangerous Substance Schedules I and II
Marihuana, Cocaine, etc.
- C3 = Controlled Dangerous Substance Schedules III-V
Diazepam, Phentermine, etc.
- Rx = Prescription Drugs
Amitriptyline, Imipramine, etc.
- OT = Over-the Counter Medications
Pseudoephedrine, Acetaminophen, etc.
- Al = Alcohol levels equal to or greater than 0.04% (40.0mg/dL)
The values include in this tabulation incorporate cases in which the source of the alcohol is both known and unknown.
- Fatal = Fatal pilots only

Table 5. Fatal Aviation Accidents with Drugs and Alcohol 1994 to 1998

14CFR	C1	C1%	C3	C3%	Rx	Rx%	OT	OT%	Al	Al%	Fatal
91	76	5.0	42	3.0	216	15.0	269	18.0	117	8.0	1474
135	4	5.0	1	1.0	5	6.0	8	9.0	4	5.0	87
121	0	0	0	0	0	0	0	0	0	0	6
137	6	11.0	3	6.0	6	11.0	12	22.0	1	2.0	54
133	0	0	0	0	1	14.0	1	14.0	0	0	7
Total	86	5.0	46	3.0	228	14.0	290	18.0	122	7.0	1628

- C1 = Controlled Dangerous Substance Schedules I and II
Marihuana, Cocaine, etc.
- C3 = Controlled Dangerous Substance Schedules III-V
Diazepam, Phentermine, etc.
- Rx = Prescription Drugs
Amitriptyline, Imipramine, etc.
- OT = Over-the Counter Medications
Pseudoephedrine, Acetaminophen, etc.
- Al = Alcohol levels equal to or greater than 0.04% (40.0mg/dL)
The values include in this tabulation incorporate cases in which the source of the alcohol is both known and unknown.
- Fatal = Fatal pilots only

PREVALENCE OF DRUGS AND ALCOHOL IN FATAL CIVIL AVIATION ACCIDENTS BETWEEN 1994 AND 1998

INTRODUCTION

The Federal Aviation Administration's Office of Aviation Medicine is tasked with determining the fitness of pilots to fly. The use of certain drugs and specific medical conditions are strictly controlled to assure the safety of the pilot and the general public. Part of this responsibility includes enforcement of alcohol and drug use regulations (1). The Civil Aeromedical Institute (CAMI), Office of Aviation Medicine (OAM), Federal Aviation Administration (FAA), is required under Public Law 100-591 [H.R.4686] (2) to help assess the role of potential medical or drug related pilot impairment in aviation accidents. The Department of Transportation (DOT) Order 8020.11 (3) requires CAMI to "conduct toxicological analyses on specimens from, and special pathologic studies on, aircraft accident fatalities" (5). This includes the identification of abused drugs such as cocaine, amphetamines, and benzodiazepines; or prescription drugs such as cardiovascular and neurological medications. This research reports the findings of these tests.

Under the cooperative efforts of the FAA and NTSB, specimens from the pilots who were fatally injured in aviation accidents were analyzed for drugs and alcohol as part of the investigation into the cause of the accidents. Analysis for the presence of drugs in body fluids and tissues of pilots in these fatal accidents was used to assist in the determination of accident causation, and whether impairment from drug use or a medical condition caused or contributed to the accident.

MATERIALS AND METHODS

Specimens (blood, urine, liver, kidney, vitreous fluid, and other body specimens) from fatal aviation accidents were collected and placed in specially designed evidence containers provided by CAMI. These samples were refrigerated and shipped by overnight air. Specimens prepared according to the instructions were maintained at approximately 4° to 6° C for 48

hours. Upon receipt at CAMI, the specimens were inventoried and accessioned for the analysis of drugs, alcohol, carbon monoxide, and cyanide. Specimens were screened for drugs of abuse by immunoassay and any positives were confirmed by gas chromatography (GC)/mass spectroscopy (MS). Specimens were screened for prescription and over-the-counter medications using a variety of analytical procedures including: immunoassay, high performance liquid chromatography (HPLC), and GC/MS. Confirmation of positives in these classes was done by GC/MS, GC/FTIR, HPLC/MS* or by a different analytical procedure than that used in the initial screening. The total number of drugs reported in this research does not include caffeine or nicotine. Alcohol was identified and quantitated in blood, vitreous fluid, urine and tissues using headspace gas chromatography. All positive alcohols in blood, vitreous fluid, and urine at or above 20mg/dL were confirmed using fluorescence polarization immunoassay (FPIA). Only cases with ethanol at or above 0.04% were reported in this study due to the FAA regulations forbidding the operation of an aircraft by a pilot with a blood ethanol reading at or above 0.04% (40mg/dL). All data collected by the laboratory were electronically entered into a computer database for future analysis. The results of these tests can be seen in Tables 1 through 6

RESULTS AND DISCUSSION

Data from 1994 to 1998 was compared with an earlier 5-year study for the years 1989 to 1993 (4) to determine changes in the incidents of drug use in pilots. The Toxicology and Accident Research Laboratory received specimens from 1683 fatally injured pilots for postmortem toxicology analysis from 1994 to 1998 (Table 1), which is less than the 1845 (Table 2) cases reported for 1989 to 1993 (4). This is a 9% reduction in the number of fatal aviation accidents received by the laboratory between the two 5-year

Table 6. Fatal Aviation Accidents Class 1 Levels A, C, P, S, and Y for 1994 to 1998

Class	A	A%	C	C%	P	P%	S	S%	Y	Y%	Total
1	131	53.9	93	38.3	15	6.2	3	1.2	1	0.4	243

A = Airline Transport Pilot

C = Commercial Pilot

P = Private Pilot

S = Student Pilot

Y = Private Pilot from Foreign Certificate

Fatal = Fatal pilots only

Amphetamine/methamphetamine was found in 2 Class 2 commercial pilots. One of the cases was a CFR Part 137 (agricultural) accident with methamphetamine and was also found to contain fluoxetine, an antidepressant. The drugs found in this case were judged an impairing factor in this accident by the NTSB. Methamphetamine and marijuana were found in another CFR Part 137 accident. The cause of this accident is still under investigation. The laboratory has never detected a positive PCP in specimens received from fatal aviation accidents. No pilot in a

CFR Part 121 (Air Carrier) fatal aviation accident was found to be positive for drugs or alcohol (Table 5). It is difficult to assign any significance to this finding due to the small number of accidents (6) that occurred between 1994 and 1998. There were 87 CFR Part 135 accidents and 4 of the pilots from these accidents were found to have CDS I and II drugs. Of the 1683 pilots examined 131 pilots (8%) held a Class 1 medical and were classified as air transport and 93 (6%) were classified as Class 1 commercial pilot (Table 6). Only 1 (0.8%) of the 131 Class 1 air transport pilots was found to have CDS I-II drugs and this pilot was given morphine after the accident during emergency medical treatment. This agrees with the FAA drug testing program's findings that less than 1% of those tested under the random drug testing program are positive for abused drugs. Between 1990 and 1993 there were 4 (2.8%) out of 145 Class 1 air transport pilots found with CDS I-II drugs. One of these pilots flying Part 91 was using cocaine, 2 pilots flying CFR Part 91 were using marijuana, and 1 pilot flying CFR Part 135 was using morphine. These data indicate a drop in the use of abused drugs by Class 1 medical air transport fatal pilots over the past 10 years.

REFERENCES

1. General Operating and Flight Rules, 14CFR91.17, Alcohol or Drugs; Federal Aviation Regulations (January 1, 1999).
2. Aviation Safety Research Act of 1988, Public Law 100-591 [H.R. 4686], Civil Aeromedical Research; One Hundredth Congress of the United States 2nd Session (January 25, 1988).
3. Aircraft Accident and Incident Notification, Investigation, and Reporting, DOT Order 8020.11, chap 4, sect 7, par 170 c (1), Civil Aeromedical Institute Shall (December 20, 1985).
4. Canfield D, Flemig J, Hordinsky J, and Birky M (1995). Drugs and alcohol found in fatal civil aviation accidents between 1989 and 1993. *Office of Aviation Medicine Report DOT/FAA/AM-95/28*.
5. Canfield D, Kupiec T, and Huffine E (1993). Postmortem alcohol production in fatal aircraft accidents. *J Forensic Sci* 38(4): 914-17.

Technical Report Documentation Page

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16. Abstract The FAA Office of Aviation Medicine's Civil Aeromedical Institute (CAMI) is tasked under public law 100-591 [H.R. 4686]; November 3, 1988, AVIATION SAFETY RESEARCH ACT OF 1988 to conduct toxicology tests on aviation accidents and determine the effects of drugs on human performance. It is important for the FAA to identify the extent to which drugs and alcohol are being used by pilots involved in aviation accidents so that the FAA can take steps to prevent pilots from using drugs or alcohol, which could impair their ability to fly an aircraft. The toxicology reports prepared by the CAMI Forensic Toxicology Research Section are used by the FAA and the National Transportation Safety Board to determine the cause of aviation accidents and evaluate present FAA regulations. METHODS: Specimens (blood, urine, liver, kidney, vitreous, and other bodily specimens) were collected by pathologists near the accident and placed in evidence containers provided by CAMI. These samples were refrigerated and shipped by overnight air. Upon receipt, the specimens were inventoried and accessioned for the analysis of drugs, alcohol, carbon monoxide, and cyanide. All data collected by the laboratory were electronically entered into a computer for future analysis. The data base was searched using a program developed by the Forensic Toxicology Research Section. The data base was sorted based on the class of drug, controlled dangerous substance schedules I and II, controlled dangerous substance schedules III-V, prescription drugs, over-the-counter drugs, and alcohol. RESULTS: The Toxicology and Accident Research Laboratory received specimens from 1845 pilots for postmortem toxicology analysis between 1989 to 1993. Controlled dangerous substances, CDSs (schedules I and II), were found in 74 of the pilots analyzed. Controlled dangerous substances (schedules III - V) were found in 28 of the pilots tested. Prescription drugs were found in 110 of the pilots analyzed. Over-the-counter drugs were found in 207 of the pilots analyzed. Alcohol at or above the legal limit of 0.04% was found in 146 pilots analyzed. The reported number of positive drug cases has doubled over the past 5 years. CONCLUSIONS: Over-the-counter medications are the most frequently found drugs in fatal aviation accidents and many of these drugs, or the medical conditions for which they are being used, could impair a pilot's ability to safely fly an aircraft. The increased number of positive cases found in this research is most likely the result of improved methods of analysis, rather than an increase in the use of drugs. The low incidence of CDS III-V drugs found in fatal aviation accidents may be a result of the difficulty in finding and identifying the new benzodiazepines commonly prescribed in this class.					
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DRUGS AND ALCOHOL FOUND IN FATAL CIVIL AVIATION ACCIDENTS BETWEEN 1989 AND 1993

INTRODUCTION

The Federal Aviation Administration (FAA) has the responsibility to ensure the safety of flight in general and commercial aviation. Part of this responsibility includes enforcement of alcohol and drug use regulations (14 CFR Part 91.17). The Civil Aeromedical Institute (CAMI) is responsible under the Department of Transportation (DOT) Order 8020.11A, Chap 4, Par 170, to "conduct toxicological analyses on specimens from, and special pathologic studies on, aircraft accident fatalities." In addition, DOT Order 1100.2C, Chap 53, Par 53-15 requires that CAMI "investigates selected general aviation and air carrier accidents and searches for biomedical and clinical causes of the accidents, including evidence of disease and chemical abuse." Post accident drug and alcohol testing after general aviation accidents provides information for monitoring compliance with these regulations. The investigation of fatal aviation accidents is the responsibility of the National Transportation Safety Board (NTSB) with the assistance of the FAA, as stated in the Independent Safety Board Act of 1974. This Act under Section 304 (b) Powers of the Board, subpart (5), authorizes the Board to obtain autopsies and seek other tests of persons who die as a result of aviation accidents. This authority is also stated in 49 CFR Part 831.10. The Act, Sec. 304(a)(1)(F) also states the Board shall provide for the participation by other agencies, in this case the Federal Aviation Administration. In fact, the Board may ask the Secretary of Transportation to conduct investigations of accidents. However, the Act requires that the Safety Board make the determination of cause or probable cause.

To fully carryout its aviation accident investigative responsibilities, the NTSB issued Safety Recommendation A-84-93 requesting the FAA to "establish at the Civil Aeromedical Institute the capability to perform state-of-the-art toxicological tests on the blood, urine, and tissue of pilots

involved in fatal accidents to determine the levels of both licit and illicit drugs at both therapeutic and abnormal levels." On December 1990, Recommendation A-83-93 was "Closed-Acceptable" after the Civil Aeromedical Institute laboratory was upgraded and fully staffed.

Under the cooperative efforts of the FAA and NTSB, specimens from the pilots who were fatally injured in aviation accidents were analyzed for drugs and alcohol, as part of the investigation into the cause of the accidents. Analysis for the presence of drugs in body fluids and tissues of pilots in these fatal accidents was used to assist in the determination of accident causation, and whether impairment from drug use and other medical conditions caused or contributed to the accident.

METHOD

Specimens (blood, urine, liver, kidney, vitreous, and other bodily specimens) were collected after the accidents and placed in evidence containers provided by CAMI. These samples were refrigerated and shipped by overnight air. Upon receipt, the specimens were inventoried and accessioned for the analysis of drugs, alcohol, carbon monoxide, and cyanide. Specimens were screened for drugs of abuse by immunoassay and any positives were confirmed by GC/MS. Specimens were screened for prescription and over-the-counter medications using a variety of analytical procedures including: immunoassay, HPLC, TLC, and GC/MS. Confirmation of positives in these classes was done by GC/MS or by a different analytical procedure than that used in the initial screening. The total number of drugs reported in this research does not include caffeine or nicotine. Alcohol is identified and quantitated in blood, vitreous fluid, and urine using head space gas chromatography. All positive alcohols at or above 20mg/dL are confirmed using fluorescence

polarization immunoassay (FPIA). Only cases with ethanol at or above 0.04% are reported in this study due to the FAA regulations forbidding the operation of an aircraft by a pilot with a blood ethanol reading at or above 0.04% (40mg/dL). All data collected by the laboratory are electronically entered into a computer for future analysis.

RESULTS

The Toxicology and Accident Research Laboratory received specimens from 1845 fatally injured pilots for postmortem toxicology analysis between 1989 to 1993 (Table 1.). During that time controlled dangerous substances (schedules I and II) were

found in 74 (4%) of the pilots analyzed. Controlled dangerous substances (schedules III - V) were found in 28 (2%) of the pilots tested. Prescription drugs were found in 110 (6%) of the pilots analyzed. Over-the-counter drugs were found in 207 (11%) of the pilots analyzed. Alcohol at or above the upper limit of 0.04% for pilots was found in 146 (8%) cases. The actual drugs identified in this study can be seen in Table 2. Some drugs, such as antihistamines, included in a given category may also be available in an another category. Multiple drug positives were found in several of the cases. It should be noted that drugs in table 2 are classified based on the pure drug, and that some of these drugs may be classified differently, depending on the formulation of the drug.

Table 1. Fatal Aviation Accidents with Drugs and Alcohol

Year	C1	C1%	C3	C3%	Rx	Rx%	OT	OT%	AI	AI%	Fatal
1989	8	2.3	7	2.0	7	2.0	24	6.9	28	8.0	349
1990	14	3.8	5	1.4	24	6.5	32	8.7	29	7.9	367
1991	22	5.7	3	0.8	24	6.2	42	10.8	30	7.7	389
1992	17	4.3	3	0.8	24	6.0	52	13.0	29	7.3	400
1993	13	3.8	10	2.9	31	9.1	57	16.8	30	8.8	340
Total	74	4.0	28	1.5	110	6.0	207	11.2	146	7.9	1845

C1 = Controlled Dangerous Substance Schedules I and II
Marihuana, Cocaine, etc.

C3 = Controlled Dangerous Substance Schedules III-V
Diazepam, Phentermine, etc.

Rx = Prescription Drugs
Amitriptyline, Imipramine, etc.

OT = Over-the Counter-Medications
Pseudoephedrine, Acetaminophen, etc.

AI = Alcohol levels equal to or greater than 0.04% (40.0mg/dL)

The values include in this tabulation incorporate cases in which the source of the alcohol is both known and unknown.

Fatal = Fatal pilots only

Table 2. All drugs identified between 1989 and 1993

Class	Drug	Cases	(%)
CI and CII	Marihuana	46	3
	Cocaine	15	1
	Codeine/Morphine	11	<1
	Amphetamine/Methamphetamine	6	<1
	PCP	0	0
	Barbiturates	18	1
	Synthetic Opiates	7	<1
	Methaqualone	1	<1
CIII - CV	Benzodiazepines	24	1
	Phentermine	2	<1
	Phendimetrazine	1	<1
Rx	Fluoxetine/Norfluoxetine	3	<1
	Imipramine/Desipramine	2	<1
	Amitriptyline/Nortriptyline	2	<1
	Sertraline	1	<1
	Maprotiline	1	<1
	Doxepine/Nordoxepin	1	<1
	Metoprolol	3	<1
	Atenolol	2	<1
	Propranolol	1	<1
	Acetylprocainamide/Procainamide	2	<1
	Quinidine	3	<1
	Verapamil/Norverapamil	5	<1
	Diltiazem	2	<1
	Triamterene	1	<1
	Cimetidine	2	<1
	Gemfibrozil	5	<1
	Phenytoin	6	<1
	Carbamazepine	3	<1
	Metoclopramide	2	<1
	Nizatidine	1	<1
	Diphenhydramine	32	2
	Promethazine	2	<1
	Brompheniramine	2	<1
	Cyclizine	2	<1
	Cyclobenzaprine	1	<1
	Naproxen	5	<1

Table 2. All drugs Identified between 1989 and 1993 (Continued)

Class	Drug	Cases	(%)
Rx	Ibuprofen	3	<1
	Fenoprofen	1	<1
	Norpropoxyphene	1	<1
	Theophylline	1	<1
	Chloroquine	3	<1
	Lidocaine	31	2
	Thiopental	1	<1
	Ketamine	2	<1
	Aminophenazone	1	<1
	Griseofulvin	1	<1
	Orphenadrine	1	<1
OTC	Salicylates	96	5
	Acetaminophen	92	5
	Pseudoephedrine	47	3
	Phenylpropanolamine	26	1
	Chlorpheniramine	36	2
	Doxylamine	8	<1
	Dextromethorphan	3	<1
	Meclizine	1	<1
	Ephedrine	1	<1
	Dextrorphan	1	<1
	Guaiphenesin	1	<1
	Quinine	16	1

DISCUSSION AND CONCLUSION

Over-the-counter and prescription medications are the most frequently found drugs in fatal aviation accidents; many of these drugs, or the medical conditions for which they are being used, could impair a pilot's ability to fly an aircraft. Chlorpheniramine and diphenhydramine, two antihistamines found in 68 of the pilots analyzed, are sedative and may cause impairment of a pilot's ability to react to an emergency. Drugs used for cardiovascular, neurological, and psychiatric illness, where the drug and/or medical condition may cause incapacitation of the pilot, were found in 64 of the cases.

The low incidence of Controlled Dangerous Substances (CDS) III-V drugs found in fatal aviation accidents (Fig. 1) may be a result of the difficulty in finding and identifying the new benzodiazepines commonly prescribed in this class. New procedures, implemented in the latter half of 1993, resulted in a significant increase in the number of benzodiazepines found in 1993 (Fig. 1).

There appears to be a steady decrease in the percentage of positive schedules I and II drugs (Fig. 1). The procedures for schedules I and II drugs have not changed over the past 5 years, and the decrease

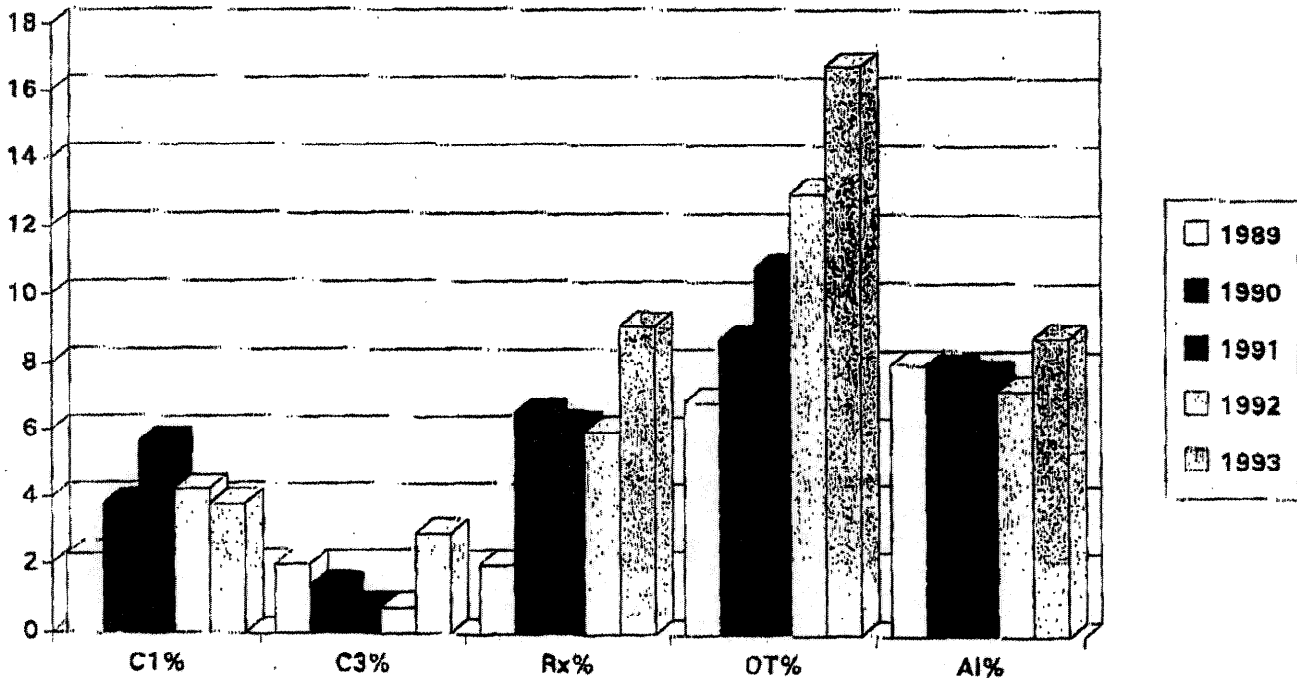
observed may be a real decrease in the number of pilots using controlled dangerous substances schedules I and II, and not an anomaly caused by changes in the method. The mean percentage of positive CDS I and II drugs is 4.0% over the past 5 years; the 1993 value of 3.8% is well within 1 standard deviation ($s = 1.2\%$), which suggests there is no significant change in the number of positive CDS I and II drugs.

The percentage of alcohol positives has remained relatively constant over the past 5 years. However, there is a 0.9% increase in the number of positive alcohol cases found in 1993, versus the mean percentage of alcohol cases of 7.9% found over the past 5 years with a standard deviation of 0.6%. Some of the alcohol cases reported in this study may be the result of postmortem alcohol production. The earlier research regarding postmortem alcohol (1) led to a change in the CAMI procedure used for the analysis of ethanol. Prior to 1993, blood was used in the initial screening for alcohol; whereas in 1993, only urine and/or vitreous fluid was submitted for the initial screening. If the initial screening of urine and/or vitreous was negative, the blood was not

tested and the case was reported as a negative for ethanol. In some cases, vitreous and urine were not available. In these cases, other factors were used to assist in determining the source of the ethanol. These other factors include a visual examination of the sample condition and the presence of other volatiles, such as higher alcohols and aldehydes, which might indicate putrefaction of the specimen. More of the cases reported in 1993 would be from the ingestion of ethanol, rather than from postmortem alcohol production because postmortem alcohol production is rare in urine and vitreous. Using urine and/or vitreous fluid routinely in the initial screen may reduce the number of positive alcohol cases reported in the future.

It would appear from the data in Table 1 that the number of pilots using drugs has increased over the past 5 years. However, new instruments and methods have made it possible to identify drugs that would not have been identified using the technology available in 1989, and this can explain the increase. All specimens are now being extracted using new methods that make it possible to recover a more diverse group of drugs. All specimens are now

Figure 1. The increased number of drugs found in pilots.





**Federal Aviation Administration
Office of Aerospace Medicine
Civil Aerospace Medical Institute**



Available Links and Descriptions

Link	Link Description
Aviation Medical Examiner Training	General Information & Seminar Schedule
Training Programs in Aviation Medicine	Information About Programs for Physicians and General Aviation Pilo (Downloadable PDF file 958.9K)
Directory of Aviation Medical Examiners	Searchable Directory of Aviation Medical Examiners
Library	Link to free MEDLINE & FAA Publications
Global Survival Training	Aviation Survival Tips
Physiological Training	Information and Training Program Contact
Oklahoma City	Local Area Information, dining, concerts, attractions to name a few.
MCSPT (PDF format)	Medical Certification Standards & Procedures Course
MCSPT Appendices (PDF format)	Medical Certification Standards & Procedures Course Appendices
MCSPT critique & test (PDF format)	Medical Certification Standards & Procedures Critique & Test
Will Rogers World Airport	Airline schedules, parking, security and terminal information.

The FAA is required by the U.S. Congress to promote the safe and efficient use of America's airsp
CAMI promotes aviation safety through aeromedical education programs that:

- Train and evaluate the Aviation Medical Examiners, a specialized group of approximately 5 physicians located in the U.S. and in 84 countries around the world, appointed by the FAA t perform the required airman medical examinations.
- Train civil aviation pilots & aircrews in aviation physiology & global survival skills.
- Disseminate aeromedical information to the civil aviation community through publications participation (lectures and practical demonstrations) in the National Aviation Safety Progra

Last modified 20 June, 2001

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Which Medicine Should You Take With a Cold?

You've got the sniffles, or a cough, or achy muscles, or a fever, or all of the above. Which over-the-counter (OTC) medication is best? Here are some helpful rules:

Don't Go for the Rambo Strategy. Your cold symptoms usually come one after the other and rarely all at once. So don't reach for a multisymptom mixture when you only have a runny nose. The best bet is to assess which symptom is most irritating and get a medication that attacks that symptom directly. Then, move on to the next symptom.

Go for the Nose Spray. The body releases chemicals when a cold sets in, causing the blood vessels in the infected area—your nose—to swell up. Decongestants act to constrict the blood vessels to provide relief. Oral decongestants will do this for the entire body, but they have side effects like nervousness or insomnia. Nose sprays target only the nose. If you're still stuffed up after three days, give your nose a rest from the medication for a couple of days to prevent "rebound" stuffiness then go for the oral medication with pseudoephedrine.

Few Medicines Relieve a Sore Throat. Like the nose spray, it's better to get a remedy that relieves only the sore throat. Throat lozenges and sprays help, as does gargling with warm salt water.

Time-Release Pills Really Do Work. Some medications require an every-four-hours dose. But if you're busy at the office or at home, taking pills often slips your mind. Time-release capsules work so you get the right dosage throughout the day. As soon as you take the pill, the outer layer dissolves, releasing one dose. Then, four hours later, another coating dissolves and releases another dose.

Should You Fly With a Cold? When you're not feeling well, your best action is to ground yourself and wait until you have recovered before resuming flying activities. There may be times, though, when you feel that you must fly and will be tempted to doctor yourself with over-the-counter medications. At these times, remember that OTCs frequently contain antihistamines or other sedating drugs. *These must not be used if you intend to fly.* Remember also that OTCs only hide your symptoms for a while—they usually don't cure the condition, and you'll not be at peak physical performance while you fly.

The Federal Air Surgeon's Medical Bulletin • Winter 1998

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Last modified: January 7, 1999

The Federal Air Surgeon's Column

Thin and Alert or Fat and Sleepy? *Caution Pilots About Ephedrine*

By Jon L. Jordan, MD, JD

HHealth-conscious users of over-the-counter medications are responsive to advertisers claiming or suggesting that their products offer such positive effects as weight loss, euphoria, increased sexual sensations, heightened awareness, plus increased energy and alertness.

As with all over-the-counter drugs, we in aviation medicine advise airmen to emphasize caution when using any substance that may hinder their performance.

The Federal Aviation Administration recently learned of an instance where an airline pilot publicly advocated the use of an herbal product whose major ingredient was a botanical form of ephedrine. The airline pilot, who used ma huang, an ephedrine product for weight loss, was quoted as saying that he believed his passengers preferred a "thin, alert pilot" to a "fat, sleepy one." While the "slim look" may be in vogue, the potential for an incapacitation should make one reconsider.

Clinical evidence suggests that ephedrine, an amphetamine-like stimulant, is not appropriate for over the counter use by pilots.

The airline pilot apparently believes that ma huang, the herbal product he promotes, is safe for consumption as a dietary supplement to enhance weight loss, with the positive effect of enhancing mental alertness. Regardless of its form, ephedrine is a stimulant with the potential for serious, adverse cardiovascular effects.

The Food and Drug Administration (FDA) warns consumers about ephedrine's potential for adverse effects: heart attack, stroke, seizures, psychosis, and death. Clinically less significant effects include dizziness, nervousness, insomnia, tremors and headache, gastrointestinal distress, irregular heartbeat, and heart palpitations.

Since 1994, the FDA has investigated more than 800 reports of adverse effects associated with the use of these products. Most of the reported adverse events occurred in young to middle-aged, but otherwise healthy, adults using the products for weight control and increased energy. After seeking public comment, FDA researchers reviewed the scientific literature, public comments to the agency, and the suggestions of an expert advisory committee to assist in preparing a final rule, which is pending. The closing date for comments was August 18, 1997.

Because ephedrine alkaloids used in dietary supplements are heart and nervous system stimulants, those with hypertension, heart conditions and neurologic disorders should avoid their use. Also, pregnant women should avoid the use of dietary supplements with ephedrine alkaloids.

The FDA has stopped short of an outright withdrawal from the market of ephedrine-based products because, by law, such "dietary supplements" may not be regulated unless the FDA, on a case-by-case basis, can meet the legal burden of proving the marketed substance is unsafe. Thus, the FDA issued a statement warning potential users of the potential adverse effects of ephedrine-containing dietary supplements with labels that portray the products as alternatives to illegal street drugs (1). Next, they

proposed safety measures to limit the amount of ephedrine alkaloids in products and to change labeling and marketing measures to reduce the risk to consumers (2).

Ingredient panels on diet supplement containers that have ephedrine among its ingredients may list ma huang, Chinese ephedra, ma huang extract, ephedra, Ephedra sinica, ephedra extract, ephedra herb powder, or epitonin, all of which indicate a source of ephedrine.

We welcome the FDA's actions and plans for closer regulation of such dietary supplements, as this provides a more solid basis for our recommendations that airmen should avoid ephedrine-based products. Aviation medical examiners must be aware of the dangers of so-called health or dietary supplements that contain ephedrine. If you have the opportunity, advise your pilot applicants to carefully consider the potential benefits versus the potential for disaster. As with the recent diet medication controversy, pilots should be cautioned about the potentially adverse effects of ephedrine (3).

- (1) Statement on Street Drugs Containing Botanical Ephedrine, April 10, 1996.
- (2) June 2, 1997.
- (3) Weight and Balance, *FASMB*, page 1, Fall 1997

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Last modified April 6, 1998

*The Federal Air Surgeon's Medical Bulletin***Antihistamines and Airman Certification****By: William H. Hark, MD**

The Winter 1993 issue of the *Federal Air Surgeon's Medical Bulletin* referenced a decision by the Federal Air Surgeon approving the use of loratadine (Claritin) by airmen on the same basis as terfenadine (Seldane) and astemizole (Hismanal). To clarify the role of the aviation medical examiner (AME), the Federal Air Surgeon has delegated authority to AMEs to issue medical certificates to airmen using these medications under the guidance set forth in that article.

A note from the prescribing physician must be in the AME's possession providing the clinical indication, dose prescribed, and a description of adverse effects (or the absence thereof) prior to issuance.

AME's should warn the airman to report any adverse effects that might occur and to refrain from safety-related duties until any such development has been medically evaluated.

All documentation regarding use of the medication should be forwarded, together with the application, to the Aeromedical Certification Division in Oklahoma City.

Dr. Hark is the Deputy Federal Air Surgeon.

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Dangers of Viagra Use in Pilots

AMEs Should Become Familiar With the Detrimental Side-Effects of Sildenafil

By Donato J. Borrillo, MD, JD

V **iagra (sildenafil citrate)** has recently received the Food and Drug Administration (FDA) seal of approval for the treatment of male erectile dysfunction. The recent popularity of this medication, and its availability to the general aviation pilot, warrants a closer look by the aviation medical examiner (AME). With the pilot in mind, the AME should become familiar with certain detrimental side effects of sildenafil.

To date, no written guidelines exist for the use of sildenafil and flying. Pursuant to the *Guidelines for Aviation Medical Examiners*, all medication use must be reported. However, the "as needed" use of sildenafil may result in confusion for pilots. It is certainly conceivable, given "as needed" dosing and stigmata, that pilots would not report sildenafil use. For the reasons outlined below, it is the author's view that a minimum of 6 hours should pass from "as needed" dosing and flying. Furthermore, the continued (daily) use of Sildenafil is incompatible with safe flight.

The AME should understand the mechanism of action for sildenafil. During sexual stimulation, nitric oxide (NO) is released into the corpus cavernosum. Nitric oxide activates the enzyme guanylate cyclase, thereby increasing the levels of cyclic guanosine monophosphate (cGMP). The cGMP produces smooth muscle relaxation and the inflow of blood into the corpus cavernosum. sildenafil enhances the effect of NO by inhibiting phosphodiesterase Type 5 (PDE5), which is responsible for degradation of cGMP in the corpus cavernosum.

When sexual stimulation releases NO, the inhibition of PDE5 by sildenafil increases levels of cGMP in the corpus cavernosum. This results in smooth muscle relaxation, inflow of blood to the corpus cavernosum, and sustained penile erection. Sildenafil at recommended doses has no effect in the absence of sexual stimulation, and has no direct relaxant effect on isolated human corpus cavernosum.

Given the above mechanism of action, potential side effects include:

- changes in color vision
- potentiation of nitrate medication
- cockpit distraction.

Sildenafil inhibits phosphodiesterase Type 5 (PDE5), however, it also has an affinity and effect on Phosphodiesterase Type 6 (PDE6). phosphodiesterase Type 6 is a retinal enzyme involved in phototransduction. The inhibition of PDE6 results in a mild transient dose related impairment of blue-green color discrimination. Although only 3% of all patients report visual disturbances, this blue-green impairment could be dangerous during Instrument Meteorological Conditions or night flying. The correct identification by the pilot of blue (1) and green (2) is necessary for safe flight. In addition, the use of color video terminal displays has increased in aviation and may present a problem in the color deficient pilot (3).

The AME should also be aware of sildenafil use in the "mile high club" (4). Sildenafil use by a pilot

with cardiac disease during sexual intercourse at 5,000 feet, could be deadly. Cardiac disease and nitrate use are risk factors for sudden death during sexual intercourse, not to mention being medically disqualifying. The hypotensive effect of nitrate (Isordil, SLNTG, etc.) is potentiated (5) by sildenafil, consistent with its effect on the NO/cGMP pathway. Recent deaths related to nitrates and sildenafil have made the combination an FDA contraindication.

Finally, the initial dose of sildenafil is 50 mg by mouth 1 hour prior to sexual activity. This dose can be increased to 100 mg, and the drug is rapidly absorbed within 30 to 120 minutes (median 60 minutes). Priapism is not a side effect; however, an early morning flight may be distracting. Full attention to instrument scan and the task at hand may be compromised by the 4-hour half-life of sildenafil. Metabolism of sildenafil by the liver further decreases by 40% at age 65.

For the above reasons, "6 hours from Viagra to throttle" is recommended.

Notes:

- (1) Taxiway
- (2) Tower/runway threshold
- (3) The continued debate regarding "color blindness" and the aviator is beyond the scope of this paper
- (4) An activity not condoned by the FAA, but known to occur
- (5) A specific cause and effect has not been shown regarding sudden death

Dr. Borrillo is the Commander, Flight Medicine, at Wright-Patterson Air Force Base, Ohio.

The views expressed in this article are those of the author and do not necessarily represent the official policy of the Federal Aviation Administration Office of Aerospace Medicine.

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Large Truck Crash Causation Study

Office of Motor Carrier Safety, Department of Transportation and
Office of Research and Development, National Highway Traffic Safety Administration
October 12, 1999

- Goal:** To determine the causes of serious large truck crashes so that the most effective countermeasures to reduce the occurrence and severity of large truck crashes will be implemented.
- Background:** No national database exists that contains information describing the causes or contributing factors for large truck crashes. The Office of Motor Carrier Safety (OMCS) recognized the importance of having these data and began investigating methods to collect it several years ago. The General Accounting Office and the Department of Transportation's Inspector General recommended in separate reports in 1999 that lack of large truck crash causation data hampered OMCS program effectiveness.
- Summary:** OMCS, cooperatively with the National Highway Traffic Safety Administration, has embarked on the first-ever national study of the causes of crashes involving large trucks that result in a fatality or serious injury. Nationally representative data on the primary and secondary causes of serious large truck crashes will be collected by teams of trained investigators from NHTSA's National Automotive Sampling System and OMCS-funded truck inspectors. OMCS has also contracted with a nationally-recognized crash investigation expert and is using the consulting services of the Bureau of Transportation Statistics and the University of Michigan's Transportation Research Institute. The number of data collection sites and the number of sampled truck crashes will not be determined until the work study plan is complete.
- Milestones:**
- 1998** - Entered into agreement with NHTSA to conduct a feasibility study.
 - 1999** - Completed feasibility study. Continued agreement with new tasks to develop a study work plan, develop data collection forms and coding manual, and select pilot study sites.
 - 2000** - Develop coding and database software, and begin collection in pilot sites.
 - 2001** - Initiate data collection at all sites, begin data entry and data analysis.
 - 2002** - Continue data collection, data entry and data analysis.
 - 2003** - Complete data collection, and draft report on preliminary results.
 - 2004** - Produce final report.
- Study Team:** The project directors are Ms. Terry Shelton, Chief of the Analysis Division in OMCS and Mr. Lee Franklin, Chief of the Crash Investigation Division in NHTSA. The project managers are Mr. Ralph Craft of OMCS and Mr. Gary Toth of NHTSA.
-

CRITICAL EVENT ASSOCIATED FACTORS

Code all factors that apply. Selection does not imply that the factor contributed to the crash.

DRIVER RELATED PHYSICAL FACTORS

11. Alcohol Use _____
 (00) No physical factors
 Code BAC test results.
 (decimal implied before first digit - 0..xx)
 (95) Test refused
 (96) None given
 (97) AC test performed, results unknown
 (98) No driver present
 (99) Unknown
12. Illegal Drug Use _____
 (00) No additional physical factors
 Code all that apply.
 (01) Amphetamine
 (02) Cocaine
 (03) Crack Cocaine
 (04) Hashish
 (05) Heroin
 (06) Lysergic Acid Diethylamide (LSD)
 (07) Marijuana
 (08) Methadone
 (09) Methamphetamine
 (10) Morphine
 (11) Opium
 (12) Phencyclidine (PCP)
 (13) Pentobarbital/Secobarbital
 (14) Tetrahydrocannabinol (THC)
 (77) Not applicable
 (88) Other (specify): _____
 (9) Unknown
- Code drug test results.
 (95) Test refused
 (96) None given
 (97) AC test performed, results unknown
 (98) No driver present
 (99) Unknown
13. Over-The-Counter Medication Use _____
 (00) No additional physical factors
 Code all that apply.
 (01) Advil
 (02) Advil cold medicine
 (03) Bayer aspirin
 (04) Ibuprofen
 (05) Laxative
 (06) Meijer Aspirin Free
 (07) Motrin
 (08) Nodose
 (09) Perrigo
 (10) Sudafed
 (11) Travis D
 (12) Tylenol
 (13) Tylenol PM
 (14) Vicks Nyquil
 (15) Vitamins
 (97) Not applicable
 (98) Other (specify): _____
 (99) Unknown
14. Prescription Medication Use _____
 (00) No additional physical factors
 Code all that apply.
 (01) Accupril-BP
 (02) Albuterol
 (03) Allegra-D
 (04) Azdolphazine
 (05) Bixion
 (06) Buteral
 (07) Calan Effexor
 (08) Captopril
 (09) Clariton-D
 (10) Cortef
 (11) Coumadin
 (12) Cylert
 (13) Diabet
 (14) Diovan
 (15) Darvocet
 (16) Dylantin
 (17) Fastin
 (18) Fexeril
 (19) Glynase
 (20) Glucophage
 (21) Lexxel
 (22) Lipitor
 (23) Lottrel
 (24) Mevacor
 (25) Naperson
 (26) Norvasc
 (27) Orudus
 (28) Parlesoc
 (29) Penicillin
 (30) Pravocol
 (31) Premarin
 (32) Prozac
 (33) Sular Prylosac
 (34) Tenorin
 (35) Tinormin
 (36) Topoxol
 (37) Tylenol/Codeine
 (38) Vasotec
 (39) Zaick
 (40) Ziac
 (41) Zesterol
 (97) Not applicable
 (98) Other (specify): _____
 (99) Unknown
15. Driver Fatigue _____
 (00) No additional physical factors
 (01) Driver fatigued
 Current Sleep Condition
- Hours of last sleep:
 _____ : _____ (hours : minutes)
- Start time of sleep interval (Military Time)
 _____ : _____ (hours : minutes)
- End of sleep interval (Military Time)
 _____ : _____ (hours : minutes)

DRIVER RELATED PHYSICAL FACTORS

15. Driver Fatigue (cont.)
 Hours since last sleep: _____ : _____ (hours : minutes)

Hours driving since last 8-hour break:
 _____ : _____ (hours : minutes)

Hours on duty since last 8-hour break:
 _____ : _____ (hours : minutes)
 77.77 not applicable
 99.99 unknown

Hours of Sleep Related To: _____
 (1) Work schedule
 (2) Social schedule
 (3) Personal problems
 (4) Family problems
 (5) Illness
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown

Preceding Seven Day Sleep Pattern:
 Longest length of daily sleep
 _____ : _____ (hours : minutes)

Shortest length of daily sleep
 _____ : _____ (hours : minutes)

Average length of daily sleep
 _____ : _____ (hours : minutes)
 77.77 not applicable
 99.99 unknown

Did the time at which the driver began to sleep rotate/shift during the seven day interval? _____
 (e.g., rotating shift schedule)

- (1) Yes (specify): _____
- _____
- (2) No
- (7) Not applicable
- (9) Unknown

Preceding Sleep Pattern Related To: _____
 (1) Work schedule
 (2) Social schedule
 (3) Personal problems
 (4) Family problems
 (5) Illness
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown

16. Illness _____
 (0) No additional physical factors
 (1) Heart attack
 (2) Seizure (epilepsy related)
 (3) Seizure (other source)
 (4) Blackout (diabetes related)
 (5) Blackout (other source)
 (6) Severe cold/flu symptoms
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown

17. Vision Problem _____
 (0) No additional physical factors
 (1) Legal blindness
 (2) Myopic (near-sighted) condition
 (3) Hyperopic (far-sighted condition)
 (4) Glucoma
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown
 Corrected vision level _____ / _____
 Code standard vision level descriptor
 (e.g. 20/20, 20/40, etc.) (77/77) Not applicable
 (99/99) Unknown

18. Other Physical Factors _____
 (0) No additional physical factors
 (Code all that apply.)
 (1) Hearing impairment
 (2) Prosthesis (specify): _____
 (3) Paraplegia
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown

DRIVER RELATED RECOGNITION FACTORS

19. Inattention _____
 (0) No recognition factors
 Nature of thought focus
 (1) Personal problem
 (2) Family problem
 (3) Financial problem
 (4) Preceding argument
 (5) Future event (e.g., vacation, wedding, etc.)
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown

20. Distracted by Conversation _____
 (0) No additional recognition factors
 (1) Conversing with passenger
 (2) Talking on phone
 (7) Not applicable
 (8) Other (specify): _____
 Nature of relationship between driver and person the driver was conversing with: _____
 (1) Business
 (2) Social (friend)
 (3) Boyfriend/girlfriend
 (4) Husband/wife
 (5) Driver/co-driver
 (6) Parent/child
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown
 Nature of the discussion: _____
 (1) Business
 (2) Social
 (3) Family matter
 (4) Argument
 (5) Disciplinary
 (7) Not applicable
 (8) Other (specify): _____
 (9) Unknown

DEPARTMENT OF TRANSPORTATION**Federal Motor Carrier Safety Administration****49 CFR Part 391**

[FMCSA Docket No. 98-3542 (formerly FHWA Docket No. 98-3542)]

RIN 2126-AA06 (formerly 2125-AC63)

Physical Qualification of Drivers; Medical Examination; Certificate

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Final rule.

SUMMARY: This document updates and simplifies the medical examination form that is currently used to determine the physical qualification of commercial motor vehicle (CMV) drivers operating in interstate commerce. The FMCSA takes this action in response to numerous requests from medical examiners to update and simplify the medical examination form that is currently used. This action is intended to reduce the incidence of errors on such forms and to provide more uniform medical examinations of CMV drivers engaged in interstate commerce. The current Federal physical qualification standards tested by medical examiners and recorded on the form will not be revised in this rulemaking.

DATES: November 6, 2000.

FOR FURTHER INFORMATION CONTACT: For information about the rulemaking, Ms. Sandra Zywockarte, Office of Bus and Truck Standards and Operations, (202) 366-2987; for information about legal issues related to this notice, Ms. Judith Rutledge, Office of the Chief Counsel, (202) 366-2519, FMCSA, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590. Office hours are from 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:**Electronic Access**

An electronic copy of this document may be downloaded using a computer, modem and suitable communications software from the Government Printing Office's Electronic Bulletin Board Service at (202) 512-1661. Internet users may reach the Office of the Federal Register's home page at: <http://www.nara.gov/fedreg> and the Government Printing Office's web page at <http://www.access.gpo.gov/nara>.

Background

The authority to require medical certification of CMV driver qualification

was originally granted to the Interstate Commerce Commission (ICC) in the Motor Carrier Act of 1935. The authority was transferred to the DOT in 1966 and is currently codified at 49 U.S.C. 31502(b). On October 9, 1999, the Secretary of Transportation transferred the motor carrier safety functions performed by the Federal Highway Administration (FHWA) to the Office of Motor Carrier Safety, a new office created in the DOT. This transfer was performed pursuant to section 338 of the DOT and Related Agencies Appropriations Act, 2000, Public Law 106-69, 113 Stat. 986, as amended by Public Law 106-73, 113 Stat. 1046. The Motor Carrier Safety Improvement Act of 1999, Public Law 106-159, 113 Stat. 1748, transferred the functions to the Federal Motor Carrier Safety Administration (FMCSA). As a result of the transfer of functions, the FMCSA now administers the driver physical qualification standards and examinations in 49 CFR Part 391.

The first physical qualification standard for CMV drivers was published by the ICC in 1939. It required a driver to have the following minimum qualifications:

Good physical and mental health; good eyesight; adequate hearing; no addiction to narcotic drugs; and no excessive use of alcoholic beverages or liquors.

Over the next three decades, other physical qualification regulations were promulgated by the ICC, but most were not clearly defined until 1970, after the creation of the DOT. On April 22, 1970 (35 FR 6458), the existing physical qualification requirements were substantially tightened, based upon discussions with our agency's medical advisors. This rule required a driver to have a physical examination every 2 years, included guidelines for evaluation of persons in high-risk medical categories, and provided that the examining physician be given full information about the responsibilities of and the exacting demands made on CMV drivers. There have been no major changes since then.

Current Medical Examination Form

The current form, at 49 CFR 391.43(f), has remained unchanged since it was adopted by the DOT in 1970. As a result, our agency has received numerous requests to make changes to the current medical examination form. Physicians and other medical providers have indicated that the format, layout and content of the current form are outdated, difficult to use, or irrelevant.

Additionally, substantial changes in medical technology and the technology,

operating practices, and economics of the motor carrier industry have affected the lifestyles of and, therefore, the physical and mental demands placed on CMV drivers. Having agreed that the current medical form is outdated and its continued use problematic, we decided to initiate rulemaking to revise the form.

Medical Examination Form Revision Process

We contracted with the Association for the Advancement of Automotive Medicine (AAAM) to review and evaluate the current form and develop a revised form. The process was defined and limited by several norms. The underlying physical qualification standards tested by medical providers and recorded on the form would not be revised in this rulemaking. In addition, the instructions for performing and recording physical examinations found in 49 CFR 391.43 would be revised only to the extent necessary to ensure that instructions to medical examiners are understandable and consistent with the information provided on the proposed medical examination form and guidance materials established by us for medical examiners.

To ensure that the revised form reflected the most current medical concepts and was responsive to the needs of the groups using the forms, the AAAM convened a working group to serve as reviewers of the draft form. The review panel members included two occupational health physicians, a motor carrier, two State motor vehicle administration officials and our agency representatives. A second draft of the form was then submitted to a correspondence advisory group, providing a more comprehensive review process. This larger group of reviewers was made up of medical providers, motor carriers, State motor vehicle agency representatives, Canadian motor transport officials, our agency field staff, and other interested groups.

Revised Medical Examination Form

The revised form, modeled after physical examination forms in use today, has been organized to (1) gain simplicity and efficiency, (2) reflect current medical terminology and examination components and (3) be a self-contained document (i.e., the form will, to the extent possible, include all relevant information necessary to conduct the physical examination and certification).

Consistent with accepted practices regarding the order of the examination, the first section of the examination form is completed by the driver. This section requests information on the driver's

health history, seeking "yes" or "no" answers to a variety of medical condition questions. Any "yes" response requires further clarification by the driver. Once this section is completed, the driver is required to sign the form, affirming that all the information contained in this section is accurate and complete. An additional statement indicates that inaccurate, false, or missing information may invalidate both the examination and any Medical Examiner's Certificate issued based on it.

The second section of the examination form covers the physical examination and tests that are performed by the medical examiner. The medical examiner is provided information on both the relevant Federal physical qualification standards and the tests required to measure compliance with those standards. The Federal standards and guidelines for evaluation of a driver's vision, hearing, and blood pressure are included in this section of the form, thereby reducing the potential for errors by the medical examiner.

Unlike the current physical examination form, the revised form clearly indicates when numerical readings must be recorded. Space is also provided on the form for recording any optional tests which the medical examiner considers necessary to evaluate a driver's physical qualification.

A full page of the revised form is devoted to instruction and recordation of the medical examiner's findings. The medical certificate is also provided, and must be completed by the medical examiner if he or she finds that the driver meets all the Federal physical qualification requirements.

The third section of the revised form not only sets forth the Federal physical qualification standards found at 49 CFR 391.41, but also contains more detailed information for the medical examiner regarding the driver's role and the types of duties he or she may face as a result of his or her employment. This section also contains the agency's guidelines to help medical examiners assess a driver's physical qualification. These guidelines are strictly advisory and were established after consultation with physicians, States, and industry representatives.

In addition to the revisions to 49 CFR 391.43 in the final rule, we are making technical corrections to paragraphs (d) and (g) of that section, to paragraphs (b)(1) and (b)(2)(ii) under § 391.41 and paragraph (d)(2) under § 391.49.

The FMCSA's primary concern is to enhance highway safety, rather than to unnecessarily limit employment

opportunities for individuals with physical impairments. The intent of the final rule is to facilitate medical providers' efforts to establish and document the physical qualification of a driver to operate a CMV by promoting reliable and understandable determinations of medical qualification.

Comments

On August 5, 1998, we published an NPRM rulemaking (63 FR 41789) seeking comments on our proposed medical examination form. We invited individuals, medical providers, motor carriers, and other interested parties to provide comments on how to improve our proposed examination form and instructions for performing and recording physical examinations. Forty-six public comments addressing the notice were received and have been considered in our final decision to amend Federal regulations governing the examination to determine the physical qualification of CMV drivers engaged in interstate commerce.

We received comments from 23 physicians, 8 employers of truck drivers, 4 State motor vehicle administrations, 1 State enforcement agency, 1 Canadian motor vehicle agency, 3 trucking associations, 1 motor coach association, 1 trade association, 1 nursing association, 1 medical association and 2 advocacy groups. The majority of the comments supported the proposed medical examination form with suggestions for additions and deletions to the form. One comment completely opposed the proposal. Some comments offered suggestions for additions or deletions without indicating support for the form. Others suggested changes to the Federal physical qualification standards tested by medical examiners and recorded on the form.

Although most comments were generally supportive, a number of comments strongly opposed providing space on the proposed form for recording the results of such optional tests as an electrocardiogram (ECG) and exercise stress test (EST). Still others expressed concerns that the form has too many pages. These comments and others will be discussed in detail below by section, and in accordance with the order of the examination.

Discussion of Comments

Driver's Information

Comments directed to this section of the examination form suggested format changes for recording and denoting certain information on the form. The FMCSA has considered these comments

and modified the form as follows: The format for recording the date of birth on the form will show month, day and year and the area code will be denoted by parentheses. The agency has also added another category, *other*, to the area on the form denoting the class of license held by the driver. This change is provided to accommodate non-CDL licensed drivers.

Health History

This section of the form received a number of comments suggesting additions or deletions of information and changes to the format. The Alabama Power Company, J.B. Hunt Transport, Inc., the Maryland Motor Vehicle Administration, the Wisconsin Department of Transportation and the Ministry of Transportation and Highways in British Columbia expressed support for the inclusion of a driver certification statement affirming that the information provided by the driver is accurate and complete. The American Association of Occupational Health Nurses (AAOHN) and the Maryland Motor Vehicle Administration indicated that the agency's statement that encourages the medical examiner to discuss health history information with the driver is not strong enough and the discussion should be required. Dr. Ellison Wittels commented that "the medical examiner needs to comment on any "yes" answer and address the severity of the problem." Comments from Dr. Wittels and the AAOHN indicated that more space should be allotted for the medical examiner's review of the health history. Dr. John A. Hansen agreed that there is inadequate space on the proposed form for the medical examiner's "impression and opinion," and indicated that too much space is allocated to driver's comments and the listing of their medications. In fact, Dr. Hansen suggests that, in general, the format of the proposed form is "excessive."

The American College of Occupational and Environmental Medicine (ACOEM) believes that the "expanded medical history section assists the [medical] examiner in making a thorough evaluation," but questions whether any of the conditions listed in the health history are likely to interfere with the driver's ability to safely operate a CMV. The ACOEM also expressed concerns over the potential for breaching confidential medical information.

The Owner Operator Independent Drivers Association, Inc. (OOIDA) an international trade association representing the interests of independent owner-operators and

professional truck drivers, supports the overall goals of the proposal. However, the OOIDA raised concerns regarding the amount and relevancy of information solicited under the health history section and the confidentiality of medical information of drivers. The OOIDA believes that vague terminology and a lack of understanding of medical terms and conditions on the part of drivers will unjustly result in a driver being determined medically unqualified. Therefore, the OOIDA suggests that the medical examiner complete the health history section. The OOIDA also expressed concern that information in this section which it views as "unnecessary and irrelevant" would be used by employers for purposes other than the intended medical certification. Finally, the OOIDA opposes the requirement for a driver certification statement suggesting that such a requirement will not prevent drivers from falsifying or omitting information if a "yes" response would result in the driver being found medically unqualified.

The AHAS commented that the "FHWA could significantly improve highway safety by promoting increased definitive diagnoses and treatment of apnea" and noted that "many preliminary diagnoses of apnea are made on the basis of self-report." The FMCSA believes the information on sleep disorders in this section will help elicit information from the driver regarding any history of sleep disorders and thereby, facilitate the identification and treatment of such disorders.

The FMCSA has considered the comments to this section and modified the form as follows: The two questions regarding hospitalization and serious illness in the last 5 years have been combined into one question that reads: "any illness or injury in the last 5 years." A box has been added to indicate when medications are taken for nervous or psychiatric disorders. The section on sleep disorders was modified to include "pauses in breathing while asleep" and to substitute "loud snoring" for severe snoring. The term "severe" has been dropped from the health history because it is too subjective. Under the section on diabetes, the term "pills" was substituted for "medication." The condition "pleurisy" has been deleted from the form because it is non-specific and non-discriminating.

The format for this section has been modified to increase the space allotted for the medical examiner's comments. As a result, the space allocated for the driver's comments has been reduced. The statement encouraging the medical

examiner to discuss the health history with the driver has been modified and expanded to address the use of prescription and over-the-counter medications. The statement now reads: the medical examiner must review and discuss with the driver any "yes" answers and potential hazards of medications, including over-the-counter medications, while driving.

The FMCSA's modification of the information in the health history is limited because this information has previously been subject to several levels of review and subsequent changes by the medical community and other interested groups.

Although the health history section has been expanded, the FMCSA believes that this information is necessary and relevant. Having this information will assist the medical examiner in conducting a thorough evaluation and facilitate the determination as to the likelihood that an individual has a condition that would interfere with the safe operation of a CMV.

The FMCSA agrees with the comments that the confidentiality of medical information is an important issue and takes the position that medical information is best maintained by the medical examiner. In fact, the Medical Examiner's Certificate at 49 CFR 391.43(h) carries a statement indicating that the completed medical examination is on file in the office of the medical examiner. Although the FMCSRs do not require that the completed medical examination form be provided to the employer, the FMCSA does not prohibit employers from obtaining copies of the form. The FMCSA does not believe this is a problem since employers must comply with applicable State and Federal laws regarding the privacy and maintenance of employee medical information.

The agency maintains that the driver certification statement requirement would discourage an individual from omitting or falsifying information as someone is likely to pause and consider his/her action before signing such a statement. This is especially so since the deliberate omission or falsification of information may invalidate the examination and any Medical Examiner's Certificate issued based on it.

The agency did not adopt the suggestion of one comment to allow medical examiners to complete the health history since this is not the usual process for completion of a health history. However, to ensure involvement by the medical examiner, the FMCSA has made the review and

discussion of any "yes" responses with the driver mandatory.

Testing: Vision and Hearing

The majority of comments to this section were suggestions for amending the actual vision and hearing standards which is beyond the scope of this rulemaking. The FMCSA will consider these comments in its ongoing review of physical qualification requirements and in any future rulemakings to amend the standards under § 391.41. The agency is considering, under a separate notice, a rule change regarding field of vision, an area of concern raised in several of the comments. This proposed change is based on a recent review and the recommendations from an expert panel of ophthalmologists. (See Frank C. Berson, M.D., Mark C. Kuperwaser, M.D., Lloyd Paul Aiello, M.D., and James W. Rosenberg, M.D., "Visual Requirements and Commercial Drivers," October 16, 1998, filed in the docket.)

The FMCSA has considered the comments to these sections and modified the form as follows: A single box designating "corrective lens" has been added to the form. The four boxes designating "glasses", "contact lenses", "right lens" and "left lens" on the proposed form have been deleted. Several comments indicated confusion over which box to check if an individual wore both glasses and contact lenses. The word "individual" has been substituted for the word "patient" under the section for recording numerical readings for hearing testing.

Testing: Blood Pressure/Pulse Rate

There were relatively few comments on this section and the majority of them focused on the need for additional space on the form. Several comments suggested the need for additional space on the form to record both the pulse rate and the quality of the pulse. Other comments suggested space for recording the second reading of the blood pressure since the instructions indicate that the medical examiner should take at least two readings to confirm an individual's blood pressure. Finally, two comments suggested changes to the recommended thresholds for acceptable blood pressures.

The FMCSA has considered the comments to this section and modified the form as follows: The space allocated for the pulse rate has been enlarged to accommodate the recording of both the pulse rate and the quality of the pulse. The recommendation for space for recording a second blood pressure reading was not adopted because the medical examiner is not limited to just two readings and the possibility exists

that several readings may be necessary to establish a fixed blood pressure. Only the fixed blood pressure should be recorded on the form. Any change to the threshold value for an acceptable blood pressure is outside the scope of this rulemaking. The FMCSA is considering a review and update of its recommendations regarding blood pressure.

Testing: Laboratory and Other Test Findings

This was clearly one of the most commented on sections in the proposal. The majority of the comments were opposed to including space on the form for recording the optional tests, ECG and EST. Those opposing or having serious concerns over this issue include: the ATA, the OOIDA, the National Automobile Dealers Association, the Georgia Motor Trucking Association, DSI Transport, Inc., Houston Industries, Inc., the Illinois State Police, Dr. Russell J. Green, Medical Director for Hillcrest Health Works, and Dr. Ellison H. Wittels. The OOIDA, Houston Industries, Inc., and Dr. Wittels also recommended that the Echocardiogram and chest x-ray be deleted from the form. Their opposition was based on the following concerns: (1) The efficacy of these tests to detect coronary artery disease (CAD) and predict future coronary events in asymptomatic individuals is unsupported, (2) optional tests would increase the costs for all parties, and (3) the appearance of the optional tests on the form will be misinterpreted as mandatory requirements.

The FMCSA believes that the concerns of the ATA, the OOIDA and others regarding the recommendations for and recordation of the optional tests, ECG and EST, on the examination form have merit. According to the information (See part A.1. on "Screening for Asymptomatic Coronary Artery Disease," by the U.S. Preventive Services Task Force's "Guide to Clinical Preventive Services," 2nd ed., Baltimore: Williams & Wilkins, December 1995, in the docket as appendix 1 to the ATA's comment) submitted by Dr. Donald Whorton (on behalf of the ATA) and Dr. Richard Moore, it seems that the benefits of screening to identify asymptomatic CAD are unproven. The evidence summarized in the Guide indicated that the use of a resting ECG for screening for asymptomatic CAD showed limited sensitivity and specificity. Relative to the first quality, it was reported that 29 percent of patients with clinically proven CAD had a normal resting ECG (a sensitivity of 71 percent). The

evidence presented also indicated that one-third to one-half of patients with normal coronary arteries had positive findings (poor specificity in the 50 to 67 percent range). Moreover, the Guide gave evidence that the predictive value of the resting ECG was low. Prospective studies found that symptomatic CAD develops in 3 to 15 percent of persons with abnormal ECG findings and that most coronary events occur in persons without resting ECG abnormalities. Based on these findings, routine ECG testing is not an efficient approach for detecting CAD or predicting future events.

While exercise ECG is more accurate than resting ECG in detecting CAD and predicting future coronary events, the Guide reported that its sensitivity and predictive values do not promote comprehensive endorsement as a screening test. For example, most patients with asymptomatic CAD do not have positive exercise results (poor sensitivity). Relative to prediction, although asymptomatic persons with a positive result on an exercise ECG are more likely to experience an event than those with a negative result, long-term studies have shown that only one to eleven percent will suffer an acute myocardial infarction or sudden death. The majority of events will occur with a negative test result. Thus, the less than desirable qualities of exercise ECG do not allow it to enjoy a broad endorsement as a screening tool and, in addition, it is more expensive than the resting ECG.

Notwithstanding this lack of evidence to support screening for asymptomatic CAD, the FMCSA believes that screening individuals in certain occupations, such as truck and bus drivers, may be justified because of possible benefits to public safety. However, since the FMCSA is not aware of any studies which have addressed the efficacy of screening these individuals to detect asymptomatic CAD, it proposes to establish a panel of medical experts to review and make recommendations for amending the agency's standards and guidelines for qualifying commercial drivers with cardiac conditions, and for screening drivers for cardiac risk factors.

The FMCSA has considered the comments to this section and modified the form as follows: Space will be provided for describing and recording any optional tests which the medical examiner considers necessary to assess a driver's physical qualification. However, references to specific tests (ECG, EST, echocardiogram, and chest x-ray) in this section have been removed. This will eliminate the

potential for such optional tests to be misinterpreted as mandatory requirements and allow more space for the medical examiner to describe, record and comment on any optional test conducted as part of the examination.

Although the FMCSA has not adopted the recommendations of the Parents Against Tired Truckers (P.A.T.T.) to require the eight question Epworth Sleep Disorder Test as part of the physical examination, the agency recognizes and shares P.A.T.T.'s concerns that excessive day-time sleepiness as a result of untreated sleep apnea can affect a driver's ability to perform safely. The FMCSA has ongoing research to evaluate the prevalence and performance of a population of CMV drivers with sleep apnea. An extension of this research involves the development and evaluation of a screening tool for identifying drivers with sleep apnea. Moreover, the FMCSA's 1991 report, "Pulmonary/Respiratory Conditions and Commercial Drivers," provides specific recommendations for qualifying CMV drivers with sleep apnea. This report may be obtained from the National Technical Information Service, by calling 1-800-553-6847 and identifying the report by title and "PB" number (PB91-236455), or by going to: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>.

Physical Examination

This section of the form received a number of comments suggesting additions or deletions of information and changes to the format. There was unanimous agreement among those commenting that the recording of height and weight in centimeters and kilograms may be problematic and a source of errors and, therefore, should be recorded in inches and pounds. Other comments indicated that the "yes" and "no" columns which answer the question, "Is driver's ability to safely operate a commercial motor vehicle affected?" may be confusing as the usual procedure is to check "yes" if there are underlying abnormalities and then comment on whether they present a safety risk. A number of comments indicated that routine rectal and pelvic examinations are not appropriate or relevant to driver safety and should be eliminated. The AAOHN indicated that more space should be allotted for the medical examiners comments to "yes" answers under this section and recommended expanding the section on certification status to include the status of individuals who meet the standard and qualify for a 2-year medical

certificate. The proposed form indicated that this section should be completed only if the driver does not qualify for a 2-year certificate.

The FMCSA has considered the comments to this section and modified the form as follows: The directions for completing this section appear in one location on the form and now read: Check "yes" if there are any abnormalities. Check "no" if the body system is normal. Discuss any "yes" answers in detail in the space below, and indicate whether it would affect the driver's ability to operate a commercial motor vehicle safely. Enter applicable item number before each comment. If organic disease is present, note that it has been compensated for. Height and weight will be recorded on the form in inches and pounds as the medical community has indicated that it is more comfortable with these units of measurement. References to both the pelvic or rectal examination have been dropped from the form, and as a result, the reference to hemorrhoids was dropped too. The term "abnormal" has been dropped because it is too subjective and the term "weakness" has been substituted for semi-paralysis. Several comments were not adopted as they addressed areas extensively discussed by medical providers and other interested parties during the development of this rule.

The instructions for completing the section on the certification status has been modified and reads: Note Certification Status Here. Additional boxes have been added to indicate (1) when a driver meets the standards in 49 CFR 391.41 and qualifies for a 2-year medical certificate, and (2) when the certification is conditionally met under the FMCSRs (e.g., when wearing corrective lenses, a hearing aid or when accompanied by a waiver/exemption/skill performance evaluation (SPE) certificate). The handicapped driver waiver form has been replaced by a skill performance evaluation certificate. See 65 FR 25285 (May 1, 2000) for more detailed information.

Medical Examiner's Certificate

The replica of the Medical Examiner's Certificate that appeared on the proposed form under item number 7 "Physical Examination" has been removed to allow more space on the form. This will accommodate the information added to the section on Certification Status and provide significantly more space for the medical examiner's comments under this section.

The box on the Medical Examiner's Certificate titled, "Name (Print)" has

been changed and reads: Medical Examiner's Name (Print). This was done to clarify whose name is to be entered in the box. Another box on the Certificate which indicates that a driver is qualified only when accompanied by a waiver has been modified and reads: accompanied by a _____ waiver/exemption. The term "exemption" has been added to be consistent with the terminology in 49 U.S.C. 31315 and 31316(e) regarding the granting of waivers and exemptions. A box has been added to indicate that a driver is qualified only when carrying an SPE certificate.

Instructions to the Medical Examiner

The majority of the comments directed to this section of the form were favorable and support the concept of a self-contained form which ensures the medical examiner access to the applicable medical standards, guidelines and other useful information including the role and duties of both the medical examiner and driver. For example, not all medical examiners, as suggested in one comment, are aware of existing guidance which allows medical examiners to issue medical certificates for periods less than 2 years in cases where drivers are qualified, but may have conditions which require more frequent monitoring.

A number of comments opposed the inclusion in this section of the recommendations to conduct optional ECG and EST tests. They cited the lack of evidence to support such screening, costs versus benefits, and the potential for the optional tests to be misinterpreted as mandatory.

The FMCSA has considered the comments to this section of the form and made the following modifications. The recommendations for evaluating cardiac risk factors and conducting the optional baseline ECG and EST tests have been removed from the Instructions to the Medical Examiner (Advisory Criteria) on the form and from the Instructions for Performing and Recording Physical Examinations, Heart, at 49 CFR 391.43 (f). However, these recommendations have been and are currently available to assist medical examiners in making physical qualification determinations, and are found in the FMCSA's conference report, "Cardiac Conditions and Commercial Drivers." This report may be obtained from the National Technical Information Service, by calling 1-800-553-6847, and identifying the report by title and "PB" number (PB88-233960), or by going to: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>. Moreover, as

previously indicated, the FMCSA plans to establish a medical panel to review its cardiac standards and guidelines for qualifying commercial drivers. As part of the review, the panel will be asked to address the issue of screening CMV drivers for CAD. Other modifications to this section were either editorial in nature or changes to update information to be consistent with current FMCSA guidelines.

Several comments recommended designating or certifying medical examiners to ensure more uniform evaluations for fitness to operate CMVs. This issue is being addressed under a separate rulemaking which proposes to link the driver physical qualification determinations with the CDL process.

Format of the Examination Form

In general, comments on the format were favorable. J.B. Hunt Transport, Inc. stated, "placing applicable FHWA guidance directly on the proposed form * * * is an effective way to insure the medical examiner is aware of the specific regulation." The ATA stated, "FHWA's revised medical examination form, coupled with the above discussed ATA recommendations, will help serve as an adequate means to provide consistency and completeness." The ATA recommended that the FHWA permit motor carriers the flexibility to reformat the form to fewer pages, provided that the content of the form remains the same, and allow the form to be maintained electronically. The AHAS commented, "Advocates believe that, taken as a whole, both the form itself and the supplementary guidance that the agency wants to provide in order to guide health care providers will be substantial improvements over the present form. We agree with FHWA that the use of this form with its added guidance to practitioners could have a positive economic impact by resulting in more careful screening of commercial drivers to detect health conditions that could prove to be a safety risk both for drivers and for the occupants of other vehicles sharing the road with large trucks and buses."

Other comments indicated that the form has too many pages and questioned whether medical examiners would read them. The ACOEM commented, "It is unlikely that expanding explanations from one side of a page to four sides will drastically increase the quality." The Federal Express Corporation believes "the proposed three page form unnecessarily adds to the paperwork burden of medical examiners and motor carriers." Schneider National did not comment specifically on the proposed form, but

included a copy of its physical exam form which Schneider considers both "comprehensive" and "helpful" in determining driver fitness. The Schneider form includes a 3-page physical exam form, 1-page driver's job description and 2 pages of instructional/informational materials, for a total of 6 pages.

The FMCSA believes the format of its examination form achieves the agency's overall objectives of accuracy and efficiency, and to be a self-contained document. Although the FMCSA has concluded that the new form would not increase cost and time burdens, it has adopted the ATA's recommendation to allow motor carriers and others to reformat the form, including an electronic version, so long as it remains a self-contained form and incorporates all of the information in 49 CFR 391.43(f), as amended in this rulemaking.

In addition to the revisions to 49 CFR 391.43 in this final rule, the FMCSA has made technical corrections to paragraphs (c)(1), (d) and (g) of that section. We are also making technical corrections to 49 CFR 391.41, paragraphs (b)(1) and (b)(2)(ii) and finally, to 49 CFR 391.49, paragraph (d)(2).

The FMCSA's primary concern is to enhance highway safety, not to unnecessarily limit employment opportunities for individuals with physical impairments. Consistent with its safety mandate and regulations, the FMCSA is interested in promoting individual determinations of medical qualification to operate a CMV. The revised medical examination form is intended to facilitate medical examiners' efforts to establish and document the physical qualifications of a driver to operate a CMV by promoting reliable and understandable determinations of physical qualification.

Executive Order 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures

The FMCSA has determined that this action is not a significant regulatory action under Executive Order 12866 or significant under the regulatory policies and procedures of the DOT. It is anticipated that the economic impact of this final rule will be minimal because the use of existing printed supplies of the forms addressed in this action will be allowed until the forms are depleted, or until 12 months after the effective date of this rulemaking, whichever occurs first. Allowing the use of existing forms will avert substantial monetary loss by motor carriers, medical providers, and vendors of forms that

might otherwise result from this rulemaking. Moreover, users of the examination form have the flexibility to reformat the form to fewer pages, including an electronic version so long as it remains a self-contained form and incorporates all of the information in 49 CFR 391.43(f), as amended in this rulemaking. According such flexibility will have the potential to reduce costs. This action will facilitate regulatory uniformity and result in easier compliance with and enforcement of the driver qualification requirements of the FMCSRs. This form will, to the extent possible, include all relevant information necessary to establish and record the physical qualification of a driver to operate a CMV. As a result, the FMCSA believes that this rulemaking will have a positive economic impact. Therefore, a full regulatory evaluation is not required.

Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act, 5 U.S.C. 601-612, the FMCSA has evaluated the effects of this final rule on small entities. The FMCSA believes that this action will not have a significant economic impact on a substantial number of small entities or the nation's economy because it would allow individual small carriers, medical examiners and vendors of the form to use the forms they now have on hand until those supplies have been depleted, or until 12 months after the effective date of this rulemaking. Additionally, users of the forms will have the flexibility to reformat the forms to less pages, including an electronic version, so long as it remains a self-contained form and incorporates all of the information in 49 CFR 391.43(f), as amended in this rulemaking. To the extent that this final rule will facilitate compliance with driver qualification requirements, the projected positive economic impact is not expected to be sufficiently significant to warrant a full regulatory evaluation. Accordingly, the FMCSA certifies that this action will not have a significant economic impact on a substantial number of small entities.

Unfunded Mandates Reform Act of 1995

The FMCSA has determined that this rulemaking will not result in the expenditure by State, local and tribal governments, or by the private sector, in the aggregate of \$100 million or more in any one year, as required by the Unfunded Mandates Reform Act of 1995 (2 U.S.C. 15632).

Executive Order 13132 (Federalism)

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 dated August 4, 1999, and it has been determined this action does not have a substantial direct effect or sufficient federalism implications on States that would limit the policymaking discretion of the States. Nothing in this document directly preempts any State law or regulation.

Executive Order 12372 (Intergovernmental Review)

Catalog of Federal Domestic Assistance Program Number 20.217, Motor Carrier Safety. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities do not apply to this program.

National Environmental Policy Act

The agency has analyzed this action for the purposes of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 *et seq.*), and has determined that this action will not have any effect on the quality of the environment.

Paperwork Reduction Act of 1995

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, *et seq.*), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. The FMCSA has determined that this final rule will affect collection of information requirements for the purposes of the PRA because it revises a form associated with a currently-approved information collection covered by OMB Approval No. 2126-0006, entitled Medical Qualification Requirements. Interested parties were invited to provide comments regarding the form revision in an NPRM which was issued on August 5, 1998. Comments which were received are discussed above in Discussion of Comments. Because the current information collection is due to expire on September 30, 2000, it has been submitted to OMB for a three-year renewal. The renewal request, which includes a revised estimate of 20 minutes to complete and document the medical examination, is more accurate. The FMCSA is not making any additional revisions to the information collection as a result of this final rule.

Regulation Identification Number

A regulation identification number (RIN) is assigned to each regulatory action listed in the Unified Agenda of

Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross reference this action with the Unified Agenda.

List of Subjects in 49 CFR Part 391

Driver qualifications-physical examinations, Highway safety, Motor carriers, Reporting and recordkeeping requirements, Safety, Transportation.

Issued on: September 19, 2000.

Clyde J. Hart, Jr.,

Acting Deputy Administrator, Federal Motor Carrier Safety Administration.

In consideration of the foregoing, the FMCSA amends title 49, CFR, chapter III, part 391 as set forth below:

PART 391—QUALIFICATIONS OF DRIVERS [AMENDED]

1. The authority citation for part 391 continues to read as follows:

Authority: 49 U.S.C. 322, 504, 31133, 31136, and 31502; and 49 CFR 1.73.

2. Section 391.41 is amended by revising paragraphs (b)(1) and (b)(2)(ii) to read as follows:

§ 391.41 Physical qualifications for drivers.

* * * * *

(b) * * *

(1) Has no loss of a foot, a leg, a hand, or an arm, or has been granted a skill performance evaluation certificate pursuant to § 391.49;

(2) * * *

(ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or has been granted a skill performance evaluation certificate pursuant to § 391.49.

* * * * *

3. Section 391.43 is amended by revising paragraphs (c)(1), (d), (f), (g) and (h) to read as follows:

§ 391.43 Medical examination; certificate of physical qualification.

* * * * *

(c) * * *

(1) Be knowledgeable of the specific physical and mental demands associated with operating a commercial motor vehicle and the requirements of this subpart, including the medical advisory criteria prepared by the FHWA's guidelines to aid the medical

examiner in making the qualification determination; and

* * * * *

(d) Any driver authorized to operate a commercial motor vehicle within an exempt intracity zone pursuant to § 391.62 of this part shall furnish the examining medical examiner with a copy of the medical findings that led to the issuance of the first certificate of medical examination which allowed the driver to operate a commercial motor vehicle wholly within an exempt intracity zone.

* * * * *

(f) The medical examination shall be performed, and its results shall be recorded, substantially in accordance with the following instructions and examination form. Existing forms may be used until current printed supplies are depleted or until November 6, 2001, whichever occurs first.

Instructions for Performing and Recording Physical Examinations

The medical examiner must be familiar with 49 CFR 391.41, Physical qualifications for drivers, and should review these instructions before performing the physical examination. Answer each question "yes" or "no" and record numerical readings where indicated on the physical examination form.

The medical examiner must be aware of the rigorous physical, mental, and emotional demands placed on the driver of a commercial motor vehicle. In the interest of public safety, the medical examiner is required to certify that the driver does not have any physical, mental, or organic condition that might affect the driver's ability to operate a commercial motor vehicle safely.

General information. The purpose of this history and physical examination is to detect the presence of physical, mental, or organic conditions of such a character and extent as to affect the driver's ability to operate a commercial motor vehicle safely. The examination should be conducted carefully and should at least include all of the information requested in the following form. History of certain conditions may be cause for rejection. Indicate the need for further testing and/or require evaluation by a specialist. Conditions may be recorded which do not, because of their character or degree, indicate that certification of physical fitness should be denied. However, those conditions should be discussed with the driver and he/she should be advised to take the necessary steps to insure correction, particularly of those conditions which, if neglected, might affect the driver's ability to drive safely.

General appearance and development. Note marked overweight. Note any postural defect, perceptible limp, tremor, or other conditions that might be caused by alcoholism, thyroid intoxication or other illnesses.

Head-eyes. When other than the Snellen chart is used, the results of such test must be expressed in values comparable to the standard Snellen test. If the driver wears

corrective lenses for driving, these should be worn while driver's visual acuity is being tested. If contact lenses are worn, there should be sufficient evidence of good tolerance of and adaptation to their use. Indicate the driver's need to wear corrective lenses to meet the vision standard on the Medical Examiner's Certificate by checking the box, "Qualified only when wearing corrective lenses." In recording distance vision use 20 feet as normal. Report all vision as a fraction with 20 as the numerator and the smallest type read at 20 feet as the denominator. Monocular drivers are not qualified to operate commercial motor vehicles in interstate commerce.

Ears. Note evidence of any ear disease, symptoms of aural vertigo, or Meniere's Syndrome. When recording hearing, record distance from patient at which a forced whispered voice can first be heard. For the whispered voice test, the individual should be stationed at least 5 feet from the examiner with the ear being tested turned toward the examiner. The other ear is covered. Using the breath which remains after a normal expiration, the examiner whispers words or random numbers such as 66, 18, 23, etc. The examiner should not use only sibilants (s-sounding test materials). The opposite ear should be tested in the same manner. If the individual fails the whispered voice test, the audiometric test should be administered. For the audiometric test, record decibel loss at 500 Hz, 1,000 Hz, and 2,000 Hz. Average the decibel loss at 500 Hz, 1,000 Hz and 2,000 Hz and record as described on the form. If the individual fails the audiometric test and the whispered voice test has not been administered, the whispered voice test should be performed to determine if the standard applicable to that test can be met.

Throat. Note any irremediable deformities likely to interfere with breathing or swallowing.

Heart. Note murmurs and arrhythmias, and any history of an enlarged heart, congestive heart failure, or cardiovascular disease that is accompanied by syncope, dyspnea, or collapse. Indicate onset date, diagnosis, medication, and any current limitation. An electrocardiogram is required when findings so indicate.

Blood pressure (BP). If a driver has hypertension and/or is being medicated for hypertension, he or she should be recertified more frequently. An individual diagnosed with mild hypertension (initial BP is greater than 160/90 but below 181/105) should be certified for one 3-month period and should be recertified on an annual basis thereafter if his or her BP is reduced. An individual diagnosed with moderate to severe hypertension (initial BP is greater than 180/104) should not be certified until the BP has been reduced to the mild range (below 181/105). At that time, a 3-month certification can be issued. Once the driver has reduced his or her BP to below 181/91, he or she should be recertified every 6 months thereafter.

Lungs. Note abnormal chest wall expansion, respiratory rate, breath sounds including wheezes or alveolar rales, impaired respiratory function, dyspnea, or cyanosis. Abnormal finds on physical exam may require further testing such as pulmonary tests and/or x-ray of chest.

Abdomen and Viscera. Note enlarged liver, enlarged spleen, abnormal masses, bruits, hernia, and significant abdominal wall muscle weakness and tenderness. If the diagnosis suggests that the condition might interfere with the control and safe operation of a commercial motor vehicle, further testing and evaluation is required.

Genital-urinary and rectal examination. A urinalysis is required. Protein, blood or sugar in the urine may be an indication for further testing to rule out any underlying medical problems. Note hernias. A condition causing discomfort should be evaluated to determine the extent to which the condition might interfere with the control and safe operation of a commercial motor vehicle.

Neurological. Note impaired equilibrium, coordination, or speech pattern; paresthesia; asymmetric deep tendon reflexes; sensory or positional abnormalities; abnormal patellar and Babinski's reflexes; ataxia. Abnormal neurological responses may be an indication for further testing to rule out an underlying medical condition. Any neurological condition should be evaluated for the nature and severity of the condition, the degree of limitation present, the likelihood of progressive limitation, and the potential for

sudden incapacitation. In instances where the medical examiner has determined that more frequent monitoring of a condition is appropriate, a certificate for a shorter period should be issued.

Spine, musculoskeletal. Previous surgery, deformities, limitation of motion, and tenderness should be noted. Findings may indicate additional testing and evaluation should be conducted.

Extremities. Carefully examine upper and lower extremities and note any loss or impairment of leg, foot, toe, arm, hand, or finger. Note any deformities, atrophy, paralysis, partial paralysis, clubbing, edema, or hypotonia. If a hand or finger deformity exists, determine whether prehension and power grasp are sufficient to enable the driver to maintain steering wheel grip and to control other vehicle equipment during routine and emergency driving operations. If a foot or leg deformity exists, determine whether sufficient mobility and strength exist to enable the driver to operate pedals properly. In the case of any loss or impairment to an extremity which may interfere with the driver's ability to operate a commercial motor vehicle safely, the medical examiner should state on the

medical certificate "medically unqualified unless accompanied by a Skill Performance Evaluation Certificate." The driver must then apply to the Field Service Center of the FMCSA, for the State in which the driver has legal residence, for a Skill Performance Evaluation Certificate under § 391.49.

Laboratory and Other Testing. Other test(s) may be indicated based upon the medical history or findings of the physical examination.

Diabetes. If insulin is necessary to control a diabetic driver's condition, the driver is not qualified to operate a commercial motor vehicle in interstate commerce. If mild diabetes is present and it is controlled by use of an oral hypoglycemic drug and/or diet and exercise, it should not be considered disqualifying. However, the driver must remain under adequate medical supervision.

Upon completion of the examination, the medical examiner must date and sign the form, provide his/her full name, office address and telephone number. The completed medical examination form shall be retained on file at the office of the medical examiner.

BILLING CODE 4910-22-P

Medical Examination Report FOR COMMERCIAL DRIVER FITNESS DETERMINATION

1. DRIVER'S INFORMATION <small>Driver completes this section.</small>									
Driver's Name (Last, First, Middle)			Social Security No.	Birthdate M/D/Y	Age	Sex <input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> New certification <input type="checkbox"/> Recertification <input type="checkbox"/> Follow Up	Date of Exam	
Address		City, State, Zip Code		Work Tel: ()	Home Tel: ()		Driver License No.	License Class <input type="checkbox"/> A <input type="checkbox"/> C <input type="checkbox"/> B <input type="checkbox"/> D <input type="checkbox"/> Other	State of Issue
2. HEALTH HISTORY <small>Driver completes this section, but medical examiner is encouraged to discuss with driver.</small>									
Yes No <input type="checkbox"/> <input type="checkbox"/> Any illness or injury in last 5 years? <input type="checkbox"/> <input type="checkbox"/> Head/Brain injuries, disorders or illnesses <input type="checkbox"/> <input type="checkbox"/> Seizures, epilepsy <input type="checkbox"/> <input type="checkbox"/> medication <input type="checkbox"/> <input type="checkbox"/> Eye disorders or impaired vision (except corrective lenses) <input type="checkbox"/> <input type="checkbox"/> Ear disorders, loss of hearing or balance <input type="checkbox"/> <input type="checkbox"/> Heart disease or heart attack; other cardiovascular condition <input type="checkbox"/> <input type="checkbox"/> medication <input type="checkbox"/> <input type="checkbox"/> Heart surgery (valve replacement/bypass, angioplasty, pacemaker) <input type="checkbox"/> <input type="checkbox"/> High blood pressure <input type="checkbox"/> medication <input type="checkbox"/> <input type="checkbox"/> Muscular disease <input type="checkbox"/> <input type="checkbox"/> Shortness of breath			Yes No <input type="checkbox"/> <input type="checkbox"/> Lung disease, emphysema, asthma, chronic bronchitis <input type="checkbox"/> <input type="checkbox"/> Kidney disease, dialysis <input type="checkbox"/> <input type="checkbox"/> Liver disease <input type="checkbox"/> <input type="checkbox"/> Digestive problems <input type="checkbox"/> <input type="checkbox"/> Diabetes or elevated blood sugar controlled by: <input type="checkbox"/> diet <input type="checkbox"/> pills <input type="checkbox"/> insulin <input type="checkbox"/> <input type="checkbox"/> Nervous or psychiatric disorders, e.g., severe depression <input type="checkbox"/> <input type="checkbox"/> Medication <input type="checkbox"/> <input type="checkbox"/> Loss of, or altered consciousness			Yes No <input type="checkbox"/> <input type="checkbox"/> Fainting, dizziness <input type="checkbox"/> <input type="checkbox"/> Sleep disorders, pauses in breathing while asleep, daytime sleepiness, loud snoring <input type="checkbox"/> <input type="checkbox"/> Stroke or paralysis <input type="checkbox"/> <input type="checkbox"/> Missing or impaired hand, arm, foot, leg, finger, toe <input type="checkbox"/> <input type="checkbox"/> Spinal injury or disease <input type="checkbox"/> <input type="checkbox"/> Chronic low back pain <input type="checkbox"/> <input type="checkbox"/> Regular, frequent alcohol use <input type="checkbox"/> <input type="checkbox"/> Narcotic or habit forming drug use			
For any YES answer, indicate onset date, diagnosis, treating physician's name and address, and any current limitation. List all medications (including over-the-counter medications) used regularly or recently.									
_____ _____ _____									

I certify that the above information is complete and true. I understand that inaccurate, false or missing information may invalidate the examination and my Medical Examiner's Certificate.

Driver's Signature

Date

Medical Examiners Comments on Health History (The medical examiner must review and discuss with the driver any "yes" answers and potential hazards of medications, including over-the-counter medications, while driving.)

TESTING (Medical Examiner completes Section 3 through 7)

3. VISION Standard: At least 20/40 acuity (Snellen) in each eye with or without correction. At least 70° peripheral in horizontal meridian measured in each eye. The use of corrective lenses should be noted on the Medical Examiner's Certificate.

INSTRUCTIONS: When other than the Snellen chart is used, give test results in Snellen-comparable values. In recording distance vision, use 20 feet as normal. Report visual acuity as a ratio with 20 as numerator and the smallest type read at 20 feet as denominator. If the applicant wears corrective lenses, these should be worn while visual acuity is being tested. If the driver habitually wears contact lenses, or intends to do so while driving, sufficient evidence of good tolerance and adaptation to their use must be obvious. Monocular drivers are not qualified.

Numerical readings must be provided.

ACUITY	UNCORRECTED	CORRECTED	HORIZONTAL FIELD OF VISION
Right Eye	20/	20/	Right Eye °
Left Eye	20/	20/	Left Eye °
Both Eyes	20/	20/	°

Applicant can recognize and distinguish among traffic control signals and devices showing standard red, green, and amber colors? Yes No

Applicant meets visual acuity requirement only when wearing:

Corrective Lenses

Monocular Vision: Yes No

Complete next line only if vision testing is done by an ophthalmologist or optometrist

Date of Examination _____ Name of Ophthalmologist or Optometrist (print) _____ Tel No. _____ License No /State of Issue _____ Signature _____

4. HEARING Standard: a) Must first perceive forced whispered voice > 5 ft., with or without hearing aid, or b) average hearing loss in better ear < 40 dB

Check if hearing aid used for tests. Check if hearing aid required to meet standard.

INSTRUCTIONS: To convert audiometric test results from ISO to ANSI, -14 dB from ISO for 500 Hz, -10 dB for 1,000 Hz, -8.5 dB for 2,000 Hz. To average, add the readings for 3 frequencies tested and divide by 3.

Numerical readings must be recorded.

a) Record distance from individual at which forced whispered voice can first be heard.	Right Ear		Left Ear		
	Feet	Feet	500 Hz	1000 Hz	2000 Hz
			Average:		

b) If audiometer is used, record hearing loss in decibels. (acc. to ANSI Z24.5-1951)	Right Ear			Left Ear		
	500 Hz	1000 Hz	2000 Hz	500 Hz	1000 Hz	2000 Hz
	Average:			Average:		

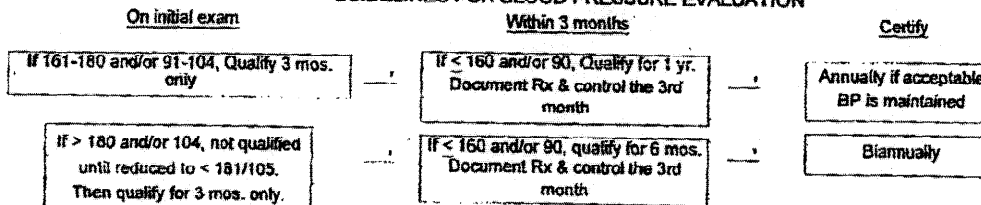
5. BLOOD PRESSURE / PULSE RATE Numerical readings must be recorded.

Blood Pressure	Systolic	Diastolic

Driver qualified if < 160/90 on initial exam.

Pulse Rate Regular Irregular

GUIDELINES FOR BLOOD PRESSURE EVALUATION



Medical examiner should take at least 2 readings to confirm blood pressure.

6. LABORATORY AND OTHER TEST FINDINGS Numerical readings must be recorded.

Urinalysis is required. Protein, blood or sugar in the urine may be an indication for further testing to rule out any underlying medical problem.

Other Testing (Describe and record)

URINE SPECIMEN	SP. GR.	PROTEIN	BLOOD	SUGAR

7. PHYSICAL EXAMINATION

Height: _____ (in.) Weight: _____ (lbs)

The presence of a certain condition may not necessarily disqualify a driver, particularly if the condition is controlled adequately, is not likely to worsen or is readily amenable to treatment. Even if a condition does not disqualify a driver, the medical examiner may consider deferring the driver temporarily. Also, the driver should be advised to take the necessary steps to correct the condition as soon as possible particularly if the condition, if neglected, could result in more serious illness that might affect driving.

Check YES if there are any abnormalities. Check NO if the body system is normal. Discuss any YES answers in detail in the space below, and indicate whether it would affect the driver's ability to operate a commercial motor vehicle safely. Enter applicable item number before each comment. If organic disease is present, note that it has been compensated for.

See *Instructions To The Medical Examiner* for guidance.

BODY SYSTEM	CHECK FOR:	YES*	NO	BODY SYSTEM	CHECK FOR:	YES*	NO
1. General Appearance	Marked overweight, tremor, signs of alcoholism, problem drinking, or drug abuse.			7. Abdomen and Viscera	Enlarged liver, enlarged spleen, masses, bruits, hernia, significant abdominal wall muscle weakness.		
2. Eyes	Pupillary equality, reaction to light, accommodation, ocular motility, ocular muscle imbalance, extraocular movement, nystagmus, exophthalmos, strabismus uncorrected by corrective lenses, retinopathy, cataracts, aphakia, glaucoma, macular degeneration.			8. Vascular system	Abnormal pulse and amplitude, carotid or arterial bruits, varicose veins.		
3. Ears	Middle ear disease, occlusion of external canal, perforated eardrums.			9. Genito-urinary system,	Hemias.		
4. Mouth and Throat	Irremediable deformities likely to interfere with breathing or swallowing.			10. Extremities - Limb impaired. Driver may be subject to SPE certificate if otherwise qualified.	Loss or impairment of leg, foot, toe, arm, hand, finger. Perceptible limp, deformities, atrophy, weakness, paralysis, clubbing, edema, hypotonia. Insufficient grasp and prehension in upper limb to maintain steering wheel grip. Insufficient mobility and strength in lower limb to operate pedals properly.		
5. Heart	Murmurs, extra sounds, enlarged heart, pacemaker.			11. Spine, other musculoskeletal	Previous surgery, deformities, limitation of motion, tenderness		
6. Lungs and chest, not including breast examination.	Abnormal chest wall expansion, abnormal respiratory rate, abnormal breath sounds including wheezes or alveolar rales, impaired respiratory function, dyspnea, cyanosis. Abnormal findings on physical exam may require further testing such as pulmonary tests and/or xray of chest.			12. Neurological	Impaired equilibrium, coordination or speech pattern; paresthesia, asymmetric deep tendon reflexes, sensory or positional abnormalities, abnormal patellar and Babinski's reflexes, ataxia.		

* COMMENTS: _____

Note certification status here. See *Instructions to the Medical Examiner* for guidance.

- Meets standards in 49 CFR 391.41; qualifies for 2 year certificate
- Does not meet standards
- Meets standards, but periodic evaluation required.
Due to _____ driver qualified only for:
 3 months 1 year
 6 months Other

- Wearing corrective lenses
- Wearing hearing aid
- Accompanied by a _____ waiver/exemption
- Skill Performance Evaluation (SPE) Certificate
- Driving within an exempt intracity zone.
- Qualified by operation of 49 CFR 391.64

Temporarily disqualified due to (condition or medication): _____

Return to medical examiner's office for follow up on _____

Medical Examiner's Signature _____
 Medical Examiner's Name (print) _____
 Address _____
 Telephone Number _____

If meets standards, complete a Medical Examiner's Certificate according to 49 CFR 391.43(h). (Driver must carry certificate when operating a commercial vehicle.)

49 CFR 391.41 Physical Qualifications for Drivers

THE DRIVER'S ROLE

Responsibilities, work schedules, physical and emotional demands, and lifestyles among commercial drivers vary by the type of driving that they do. Some of the main types of drivers include the following: turn around or short relay (drivers return to their home base each evening); long relay (drivers drive 8-10 hours and then have an 8-hour off-duty period), straight through haul (cross country drivers); and team drivers (drivers share the driving by alternating their 4-hour driving periods and 4-hour rest periods).

The following factors may be involved in a driver's performance of duties: abrupt schedule changes and rotating work schedules, which may result in irregular sleep patterns and a driver beginning a trip in a fatigued condition; long hours; extended time away from family and friends, which may result in lack of social support; tight pickup and delivery schedules, with irregularity in work, rest, and eating patterns, adverse road, weather and traffic conditions, which may cause delays and lead to hurriedly loading or unloading cargo in order to compensate for the lost time; and environmental conditions such as excessive vibration, noise, and extremes in temperature. Transporting passengers or hazardous materials may add to the demands on the commercial driver.

There may be duties in addition to the driving task for which a driver is responsible and needs to be fit. Some of these responsibilities are: coupling and uncoupling trailer(s) from the tractor, loading and unloading trailer(s) (sometimes a driver may lift a heavy load or unload as much as 50,000 lbs. of freight after sitting for a long period of time without any stretching period); inspecting the operating condition of tractor and trailer(s) before, during, and after delivery of cargo; lifting, installing, and removing heavy tire chains; and, lifting heavy tarpaulins to cover open top trailers. The above tasks demand agility, the ability to bend and stoop, the ability to maintain a crouching position to inspect the underside of the vehicle, frequent entering and exiting of the cab, and the ability to climb ladders on the tractor and/or trailer(s).

In addition, a driver must have the perceptual skills to monitor a sometimes complex driving situation, the judgment skills to make quick decisions, when necessary, and the manipulative skills to control an oversize steering wheel, shift gears using a manual transmission, and maneuver a vehicle in crowded areas.

§ 391.41 PHYSICAL QUALIFICATIONS FOR DRIVERS

(a) A person shall not drive a commercial motor vehicle unless he is physically qualified to do so and, except as provided in §391.67, has on his person the original, or a photographic copy, of a medical examiner's certificate that he is physically qualified to drive a commercial motor vehicle.

(b) A person is physically qualified to drive a motor vehicle if that person:
(1) Has no loss of a foot, a leg, a hand, or an arm, or has been granted a Skill Performance Evaluation (SPE) Certificate (formerly Limb Waiver Program) pursuant to §391.49.

(2) Has no impairment of: (i) A hand or finger which interferes with prehension or power grasping; or (ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or has been granted a SPE Certificate pursuant to §391.49.

(3) Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;

(4) Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure.

(5) Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with his ability to control and drive a commercial motor vehicle safely.

(6) Has no current clinical diagnosis of high blood pressure likely to interfere with his ability to operate a commercial motor vehicle safely.

(7) Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his ability to control and operate a commercial motor vehicle safely.

(8) Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a commercial motor vehicle;

(9) Has no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with his ability to drive a commercial motor vehicle safely;

(10) Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green and amber;

(11) First perceives a forced whispered voice in the better ear not less than 5 feet with or without the use of a hearing aid, or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951;

(12) (i) Does not use a controlled substance identified in 21 CFR 1308.11 Schedule I, an

amphetamine, a narcotic, or any other habit-forming drug. (ii) Exception: A driver may use such a substance or drug, if the substance or drug is prescribed by a licensed medical practitioner who: (A) Is familiar with the driver's medical history and assigned duties; and (B) Has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle; and
(13) Has no current clinical diagnosis of alcoholism.

INSTRUCTIONS TO THE MEDICAL EXAMINER

Federal Motor Carrier Safety Regulations

- Advisory Criteria -

General Information

The purpose of this examination is to determine a driver's physical qualification to operate a commercial motor vehicle (CMV) in interstate commerce according to the requirements in 49 CFR 391.41-49. Therefore, the medical examiner must be knowledgeable of these requirements and guidelines developed by the FMCSA to assist the medical examiner in making the qualification determination. The medical examiner should be familiar with the driver's responsibilities and work environment and is referred to the section on the form, The Driver's Role.

In addition to reviewing the Health History section with the driver and conducting the physical examination, the medical examiner should discuss common prescriptions and over-the-counter medications relative to the side effects and hazards of these medications while driving. Educate driver to read warning labels on all medications. History of certain conditions may be cause for rejection, particularly if required by regulation, or may indicate the need for additional laboratory tests or more stringent examination perhaps by a medical specialist. These decisions are usually made by the medical examiner in light of the driver's job responsibilities, work schedule and potential for the condition to render the driver unsafe.

Medical conditions should be recorded even if they are not cause for denial, and they should be discussed with the driver to encourage appropriate remedial care. This advice is especially needed when a condition, if neglected, could develop into a serious illness that could affect driving.

If the medical examiner determines that the driver is fit to drive and is also able to perform non-driving responsibilities as may be required, the medical examiner signs the medical certificate which the driver must carry with his/her license. The certificate must be dated. Under current regulations, the certificate is valid for two years, unless the driver has a medical condition that does not prohibit driving but does require more frequent monitoring. In such situations, the medical certificate should be issued for a shorter length of time. The physical examination should be done carefully and at least as complete as is indicated by the attached form. Contact the FMCSA at (202) 366-1790 for further information (a vision exemption, qualifying drivers under 49 CFR 391.64, etc.).

Interpretation of Medical Standards

Since the issuance of the regulations for physical qualifications of commercial drivers, the Federal Motor Carrier Safety Administration (FMCSA) has published recommendations called Advisory Criteria to help medical examiners in determining whether a driver meets the physical qualifications for commercial driving. These recommendations have been condensed to provide information to medical examiners that (1) is directly relevant to the physical examination and (2) is not already included in the medical examination form. The specific regulation is printed in *italics* and its reference by section is highlighted.

Loss of Limb:

§ 391.41(b)(1)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no loss of a foot, leg, hand or an arm, or has been granted a Skill Performance Evaluation (SPE) Certificate pursuant to Section 391.49.

Limb Impairment:

§ 391.41(b)(2)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no impairment of: (i) A hand or finger which interferes with prehension or power grasping; or (ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or (iii) Any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or (iv) Has been granted a Skill Performance Evaluation Certificate pursuant to Section 391.49.

A person who suffers loss of a foot, leg, hand or arm or whose limb impairment in any way interferes with the safe performance of normal tasks associated with operating a commercial motor vehicle is subject to the Skill Performance Evaluation (SPE) Certification Program pursuant to section 391.49, assuming the person is otherwise qualified.

With the advancement of technology, medical aids and equipment modifications have been developed to compensate for certain disabilities. The SPE Certification Program (formerly the Limb Waiver Program) was designed to allow persons with the loss of a foot or limb or with functional impairment to qualify under the Federal Motor Carrier Safety Regulations (FMCSRs) by use of prosthetic devices or equipment modifications which enable them to safely operate a commercial motor vehicle. Since there are no medical aids equivalent to the original body or limb, certain risks are still present, and thus restrictions may be included on individual SPE certificates when a State Director for the FMCSA determines they are necessary to be consistent with safety and public interest.

If the driver is found otherwise medically qualified (391.41(b)(3) through (13)), the medical examiner must check on the medical certificate that the driver is qualified only if accompanied by a SPE certificate. The driver and the employing motor carrier are subject to appropriate penalty if the driver operates a motor vehicle in interstate or foreign commerce without a current SPE certificate for his/her physical disability.

Diabetes

§ 391.41(b)(3)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control.

Diabetes mellitus is a disease which, on occasion, can result in a loss of consciousness or disorientation in time and space. Individuals who require insulin for control have conditions which can get out of control by the use of too much or too little insulin, or food intake not consistent with the insulin dosage. Incapacitation may occur from symptoms of hyperglycemic or hypoglycemic reactions (drowsiness, semiconsciousness, diabetic coma or insulin shock).

The administration of insulin is, within itself, a complicated process requiring insulin, syringe, needle, alcohol sponge and a sterile technique. Factors related to long-haul commercial motor vehicle operations, such as fatigue, lack of sleep, poor diet, emotional conditions, stress, and concomitant illness, compound the diabetic problem. Thus, because of these inherent dangers, the FMCSA has consistently held that a diabetic who uses insulin for control does not meet the minimum physical requirements of the FMCSRs.

Hypoglycemic drugs, taken orally, are sometimes prescribed for diabetic individuals to help stimulate natural body production of insulin. If the condition can be controlled by the use of oral medication and diet, then an individual may be qualified under the present rule.

(See Conference Report on Diabetic Disorders and Commercial Drivers and Insulin-Using Commercial Motor Vehicle Drivers at:

<http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Cardiovascular Condition

§ 391.41(b)(4)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse or congestive cardiac failure.

The term "has no current clinical diagnosis of" is specifically designed to encompass: "a clinical diagnosis of" (1) a current cardiovascular condition, or (2) a cardiovascular condition which has not fully stabilized regardless of the time limit. The term "known to be accompanied by" is defined to include: a clinical diagnosis of a cardiovascular disease (1) which is

accompanied by symptoms of syncope, dyspnea, collapse or congestive cardiac failure; and/or (2) which is likely to cause syncope, dyspnea, collapse or congestive cardiac failure.

It is the intent of the FMCSRs to render unqualified a driver who has a current cardiovascular disease which is accompanied by and/or likely to cause symptoms of syncope, dyspnea, collapse, or congestive cardiac failure. However, the subjective decision of whether the nature and severity of an individual's condition will likely cause symptoms of cardiovascular insufficiency is on an individual basis and qualification rests with the medical examiner and the motor carrier. In those cases where there is an occurrence of cardiovascular insufficiency (myocardial infarction, thrombosis, etc.), it is suggested before a driver is certified that he or she have a normal resting and stress electrocardiogram (ECG), no residual complications and no physical limitations, and is taking no medication likely to interfere with safe driving.

Coronary artery bypass surgery and pacemaker implantation are remedial procedures and thus, not unqualifying. Coumadin is a medical treatment which can improve the health and safety of the driver and should not, by its use, medically disqualify the commercial driver. The emphasis should be on the underlying medical condition(s) which require treatment and the general health of the driver. The FMCSA should be contacted at (202) 366-1790 for additional recommendations regarding the physical qualification of drivers on coumadin.

(See Conference on Cardiac Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Respiratory Dysfunction

§ 391.41(b)(5)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with ability to control and drive a commercial motor vehicle safely.

Since a driver must be alert at all times, any change in his or her mental state is in direct conflict with highway safety. Even the slightest impairment in respiratory function under emergency conditions (when greater oxygen supply is necessary for performance) may be detrimental to safe driving.

There are many conditions that interfere with oxygen exchange and may result in incapacitation, including emphysema, chronic asthma, carcinoma, tuberculosis, chronic bronchitis and sleep apnea. If the medical examiner detects a respiratory dysfunction, that in any way is likely to interfere with the driver's ability to safely control and drive a commercial motor vehicle, the driver must be referred to a specialist for further evaluation and therapy. Anticoagulation therapy for deep vein thrombosis and/or pulmonary thromboembolism is not unqualifying once optimum dose is achieved, provided lower extremity venous examinations remain normal and the treating physician gives a favorable recommendation.

(See Conference on Pulmonary/Respiratory Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Hypertension

§ 391.41(b)(6)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no current clinical diagnosis of high blood pressure likely to interfere with ability to operate a commercial motor vehicle safely.

Hypertension alone is unlikely to cause sudden collapse; however, the likelihood increases when target organ damage, particularly cerebral vascular disease, is present. This regulatory criteria is based on FMCSA's Cardiac Conference recommendations, which used the report of the 1984 Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure.

A blood pressure of 161-180 and/or 91-104 diastolic is considered mild hypertension, and the driver is not necessarily unqualified during evaluation and institution of treatment. The driver is given a 3-month period to reduce his or her blood pressure to less than or equal to 160/90; the certifying physician should state on the medical certificate that it is only valid for that 3-month period. If the driver is subsequently found qualified with a blood pressure less than or equal to 160/90, the certifying physician may issue a medical certificate for a 1-year period, but should confirm blood pressure control in the third month of this 1-year period. The individual should be certified annually thereafter. The expiration date must be stated on the medical certificate.

A blood pressure of greater than 180 systolic and/or greater than 104 diastolic is considered moderate to severe. The driver may not be qualified, even temporarily, until his or her blood pressure has been reduced to less than 181/105. The examining physician may temporarily certify the individual once the individual's blood pressure is below 181 and/or 105. For blood pressure greater than 180 and/or 104, documentation of continued control should be made every 6 months. The individual should be certified biannually thereafter. The expiration date must be stated on the medical certificate. Commercial drivers who present for certification with normal blood pressures but are taking medication(s) for hypertension should be certified on the same basis as individuals who present with blood pressures in the mild or moderate to severe range. Annual recertification is recommended if the medical examiner is unable to establish the blood pressure at the time of diagnosis.

An elevated blood pressure finding should be confirmed by at least two subsequent measurements on different days. Inquiry should be made regarding smoking, cardiovascular disease in relatives, and immoderate use of alcohol. An electrocardiogram (ECG) and blood profile, including glucose, cholesterol, HDL cholesterol, creatinine and potassium, should be made. An echocardiogram and chest x-ray are desirable in subjects with moderate or severe hypertension.

Since the presence of target damage increases the risk of sudden collapse, group 3 or 4 hypertensive retinopathy, left ventricular hypertrophy not otherwise explained (echocardiography or ECG by Estes criteria), evidence of severely reduced left ventricular function, or serum creatinine of greater than 2.5 warrants the driver being found unqualified to operate a commercial motor vehicle in interstate commerce.

Treatment includes nonpharmacologic and pharmacologic modalities as well as counseling to reduce other risk factors. Most antihypertensive medications also have side effects, the importance of which must be judged on an individual basis. Individuals must be alerted to the hazards of these medications while driving. Side effects of somnolence or syncope are particularly undesirable in commercial drivers.

A commercial driver who has normal blood pressure 3 or more months after a successful operation for pheochromocytoma, primary aldosteronism (unless bilateral adrenalectomy has been performed), renovascular disease, or unilateral renal parenchymal disease, and who shows no evidence of target organ may be qualified. Hypertension that persists despite surgical intervention with no target organ disease should be evaluated and treated following the guidelines set forth above. (See Conference on Cardiac Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Rheumatic, Arthritic, Orthopedic, Muscular, Neuromuscular or Vascular Disease

§ 391.41(b)(7)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease which interferes with ability to control and operate a commercial motor vehicle safely.

Certain diseases are known to have acute episodes of transient muscle weakness, poor muscular coordination (ataxia), abnormal sensations (paresthesia), decreased muscular tone (hypotonia), visual disturbances and pain which may be suddenly incapacitating. With each recurring episode, these symptoms may become more pronounced and remain for longer periods of time. Other diseases have more insidious onsets and display symptoms of muscle wasting (atrophy), swelling and paresthesia which may not suddenly incapacitate a person but may restrict his/her movements and eventually interfere with the ability to safely operate a motor vehicle. In many instances these diseases are degenerative in nature or may result in deterioration of the involved area.

Once the individual has been diagnosed as having a rheumatic, arthritic, orthopedic, muscular, neuromuscular or

vascular disease, then he/she has an established history of that disease. The physician, when examining an individual, should consider the following: (1) the nature and severity of the individual's condition (such as sensory loss or loss of strength); (2) the degree of limitation present (such as range of motion); (3) the likelihood of progressive limitation (not always present initially but may manifest itself over time); and (4) the likelihood of sudden incapacitation. If severe functional impairment exists, the driver does not qualify. In cases where more frequent monitoring is required, a certificate for a shorter time period may be issued. (See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Epilepsy

§ 391.41(b)(8)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a motor vehicle.

Epilepsy is a chronic functional disease characterized by seizures or episodes that occur without warning, resulting in loss of voluntary control which may lead to loss of consciousness and/or seizures. Therefore, the following drivers cannot be qualified: (1) a driver who has a medical history of epilepsy; (2) a driver who has a current clinical diagnosis of epilepsy; or (3) a driver who is taking antiseizure medication.

If an individual has had a sudden episode of a nonepileptic seizure or loss of consciousness of unknown cause which did not require antiseizure medication, the decision as to whether that person's condition will likely cause loss of consciousness or loss of ability to control a motor vehicle is made on an individual basis by the medical examiner in consultation with the treating physician. Before certification is considered, it is suggested that a 6-month waiting period elapse from the time of the episode. Following the waiting period, it is suggested that the individual have a complete neurological examination. If the results of the examination are negative and antiseizure medication is not required, then the driver may be qualified.

In those individual cases where a driver has a seizure or an episode of loss of consciousness that resulted from a known medical condition (e.g., drug reaction, high temperature, acute infectious disease, dehydration or acute metabolic disturbance), certification should be deferred until the driver has fully recovered from that condition and has no existing residual complications, and not taking antiseizure medication. (See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Mental Disorders

§ 391.41(b)(9)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no mental, nervous, organic or functional disease or psychiatric disorder likely to interfere with ability to drive a motor vehicle safely.

Emotional or adjustment problems contribute directly to an individual's level of memory, reasoning, attention and judgment. These problems often underlie physical disorders. A variety of functional disorders can cause drowsiness, dizziness, confusion, weakness or paralysis that may lead to incoordination, inattention, loss of functional control and susceptibility to accidents while driving. Physical fatigue, headache, impaired coordination, recurring physical ailments and chronic "nagging" pain may be present to such a degree that certification for commercial driving is inadvisable. Somatic and psychosomatic complaints should be thoroughly examined when determining an individual's overall fitness to drive. Disorders of a periodically incapacitating nature, even in the early stages of development, may warrant disqualification.

Many bus and truck drivers have documented that "nervous trouble" related to neurotic, personality, emotional or adjustment problems is responsible for a significant fraction of their preventable accidents. The degree to which an individual is able to appreciate, evaluate and adequately respond to environmental strain and emotional stress is critical when assessing an individual's mental alertness and flexibility to cope with the stresses of commercial motor vehicle driving.

When examining the driver, it should be kept in mind that individuals who live under chronic emotional upsets may have deeply ingrained maladaptive or erratic behavior patterns. Excessively antagonistic, instinctive, impulsive, openly aggressive, paranoid or severely depressed behavior greatly interfere with the driver's ability to drive safely. Those individuals who are highly susceptible to frequent states of emotional instability (schizophrenia, affective psychoses, paranoia, anxiety or depressive neuroses) may warrant disqualification. Careful consideration should be given to the side effects and interactions of medications in the overall qualification determination. See Psychiatric Conference Report for specific recommendations on the use of these medications and potential hazards for driving. (See Conference on Psychiatric Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Vision

§ 391.41(b)(10)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has distant visual acuity of at least 20/40 (Snellen) in each eye with or without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber.

The term "ability to recognize the colors of" is interpreted to mean if a person can recognize and distinguish among traffic control signals and devices showing standard red, green and amber, he or she meets the minimum standard, even though he or she may have some type of color perception deficiency. If certain color perception tests are administered, (such as Ishihara, Pseudoisochromatic, Yam) and doubtful findings are discovered, a controlled test using signal red, green and amber may be employed to determine the driver's ability to recognize these colors.

Contact lenses are permissible if there is sufficient evidence to indicate that the driver has good tolerance and is well adapted to their use. Use of a contact lens in one eye for distance visual acuity and another lens in the other eye for near vision is not acceptable, nor telescopic lenses acceptable for the driving of commercial motor vehicles.

If an individual meets the criteria by the use of glasses or contact lenses, the following statement shall appear on the Medical Examiner's Certificate: "Qualified only if wearing corrective lenses".

(See Visual Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Hearing

§ 391.41(b)(11)

A person is physically qualified to drive a commercial motor vehicle if that person:

First perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid, or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951. Since the prescribed standard under the FMCSRs is the American Standards Association (ANSI), it may be necessary to convert the audiometric results from the ISO standard to the ANSI standard. Instructions are included on the Medical Examination report form.

If an individual meets the criteria by using a hearing aid, the driver must wear that hearing aid and have it in operation at all times while driving. Also, the driver must be in possession of a spare power source for the hearing aid.

For the whispered voice test, the individual should be stationed at least 5 feet from the examiner with the ear being tested turned toward the examiner. The other ear is covered. Using the breath which remains after a normal expiration, the examiner whispers words or random numbers such as 66, 18, 23, etc. The examiner should not use only sibilants (s-sounding test materials). The opposite ear should be tested in the same manner. If the individual fails the whispered voice test, the audiometric test should be administered.

If an individual meets the criteria by the use of a hearing aid, the following statement must appear on the Medical Examiner's Certificate "Qualified only when wearing a hearing aid".

(See Hearing Disorders and Commercial Motor Vehicle Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Drug Use
§ 391.41(b)(12)

A person is physically qualified to drive a commercial motor vehicle if that person:

Does not use a controlled substance identified in 21 CFR 1308.11. Schedule I, an amphetamine, a narcotic, or any other habit-forming drug. Exception: A driver may use such a substance or drug, if the substance or drug is prescribed by a licensed medical practitioner who is familiar with the driver's medical history and assigned duties; and has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle.

This exception does not apply to methadone. The intent of the medical certification process is to medically evaluate a driver to ensure that the driver has no medical condition which interferes with the safe performance of driving tasks on a public road. If a driver uses a Schedule I drug or other substance, an amphetamine, a narcotic, or any other habit-forming drug, it may be cause for the driver to be found medically unqualified. Motor carriers are encouraged to obtain a practitioner's written statement about the effects on transportation safety of the use of a particular drug.

A test for controlled substances is not required as part of this biennial certification process. The FMCSA or the driver's employer should be contacted directly for information on controlled substances and alcohol testing under Part 382 of the FMCSRs.

The term "uses" is designed to encompass instances of prohibited drug use determined by a physician through established medical means. This may or may not involve body fluid testing. If body fluid testing takes place, positive test results should be confirmed by a second test of greater

specificity. The term "habit-forming" is intended to include any drug or medication generally recognized as capable of becoming habitual, and which may impair the user's ability to operate a commercial motor vehicle safely.

The driver is medically unqualified for the duration of the prohibited drug(s) use and until a second examination shows the driver is free from the prohibited drug(s) use.

Recertification may involve a substance abuse evaluation, the successful completion of a drug rehabilitation program, and a negative drug test result. Additionally, given that the certification period is normally two years, the examiner has the option to certify for a period of less than 2 years if this examiner determines more frequent monitoring is required. (See Conference on Neurological Disorders and Commercial Drivers and Conference on Psychiatric Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Alcoholism
§ 391.41(b)(13)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no current clinical diagnosis of alcoholism.

The term "current clinical diagnosis of" is specifically designed to encompass a current alcoholic illness or those instances where the individual's physical condition has not fully stabilized, regardless of the time element. If an individual shows signs of having an alcohol-use problem, he or she should be referred to a specialist. After counseling and/or treatment, he or she may be considered for certification.

(g) If the medical examiner finds that the person he/she examined is physically qualified to drive a commercial motor vehicle in accordance with § 391.41(b), the medical examiner shall complete a certificate in the form prescribed in paragraph (h) of this

section and furnish one copy to the person who was examined and one copy to the motor carrier that employs him/her.

(h) The medical examiner's certificate shall be substantially in accordance with the following form. Existing forms

may be used until current printed supplies are depleted or until November 6, 2001, whichever occurs first.

BILLING CODE 4910-22-P

MEDICAL EXAMINER'S CERTIFICATE

I certify that I have examined _____ in accordance with the Federal Motor Car-
rier Safety Regulations (49 CFR 391.41-391.49) and with knowledge of the driving duties, I find this person is qualified, and, if applicable, only when:

wearing corrective lenses
 wearing hearing aid
 accompanied by a _____ waives/exemption

driving within an exempt/excepted zone (49 CFR 391.52)
 accompanied by a Skill Performance Evaluation Certificate (SPE)
 Qualified by operation of 49 CFR 391.54

The information I have provided regarding this physical examination is true and complete. A complete examination form with any attachment embodies my findings completely and correctly, and is on file in my office.

SIGNATURE OF MEDICAL EXAMINER	TELEPHONE	DATE
MEDICAL EXAMINER'S NAME (PRINT)		
<input type="checkbox"/> MD <input type="checkbox"/> Physician Assistant	<input type="checkbox"/> DO	<input type="checkbox"/> Chiropractor <input type="checkbox"/> Advanced Practice Nurse
MEDICAL EXAMINER'S LICENSE OR CERTIFICATE NO. / ISSUING STATE		
SIGNATURE OF DRIVER	DRIVERS LICENSE NO. STATE	
ADDRESS OF DRIVER		
MEDICAL CERTIFICATE EXPIRATION DATE		

§ 391.49 [Amended]

4. Section 391.49 is amended in paragraph (d)(2) by revising the erroneous reference "§ 391.43(e)" to read "§ 391.43(h)".

[FR Doc. 00-25337 Filed 10-4-00; 8:45 am]
BILLING CODE 4910-22-C

DEPARTMENT OF COMMERCE**National Oceanic and Atmospheric Administration****50 CFR Part 679**

[Docket No. 000211039-0039-01; I.D. 092900A]

Fisheries of the Exclusive Economic Zone Off Alaska; Shortraker and Rougheye Rockfish in the Eastern Regulatory Area of the Gulf of Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Closure.

SUMMARY: NMFS is prohibiting retention of shortraker and rougheye rockfish in the Eastern Regulatory Area of the Gulf of Alaska (GOA). NMFS is requiring that catch of shortraker and rougheye rockfish in this area be treated in the same manner as prohibited species and discarded at sea with a minimum of injury. This action is necessary because the amount of the 2000 total allowable

catch (TAC) of shortraker and rougheye rockfish in this area has been reached.

DATES: Effective 1200 hrs, Alaska local time (A.l.t.), October 2, 2000, until 2400 hrs, A.l.t., December 31, 2000.

FOR FURTHER INFORMATION CONTACT: Nick Hindman 907-586-7006 or nick.hindman@noaa.gov.

SUPPLEMENTARY INFORMATION: NMFS manages the groundfish fishery in the GOA exclusive economic zone according to the Fishery Management Plan for Groundfish of the Gulf of Alaska (FMP) prepared by the North Pacific Fishery Management Council under authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations governing fishing by U.S. vessels in accordance with the FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

The amount of the 2000 TAC of shortraker and rougheye rockfish in the Eastern Regulatory Area of the GOA was established as 590 metric tons by the Final 2000 Harvest Specifications of Groundfish for the GOA (65 FR 8298, February 18, 2000). See § 679.20(c)(3)(ii).

In accordance with § 679.20(d)(2), the Administrator, Alaska Region, NMFS, has determined that the amount of the 2000 TAC for shortraker and rougheye rockfish in the Eastern Regulatory Area of the GOA has been reached. Therefore, NMFS is requiring that further catches of shortraker and rougheye rockfish in the Eastern Regulatory Area of the GOA

be treated as prohibited species in accordance with § 679.21(b).

Classification

This action responds to the best available information recently obtained from the fishery. NMFS finds that implementing this action immediately to prevent overharvesting the amount of the 2000 TAC for shortraker and rougheye rockfish in the Eastern Regulatory Area of the GOA constitutes good cause to waive the requirement to provide prior notice and the opportunity for public comment pursuant to authority set forth at 5 U.S.C. 553(b)(B) as such procedure would be impracticable and contrary to the public interest. Moreover, the fleet has taken the amount of the 2000 TAC for shortraker and rougheye rockfish in the Eastern Regulatory Area of the GOA. As further delay would only result in overharvest, NMFS finds that this constitutes good cause under 5 U.S.C. 553(d), to waive the delay in the effective date.

This action is required by § 679.20 and is exempt from review under E.O. 12866.

Authority: 16 U.S.C. 1801 *et seq.*

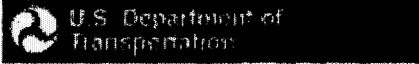
Dated: October 2, 2000.

Clarence Pautzke,

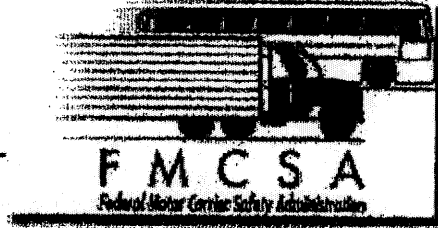
Director, Office of Sustainable Fisheries,
National Marine Fisheries Service.

[FR Doc. 00-25821 Filed 10-2-00; 4:30 pm]

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Federal Motor Carrier Safety Administration



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- [Visual Requirements and Commercial Drivers](#) (PDF - 88Kb)
- [Appendix A: Requirements for the FHWA Diabetes Waiver Program](#) (PDF - 347Kb)
- [Appendix B: Federal Register Notice Describing the FAA's Protocol for Certifying Third-Class ITDM Pilots](#) (PDF - 40Kb)
- [Appendix C: State Materials Used in the Process to Permit Some Individuals with ITDM to Operate CMVs In: Utah, Michigan, Delaware](#) (PDF - 808Kb)
- [Appendix C, Part II: Materials Used by Michigan, Delaware](#) (PDF - 1.2Mb)
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United States Department of Transportation Federal Motor Carrier Safety Administration

Medical Examination Report

FOR COMMERCIAL DRIVER FITNESS DETERMINATION

F (6045)

1. DRIVER'S INFORMATION Driver completes this section.

Driver's Name (Last, First, Middle)		Social Security No.	Birthdate M / D / Y	Age	Sex <input type="checkbox"/> M <input type="checkbox"/> F	<input type="checkbox"/> New Certification <input type="checkbox"/> Recertification <input type="checkbox"/> Follow Up	Date of Exam
Address	City, State, Zip Code	Work Tel: () Home Tel: ()		Driver License No.		License Class <input type="checkbox"/> A <input type="checkbox"/> C <input type="checkbox"/> B <input type="checkbox"/> D <input type="checkbox"/> Other	State of Issue

2. HEALTH HISTORY Driver completes this section, but medical examiner is encouraged to discuss with driver.

Yes No	Yes No	Yes No
<input type="checkbox"/> <input type="checkbox"/> Any illness or injury in last 5 years?	<input type="checkbox"/> <input type="checkbox"/> Lung disease, emphysema, asthma, chronic bronchitis	<input type="checkbox"/> <input type="checkbox"/> Fainting, dizziness
<input type="checkbox"/> <input type="checkbox"/> Head/Brain injuries, disorders or illnesses	<input type="checkbox"/> <input type="checkbox"/> Kidney disease, dialysis	<input type="checkbox"/> <input type="checkbox"/> Sleep disorders, pauses in breathing while asleep, daytime sleepiness, loud snoring
<input type="checkbox"/> <input type="checkbox"/> Seizures, epilepsy <input type="checkbox"/> medication _____	<input type="checkbox"/> <input type="checkbox"/> Liver disease	<input type="checkbox"/> <input type="checkbox"/> Stroke or paralysis
<input type="checkbox"/> <input type="checkbox"/> Eye disorders or impaired vision (except corrective lenses)	<input type="checkbox"/> <input type="checkbox"/> Digestive problems	<input type="checkbox"/> <input type="checkbox"/> Missing or impaired hand, arm, foot, leg, finger, toe
<input type="checkbox"/> <input type="checkbox"/> Ear disorders, loss of hearing or balance	<input type="checkbox"/> <input type="checkbox"/> Diabetes or elevated blood sugar controlled by: <input type="checkbox"/> diet <input type="checkbox"/> pills <input type="checkbox"/> insulin	<input type="checkbox"/> <input type="checkbox"/> Spinal injury or disease
<input type="checkbox"/> <input type="checkbox"/> Heart disease or heart attack; other cardiovascular condition <input type="checkbox"/> medication _____	<input type="checkbox"/> <input type="checkbox"/> Nervous or psychiatric disorders, e.g., severe depression <input type="checkbox"/> medication _____	<input type="checkbox"/> <input type="checkbox"/> Chronic low back pain
<input type="checkbox"/> <input type="checkbox"/> Heart surgery (valve replacement/bypass, angioplasty, pacemaker)	<input type="checkbox"/> <input type="checkbox"/> Loss of, or altered consciousness	<input type="checkbox"/> <input type="checkbox"/> Regular, frequent alcohol use
<input type="checkbox"/> <input type="checkbox"/> High blood pressure <input type="checkbox"/> medication _____		<input type="checkbox"/> <input type="checkbox"/> Narcotic or habit forming drug use
<input type="checkbox"/> <input type="checkbox"/> Muscular disease		
<input type="checkbox"/> <input type="checkbox"/> Shortness of breath		

For any YES answer, indicate onset date, diagnosis, treating physician's name and address, and any current limitation. List all medications (including over-the-counter medications) used regularly or recently.

I certify that the above information is complete and true. I understand that inaccurate, false or missing information may invalidate the examination and my Medical Examiner's Certificate.

Driver's Signature

Date

Medical Examiner's Comments on Health History (The medical examiner must review and discuss with the driver any "yes" answers and potential hazards of medications, including over-the-counter medications, while driving.)

If an individual meets the criteria by using a hearing aid, the driver must wear that hearing aid and have it in operation at all times while driving. Also, the driver must be in possession of a spare power source for the hearing aid.

For the whispered voice test, the individual should be stationed at least 5 feet from the examiner with the ear being tested turned toward the examiner. The other ear is covered. Using the breath which remains after a normal expiration, the examiner whispers words or random numbers such as 66, 18, 23, etc. The examiner should not use only sibilants (s-sounding test materials). The opposite ear should be tested in the same manner. If the individual fails the whispered voice test, the audiometric test should be administered.

If an individual meets the criteria by the use of a hearing aid, the following statement must appear on the Medical Examiner's Certificate "Qualified only when wearing a hearing aid."

(See Hearing Disorders and Commercial Motor Vehicle Drivers at:
<http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Drug Use

§391.41(b)(12)

A person is physically qualified to drive a commercial motor vehicle if that person:

Does not use a controlled substance identified in 21 CFR 1308.11, Schedule I, an amphetamine, a narcotic, or any other habit-forming drug. Exception: A driver may use such a substance or drug, if the substance or drug is prescribed by a licensed medical practitioner who is familiar with the driver's medical history and assigned duties; and has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle.

This exception does not apply to methadone. The intent of the medical certification process is to medically evaluate a driver to ensure that the driver has no medical condition which interferes with the safe performance of driving tasks on a public road. If a driver uses a Schedule I drug or other substance, an amphetamine, a narcotic, or any other habit-forming drug, it may be cause for the driver to be found medically unqualified. Motor carriers are encouraged to obtain a practitioner's written statement about the effects on transportation safety of the use of a particular drug.

A test for controlled substances is not required as part of this biennial certification process. The FMCSA or the driver's employer should be contacted directly for information on controlled substances and alcohol testing under Part 382 of the FMCSRs.

The term "uses" is designed to encompass instances of prohibited drug use determined by a physician through established medical means. This may or may not involve body fluid testing. If body fluid testing takes place, positive test results should be confirmed by a second test of greater specificity. The term "habit-forming" is intended to include

any drug or medication widely recognized as capable of becoming habitual, and which may impair the user's ability to operate a commercial motor vehicle safely.

The driver is medically unqualified for the duration of the prohibited drug(s) use and until a second examination shows the driver is free from the prohibited drug(s) use.

Recertification may involve a substance abuse evaluation, the successful completion of a drug rehabilitation program, and a negative drug test result. Additionally, given that the certification period is normally two years, the examiner has the option to certify for a period of less than 2 years if this examiner determines more frequent monitoring is required. (See Conference on Neurological Disorders and Commercial Drivers and Conference on Psychiatric Disorders and Commercial Drivers at:
<http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Alcoholism

§391.41(b)(13)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no current clinical diagnosis of alcoholism.

The term "current clinical diagnosis of" is specifically designed to encompass a current alcoholic illness or those instances where the individual's physical condition has not fully stabilized, regardless of the time element. If an individual shows signs of having an alcohol-use problem, he or she should be referred to a specialist. After counseling and/or treatment, he or she may be considered for certification.



7. PHYSICAL EXAMINATION

Height: _____ (in.) Weight: _____ (lbs.)

The presence of a certain condition may not necessarily disqualify a driver, particularly if the condition is controlled adequately, is not likely to worsen or is readily amenable to treatment. Even if a condition does not disqualify a driver, the medical examiner may consider deferring the driver temporarily. Also, the driver should be advised to take the necessary steps to correct the condition as soon as possible particularly if the condition, if neglected, could result in more serious illness that might affect driving.

Check YES if there are any abnormalities. Check NO if the body system is normal. Discuss any YES answers in detail in the space below, and indicate whether it would affect the driver's ability to operate a commercial motor vehicle safely. Enter applicable item number before each comment. If organic disease is present, note that it has been compensated for.

See *Instructions to the Medical Examiner for guidance.*

BODY SYSTEM	CHECK FOR:	YES*	NO	BODY SYSTEM	CHECK FOR:	YES*	NO
1. General Appearance	Marked overweight, tremor, signs of alcoholism, problem drinking, or drug abuse.			7. Abdomen and Viscera	Enlarged liver, enlarged spleen, masses, bruits, hernia, significant abdominal wall muscle weakness.		
2. Eyes	Pupillary equality, reaction to light, accommodation, ocular motility, ocular muscle imbalance, extraocular movement, nystagmus, exophthalmos, strabismus uncorrected by corrective lenses, retinopathy, cataracts, aphakia, glaucoma, macular degeneration.			8. Vascular System	Abnormal pulse and amplitude, carotid or arterial bruits, varicose veins.		
3. Ears	Middle ear disease, occlusion of external canal, perforated eardrums.			9. Genito-urinary System	Hemias.		
4. Mouth and Throat	Irremediable deformities likely to interfere with breathing or swallowing.			10. Extremities - Limb impaired. Driver may be subject to SPE certificate if otherwise qualified.	Loss or impairment of leg, foot, toe, arm, hand, finger. Perceptible limp, deformities, atrophy, weakness, paralysis, clubbing, edema, hypotonia. Insufficient grasp and prehension in upper limb to maintain steering wheel grip. Insufficient mobility and strength in lower limb to operate pedals properly.		
5. Heart	Murmurs, extra sounds, enlarged heart, pacemaker.			11. Spine, other musculoskeletal	Previous surgery, deformities, limitation of motion, tenderness.		
6. Lungs and chest, not including breast examination.	Abnormal chest wall expansion, abnormal respiratory rate, abnormal breath sounds including wheezes or alveolar rales, impaired respiratory function, dyspnea, cyanosis. Abnormal findings on physical exam may require further testing such as pulmonary tests and/or xray of chest.			12. Neurological	Impaired equilibrium, coordination or speech pattern; paresthesia, asymmetric deep tendon reflexes, sensory or positional abnormalities, abnormal patellar and Babinski's reflexes, ataxia.		

*COMMENTS: _____

Note certification status here. See *Instructions to the Medical Examiner for guidance.*

Meets standards in 49 CFR 391.41; qualifies for 2 year certificate

Does not meet standards

Meets standards, but periodic evaluation required

Due to _____ driver qualified only for:

3 months 1 year

6 months Other

Temporarily disqualified due to (condition or medication): _____

Return to medical examiner's office for follow up on _____

Wearing corrective lenses

Wearing hearing aid

Accompanied by a _____ waiver/exemption

Skill Performance Evaluation (SPE) Certificate

Driving within an exempt intracity zone

Qualified by operation of 49 CFR 391.64

Medical Examiner's Signature _____

Medical Examiner's Name (print) _____

Address _____

Telephone Number _____

If meets standards, complete a Medical Examiner's Certificate according to 49 CFR 391.43(h). (Driver must carry certificate when operating a commercial vehicle.)

which is accompanied by symptoms of syncope, dyspnea, collapse or congestive cardiac failure; and/or (2) which is likely to cause syncope, dyspnea, collapse or congestive cardiac failure.

It is the intent of the FMCSRs to render unqualified, a driver who has a current cardiovascular disease which is accompanied by and/or likely to cause symptoms of syncope, dyspnea, collapse, or congestive cardiac failure. However, the subjective decision of whether the nature and severity of an individual's condition will likely cause symptoms of cardiovascular insufficiency is on an individual basis and qualification rests with the medical examiner and the motor carrier. In those cases where there is an occurrence of cardiovascular insufficiency (myocardial infarction, thrombosis, etc.), it is suggested before a driver is certified that he or she have a normal resting and stress electrocardiogram (ECG), no residual complications and no physical limitations, and is taking no medication likely to interfere with safe driving.

Coronary artery bypass surgery and pacemaker implantation are remedial procedures and thus, not unqualifying. Coumadin is a medical treatment which can improve the health and safety of the driver and should not, by its use, medically disqualify the commercial driver. The emphasis should be on the underlying medical condition(s) which require treatment and the general health of the driver. The FMCSA should be contacted at (202) 366-1790 for additional recommendations regarding the physical qualification of drivers on coumadin. (See Conference on Cardiac Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Respiratory Dysfunction §391.41(b)(5)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with ability to control and drive a commercial motor vehicle safely.

Since a driver must be alert at all times, any change in his or her mental state is in direct conflict with highway safety. Even the slightest impairment in respiratory function under emergency conditions (when greater oxygen supply is necessary for performance) may be detrimental to safe driving.

There are many conditions that interfere with oxygen exchange and may result in incapacitation, including emphysema, chronic asthma, carcinoma, tuberculosis, chronic bronchitis and sleep apnea. If the medical examiner detects a respiratory dysfunction, that in any way is likely to interfere with the driver's ability to safely control and drive a commercial motor vehicle, the driver must be referred to a specialist for further evaluation and therapy. Anticoagulation therapy for deep vein thrombosis and/or pulmonary thromboembolism is not unqualifying once optimum dose is achieved. Added lower extremity venous examinations

remain normal and the treating physician gives a favorable recommendation.

(See Conference on Pulmonary/Respiratory Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Hypertension §391.41(b)(6)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no current clinical diagnosis of high blood pressure likely to interfere with ability to operate a commercial motor vehicle safely.

Hypertension alone is unlikely to cause sudden collapse; however, the likelihood increases when target organ damage, particularly cerebral vascular disease, is present. This regulatory criteria is based on FMCSA's Cardiac Conference recommendations, which used the report of the 1984 Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure.

A blood pressure of 161-180 and/or 91-104 diastolic is considered mild hypertension, and the driver is not necessarily unqualified during evaluation and institution of treatment. The driver is given a 3-month period to reduce his or her blood pressure to less than or equal to 160/90; the certifying physician should state on the medical certificate that it is only valid for that 3-month period. If the driver is subsequently found qualified with a blood pressure less than or equal to 160/90, the certifying physician may issue a medical certificate for a 1-year period, but should confirm blood pressure control in the third month of this 1-year period. The individual should be certified annually thereafter. The expiration date must be stated on the medical certificate.

A blood pressure of greater than 180 systolic and/or greater than 104 diastolic is considered moderate to severe. The driver may not be qualified, even temporarily, until his or her blood pressure has been reduced to less than 181/105. The examining physician may temporarily certify the individual once the individual's blood pressure is below 181 and/or 105. For blood pressure greater than 180 and/or 104, documentation of continued control should be made every 6 months. The individual should be certified biannually thereafter. The expiration date must be stated on the medical certificate. Commercial drivers who present for certification with normal blood pressures but are taking medication(s) for hypertension should be certified on the same basis as individuals who present with blood pressures in the mild or moderate to severe range. Annual recertification is recommended if the medical examiner is unable to establish the blood pressure at the time of diagnosis.

An elevated blood pressure finding should be confirmed by at least two subsequent measurements on different days. Inquiry should be made regarding smoking, cardiovascular disease in relatives, and immoderate use of alcohol. An electrocardiogram (ECG) and blood profile, including glucose, cholesterol, HDL cholesterol, creatinine and potassium, should be made. An echocardiogram and chest x-ray are

desirable in subjects with moderate or severe hypertension.

Since the presence of target damage increases the risk of sudden collapse, group 3 or 4 hypertensive retinopathy, left ventricular hypertrophy not otherwise explained (echocardiography or ECG by Estes criteria), evidence of severely reduced left ventricular function, or serum creatinine of greater than 2.5 warrants the driver being found unqualified to operate a commercial motor vehicle in interstate commerce.

Treatment includes nonpharmacologic and pharmacologic modalities as well as counseling to reduce other risk factors. Most antihypertensive medications also have side effects, the importance of which must be judged on an individual basis. Individuals must be alerted to the hazards of these medications while driving. Side effects of somnolence or syncope are particularly undesirable in commercial drivers.

A commercial driver who has normal blood pressure 3 or more months after a successful operation for pheochromocytoma, primary aldosteronism (unless bilateral adrenalectomy has been performed), renovascular disease, or unilateral renal parenchymal disease, and who shows no evidence of target organ may be qualified. Hypertension that persists despite surgical intervention with no target organ disease should be evaluated and treated following the guidelines set forth above.

(See Conference on Cardiac Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Rheumatic, Arthritic, Orthopedic, Muscular, Neuromuscular or Vascular Disease §391.41(b)(7)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease which interferes with ability to control and operate a commercial motor vehicle safely.

Certain diseases are known to have acute episodes of transient muscle weakness, poor muscular coordination (ataxia), abnormal sensations (paresthesia), decreased muscular tone (hypotonia), visual disturbances and pain which may be suddenly incapacitating. With each recurring episode, these symptoms may become more pronounced and remain for longer periods of time. Other diseases have more insidious onsets and display symptoms of muscle wasting (atrophy), swelling and paresthesia which may not suddenly incapacitate a person but may restrict his/her movements and eventually interfere with the ability to safely operate a motor vehicle. In many instances these diseases are degenerative in nature or may result in deterioration of the involved area.

Once the individual has been diagnosed as having a rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease, then he/she has an established history of that disease. The physician, when examining an individual, should consider the following: (1) the nature and severity of

INSTRUCTIONS TO THE MEDICAL EXAMINER

General Information

The purpose of this examination is to determine a driver's physical qualification to operate a commercial motor vehicle (CMV) in interstate commerce according to the requirements in 49 CFR 391.41-49. Therefore, the medical examiner must be knowledgeable of these requirements and guidelines developed by the FMCSA to assist the medical examiner in making the qualification determination. The medical examiner should be familiar with the driver's responsibilities and work environment and is referred to the section on the form, The Driver's Role.

In addition to reviewing the Health History section with the driver and conducting the physical examination, the medical examiner should discuss common prescriptions and over-the-counter medications relative to the side effects and hazards of these medications while driving. Educate driver to read warning labels on all medications. History of certain conditions may be cause for rejection, particularly if required by regulation, or may indicate the need for additional laboratory tests or more stringent examination perhaps by a medical specialist. These decisions are usually made by the medical examiner in light of the driver's job responsibilities, work schedule and potential for the condition to render the driver unsafe.

Medical conditions should be recorded even if they are not cause for denial, and they should be discussed with the driver to encourage appropriate remedial care. This advice is especially needed when a condition, if neglected, could develop into a serious illness that could affect driving.

If the medical examiner determines that the driver is fit to drive and is also able to perform non-driving responsibilities as may be required, the medical examiner signs the medical certificate which the driver must carry with his/her license. The certificate must be dated. Under current regulations, the certificate is valid for two years, unless the driver has a medical condition that does not prohibit driving but does require more frequent monitoring. In such situations, the medical certificate should be issued for a shorter length of time. The physical examination should be done carefully and at least as complete as is indicated by the attached form. Contact the FMCSA at (202) 366-1790 for further information (a vision exemption, qualifying drivers under 49 CFR 391.64, etc.).

Interpretation of Medical Standards

Since the issuance of the regulations for physical qualifications of commercial drivers, the Federal Motor Carrier Safety Administration (FMCSA) has published recommendations called Advisory Criteria to help medical examiners in determining whether a driver meets the physical qualifications for commercial driving. These recommendations have been condensed to provide information to medical examiners that (1) is directly relevant to the physical examination and (2) is not already included in the medical examination form. The specific regulation is printed in italics and its reference by section is highlighted.

Federal Motor Carrier Safety Regulations - Advisory Criteria -

Loss of Limb:

§391.41(b)(1)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no loss of a foot, leg, hand or an arm, or has been granted a Skill Performance Evaluation (SPE) Certificate pursuant to Section 391.49.

Limb Impairment:

§391.41(b)(2)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no impairment of: (i) A hand or finger which interferes with prehension or power grasping; or (ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or (iii) Any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or (iv) Has been granted a Skill Performance Evaluation Certificate pursuant to Section 391.49.

A person who suffers loss of a foot, leg, hand or arm or whose limb impairment in any way interferes with the safe performance of normal tasks associated with operating a commercial motor vehicle is subject to the Skill Performance Evaluation (SPE) Certification Program pursuant to section 391.49, assuming the person is otherwise qualified.

With the advancement of technology, medical aids and equipment modifications have been developed to compensate for certain disabilities. The SPE Certification Program (formerly the Limb Waiver Program) was designed to allow persons with the loss of a foot or limb or with functional impairment to qualify under the Federal Motor Carrier Safety Regulations (FMCSRs) by use of prosthetic devices or equipment modifications which enable them to safely operate a commercial motor vehicle. Since there are no medical aids equivalent to the original body or limb, certain risks are still present, and thus restrictions may be included on individual SPE certificates when a State Director for the FMCSA determines they are necessary to be consistent with safety and public interest.

If the driver is found otherwise medically qualified (391.41(b)(3) through (13)), the medical examiner must check on the medical certificate that the driver is qualified only if accompanied by a SPE certificate. The driver and the employing motor carrier are subject to appropriate penalty if the driver operates a motor vehicle in interstate or foreign commerce without a current SPE certificate for his/her physical disability.

Diabetes

§391.41(b)(3)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control.

Diabetes mellitus is a disease which, on occasion, can result in a loss of consciousness or disorientation in time and space. Individuals who require insulin for control have conditions which can get out of control by the use of too much or too little insulin, or food intake not consistent with the insulin dosage. Incapacitation may occur from symptoms of hyperglycemic or hypoglycemic reactions (drowsiness, semiconsciousness, diabetic coma or insulin shock).

The administration of insulin is, within itself, a complicated process requiring insulin, syringe, needle, alcohol sponge and a sterile technique. Factors related to long-haul commercial motor vehicle operations, such as fatigue, lack of sleep, poor diet, emotional conditions, stress, and concomitant illness, compound the diabetic problem. Thus, because of these inherent dangers, the FMCSA has consistently held that a diabetic who uses insulin for control does not meet the minimum physical requirements of the FMCSRs.

Hypoglycemic drugs, taken orally, are sometimes prescribed for diabetic individuals to help stimulate natural body production of insulin. If the condition can be controlled by the use of oral medication and diet, then an individual may be qualified under the present rule.

(See Conference Report on Diabetic Disorders and Commercial Drivers and Insulin-Using Commercial Motor Vehicle Drivers at:
<http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Cardiovascular Condition

§391.41(b)(4)

A person is physically qualified to drive a commercial motor vehicle if that person:

Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse or congestive cardiac failure.

The term "has no current clinical diagnosis of" is specifically designed to encompass: "a clinical diagnosis of" (1) a current cardiovascular condition, or (2) a cardiovascular condition which has not fully stabilized regardless of the time limit. The term "known to be accompanied by" is defined to include: a clinical diagnosis of a cardiovascular disease (1)

49 CFR 391.41 Physical Qualifications for Drivers

THE DRIVER'S ROLE

Responsibilities, work schedules, physical and emotional demands, and lifestyles among commercial drivers vary by the type of driving that they do. Some of the main types of drivers include the following: turn around or short relay (drivers return to their home base each evening); long relay (drivers drive 8-10 hours and then have an 8-hour off-duty period), straight through haul (cross country drivers); and team drivers (drivers share the driving by alternating their 4-hour driving periods and 4-hour rest periods).

The following factors may be involved in a driver's performance of duties: abrupt schedule changes and rotating work schedules, which may result in irregular sleep patterns and a driver beginning a trip in a fatigued condition; long hours; extended time away from family and friends, which may result in lack of social support; tight pickup and delivery schedules, with irregularity in work, rest, and eating patterns, adverse road, weather and traffic conditions, which may cause delays and lead to hurriedly loading or unloading cargo in order to compensate for the lost time; and environmental conditions such as excessive vibration, noise, and extremes in temperature. Transporting passengers or hazardous materials may add to the demands on the commercial driver.

There may be duties in addition to the driving task for which a driver is responsible and needs to be fit. Some of these responsibilities are: coupling and uncoupling trailer(s) from the tractor, loading and unloading trailer(s) (sometimes a driver may lift a heavy load or unload as much as 50,000 lbs. of freight after sitting for a long period of time without any stretching period); inspecting the operating condition of tractor and trailer(s) before, during, and after delivery of cargo; lifting, installing, and removing heavy tire chains; and, lifting heavy tarpaulins to cover open top trailers. The above tasks demand agility, the ability to bend and stoop, the ability to maintain a crouching position to inspect the underside of the vehicle, frequent entering and exiting of the cab, and the ability to climb ladders on the tractor and/or trailer(s).

In addition, a driver must have the perceptual skills to monitor a sometimes complex driving situation, the judgment skills to make quick decisions, when necessary, and the manipulative skills to control an oversize steering wheel, shift gears using a manual transmission, and maneuver a vehicle in crowded areas.

§391.41 PHYSICAL QUALIFICATIONS FOR DRIVERS

(a) A person shall not drive a commercial motor vehicle unless he is physically qualified to do so and, except as provided in §391.67, has on his person the original, or a photographic copy, of a medical examiner's certificate that he is physically qualified to drive a commercial motor vehicle.

(b) A person is physically qualified to drive a motor vehicle if that person:

(1) Has no loss of a foot, a leg, a hand, or an arm, or has been granted a Skill Performance Evaluation (SPE) Certificate (formerly Limb Waiver Program) pursuant to §391.49.

(2) Has no impairment of: (i) A hand or finger which interferes with prehension or power grasping; or (ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or has been granted a SPE Certificate pursuant to §391.49.

(3) Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;

(4) Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure.

(5) Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with his ability to control and drive a commercial motor vehicle safely.

(6) Has no current clinical diagnosis of high blood pressure likely to interfere with his ability to operate a commercial motor vehicle safely.

(7) Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his ability to control and operate a commercial motor vehicle safely.

(8) Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a commercial motor vehicle;

(9) Has no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with his ability to drive a commercial motor vehicle safely;

(10) Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green and amber;

(11) First perceives a forced whispered voice in the better ear not less than 5 feet with or without the use of a hearing aid, or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951;

(12) (i) Does not use a controlled substance identified in 21 CFR 1308.11 Schedule I, an amphetamine, a narcotic, or any other habit-forming drug. (ii) Exception: A driver may use such a substance or drug, if the substance or drug is prescribed by a licensed medical practitioner who: (A) is familiar with the driver's medical history and assigned duties; and (B) Has advised the driver that the prescribed substance

or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle; and

(13) Has no current clinical diagnosis of alcoholism.

the individual's condition (such as sensory loss or loss of strength); (2) the degree of limitation present (such as range of motion); (3) the likelihood of progressive limitation (not always present initially but may manifest itself over time); and (4) the likelihood of sudden incapacitation. If severe functional impairment exists, the driver does not qualify. In cases where more frequent monitoring is required, a certificate for a shorter time period may be issued. (See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Epilepsy §391.41(b)(8)

A person is physically qualified to drive a commercial motor vehicle if that person:
Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a motor vehicle.

Epilepsy is a chronic functional disease characterized by seizures or episodes that occur without warning, resulting in loss of voluntary control which may lead to loss of consciousness and/or seizures. Therefore, the following drivers cannot be qualified: (1) a driver who has a medical history of epilepsy; (2) a driver who has a current clinical diagnosis of epilepsy; or (3) a driver who is taking antiseizure medication.

If an individual has had a sudden episode of a nonepileptic seizure or loss of consciousness of unknown cause which did not require antiseizure medication, the decision as to whether that person's condition will likely cause loss of consciousness or loss of ability to control a motor vehicle is made on an individual basis by the medical examiner in consultation with the treating physician. Before certification is considered, it is suggested that a 6-month waiting period elapse from the time of the episode. Following the waiting period, it is suggested that the individual have a complete neurological examination. If the results of the examination are negative and antiseizure medication is not required, then the driver may be qualified.

In those individual cases where a driver has a seizure or an episode of loss of consciousness that resulted from a known medical condition (e.g., drug reaction, high temperature, acute infectious disease, dehydration or acute metabolic disturbance), certification should be deferred until the driver has fully recovered from that condition and has no existing residual complications, and not taking antiseizure medication. (See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Mental Disorders §391.41(b)(9)

A person is physically qualified to drive a commercial motor vehicle if that person:
Has no mental, nervous, organic or functional disease or psychiatric disorder likely to interfere with ability to drive a motor vehicle safely.

Emotional or adjustment problems contribute directly to an individual's level of memory, reasoning, attention and judgment. These problems often underlie physical disorders. A variety of functional disorders can cause drowsiness, dizziness, confusion, weakness or paralysis that may lead to incoordination, inattention, loss of functional control and susceptibility to accidents while driving. Physical fatigue, headache, impaired coordination, recurring physical ailments and chronic "nagging" pain may be present to such a degree that certification for commercial driving is inadvisable. Somatic and psychosomatic complaints should be thoroughly examined when determining an individual's overall fitness to drive. Disorders of a periodically incapacitating nature, even in the early stages of development, may warrant disqualification.

Many bus and truck drivers have documented that "nervous trouble" related to neurotic, personality, emotional or adjustment problems is responsible for a significant fraction of their preventable accidents. The degree to which an individual is able to appreciate, evaluate and adequately respond to environmental strain and emotional stress is critical when assessing an individual's mental alertness and flexibility to cope with the stresses of commercial motor vehicle driving.

When examining the driver, it should be kept in mind that individuals who live under chronic emotional upsets may have deeply ingrained maladaptive or erratic behavior patterns. Excessively antagonistic, instinctive, impulsive, openly aggressive, paranoid or severely depressed behavior patterns. Excessively antagonistic, instinctive, impulsive, openly aggressive, paranoid or severely depressed behavior greatly interfere with the driver's ability to drive safely. Those individuals who are highly susceptible to frequent states of emotional instability (schizophrenia, affective psychoses, paranoia, anxiety or depressive neuroses) may warrant disqualification. Careful consideration should be given to the side effects and interactions of medications in the overall qualification determination. See Psychiatric Conference Report for specific recommendations on the use of these medications and potential hazards for driving. (See Conference on Psychiatric Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Vision §391.41(b)(10)

A person is physically qualified to drive a commercial motor vehicle if that person:
Has distant visual acuity of at least 20/40 (Snellen) in each eye with or without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber.

The term "ability to recognize the colors of" is interpreted to mean if a person can recognize and distinguish among traffic control signals and devices showing standard red, green and amber, he or she meets the minimum standard, even though he or she may have some type of color perception deficiency. If certain color perception tests are administered, (such as Ishihara, Pseudoisochromatic, Yarn) and doubtful findings are discovered, a controlled test using signal red, green and amber may be employed to determine the driver's ability to recognize these colors.

Contact lenses are permissible if there is sufficient evidence to indicate that the driver has good tolerance and is well adapted to their use. Use of a contact lens in one eye for distance visual acuity and another lens in the other eye for near vision is not acceptable, nor telescopic lenses acceptable for the driving of commercial motor vehicles.

If an individual meets the criteria by the use of glasses or contact lenses, the following statement shall appear on the Medical Examiner's Certificate: "Qualified only if wearing corrective lenses." (See Visual Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

Hearing §391.41(b)(11)

A person is physically qualified to drive a commercial motor vehicle if that person:
First perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid, or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951.

Since the prescribed standard under the FMCSRs is the American Standards Association (ANSI), it may be necessary to convert the audiometric results from the ISO standard to the ANSI standard. Instructions are included on the Medical Examination report form.

TESTING (Medical Examiner completes Section 3 through 7)

3. VISION

Standard: At least 20/40 acuity (Snellen) in each eye with or without correction. At least 70° peripheral in horizontal meridian measured in each eye. The use of corrective lenses should be noted on the Medical Examiner's Certificate.

INSTRUCTIONS: When other than the Snellen chart is used, give test results in Snellen-comparable values. In recording distance vision, use 20 feet as normal. Report visual acuity as a ratio with 20 as numerator and the smallest type read at 20 feet as denominator. If the applicant wears corrective lenses, these should be worn while visual acuity is being tested. If the driver habitually wears contact lenses, or intends to do so while driving, sufficient evidence of good tolerance and adaptation to their use must be obvious. Monocular drivers are not qualified.

Numerical readings must be provided.

ACUITY	UNCORRECTED	CORRECTED	HORIZONTAL FIELD OF VISION
Right Eye	20/	20/	Right Eye °
Left Eye	20/	20/	Left Eye °
Both Eyes	20/	20/	°

Applicant can recognize and distinguish among traffic control signals and devices showing standard red, green and amber colors? Yes No

Applicant meets visual acuity requirement only when wearing:

Corrective Lenses

Monocular Vision: Yes No

Complete next line only if vision testing is done by an ophthalmologist or optometrist

Date of Examination _____ Name of Ophthalmologist or Optometrist (print) _____ Tel. No. _____ License No./State of Issue _____ Signature _____

4. HEARING

Standard: a) Must first perceive forced whispered voice ≥ 5 ft., with or without hearing aid, or b) average hearing loss in better ear ≤ 40 dB

Check if hearing aid used for tests. Check if hearing aid required to meet standard.

INSTRUCTIONS: To convert audiometric test results from ISO to ANSI, -14 dB from ISO for 500 Hz, -10 dB for 1,000 Hz, -8.5 dB for 2,000 Hz. To average, add the readings for 3 frequencies tested and divide by 3.

Numerical readings must be recorded.

a) Record distance from individual at which forced whispered voice can first be heard.	Right Ear	Left Ear
	Feet	Feet

b) If audiometer is used, record hearing loss in decibels. (acc. to ANSI Z24.5-1951)

Right Ear			Left Ear		
500 Hz	1000 Hz	2000 Hz	500 Hz	1000 Hz	2000 Hz
Average:			Average:		

5. BLOOD PRESSURE / PULSE RATE

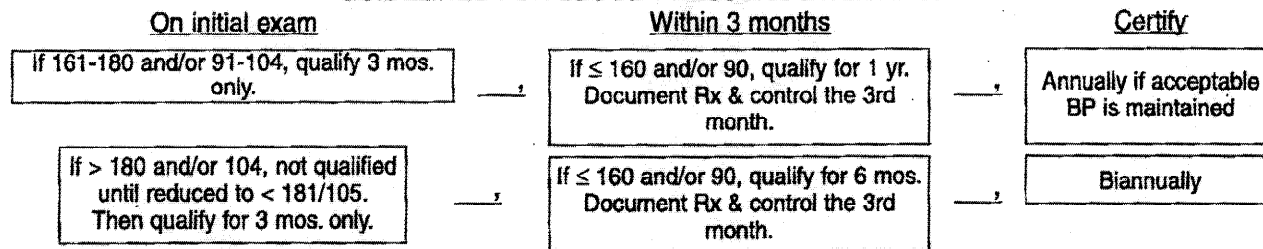
Numerical readings must be recorded.

Blood Pressure	Systolic	Diastolic
----------------	----------	-----------

Driver qualified if ≤ 160/90 on initial exam.

Pulse Rate	<input type="checkbox"/> Regular	<input type="checkbox"/> Irregular
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GUIDELINES FOR BLOOD PRESSURE EVALUATION



Medical examiner should take at least 2 readings to confirm blood pressure.

6. LABORATORY AND OTHER TEST FINDINGS

Numerical readings must be recorded.

Urinalysis is required. Protein, blood or sugar in the urine may be an indication for further testing to rule out any underlying medical problem.

Other Testing (Describe and record)

URINE SPECIMEN	SP. GR.	PROTEIN	BLOOD	SUGAR
----------------	---------	---------	-------	-------



AMERICAN COLLEGE OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE

Welcome to ACOEM's Website

The world's largest organization of occupational and environmental physicians, ACOEM is dedicated to promoting and protecting the health of workers through preventive services, clinical care, research, and educational programs.

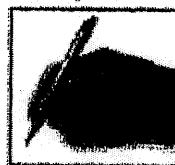
To achieve this goal, the College provides courses and conferences, newsletters, the *Journal of Occupational and Environmental Medicine*, and numerous other services.

Our presence on the Internet is yet another method for the College to assist physicians in caring for workers.

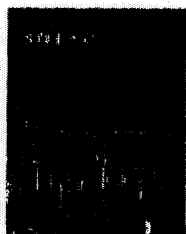


ACOEM Provides Resources for Occupational Physicians to deal with September 11 Terrorist Attacks

Let us know what you think



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Call 847-818-1800 x371 to register now!

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This site will continue to expand as ACOEM provides additional material on the Internet. So visit us frequently to receive the most up-to-date information in the field of occupational and environmental medicine. Please e-mail any questions or comments to: webmaster@ACOEM.org

The information contained in this web site should not be used as a substitute for the medical care and advice of your physician. There may be variations in treatment that your physician may recommend based on individual facts and circumstances.

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Last Updated October 24 2001

COURSE SUMMARY

Length: One day, 8:00 am – 5:00 pm

Dates	Locations	Registration Deadline
April 21	San Francisco, CA	Register by March 23
September 14	Chicago (Rosemont), IL	Register by August 31
October 27	Seattle, WA	Register by October 5

You should attend the Commercial Driver Medical Examiner course if you are:

- A physician (including occupational medicine specialist, family practitioner, and internist), physician's assistant, advanced practice nurse, occupational health nurse, or other health care professional responsible for or involved in commercial driver medical certification.

Format Lecture, discussion, case study, faculty panel.

CME Credit ACOEM designates this educational activity for up to 7 hours in category 1 credit toward the AMA Physician's Recognition Award (PRA). Each physician should claim only those hours of credit that he or she actually spent in the educational activity.

AAFP Prescribed Hours This activity has been reviewed and is acceptable for up to 7 prescribed credit hours by the American Academy of Family Physicians.

Tuition (includes course syllabus, breakfast, lunch, and refreshment breaks)

ACOEM Member	\$295
Non-member	\$355
Student/Resident	\$145

To register or request additional information, call 847/818-1800, ext. 374 or 371.

Note: Enrollment is limited and advance registration is strongly recommended for this course. On-site registrations will be accepted only on a space-available basis. Please call the Registration Department for details after registration deadlines.

COURSE DIRECTOR

Natalie P. Hartenbaum, MD, MPH, FACOEM, is Chief Medical Officer of OccuMedix, Maple Glen, Pennsylvania, and Adjunct Professor in Emergency Medicine at the University of Pennsylvania. Dr. Hartenbaum is editor of ACOEM's *CDME Review* and *The DOT Medical Examination: A Guide to Commercial Driver Medical Certification*. She has lectured and written extensively on issues of fitness for duty with a concentration in the transportation industry.



FACULTY:

Samuel D. Caughron, MD, FACOEM
Vice President of Medical Services
Occupational Health Strategies
Charlottesville, Virginia

Kurt T. Hegmann, MD, FACOEM
Research Associate Professor, Family and Preventive Medicine
Assistant Residency Program Director for Occupational Medicine
University of Utah
Salt Lake City, Utah

William J. Judge, JD, LL.M.
Workplace Distance Learning-USA, Inc.
Oak Park, Illinois

CME COURSES

Choose from these convenient locations in 2001

Ft. Lauderdale, FL

March 10-11 Medical Review Officer Drug and Alcohol Testing - Fast Track

San Francisco, CA*

April 19-20 Basic Curriculum in Occupational Medicine, Segment 1
 April 20-21 Medical Review Officer Drug and Alcohol Testing - Comprehensive
 April 21 Commercial Driver Medical Examiner
 April 21 Medical Review Officer - Advanced
 April 21-22 Basic Curriculum in Occupational Medicine, Segment 3
 April 21-22 Evaluating Impairment - Use of the AMA Guides
 April 21-22 Occupational Medicine Board Review
 April 21-22 Musculoskeletal Exam and Treatment Techniques
 April 21-22 Medical Center Occupational Health and Safety
 April 22 Medical Review Officer - Review

Baltimore, MD

June 23-24 Medical Review Officer Drug and Alcohol Testing - Fast Track

Chicago (Rosemont), IL

September 14 Commercial Driver Medical Examiner
 September 15-18 Medical Review Officer Drug and Alcohol Testing - Fast Track
 September 15-18 Occupational Medicine Board Review
 September 15-18 Musculoskeletal Exam and Treatment Techniques

Seattle, WA**

October 26-27 Medical Review Officer Drug and Alcohol Testing - Comprehensive
 October 27 Commercial Driver Medical Examiner
 October 27 Medical Review Officer - Advanced
 October 27-28 Basic Curriculum in Occupational Medicine, Segment 2
 October 28 Medical Review Officer - Review

* April 2001 courses held in conjunction with the American Occupational Health Conference (April 20-27).

** October 2001 courses held in conjunction with the State-of-the-Art Conference (October 28-November 1).

COURSE TUITION (FEIN#: 36-3593614)

Tuition includes syllabus and other materials, breakfast(s), lunch(es), and refreshment breaks.

TWO-DAY COURSES	ACOEM MEMBER	NON-MEMBER	STUDENT/RESIDENT
MRO Comprehensive/Fast Track	\$590	\$725	\$295
Evaluating Impairment - Use of the AMA Guides	\$580	\$715	\$290
Basic Curriculum in Occupational Medicine, Segment 1	\$560	\$695	\$280
Basic Curriculum in Occupational Medicine, Segment 2	\$560	\$695	\$280
Basic Curriculum in Occupational Medicine, Segment 3	\$560	\$695	\$280
Medical Center Occupational Health and Safety	\$560	\$695	\$280
Musculoskeletal Exam and Treatment Techniques	\$560	\$695	\$280
Occupational Medicine Board Review	\$560	\$695	\$280
ONE-DAY COURSES	ACOEM MEMBER	NON-MEMBER	STUDENT/RESIDENT
Commercial Driver Medical Examiner	\$295	\$355	\$145
MRO Advanced	\$295	\$355	\$145
MRO Review	\$295	\$355	\$145

CANCELLATION/TRANSFER POLICY/REFUNDS

Cancellations/Transfers

Cancellation requests must be received in writing by each course's respective registration deadline. A credit memo will be issued for the amount of your payment less \$75, which represents the cost of the syllabus (if it has already been shipped to you). Credit memos may be used for any ACOEM event or product and are valid for one year from date of issue. The syllabus is not returnable and is yours to keep. No credit memo will be issued for cancellation requests received after the respective registration deadline.

Requests to transfer your registration from one course to another must be received in writing by the registration deadline. You will be charged \$75 if the course syllabus has already been shipped to you. Requests to transfer a registration to another course will not be accommodated after the registration deadline date.

Refunds: If you request a refund instead of a credit memo, an administrative fee of \$50 (plus \$75 for the syllabus if shipped) will be assessed.

ACOEM reserves the right to substitute faculty at any time or cancel any course up to 21 days in advance. ACOEM will not be held liable in cases of Acts of God that prevent the delivery of a course.

FOUR EASY WAYS TO REGISTER!

- 1 **Detach/mail:** ACOEM Dept. 77-6583 Chicago, IL 60678-6583
- 2 **Fax,** with credit card information, to 847/818-9265
- 3 **Call** 847/818-1800 ext. 374 or 371 to register by phone
- 4 **Internet** www.acoem.org click on Education/Conferences

Print or type:

Last name, first name, middle initial Degree(s)

Employer name

Mailing address (no PO Box please)

City State/Province Zip/Postal Code

Area code Telephone number

ACOEM Member status | Member | Non-member | Student/Resident
| Send membership information

PLEASE REGISTER ME FOR:

Basic Curriculum in Occupational Medicine			
Segment 1 April 19-20	Segment 2 October 27-28	Segment 3 April 21-22	
Commercial Driver Medical Examiner			
April 21	September 14	October 27	
Evaluating Impairment – Use of the AMA Guides			
April 21-22			
Medical Center Occupational Health and Safety			
April 21-22			
Musculoskeletal Exam and Treatment Techniques			
April 21-22	September 15-16		
Medical Review Officer Drug and Alcohol Testing			
<i>MRO Advanced</i>	<i>MRO Comprehensive</i>	<i>MRO Fast Track</i>	<i>MRO Review</i>
April 21	April 20-21	March 10-11	April 22
October 27	October 26-27	June 23-24	October 28
		September 15-16	
Occupational Medicine Board Review			
April 21-22	September 15-16		

Tuition total (see chart at left): _____

Payment (check one): | *Check enclosed (payable to ACOEM – US funds only)*
| VISA | MasterCard | American Express | Discover | Diners Club

Signature

Card Number Expiration Date

How did you learn about the course(s)?

Please list any special needs (eg: facility, dietary, etc.)

Course Syllabus Shipping Policy
A copy of the respective course syllabus and other related materials will be shipped via UPS ground service to U.S. registrants of all MRO, Impairment & Dis/Ability, and Occupational Medicine Board Review courses whose registration(s) are confirmed by the respective registration deadlines. All other attendees will receive their syllabus and other related materials on site.

Course syllabi will be provided on site to registrants of the following courses: Basic Curriculum in Occupational Medicine (all segments), Commercial Driver Medical Examiner, Medical Center Occupational Health & Safety, and Musculoskeletal Exam & Treatment Techniques.

Office use only

P# _____

CK# _____

BA# _____

Date: _____

5001 2 3

Commercial Driver Medical Examiner

More than eight million truck and bus drivers are required to meet the 13 interstate federal medical requirements, but nine of these requirements are left intentionally vague and provide a great deal of latitude to the medical examiner. Examiners may be physicians or any health care provider licensed by their state practice act to perform examinations. It's critical for all persons involved in such examinations to be fully aware of the available guidance and medical literature that should be considered as part of the certification determination. In addition, it's important to have a comprehensive awareness of the issues involved in evaluating the medical fitness of commercial drivers.

Learning objectives

Upon completion of this educational activity, learners should be able to:

- Cite the federal regulations for evaluating the medical fitness of commercial motor vehicle drivers and apply them effectively during an examination
- Interpret the guidance issued by the Federal Motor Carrier Safety Administration
- Utilize medical literature and guidance from other countries to correctly evaluate the ability of a commercial vehicle operator to work safely with given medical conditions

Commercial Driver Medical Examiner
April 21 San Francisco, CA
Mont), IL

DiModica, Nancy

From: "Natalie Hartenbaum" <NataH@worldnet.att.net>
Sent: [c=US/admd=ATTMAIL/prmd=gov+dot/s=worldnet/@mh1-gw.dot.gov]
Wednesday, October 31, 2001 9:03 AM
Subject: DiModica, Nancy
Re: Information for DOT



Mime.822

There were approximately 3000 books sold over the past 2 years, 2000 of them were the second edition. The comments in the book on medications represent what were in the conference reports. Approximately 350 physicians have attended the full day ACOEM course over the past 2 years. Some of the information has also been presented in smaller course. One of the major problems the examiners face with prescription medications is that the personal physician will state that there are no side effects and the individual is safe to drive. Unless the medication is specifically excluded, the companies and examiners are challenged by employees and unions. We even recently had an examiner relay a situation where he would not qualify a driver on Methadone. As this was mentioned in the Advisory Criteria, not codified and therefore "guidance", there was many problems. A treating physician did state that it was safe. I can provide any additional information, please let me know. See you at the hearing.
Natalie

DiModica, Nancy

From: Clarke, Bob
Sent: Tuesday, November 06, 2001 4:39 PM
To: Doggett, Teresa <FHWA>; DiModica, Nancy
Sebastian, Angeli <FHWA>
Subject: RE: Re Distribution of Motor Coach Fatigue Video

Good news, thanks

-----Original Message-----

From: Doggett, Teresa <FHWA>
Sent: Tuesday, November 06, 2001 4:30 PM
To: Clarke, Bob; DiModica, Nancy
Cc: Sebastian, Angeli <FHWA>
Subject: Re Distribution of Motor Coach Fatigue Video

Per request of Sandra Zywokarte, the following distribution was made of subject video:

Federal Motor Carrier Safety Administration (FMCSA) distributed approximately 225 and the American Bus Association distributed 1,000 from the master given to them by FMCSA.

If we can be of further assistance, you may contact me at (202) 366-2990.

directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program)

Issued on: December 16, 1998.

Elton H. Chang,

Environmental Engineer Oregon Division.

[FR Doc. 98-34177 Filed 12-23-98; 8:45 am]

BILLING CODE 4910-01-M

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

Safe Use of Prescription and Over-the-Counter Drugs

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of safety advisory.

SUMMARY: FRA issues Safety Advisory 98-3 to address recommended practices for the safe use of prescription and over-the-counter drugs by safety-sensitive railroad employees.

FOR FURTHER INFORMATION CONTACT: Lamar Allen, Alcohol and Drug Program Manager, Office of Safety Assurance and Compliance, Operating Practices Division, Federal Railroad Administration, 1120 Vermont Avenue, NW, RRS-11, Mail Stop 25, Washington, DC 20590. (Telephone: (202) 493-6313) or Patricia V. Sun, Trial Attorney, Office of Chief Counsel, FRA, 1120 Vermont Avenue, NW, RCC-11, Mail Stop 10, Washington, DC 20590. (Telephone: (202) 493-6060).

SUPPLEMENTARY INFORMATION: FRA issues this advisory in support of DOT's efforts to ensure that transportation employees safely use prescription and over-the-counter (OTC) drugs. Safe rail operations depend upon alert and fully functional professionals who have not been adversely affected by drug use, whether medically appropriate ("legal") or not. FRA has always prohibited illicit drug use and unauthorized use of controlled substances by safety-sensitive employees, but is equally concerned about the potentially adverse side effects from other prescription drugs and OTC products. Because DOT and FRA testing (including FRA's post-accident program) targets only alcohol and controlled substances, FRA does not have a clear picture of the extent to which the performance of safety-sensitive employees is adversely affected by legal drug use.

Accordingly, although not specifically addressed in its alcohol and drug testing regulations (49 CFR part 219), FRA strongly recommends that rail employers and safety-sensitive employees follow § 219.103 guidelines when considering the use of all prescription and OTC drugs. Simply stated, in the interest of safety, FRA strongly recommends that either a treating medical professional or a railroad-designated physician make a fitness-for-work determination concerning all prescription and OTC drug use prior to permitting an employee to return to work in safety-sensitive service. This determination should also be made whenever an employee currently performing safety-sensitive functions is concerned about possible effects on his or her job performance from the use of prescription or OTC drugs.

Section 219.103(b) authorizes railroads to establish reporting and approval procedures for all prescription and OTC drugs which may have detrimental effects on safety. Additionally, FRA recommends that railroads educate their employees on these reporting and approval procedures and, most importantly, on how to use prescription and OTC medications safely.

FRA will take all appropriate action to continue reducing the negative impact from inappropriate use of all prescription and OTC medications. Moreover, FRA strongly encourages the rail industry to voluntarily develop programs on safe prescription and OTC drug use before such programs are mandated or directed through legislation.

Issued in Washington, D.C., on December 16, 1998.

George Cavalla,

Acting Associate Administrator for Safety.

[FR Doc. 98-34064 Filed 12-23-98; 8:45 am]

BILLING CODE 4910-05-P

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration (RSPA), DOT

[Docket No. RSPA-98-4450; Notice 17]

Pipeline Safety: Intent To Approve Project and Environmental Assessment for the Chevron Pipe Line Company; Pipeline Risk Management Demonstration Program

AGENCY: Research and Special Programs Administration, Office of Pipeline Safety, DOT.

ACTION: Notice of Intent to Approve Project and Environmental Assessment.

SUMMARY: As part of its Congressional mandate to conduct a Risk Management Demonstration Program, the Office of Pipeline Safety (OPS) has been authorized to conduct demonstration projects with pipeline operators to determine how risk management might be used to complement and improve the existing Federal pipeline safety regulatory process. This is a notice that OPS intends to approve Chevron Pipe Line Company (Chevron) as a participant in the Pipeline Risk Management Demonstration Program. This also provides an environmental assessment of Chevron's demonstration project. Based on this environmental assessment, OPS has preliminarily concluded that this proposed project will not have significant environmental impacts.

This notice explains OPS's rationale for approving this project, and summarizes the demonstration project provisions that would go into effect once OPS issues an order approving Chevron as a Demonstration Program participant. OPS seeks public comment on the proposed demonstration project so it may consider and address these comments before approving the project. The Chevron demonstration project is one of several projects OPS plans to approve and monitor in assessing risk management as a component of the Federal pipeline safety regulatory program.

ADDRESSES: OPS requests that comments to this notice or about this environmental assessment be submitted on or before February 8, 1999, so they can be considered before project approval. However, comments on this or any other demonstration project will be accepted in the Docket throughout the 4-year demonstration period. Comments should be sent to the Dockets Facility, U.S. Department of Transportation, Plaza 401, 400 Seventh Street, SW, Washington, DC 20590-0001, or you can E-Mail your comments to ops.comments@rspa.dot.gov. Comments should identify the docket number RSPA-98-4450. Persons should submit the original comment document and one (1) copy. Persons wishing to receive confirmation of receipt of their comments must include a self-addressed stamped postcard. The Dockets Facility is located on the plaza level of the Nassif Building in Room 401, 400 Seventh Street, SW, Washington, DC. The Dockets Facility is open from 9:00 a.m. to 5:00 p.m., Monday through Friday, except on Federal holidays.

Explanation. Employees must ask their supervisor for an explanation of any rule, regulation, or instruction they are unsure of.

Issued, Canceled, or Modified. Rules may be issued, canceled, or modified by track bulletin, general order, or special instructions.

1.3.2 General Orders

General orders:

- Are numbered consecutively.
- Are issued and canceled by the designated manager.
- Contain only information and instructions related to rules or operating practices.
- Replace any rule, special instruction, or regulation that conflicts with the general order.

Before beginning each day's work or trip, trainmen, enginemen, and any others whose duties require, must review general orders that apply to the territory they will work on.

1.3.3 Circulars, Instructions, and Notices

Circulars, instructions, notices, and other information are issued and canceled by the designated manager. Before beginning each day's work or trip, trainmen, enginemen, and any others whose duties require, must review those that apply to the territory they will work on.

1.4 Carrying Out Rules and Reporting Violations

Employees must cooperate and assist in carrying out the rules and instructions. They must promptly report any violations to the proper supervisor. They must also report any condition or practice that may threaten the safety of trains, passengers, or employees, and any misconduct or negligence that may affect the interest of the railroad.

1.5 Drugs and Alcohol

The use or possession of alcoholic beverages while on duty or on company property is prohibited. Employees must not have any measurable alcohol in their breath or in their bodily fluids when reporting for duty, while on duty, or while on company property.

The use or possession of intoxicants, over-the-counter or prescription drugs, narcotics, controlled substances, or medication that may adversely affect safe performance is prohibited while on duty or on company property, except medication that is permitted by a medical practitioner and used as prescribed. Employees must not have any prohibited substances in their bodily fluids when reporting for duty, while on duty, or while on company property.

1.6 Conduct

Employees must not be:

1. Careless of the safety of themselves or others.
2. Negligent.
3. Insubordinate.
4. Dishonest.
5. Immoral.
6. Quarrelsome.
- or
7. Discourteous.

90.0 POLICIES AND PROGRAMS

90.1 Drug and Alcohol Policy (“In Part”) (Effective March 1, 1997)

Employees must not report for duty or be on company property under the influence of, or use while on duty, any over-the-counter or prescription drug or medication which may in any way adversely affect their alertness, coordination, reaction, response, or safety.*

If an employee is in doubt as to whether an over-the-counter or prescription drug may have an adverse effect on alertness, coordination, reaction, response, or safety, the employee should take the following steps:

1. The employee's treating medical practitioner or any other medical practitioner who has evaluated the individual should make a good faith judgement in writing, with notice of the employee's assigned duties and on the basis of the available medical history, that the use of the substance by the employee at the prescribed or authorized dosage applicable is consistent with the safe performance of the employee's duties. A copy of this documentation must be kept in the employee's possession while on duty; and
2. The substance must be used only in the manner and dosage, and for the purpose prescribed or authorized; and
3. In the event the employee is being treated by more than one medical practitioner, at least one treating medical practitioner should be informed of all medications authorized or prescribed and should make a good faith judgement, in writing, that the combination of medications is consistent with the safe performance of the employee's duties. A copy

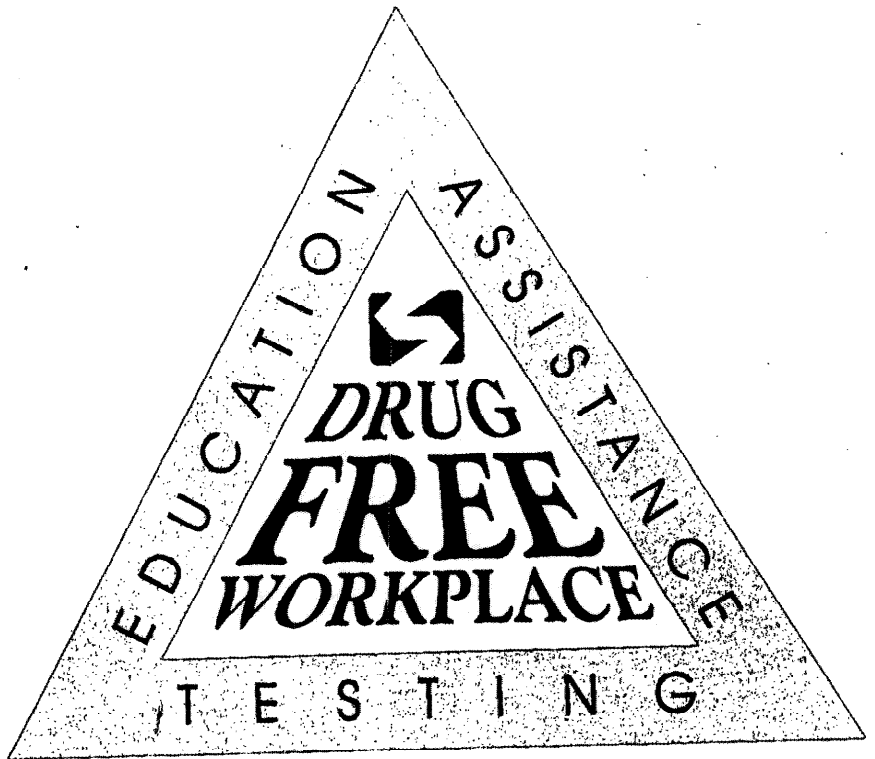
of this documentation must be kept in the employee's possession while on duty, and the employee must observe any restrictions imposed with respect to use of medications in combination.

Note: Every employee must recognize that the unauthorized use of another person's prescription is illegal and may cause a positive test result which would be a violation of Union Pacific's drug and alcohol testing policy.

The conduct of any employee leading to conviction of any misdemeanor or felony involving the unlawful use, possession, manufacture, distribution, dispensation, or transportation of any illegal drug or controlled substance is prohibited.

Any employee convicted of any such misdemeanor or felony must notify his or her supervisor of that fact no later than the end of the first business day immediately following the day the employee receives notice of the conviction.

**Drugs which are considered to be prohibited under this policy include all "controlled substances" on Schedules I through V of the Federal Controlled Substances Act as revised from time to time. These controlled substances are listed in Volume 21 of the Code of Federal Regulations, Section 1308. They include illicit drugs (Schedule I), drugs that are required to be distributed only by a medical practitioner's prescription or other authorization (Schedules II through IV, and some drugs on Schedule V), and certain preparations for which distribution is through documented over the counter sales (Schedule V only). They are grouped as follows: marijuana, narcotics (such as heroin and codeine), stimulants (such as cocaine and amphetamines), depressants (such as barbiturates and minor tranquilizers), and hallucinogens (such as the drugs known as PCP and LSD).*



Policy

SEPTA 
SERIOUS ABOUT CHANGE.



U.S. Department
of Transportation

Federal Railroad Administration
1120 Vermont Ave., N.W.
Washington, DC 20590

Lamar Allen
Alcohol/Drug Program Manager
202-493-6313
FAX: 202-493-6230

Part 219 Alcohol/Drug Program Compliance Manual

For The Railroad Industry

FEDERAL RAILROAD ADMINISTRATION

Office of Safety

September 1999



MROALERT

JANUARY 2001 VOLUME XII, NO. 1

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New DOT Regulations Create a Legal Duty for MROs to Disclose Safety Concerns to Employers

An Iota of a Difference and Drug and Alcohol Regulations Evolve from Deterrence to Safety

Theodore F. Shults, MS, JD

"...verification of a test as negative does not end the MRO's job." (Preamble to new DOT regulations)

The Greek letter "iota" (which today means a very small quantity) was the minimal difference in spelling in the Greek word that described Jesus as being the same substance as opposed to being of a different substance from God. Thus, historically an iota difference had significant theological consequences. The change of one word in DOT's drug and alcohol regulation may also represent a fundamental "iota" difference in the nature of DOT's program—the difference in the program being one focused on eliminating illegal drug use in the transportation industry to being a more challenging and more comprehensive safety, fitness and medical qualification program.

The "iota" here is the word "may," which was changed to "must." There are a lot of new "musts" in DOT's new regulations, but this one relates to the disclosure of medical information gathered by the MRO in the verification process. Under the newly published rules, MRO disclosure of medical information is no longer *may* (permissive)—it is now *must* (mandatory).

Although at first it appears that this change represents a new policy fiat, it is more accurately described as the regulations catching up with reality, for the DOT's drug and alcohol program has for a number of years been moving toward a more proactive treatment of prescription drug abuse and medical qualifications. This change in policy also tracks with the efforts of the National Transportation Safety Board to look at prescription drug use and safety, and with its ongoing efforts to shore up the medical qualification standards in the Federal Motor Carrier Safety Administration. It is also worth noting that to a large degree the drug and alcohol program has positively affected workplace culture in regard to illicit drug and alcohol abuse in the transportation industry. Now it is time to look beyond that goal.

Nevertheless, this somewhat spasmodic lurch into the future is not without some concern, for it is one thing to articulate a policy and quite another to achieve it. The change in MRO disclosure rules will have legal and practical consequences which may adversely impact MROs, employers and employees.

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New DOT Regulations Create a Legal Duty for MROs to Disclose Safety Concerns to Employers

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From Prohibited, to Permissive, to Mandatory Disclosure

Back in 1989 when the first draft of the DOT regulations was published, the Medical Review Officer was strictly prohibited from disclosing to the employer any medical information obtained during the verification process. The regulations were sharply focused on the reduction and elimination of illegal drug use in the transportation industry. The role of the MRO was to decide whether a positive laboratory report was evidence of a violation of the Federal Controlled Substances Act.

The regulation against reporting adverse medical information was difficult to follow. The few physicians and employers who were involved at the time universally expressed their concern over the prospects of an MRO discovering critical safety information and yet being unable to disclose it to the employer. This prohibition on disclosure was considered to be ethically if not morally unacceptable. In a process of regulatory black magic, similar to what we have currently re-experienced, between the draft rule and the final rule this was changed. The MRO was now able to disclose medical information that, in the professional judgment of the MRO, presented a safety concern.

This permissive approach accomplished a great deal. For example, an MRO could notify an employer when a 100-pound donor presented a prescription for methamphetamine, obtained from a storefront pharmacy in Tijuana, for weight loss. Permissive disclosure has revealed countless instances of medically unqualified individuals. More recently it has been used when the donor has presented multiple prescriptions for pain medications and sedatives, and to address situations where Marinol prescriptions for sinus headaches have been presented as alternative medical explanations (it is still a negative test). Apparently there was concern that because

disclosure was permissive and not mandated there was not enough disclosure. It is difficult to say, since there has been no survey or analysis of this practice.

Over the past 10 years there has been a growing concern over prescription drug abuse and its impact on public safety. Physicians at every MRO meeting and MRO training program have expressed and acknowledged this concern. The current change from permitting disclosure to requiring disclosure was not specifically set forth in DOT's notice of proposed rule making but was proposed in some of the comments. The preamble of the new rule states:

"...as some commenters requested, we have made it mandatory for MROs to release information under this section if the information is likely to result in the employee being medically unqualified for performance of safety-sensitive duties under a DOT regulation or if the information indicates that continued performance by the employee of his or her safety-sensitive function is likely to pose a significant safety risk. In this case, the Department believes that the safety interest served by the information release outweighs the confidentiality interest of the employee. [DOT preamble, Section 40.327]"

Few will argue otherwise. However, there are essentially no established standards of practice for dealing with prescription drugs. Therein lie some potential adverse consequences of the regulatory change.

Legal Duty and Liability of the New Rule

To date, no cases have been discovered where an MRO has been sued for failing to disclose relevant medical information to an employer. There are a number of reasons for this. First, there is low probability of a catastrophic accident occurring that is proximately related to the medical condition of an individual who disclosed this information to an MRO, who in turn did not disclose it to an employer. Second, and perhaps equally significant, is that there has been no legal duty to disclose that information. Although in theory a court could find (or create) such a duty, the judicial creation of a legal duty to disclose medical information in this situation is quite a

steep hill for a plaintiff to climb, particularly when there are so many statutes, policies and procedures to protect confidentiality.

So even in the situation where an MRO's failure to disclose medical information resulted in damages, in the absence of a legal requirement or legal duty to disclose that information the case would be summarily dismissed (and probably never filed in the first place). Thus, regardless of any hypothetical accident or the malfeasance or indifference of the MRO, the legal argument that has limited liability in all potential cases has been this: *There has been no legal duty for the MRO to disclose any medical or prescription drug information to the employer.*

That obviously is no longer the case. As of August 1, 2001, by operation of law there will now be a legal duty to disclose medical information related to the performance of safety-sensitive jobs. The consequences are that if such an unfortunate catastrophic accident were to arise, a jury would now decide whether or not the MRO exercised reasonable medical judgment in failing to disclose information.

The jury will inevitably be assisted by an expert medical witness for the plaintiff. This expert witness will opine that, for whatever reason, the MRO did not exercise reasonable medical judgment or follow generally accepted standards of practice. The fact that "generally accepted" standards of practice relative to assessing a safety situation over the phone from an otherwise unknown donor are at the moment ephemeral at best (if existent at all) simply exacerbates the situation.

The Challenges Ahead

To many this regulatory change seems subtle, and insignificant in its impact on MRO practice. But it is important to appreciate that the change also creates a new legal duty for Medical Review Officers, and requires the development and articulation of acceptable standards of practice.

What Are Appropriate Standards of Practice?

The new disclosure rule states:

§40.327

(a) As the MRO, you must, except as provided in paragraph (c) of this section, report drug test results and medical information you learned as part of the verification process to third parties without the employee's consent if you determine, in your reasonable medical judgment, that:

- (1) The information is likely to result in the employee being determined to be medically unqualified under an applicable DOT agency regulation; or*
- (2) The information indicates that continued performance by the employee of his or her safety-sensitive function is likely to pose a significant safety risk.*

§40.135

(d) As the MRO, you must warn an employee who has a confirmed positive, adulterated, substituted or invalid test that you are required to provide to third parties drug test result information and medical information affecting the performance of safety-sensitive duties that the employee gives you in the verification process without the employee's consent (see §40.327).

Section 40.327(a)(1) requires the MRO to disclose medical information when he or she learns that the donor does not meet medical qualification standards. This presumes that the MRO knows what type of safety-sensitive job the employee holds, and what the applicable medical qualifications are. Those are two large presumptions. Learning that the employee has uncontrolled seizures falls into this category. Taking methadone is also a situation where the employee is medically unqualified. The MRO should obtain a list of applicable medical qualifications by August 1, 2001. (MROALERT will assist by providing a list of where to obtain copies of these standards in the next month or so.)

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New DOT Regulations Create a Legal Duty for MROs to Disclose Safety Concerns to Employers

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Section 40.327(a)(2) is more problematic, as there is not list of what type of information is "likely to pose a significant safety risk." Examples of the types of information that will have to be assessed:

- (a) Donor discloses use of codeine prescription for positive codeine test
- (b) Donor discloses "old" prescription for codeine for positive codeine test
- (c) Donor discloses prescription for benzodiazepines
- (d) Donor discloses "old" prescription for narcotics

Somewhat divergent practices have been taken by certified MROs, and it is unclear in the absence of any information what non-certified MRO practices may be. In general it appears that most MROs make a professional judgment, may investigate recent prescription use with the treating physician, and often disclose "old" prescription use to employers.

From a purely risk management approach, many MROs may decide not to split hairs and report all of the adverse medical information that they obtain. The problem will be that many of the employers will be unable to understand what to do with this information.

Disclosure of Past Positive Drug Tests to New Employers

Finally, the open question is what to do about the situation where an MRO has verified a positive drug test for a previous employer. Under this new disclosure rule, must this information be disclosed to a new employer? In the absence of any language that restricts information to discrete verifications, it looks like it does. A positive drug test is information that is likely to result in an individual being medically disqualified, in the absence of an assessment by a Substance Abuse Professional and the return-to-duty process. In many cases the MRO may not be aware whether this has been accomplished or not.

Hopefully by August 1, 2001 there will be more guidance from the MRO community and regulators on how to approach this new aspect of MRO practice. —

DOT's Mandatory Medical Information Disclosure Rules

NOTE: These rules become effective on August 1, 2001.

§40.327 When must the MRO report medical information gathered in the verification process?

- (a) As the MRO, you must, except as provided in paragraph (c) of this section, report drug test results and medical information you learned as part of the verification process to third parties without the employee's consent if you determine, in your reasonable medical judgment, that:
 - (1) The information is likely to result in the employee being determined to be medically unqualified under an applicable DOT agency regulation; or
 - (2) The information indicates that continued performance by the employee of his or her safety-sensitive function is likely to pose a significant safety risk.
- (b) The third parties to whom you are authorized to provide information by this section include the employer, a physician or other health care provider responsible for determining the medical qualifications of the employee under an applicable DOT agency safety regulation, a SAP evaluating the employee as part of the return to duty process (see §40.293(g)), a DOT agency, or the National Transportation Safety Board in the course of an accident investigation.
- (c) If the law of a foreign country (e.g., Canada) prohibits you from providing medical information to the employer, you may comply with that prohibition.

An employee may be medically unfit for safety-sensitive duties because of the use of a legal medication, foreign or domestic. —

DOT's New MRO "Miranda" Warning

NOTE: These rules become effective on August 1, 2001.

§40.135 What does the MRO tell the employee at the beginning of the verification interview?

- (a) As the MRO, you must tell the employee that the laboratory has determined that the employee's test result was positive, adulterated, substituted, or invalid, as applicable. You must also tell the employee of the drugs for which his or her specimen tested positive, or the basis for the finding of adulteration or substitution.
- (b) You must explain the verification interview process to the employee and inform the employee that your decision will be based on information the employee provides in the interview.
- (c) You must explain that, if further medical evaluation is needed for the verification process, the employee must comply with your request for this evaluation and that failure to do so is equivalent of expressly declining to discuss the test result.
- (d) As the MRO, you must warn an employee who has a confirmed positive, adulterated, substituted or invalid test that you are required to provide to third parties drug test result information and medical information affecting the performance of safety-sensitive duties that the employee gives you in the verification process without the employee's consent (see §40.327).
 - (1) You must give this warning to the employee before obtaining any medical information as part of the verification process.
 - (2) For purposes of this paragraph (d), medical information includes information on medications or other substances affecting the performance of safety-sensitive duties that the employee reports using or medical conditions the employee reports having.
 - (3) For purposes of this paragraph (d), the persons to whom this information may be provided include the employer, a SAP evaluating the employee as part of the return to duty process (see §40.293(g)), DOT, another Federal safety agency (e.g., the NTSB), or any state safety agency as required by state law.
- (e) You must also advise the employee that, before informing any third party about any medication the employee is using pursuant to a legally valid prescription under the Controlled Substances Act, you will, if the employee consents, contact the prescribing physician to determine if the medication can be changed to one that does not make the employee medically unqualified or does not pose a significant safety risk. —

Impact of OSHA's Ergonomic Program Regarding Post-Accident Testing on Private Workplace Drug Testing Programs

Overview

Under the new OSHA ergonomic program, employers are barred from requiring post-accident drug testing of employees reporting ergonomic injuries that did not result from a discrete traumatic injury such as a slip and fall. This prohibition may require many employers to carefully define what an accident is and what should and should not trigger a post-accident test.

OSHA's Ergonomic Program

One of every three dollars paid in workers' compensation benefits is for ergonomic injury. That sole statistic reflects the size and significance of this issue. On November 14, 2000, the Occupational Safety and Health Administration (OSHA) published its final rules on its comprehensive Ergonomics Program.¹ Within the business community these rules have raised significant controversy, and have been labeled as a last-minute legacy entry of the Clinton Administration. The concern over the potential costs of this regulatory program has resulted in a long list of threatened legal actions by business and industry groups seeking to challenge the rules.

In any event, the ergonomic regulations are hundreds of pages in length; the testimony developed for the rule is over eighteen thousand pages long. The first ergonomic issue is how to lift these regulations without sustaining a low back injury. The second significant issue is the impact of these regulations on workplace drug testing policies and procedures. Depending on what commentary you may read, the impact is viewed as either being neutral (which is OSHA's view) or as significantly impeding private workplace policies. The truth is somewhere in-between.

Where Ergonomics and Drug Testing Cross Paths

OSHA's ergonomic program relies on employees to self-report ergonomic injuries (called musculoskeletal disorders (MSDs)). Under OSHA's ergonomic program, if an employee reports an MSD incident and the risk factors of that employee's job meet the action trigger, the employer must establish an ergonomics program for that job. Thus, employee self-reporting of ergonomic injury is the cornerstone of the whole program. Where OSHA's ergonomic program crosses paths with drug testing is OSHA's concern over various "disincentives" that employers have devised to reduce the reporting of accidents. Right or wrong, included in this analysis is post-accident drug testing.

Union comments to the rule told OSHA that post-accident drug testing programs "*hinder full reporting of injuries because employees [in this case union employees] fear 'false positives.'*" Great.

This is not to say the opposite position was not presented. It looks like OSHA received several hundred comments expressing the general concern that its proposed prohibition on post-accident drug testing and practices that discourage worker reporting could be interpreted to eliminate widely accepted drug testing policies.

In the view of one business organization and its members:

"The possibility that some individuals will feel constrained to avoid reporting workplace injuries or accidents because of a drug test requirement that might be triggered is not an overriding concern. These fears largely will relate only to those whose drug use may be discovered, and their protection should not be the goal of

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Impact of OSHA's Ergonomic Program Regarding Post-Accident Testing on Private Workplace Drug Testing Programs

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a major OSHA regulatory scheme. In addition, any such inhibiting effect is more than outweighed by the workplace accidents and injuries that are avoided through maintenance of an effective drug-free workplace program." (Ex. 30-3819)

OSHA's final position is based on the obvious: that there is no basis for concluding that the development of MSDs are in any way associated with the use of drugs or alcohol. Thus OSHA concludes that reporting of MSDs or the signs and symptoms of MSDs covered under this rule cannot therefore be considered by itself to provide any justification for testing.

"Although subjecting all parties reporting injuries or all OSHA recordable cases to testing has sometimes been used by employers as a matter of administrative convenience in identifying individuals for testing, the lack of a relationship between drug or alcohol use and the MSDs covered by this rule, along with the detrimental effect on reporting behavior that testing can have, combine to make this an inappropriate practice where MSDs are concerned."

The good news, and to a large degree the experience with drug testing is:

"... there is no evidence that drug tests discourage workers from reporting injuries only if they fear that drug use will be discovered."

OSHA goes on to say:

"This rule does not in any way prevent an employer from conducting testing if it is required by law, is based on reasonable suspicion, is part of the job application process, is part of routine fitness-for-duty examination, is done as follow-up after entering an employee assistance or drug rehabilitation program, or is administered to assist in post-accident investigation. A blanket policy that requires all employees reporting MSDs or signs and symptoms of MSDs to submit to drug or alcohol testing, however, would hinder the effectiveness of the ergonomics program if such a policy results in underreporting. [FR 68325]

"Nor is the fear that a back injury or other MSD may be the result of an accident caused by drug or alcohol use a reason for testing employees for drugs when reporting an MSD or MSD signs or symptoms. As stated in paragraph (a), this standard does not address injuries caused by slips, trips, falls, vehicle accidents, or other similar accidents. The standard addresses injuries that are the result of exposure to force, repetition, awkward postures, vibration, and contact stress. Injuries covered by the standard are commonly associated with prolonged or excessive exposures to these ergonomic risk factors. There is no reason to believe that drugs or alcohol have any relevance to the development of these conditions and certainly no evidence that impairment at the time of reporting has any relevance. Simply reporting MSD signs and symptoms therefore cannot be viewed as a legitimate reason to suspect drug or alcohol abuse.

"OSHA's concern is that testing not be conducted in a manner that penalizes individuals reporting MSDs or participating in ergonomics programs. This final rule does not restrict employers' drug or alcohol testing policies where such policies are authorized by state or federal law. It should be noted, however, that DOT regulations, which require post-accident testing and testing of safety-sensitive employees and under certain other circumstances, do not require drug testing when MSDs or any other type of injury or illness is reported.

"Workers compensation and other state and federal laws that require drug testing following a traffic or other accident, are also not generally relevant to the application of this standard, because as explained above, MSDs resulting from accidents, slips, trips and falls are specifically exempted from this rule."

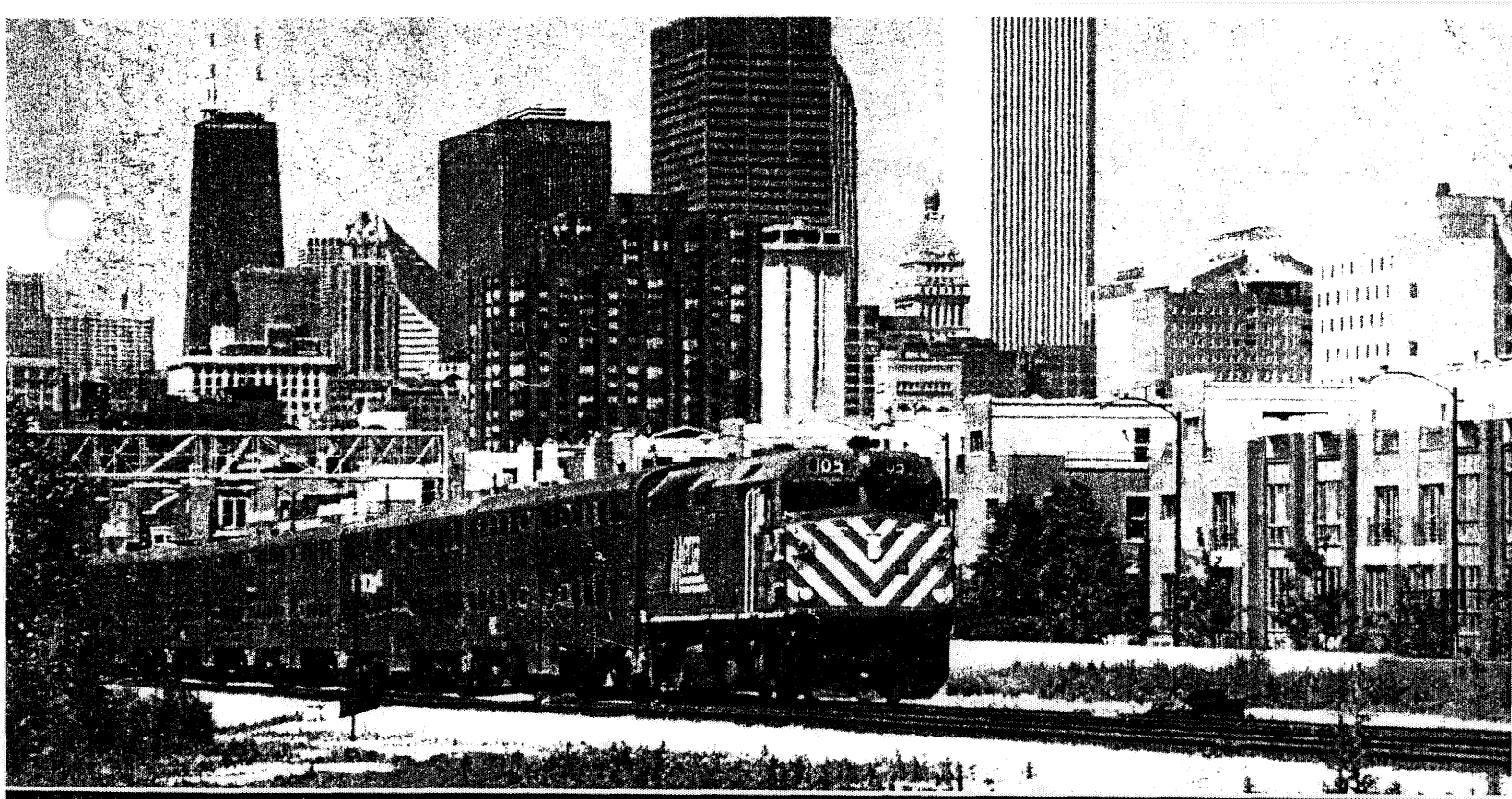
Finally, OSHA has provided some regulatory flexibility in that in order to provide an objective basis for enforcement of this provision, OSHA concluded that a pattern of underreporting must be evident in the workplace before a determination will be made that any given employer policy or practice discourages reporting of MSDs or signs and symptoms of MSDs. This requirement for a "pattern of underreporting" is perhaps the regulatory clause that will save employers from a great deal of ergonomic legal injury.

Employer Policies

Definitions of accidents that trigger post-accident drug tests in workplace policies vary a great deal. State law and collective bargaining agreements dictate some policies. Some policies require post-accident testing if an injury causes a need for outside medical assistance, or lost time. Many if not most are silent on how to deal with latent back injuries and ergonomic injuries.

Requiring a drug test of an employee who reports an MSD (not the result of a identifiable accident or trauma) would be viewed as a deterrent to ergonomic reporting and may have adverse legal implications for the employer, including but not limited to an OSHA compliance action. —

1 65 FR 68262-01



**METRA ROCK ISLAND DISTRICT
TIMETABLE
SPECIAL INSTRUCTIONS
NO. 7**

**ROCK ISLAND DISTRICT
JOLIET SUB DISTRICT
BEVERLY SUB DISTRICT**

**CHICAGO UNION STATION DISTRICT
SOUTHWEST SUB DISTRICT**

EFFECTIVE SUNDAY, OCTOBER 17, 1999 3:01 AM

TELEPHONE NUMBERS

LA SALLE ST. STATION	312-322-8961
TERMINAL DISPATCHER	312-322-2854
ROAD DISPATCHER	312-322-2856

**V.L. STONER
G.L. HARDWIDGE
D.S. MOGAN
R.J. SCARBROUGH**

**CHIEF OPERATIONS OFFICER
CHIEF TRANSPORTATION OFFICER
DIRECTOR OF SAFETY AND RULES
SUPERVISOR OF LOCOMOTIVE ENGINEERS**

SYSTEM SPECIAL INSTRUCTIONS

1.3.2 GENERAL ORDERS Add:

General Orders will be issued and cancelled by the Superintendent.

General Order information which establishes a change in the physical characteristics of the District will be removed from General Orders after having been posted for a period of six (6) months.

Engineering employees designated as an employee in charge are held accountable for General Orders in effect on the District to which they are assigned.

1.3.3 CIRCULARS, INSTRUCTIONS, AND NOTICES Add:

The following Notices will be issued:

Bulletin Notices will be numbered consecutively and will be issued and cancelled by the Superintendent. They will contain information and instructions for transportation department personnel.

Administrative Notices will be numbered consecutively and will be issued and cancelled by the Superintendent. They will contain information and instructions concerning crew assignments, seniority rosters, vacation schedules, labor agreements, crew management issues and other administrative matters.

Road Foreman Notices will be numbered consecutively and will be issued and cancelled by the Road Foreman of Engines. They will contain information and instructions concerning the mechanical operation and handling of locomotives, cars and trains.

Engineering and Mechanical Directors also issue circulars, instructions and notices affecting employees of their respective departments.

1.5 DRUGS AND ALCOHOL Add:

Metra Drug and Alcohol Policies:

- **Policy A**—For hours of service employees, employees who drive a vehicle which requires a commercial drivers license and employees in safety sensitive positions.
- **Policy B**—For all employees not covered by the Hours of Service Act and not in safety sensitive positions.

Any reference to Rule "G" in Metra Drug and Alcohol Policies pertains to GCOR Rule 1.5.

It is possible for some legally prescribed and authorized prescription medications to affect a person's alertness or coordination and thereby prevent them from performing safely. Some examples of medications legally prescribed which may impair performance are pain relievers, muscle relaxants, sleeping pills, anti-depressants and diet pills. Though an employee may not have taken the drug while subject to duty, the presence of the drug may still be in their system. Presence of a medication which impairs alertness, coordination or reaction detected in a reasonable cause drug test, will be deemed a violation of Rule 1.5.

To protect against a violation of Rule 1.5, employees should notify the Metra Medical Department at (312) 322-8923 or their supervisor that they are taking a medication which may impair their performance. A determination will be made whether or not the employee can be authorized to work and the employee so advised.

Drug Free Workplace Act—Unlawfully manufacturing, distributing, dispensing, possessing or using a controlled substance in the workplace is strictly prohibited. Any employee found in violation of this policy is subject to discipline, up to and including dismissal.

The Act also requires that any employee convicted of a drug violation at a workplace location must report such conviction to their employer within five (5) days of the date of such conviction. The employer further must notify the Federal Government within ten (10) days after receipt of this information.

1.6.1 MOTOR VEHICLE DRIVING RECORDS

Add New Rule:

Employees certified as locomotive engineers, whatever class of service, must report convictions for:

- Operating a motor vehicle while under the influence of, or impaired by, alcohol or a controlled substance.
- Refusal to undergo such testing when a law enforcement official seeks to find out whether a person is operating under the influence of alcohol or a controlled substance.

State-sponsored diversion programs, guilty pleas, and completed state actions to cancel, revoke, suspend, or deny a driver's license are considered convictions as applied to this rule.

Prescription and OTC Drug Use Among Transportation Operators

Douglas L. Allen

Alcohol and Drug Program Management

USDOT/FR



FRA Post-Accident Test History

YEAR	# EVENTS	# TESTED	# POSITIVES
1987	179	770	42 (39 D - 3A)
1988	178	682	41 (38D - 3A)
1989	161	607	34 (18 D - 6A)
1990	149	534	29 (18 D - 1A)
1991	157	552	8
1992	109	332	7 (6D - 1A)
1993	128	403	8 (6D - 2A)
1994	115	294	7 (5D - 2A)
1995	82	225	2 (2D - 0A)
1996	73	197	1 (1D - 0A)
1997	86	240	3 (1D - 2A)
1998	68	153	4 (4D - 0A)
1999	80	200	2 (2D - 0A)
2000	91	255	5 (5D - 0A)
2001	62	155	3 (3D - 0A)

Railroad Post-Accident Testing

- 1,717 events in last 14 years
- 5,589 railroad employees tested for drug classes
- Specimens taken:
 - Urine
 - Blood
 - Tissue (fatalities)

Review of Cases with Positive Drug Test Results

- 1996 – 2001, 460 qualifying events
- 1,200 employees tested
- Results
 - 16 Cases involving non-authorized drug use (1.3 %)
 - 27 Cases involving authorized drug use (2.2 %)

Cases Involving Unauthorized Drug Use

- Illegal Drugs (12)
 - Marijuana, 8 cases (.67%)
 - Cocaine, 4 cases (.33 %)
- Legal Drugs (4)
 - Amphetamine and/or methamphetamine, 2 cases (.17 %)
 - Barbiturates, 2 cases (.17 %)

Cases Involving Authorized Drug Use

- Authorized Prescriptions Used while on-duty, 8 cases (0.7%)
 - Benzodiazepine, 4 cases
 - Amphetamine, 2 cases
 - Codeine, 2 cases
- Medications Administered after the event, 19 cases (1.6 %)
 - Morphine, 16 cases
 - Codeine, 1 case
 - Benzodiazepines/Codeine, 1 case
 - Pentobarbital (barbiturate), 1 case

FAA Post-Crash Autopsy Results, General Aviation Pilots

- CAMI Test Results – 1994-98, Fatal Crashes
- 1683 Pilots tested for at least 58 different drugs
- OTC's present – 301 (18%)
- Prescription Drugs present – 240 (14%)
- Dose levels not reported, could be insignificant and/or non-impairing
- No linkages to accident cause noted

Conclusions

- Rail

- Only 4 Cases (0.33%) involved unauthorized use of OTC/prescription drugs
- Review of cases indicated other factors were principal cause of event

- General Aviation

- Higher prevalence due, in part, to larger sample of drugs analyzed
- Private vs. commercial operators



Announcing the Crew Alertness Campaign

It's no mystery that people within the marine industry become tired and fatigued from working long hours in harsh environments. Unusual schedules and ever changing work environments are enough to make anyone exhausted. But how can you effectively deal with this problem?

U.S. Coast Guard Headquarters and the USCG Research and Development Center are working closely with the marine industry in developing an approach for managing factors that affect crew alertness. This non-regulatory approach is designed for both shipboard and shore-side personnel, and it is tailored specifically for the unique marine operational environment.

A critical step in this approach is increasing awareness and educating mariners about crew alertness. The Crew Alertness Campaign will provide the means for sharing information and increasing understanding of the issues, while fostering open communication between the Coast Guard and Industry. Some examples of the concepts that will be shared include:

- (1) Getting good sleep & rest
- (2) Shifting watch schedules properly
- (3) Working at night, and
- (4) Dealing with personal issues

Educational materials and workshops are being developed, so look for them in April 2001. They will be available from various maritime associations and organizations, as well as from local Marine Safety Offices.

You can preview the Campaign website at:
<http://www.uscg.mil/hq/g-m/cac>

For further details contact:

US. Coast Guard Headquarters (G-MSE-1)
Human Element and Ship Design Division
2100 Second Street, SW
Washington, DC 20593
(202)267-2997
Email:cac@comdt.uscg.mil

U.S. Department
of Transportation

United States
Coast Guard



Commandant
United States Coast Guard

2100 Second Street, S.W.
Washington, DC 20593-0001
Staff Symbol: (G-MSE-1)
Phone: (202) 267-2997
FAX: (202) 267-4816

16720

Dear Sir or Madam:

The marine industry is faced with a continuous challenge: how to maintain crew endurance. Endurance is affected by many factors. An example is fatigue, which has been a contributing factor in major casualties like EXXON VALDEZ, HERALD OF FREE ENTERPRISE, and the recent M/V CHINOOK allision with a bridge in Seattle. Other endurance risk factors exist, such as harsh working conditions, 24-hour work schedules, and stress. In attacking this problem, we must educate ourselves and mariners on how to effectively manage these risk factors.

A team effort between our R&D Center, the Office of Safety and Environmental Health (G-WKS), and the Human Element and Ship Design Division (G-MSE-1) has provided a promising solution to the endurance challenge. The program provides a process to identify and manage the many crew endurance risk factors. Called Crew Endurance Management, it involves much more than addressing just sleep. It is an all-encompassing approach that includes fatigue, environmental factors, work and rest schedules, caffeine use, and nutrition, just to mention a few.

The Crew Alertness Campaign is our first step in implementing the Crew Endurance Management program throughout the industry. The campaign will focus on increasing awareness and education on endurance risk factors for both Coast Guard and industry members.

I have enclosed a flyer announcing the Crew Alertness Campaign, which is only designed to create interest and awareness. One other development has been the production of a "Stay Alert For Safety" brochure created through our partnership with the American Waterways Operators. I would encourage you to distribute this information among your people and your mariners and to seek out opportunities to educate yourself on this issue.

I thank you for your continued support with Prevention Through People initiatives such as this one, and for your overall commitment to safety. For questions or more information, please contact the Human Element and Ship Design Division (G-MSE-1), at (202) 267-2997.

Sincerely,

R. C. NORTH
Rear Admiral, U.S. Coast Guard

Encl: (1) Crew Alertness Campaign flyer
(2) "Stay Alert for Safety" brochure

Welcome Aboard!

It's no mystery that people within the marine industry become tired and fatigued from working long hours in harsh environments. Unusual schedules and ever changing work environments are enough to make anyone exhausted. But how can you effectively deal with this problem?

This site has been created to help you, as a member of the maritime industry, better understand crew alertness. There are many things we will be doing with the site. Currently, we are developing a web-based training program for Crew Alertness. You will be able to learn all about the risk factors and how they affect your performance.

In the meantime please go through [an introductory slide show](#), the [campaign flyer](#), and read a [letter](#) from RADM Robert C. North.

Please give us your feedback on the site and provide suggestions. We will make every effort to include those things that you would like to see. [Send us an e-mail!](#)

The site is broken into four major areas:

Up & At Em'

It's the place where it all begins. You will find a brief presentation on crew alertness and endurance factors. After viewing this presentation, you will have a better idea of all of the issues and how they are being addressed.

Logbook

This portion of the website will keep you abreast of when and where seminars, conferences and workshops will be conducted, by providing you with a calendar of events related to crew alertness.

Navigation

Navigating a vessel requires information and understanding in order to reach your destination. This section contains all of the information and materials you will need to educate yourself on crew alertness. Everything from e-copies of brochures to videos to web-based training will all be provided here.

Galley Chat

The website will contain a forum where people can share their experiences and ask questions about crew alertness. We are very excited about this interaction, and look forward to learning from one another and obtaining sea stories that will lead to lessons learned.

First-timer? Start here!



We encourage those of you visiting our site for the first time to take a few minutes and run through our [slide show](#). C'mon, let us entertain you!

Campaign Flyer

RADM Robert C. North, the Assistant Commandant for Marine Safety and Environmental Protection, recently wrote a letter and released a flyer about the campaign. These were mailed out to over 400 individual addresses! If you did not receive a mailing, you can read them here.

[Campaign Flyer](#) | [Letter](#)

Grab a cup 'o joe & let's talk!



The floor is now open! Share some of your experiences, check out someone else's close call, or come on by just to say "Hi!"



Marine Safety Information Bulletin 04-01

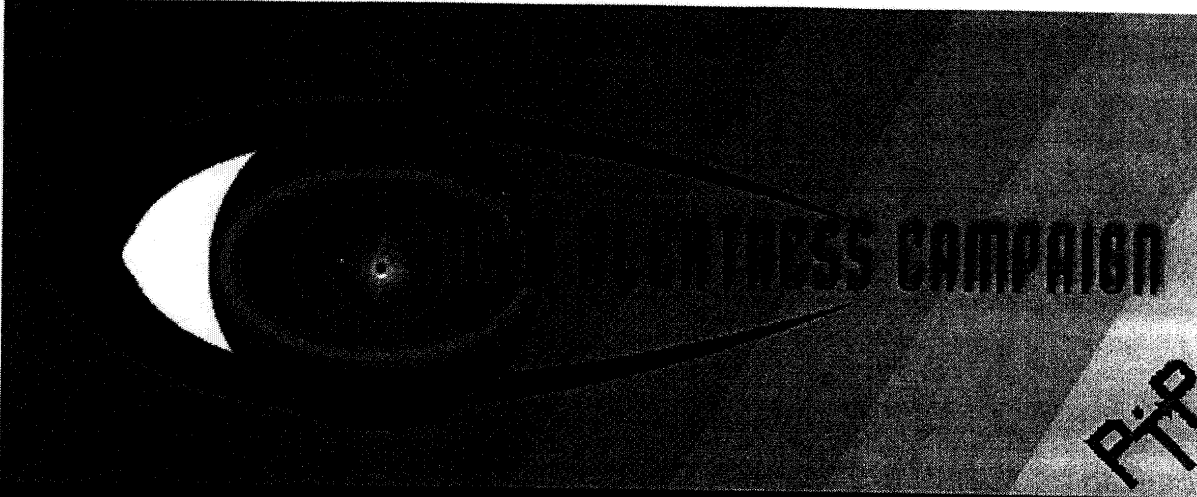
Crew Alertness Campaign

February 01, 2001

1. On December 13, 2000, the Coast Guard and marine industry developed an approach for managing factors that affect crew alertness. The Crew Alertness Campaign will provide the means for sharing information and an increased understanding of the issues faced by those who work within the marine industry. The Crew Alertness Campaign is the first step in implementing the Crew Endurance Management program throughout the industry. The Campaign focuses on awareness and education on endurance risk factors for both the Coast Guard and industry members.
2. The Campaign's official rollout date is April 2001. Some examples of the concepts that will be shared include: (1) Getting good sleep & rest, (2) Shifting watch schedules properly, (3) Working at night, and (4) Dealing with personal issues. In attacking this problem, the marine industry must educate themselves and mariners on how to effectively manage these risk factors. The marine industry is an around-the-clock business, which includes harsh working conditions, 24-hour work schedules, and stress. Part of working safely means staying alert!
3. For questions, and a flyer that introduces the Crew Alertness Campaign, please contact the Human Element and Ship Design Division (G-MSE-1), at (202) 267-2997. You may also refer to the Campaign's website at www.uscg.mil/hq/g-m/cac.

Wayne D. Gusman
Captain, U. S. Coast Guard
Officer in Charge
Marine Inspection

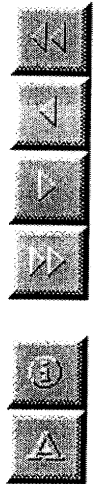
MSO Houston-Galveston, P.O. Box 446, Galena Park, TX 77547-0446,



Marine Safety and Environmental Protection (G-M)
LT Scott Calhoun (G-MSE-1)

and

USCG Research and Development Center



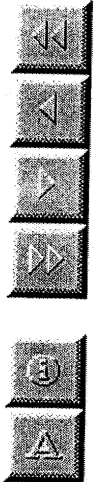
Slide 1 of 7

Crew Endurance Management Program

- Reduces the Incidence of Fatigue
- Increases Mariner's Alertness
- Operationalizes Prevention Through People

Key Program Elements

- Education on risk factors
- Milestone in 6-year process of R&D



Slide 2 of 7

Risk Factors

Physical Conditioning

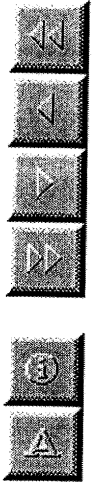
Body Clock

Stress

Sleep

Diet

Motion Sickness

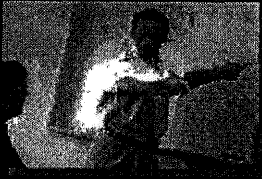


Slide 3 of 7


CREW ENDURANCE MANAGEMENT

Success depends on...


Coordinated Planning



Supporting Infrastructure




Understanding Risk Factors...




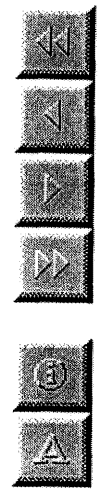
And How To Manage Them

Company Management Support



Coordination with Unions





Slide 4 of 7



Featured April 24th:
MARINE LOG
Conference
on the Human Element

Objectives

Increase Awareness

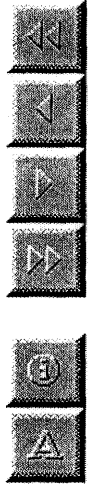
Support Industry Education Programs

Open Communication and Discussion

Distribute Educational Materials

Website (Web-based learning)

Computer-Based Training



Slide 5 of 7

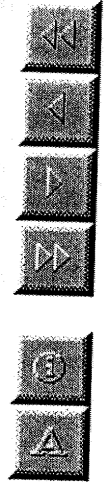


Success Depends On Champions and Partners

- Private Industry
- Local Government
- Federal Safety Advisory Committees
- MSO Field Units

Support External Activities

- Provide Materials and Assistance for
Conferences, Seminars, and Workshops



Slide 6 of 7

U.S. Department
of Transportation

United States
Coast Guard



version 11-98

Commanding Officer
United States Coast Guard
National Maritime Center

4200 Wilson Blvd. Suite 510
Arlington, VA 22203-1804
Staff Symbol: NMC-4
Phone: (703) 235-0018
FAX: (703) 235-1062

16721
NMC Policy Ltr No. 11-98
July 30, 1998

From: Commanding Officer, National Maritime Center

To: Distribution

Subj: MEDICAL STANDARDS FOR ENTRY LEVEL RATINGS

Ref: (a) Title 46, Code of Federal Regulations (CFR), Section 12.02-17
(b) Navigation and Vessel Inspection Circular 2-98

1. Reference (a) requires that an applicant for entry level ratings valid for service on a seagoing vessel of 200 or more gross register tons (domestic tonnage) (GRT) "provide a document issued by a qualified medical practitioner attesting the applicant's medical fitness to perform the functions for which the document is issued." This policy letter provides guidance for acceptance of such documents. Reference (b) sets forth the medical fitness standards for an applicant for entry level ratings. These standards apply to all applicants for original issuance or renewal of any entry level rating.

2. An applicant for entry level ratings who will be employed only on non-seagoing vessels, i.e., vessels that do not go beyond the Boundary Line as defined in 46 CFR Part 7, is not required to provide medical certification. If such an applicant otherwise qualifies for issue of a merchant mariner's document (MMD), the MMD shall be endorsed with a limitation valid for service only on Great Lakes and Inland waters. A typical endorsement would read "Ordinary seaman, wiper, steward's department (GL & Inland waters only)."

3. An applicant for entry level ratings who will be employed on seagoing vessels over 200 GRT shall provide a medical report document that meets the following requirements and attests to his or her medical qualifications:

a. The medical report document may consist of form CG-719K, but its use is not required. If this form is used, only the portions of the form identifying the applicant must be completed. If letterhead stationary is used for the report, the applicant must be positively identified in the report by name, social security number, height, weight, color of hair and eyes, and any distinguishing characteristics;

b. The following shall be typed or written on either the form CG-719K or the letter: "The applicant has the strength, agility, and flexibility to perform the activities stated in paragraph 4 of Navigation and Vessel Inspection Circular No. 2-98;"

c. The report of medical qualifications, form CG-719K or letter report, shall be signed by a licensed physician, licensed physician's assistant, or a licensed nurse practitioner; and,

d. An ordinary seaman who applies for a form issued in accordance with the International Convention on Standards of Training, Certification, and

MERCHANT MARINE PERSONNEL PHYSICAL EXAMINATION REPORT

PRIVACY ACT STATEMENT

As required by 5 USC 552a(e)(3), the following information is provided when supplying personal information to the U. S. Coast Guard.

1. Authority for solicitation of the information: 46 USC 2104(a), 7101(c)-(e), 7308(a)(4), 7313(c)(3) 7317(a), 8703(b), 9102(a)(5), (See 46 CFR subparts and paragraphs 10.205(d), 10.207(e), 10.209(d), 12.05-5, 12.20-3)
2. Principal purposes for which the information is used:
 - (1) To determine if an applicant is physically capable of performing shipboard duties.
 - (2) To ensure that the applicant's physical is conducted by a duly licensed physician/physician's assistant and to verify the information as needed.
3. The routine uses which may be made of this information:
 - (1) This form becomes part of the applicant's file as documentary evidence that the regulatory physical requirement has been satisfied and the applicant is physically competent to hold a merchant marine license or document.
 - (2) This information becomes part of the total license or document file and is subject to review by federal agency casualty investigators.
4. Disclosure of this information is voluntary, but failure to provide this information will result in non-issuance of a license or merchant mariner's document.

INSTRUCTIONS FOR THE PHYSICIAN

The United States Code requires a physical examination to determine that all holders of Coast Guard Issued Licenses and Merchant Mariner's Documents are of sound health with no physical limitations that would hinder or prevent performance of duties. In general, all mariners must be capable of working in cramped spaces on rolling vessels. They must be able to climb steep stairs or vertical ladders. In an emergency such as a vessel fire or flooding, the mariner must be able to fully participate in the firefighting and lifesaving of passengers and crewmembers. In addition, mariners must be physically able to stand an alert 4 to 8 hour watch. To do this, they must be free from any sudden onset of a medical condition which would affect their watchkeeping abilities.

Detailed guidelines on potentially disqualifying medical conditions may be obtained from any U. S. Coast Guard Regional Examination Center (NVIC 2-98) or by calling Coast Guard National Maritime Center (NMC-4C), at 703-236-8483. Examples of impairment that could lead to disqualification include: impaired vision, color vision or hearing; poorly controlled diabetes; multiple or recent myocardial infarctions; psychiatric disorders; and convulsive disorders. In short, any condition that poses an inordinate risk of sudden incapacitation or debilitating complication, and any condition requiring medication that impairs judgment or reaction time are potentially disqualifying and will require a detailed evaluation.

The Coast Guard will use this physical evaluation to determine the applicants eligibility to hold a license or document.

1. Name (Last, First, MI)			2. Social Security Number	
3. Height (Inches)	4. Weight (pounds)	5. Eye Color	6. Hair Color	7. Distinguishing Marks
8. Blood Pressure Systolic Diastolic		9. Pulse (resting) _____ <input type="checkbox"/> Regular <input type="checkbox"/> Irregular		
10a Vision: Uncorr. Right 20/ Corr. to 20/ Uncorr. Left 20/ Corr. to 20/		10b. Field of Vision: _____ Degrees <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal		
11. Color Vision <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal * Color sense must be tested by one of the following. * Color sensing lenses are prohibited.				
Pseudisochromatic plates		Eldridge - Green Perception Lantern	SAMCTT - School of Aviation Medicine	
Divorine 2nd Edition	ARC	Farnsworth Lantern	Tiltnus Optical Vision Test	
AOC Revised Edition	AOC-HRR	Keystone Orthoscope	Williams Lantern	
Ishihara 16-, 24-, 38- Plate Ed		Keystone Telebinocular		
12. Hearing <input type="checkbox"/> Normal <input type="checkbox"/> Impaired				
An audiometer and speech discrimination tests are only required if the applicant has, or is suspected to have impaired hearing.				
Audiometer (Threshold Values)	500 (Hz)	1000 (Hz)	2000 (Hz)	3000 (Hz)
Right Ear				
Left Ear				
Right Ear - aided				
Left Ear - aided				
Functional Speech Discrimination Test at 55 db Left Ear _____% Right Ear _____%				
External Auditory Canal <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal				
13. Indications of current or past Drug/Alcohol Abuse <input type="checkbox"/> Yes <input type="checkbox"/> No If yes explain in Block 16				

The Coast Guard estimates that the average burden for this is 5 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestion for reducing the burden to: Commanding Officer National Maritime Center (NMC-4C), 4200 Wilson Blvd, Suite 510, Arlington, VA 22203-1804 or Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Desk Officer for DOT/USCG, Old Executive Office Building, Washington, DC 20593

Watchkeeping for Seafarers (STCW) endorsed as a rating forming part of a navigational watch must provide evidence that he/she meets the vision, color vision, and hearing requirements for a deck officer as set forth in reference (b). A wiper who applies for an STCW form endorsed as a rating forming part of an engineering watch must provide evidence that he/she meets the vision, color vision, and hearing requirements for an engineer officer as set forth in reference (b).

4. An applicant for entry level ratings to serve on seagoing vessels of 200 or more gross tons who does not meet the standards listed in reference (b) may be issued an MMD with appropriate limitations.

5. An applicant for entry level ratings for service on seagoing vessels of less than 200 GRT is not required to present a document attesting to his or her medical qualifications. This applicant should be advised of the employment limitations of such an endorsement. If he or she still does not want to provide a document of medical qualification, the endorsement on the MMD would read "Ordinary seaman, wiper, steward's department. May not serve on seagoing vessels of 200 or more GRT."

W. C. BENNETT
By direction

Dist: All District Commanders (m)
Commandant (G-MSO)
All MSOs/Activities
All RECs

14. Doctor's assessment - Does the applicant have or has he/she ever suffered from any of the following? *If yes explain in Block 16.								
Yes	No		Yes	No		Yes	No	
		Deteriorating eye disease			Severe digestive disorder			Periods of unconsciousness
		Severe speech impediment			Chronic renal failure			Sleepwalking
		Diabetes			Communicable disease			Recent or repetitive surgery
		Thyroid dysfunction			Asthma or lung disease			Amputations
		Epilepsy, seizures, paralysis			Psychiatric disorder			Impaired range of motion
		Heart or vascular disease			Depression			Impaired balance or coordination
		Heart surgery			Attempted suicide			Other illness or disability
		Blood disorder			Loss of memory			
		High blood pressure			Dizziness or fainting			

15. Medications taken: Include dosage, purpose, and side effects.

No prescription medications

16. Comments on Findings:

No Significant Medical History

Considering the findings in this examination, and noting the duties to be performed by the applicant aboard a merchant vessel of the United States of America, I consider the applicant

competent
 needs further evaluation
 not competent

Printed/Typed Name of Physician/Physician's Assistant/Nurse Practitioner		OFFICE ADDRESS (ZIP CODE)	
State License Number			
Telephone			
Physician/Physician's Assistant /Nurse Practitioner Signature		Date	
I certify that all information provided by me is complete and true to the best of my knowledge.			
Signature of Applicant		Date	

The Coast Guard estimates that the average burden for this is 5 minutes. You may submit any comments concerning the accuracy of this burden estimate or any suggestion for reducing the burden to: Commanding Officer National Maritime Center (NMC-4C), 4200 Wilson Blvd, Suite 510, Arlington, VA 22203-1804 or Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Desk Officer for DOT/USCG, Old Executive Office Building, Washington, DC 20593

MARINE SAFETY MANUAL

CHAPTER 4: PHYSICAL REQUIREMENTS FOR MARINERS

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MARINE SAFETY MANUAL

CHAPTER 4: PHYSICAL REQUIREMENTS FOR MARINERS

A. Physical Examinations.

Merchant Marine Personnel Physical Examination Report, Form CG-719K, is submitted with the application for a license or MMD when a physical examination is required. Any questions relating to physical requirements may be directed to the National Maritime Center.

Guidance to assist medical personnel in conducting these examinations is found in NVIC 2-98.

B. Qualified Medical Personnel.

Physician will be used in this chapter to mean a licensed medical doctor (including doctors of osteopathy (D.O.)), a licensed physician assistant, or a licensed nurse practitioner. The above medical personnel must be licensed by a state in the U.S., a U.S. possession, or a U.S. territory. Foreign medical licenses are not accepted. A chiropractor is not acceptable as a physician; see 46 CFR 10.205(d).

C. Completing The Merchant Marine Personnel Physical Examination Report (Form CG-719K).

One of the major concerns of an evaluator is having the CG-719K completed properly. The CG-719K must be completed and signed by a physician. The license number, the state issuing the license, the address and telephone number of the physician must be included on the CG-719K. A random number of CG-719K's should be verified with the physician to check the information on the form. If any of the notations on the form are unreadable, unknown, or omitted, a quick call to the signer may clear up any misunderstanding and verify the applicant's condition. The evaluator is responsible to ensure that the applicant provides satisfactory evidence to show that he or she meets the physical requirements of the regulations. It is the applicant's responsibility to provide the necessary medical information to evaluate the application. If the information from the physician is incomplete or unacceptable, return the CG-719K to the applicant to obtain the required information.

D. Physical Standards.

The conditions discussed in this chapter are considered to be potentially disqualifying for the purpose of obtaining a license or MMD. They are not intended to be absolute or all-encompassing. One applicant could be unqualified due to a condition not listed here, while another applicant could have a listed condition and be qualified for a waiver. Waivers may be considered where extenuating circumstances are such as to warrant special consideration.

E. Unlicensed Seaman Physical Standards.

46 CFR Part 12, Certification of Seamen, refers to 46 CFR 10.205(d) when setting standards for unlicensed seamen. The following is a list of ratings and the standards they must meet:

1. Able seamen must meet the same physical standards as a licensed master, mate, or pilot.
2. Qualified member of the engine department (QMED) must meet same physical standards as a licensed engineer.
3. Tankermen must meet the same physical standards as a licensed engineer.

F. Waiver Statements.

There is no regulation that requires the seaman to notify the REC when a physical waiver condition worsens during the license period. To prevent possible injury to the seaman and prevent a vessel from becoming unseaworthy the following statement will be placed on the license/MMD. "Any deterioration of a waived medical condition shall be immediately reported to the nearest REC." Under certain conditions OCMI's are authorized to grant waivers for the physical standards. This authorization does not prevent the OCMI from asking advice or further evaluation from NMC. Listed below are the standards for local waivers.

1. Vision.

There are two areas of concern with vision. One is the ability of the applicant to see at a distance (visual acuity) and the other is the ability to distinguish colors (color sense).

a. Visual Acuity Waiver.

Corrected visual acuity must always be at least 20/40 for deck officers and at least 20/50 for engineering officers (46 CFR 10.202(f)). All RECs are authorized to grant waivers to applicants who have an uncorrected vision no worse than 20/800 under the following conditions:

- (1) The applicant may not have a degenerative condition that would speed the deterioration of their eyesight. All applicants with diabetes must submit documentation from their doctor that the diabetes is not affecting the applicant's eyesight.
- (2) The license must contain a vision waiver notation that requires the mariner to wear the corrective lenses (contacts or glasses). A spare set of glasses (not contact lenses) must also be carried aboard the vessel for all individuals with a vision waiver.
- (3) The applicant must have 100 degrees, horizontal field of vision.
- (4) Every applicant with uncorrected vision of 20/400 to 20/800 must wear corrective lenses (contacts or glasses), and carry a spare set of glasses on their person. If glasses are worn, they must have an attached restraining device to keep them securely in place.

b. Color Vision.

The required tests for color vision are specified in the regulations and on the reverse of the Form CG-719K for deck officers. A deck officer must pass one of these prescribed tests. An exception may be made for restricted Inland routes. They may have their licenses endorsed "Vision Waiver: Restricted to daylight operation only." In granting a waiver the area (route) of operation must also be considered. If it is unreasonable to expect that the applicant would be able to comply with this restriction, additional area restrictions may be placed on the license. An example would be a license limited to a specific geographic area, e.g., "Montauk Point, N.Y. to Martha's Vineyard." The expectation is that the licensee would be able to comply with the daylight only operation.

c. Monocular Vision.

Monocular vision is the ability to see with one eye only. A person may have both eyes functioning but due to a problem, such as cross fixation (cross-eyed), they have limited or no depth perception. These cases should be referred to NMC. For raise of grade or renewal applications, monocular vision is addressed in 46 CFR 10.207(e)(3) and 10.209(d)(3), respectively.

2. Hearing.

Hearing acuity presents two concerns for the evaluator. One is the unaided hearing response to certain frequencies and the other is speech discrimination ability at 55 decibels (dB).

a. Decibels (dB).

This is a measure of the power or loudness of sound. The higher the number, the louder the sound. Someone who can hear a 20 dB sound has better hearing than someone who can only hear a 60 dB sound. Normal conversation is at 55 dB, hence the speech discrimination test at 55 dB.

b. Standards.

Hearing shall be evaluated in accordance with NVIC 2-98.

c. Hearing Aid Waiver.

(1) Deck Department.

Deck department personnel who cannot meet the above requirements may use hearing aids. Mariners with hearing aids who meet the auditory requirements of NVIC 2-98, may be granted a waiver by the OCMI. The license or MMD must show that a waiver was issued.

(2) Engineering Department.

Hearing aids may not be used to meet the auditory requirements for Engineering licenses or MMDs. Concerns in the engine room include negative effects of hearing aids around loud noises. However, in some cases, impaired hearing is no worse in the engine room than an individual with hearing protection on. Outside the machinery space, such as the control room, an individual would likely need the hearing aid to use a telephone or to respond to audible console alarms. Engineers (licensed and/or documented) must be able to hear telephone bells/buzzers, general alarm bells, and CO² sirens without aid in the engine room. A letter attesting to this ability shall be provided by the applicant from the vessels chief engineer or master. A waiver notation, if granted, shall be added to the license or MMD. Questionable cases should be referred to NMC for further review.

d. Other Hearing Waiver.

Other conditions that do not meet the situations described above may be considered for a waiver when recommended by the OCMI. Such cases will be evaluated by NMC.

3. Mind Altering Drugs (Psychotropic Drugs).

Drugs used to treat psychiatric disorders are called mind altering or psychotropic drugs. Applicants requiring these drugs are no longer automatically considered ineligible for a license or MMD. Conditions treated by psychotropic drugs are separated into two distinct categories; psychosis and/or neurosis

- a. Waivers should be considered on a case by case basis for individuals with neurotic disorders (anxiety or depression). Supporting data shall include a strong recommendation from the attending physician confirming no adverse side effects from the medication over a one year period.
- b. Waivers are not normally approved for individuals with psychotic disorders (manic depression, schizophrenia). Although a person may have demonstrated control of the condition, it is not unusual that patients feel well and decide to reduce or stop medication. They often regress without realizing it. Given the limited resources available to assist a vessel's crew (as opposed to what is available ashore), an unacceptable risk to the vessel and crew may develop. All such cases shall be forwarded to NMC for evaluation. If a determination is then made that the mariner is competent to have a waiver granted, the license/MMD shall be endorsed with the appropriate waiver statement. "Physical Waiver: This waiver is granted on the condition that there is no further degradation of your condition. Any degradation shall be immediately reported to the nearest Coast Guard Regional Examination Center."

G. National Maritime Center Waivers.

Medical conditions that are beyond the scope of the REC to evaluate shall be referred to NMC. See paragraph 4.H for a discussion of those conditions.

1. As all waiver requests are from the OCMI and not the applicant, the applicant need not provide a letter requesting a waiver.
2. The request for a waiver should be sent directly to NMC. These requests are no longer required to be reviewed by the District offices.
3. Send only copies of the medical file and the current application package.
[REMEMBER, COPIES ONLY].

H. Medical Conditions Needing Further Review.

The following is a discussion of the medical conditions requiring further review by NMC. Although not all inclusive the medical conditions discussed cover those most frequently seen.

1. Diabetes.

A physical waiver is required for all applicants seeking an original, renewal, or upgrade of a license or MMD who have insulin-dependent diabetes or poorly controlled non-insulin dependent diabetes (see figures 4-1 and 4-2). In order to be considered for a waiver, applicants must provide thorough amplifying written information from their physician including statements covering;

- a. A brief history of the applicant's diabetes, including when the diagnosis was made;
- b. The extent of applicant's diabetes education by topics (for minimum requirements see Figure 4-1);
- c. Description of any hospitalization in the past 12 months;
- d. A description of the applicant's control of the diabetes;
- e. If insulin-dependent, the applicant's ability to monitor his/her blood glucose and adjust his/her insulin dosage;
- f. A description of any other chronic medical conditions;
- g. A list of the applicant's medications, dosage, and required dosage frequency;
- h. Length of time the applicant has been on the current dosage;
- i. Copies of the applicant's medical record entries for the past 18 months; and
- j. A copy of the laboratory report of glycosolated hemoglobin (HgbA1c), within the past 30 days. NOTE: Waivers will not be granted when test results are 10.0 and over as this indicates poor control.

2. Cardiac.

Cardiac infirmities are often beyond the scope of the RECs to handle. The list below indicates those conditions requiring further information, and most likely, a waiver. Cardiac medication is a good indicator that a significant coronary condition exists. When submitting the case for a waiver review a recent (less than 12 months old) stress test will be required.

a. History Of Myocardial Infarction(s).

Any such history must be described in the attending physician's report including "class" (class III or IV) of myocardial infarction(s).

b. Surgery.

Any cardiac surgeries, including cardiac pacemaker implant, bypass, etc., require further evaluation and thorough description(s) in order to facilitate thorough analysis by Headquarters medical staff.

c. Heart Irregularity.

Irregularity sufficient to compromise cardiac function.

d. Hypertension.

Uncontrolled hypertension or hypertension controlled by medication requiring close monitoring. Applications indicating uncontrolled hypertension or control by reserpine, guanethidine, guanadrel, methylopa, clonidine, or guanabenz must be evaluated by NMC. If the applicant's hypertension is controlled by diuretics, beta-

adrenagic blocking agents, labetalol, hydralazine, minoxidil, prazosin, captopril, or calcium slow channel blocking agents, no further evaluation is required unless additional complications are noted by the examining physician.

(1) Original Licenses.

Blood pressure higher than 150/90 regardless of treatment with medication.

(2) Renewal Or Raise Of Grade.

Blood pressure higher than 160/100 if under age 50 or 175/100 if 50 or over, on medication.

3. Physical Handicaps.

Conditions such as loss of limb or restricted motions of limb require a practical demonstration of ability. These demonstrations determine if an applicant can safely perform all duties entrusted to him/her by virtue of holding a license. The OCMI shall recommend the extent of the test to NMC for approval prior to the demonstration. If possible, an underway practical examination should be performed. The license may be approved at the local level with the OCMI imposing any necessary limitations.

a. Operator of Uninspected Towing or Passenger Vessels (OUTV, OUPV) and Master Or Mate Of Less Than 200 Gross Tons.

A practical demonstration shall include the following elements:

- (1) Handling of mooring lines.
- (2) Climbing and descending the vessel's ladder.
- (3) Reaching, handling, grasping, and lifting lifesaving and fire fighting equipment required by the vessel's COI or applicable regulations.
- (4) Donning and properly wearing a personal flotation device (PFDs); Helping passengers don PFDs; Casting ring buoys.
- (5) Properly operating fire fighting equipment.
- (6) Recovering a person who has fallen overboard.
- (7) Rendering first-aid to a person who may be unconscious or otherwise incapacitated.
- (8) Using shipboard tools to repair a mechanical breakdown.
- (9) Properly use navigation/communication equipment if applicable.

b. Deck And Engineer Officer Licenses.

A practical demonstration shall include the following elements.

- (1) Climbing and descending the ship's ladder.
- (2) Climbing and descending a Jacob's ladder.
- (3) Opening and closing watertight doors.
- (4) Exiting vessel via emergency routes.

- (5) Rowing a lifeboat.
- (6) Wearing an emergency breathing apparatus.
- (7) Reaching, handling, grasping, and lifting lifesaving and fire fighting equipment required by the vessel's COI.
- (8) Donning and properly wearing a personal flotation device (PFD) and casting ring buoys.
- (9) Deck Officers must handle mooring lines and operate winch controls.
- (10) Engineers must operate valves and related machinery control equipment.
- (11) Properly use navigation/communication equipment if applicable.

FIGURE 4-1: COMPREHENSIVE DIABETES EDUCATION PROGRAM

To include but not limited to:

1. The disease and its complications.
2. Diet management and weight control.
3. Types of insulin, characteristics and uses.
4. Storage, handling and administration of insulin.
5. Monitoring blood glucose.
6. Self-adjustment of insulin dosage in response to trends in blood glucose monitoring.
7. Effects of illness, injury, stress, heavy manual labor, exercise and other factors on diabetic control, insulin dose and diet.
8. The applicant's recognition when there is a loss of diabetic control.

FIGURE 4-2: RECOMMENDED CHECKLIST FOR DIABETES

(REC USE ONLY.) This list is for the REC to use to ensure that sufficient information is being given for the waiver. Do not send this list to the doctor.

1. Physician's statement that:

- applicant has completed a comprehensive diabetes education program.
- no hospitalizations within the last 12 months.
- applicant's diabetic control is stable.
- has total insulin dose per day varied less than ten units up or down (e.g., total range less than 20)?
- applicant is able to maintain diabetic control by monitoring blood glucose and appropriately adjusting insulin dosage.
- copies of medical record entries for last 18 months.
 - are there at least three entries?
 - are there less than six entries?
 - the record supports the statement that the disease is stable. Any doubts refer to G-NMC-4C.
 - no evidence of other significant conditions or diabetes-related illnesses. [NOTE: Many illnesses may not be apparently related to diabetes; any doubts refer to G-NMC-4C.]
- Test: HgbA1C within one month of waiver request.
 - within normal limits?

2. Applicant's statement that:

- no hospitalizations within the last 12 months.
- he/she is capable of maintaining diabetic control by:
 - monitoring blood glucose.
 - adjusting insulin dose and other relevant factors.

DOT - USCG

CG-719K (Rev. 2/94)

Merchant Marine Personnel Examination Report

OMB No. 0705-0181

Privacy Act Statement

As required by 5 USC 552a(c)(3), the following information is provided when supplying personal information to the U.S. Coast Guard:

1. Authority for solicitation of the information: 46 USC 22104(a), 7101(c)-(e), 7306(a)(4), 7313(c)(3), 7317(a), 8703(b), 9102(a)(5)
2. Principal purposes for which information is used:
 - (1) To determine if an applicant is physically capable of performing shipboard duties
 - (2) To ensure that a duly licensed Physician/Physician's Assistant conducts the applicant's physical and to verify the information as needed.
3. The routine uses which may be made of this information:
 - (1) This form becomes a part of the applicant's file as documentary evidence that regulatory physical requirement has been satisfied and the applicant is physically competent to hold a merchant marine license or document.
 - (2) The information becomes part of the total license or document file and is subject to review by federal agency casualty investigators.
4. Disclosure of this information is voluntary, but failure to provide this information will result in nonissuance of a license or Merchant Mariner's Document.

Instructions for Medical Personnel

The U.S. Coast Guard requires a physical examination to determine that all holders of Coast Guard issued licenses and documents:

- Be of sound health
- Have no physical limitations that would hinder or prevent performance of duties
- Must be capable of working in cramped spaces on rolling vessels
- Maintain balance on a moving deck
- Rapidly don an exposure suit
- Step over door sills of 24 inches in height
- Open or close watertight doors that may weigh up to 56 pounds
- Pull heavy fire hoses a distance of 400 feet, and have the ability to lift fully charged fire hoses
- Must be able to climb steep stairs or vertical ladders
- In an emergency such as a vessel fire or flooding, must be able to fully participate in the firefighting and lifesaving of passengers and crewmembers
- Must be physically able to stay alert for 4 to 6 hour shifts
- Must be free from any sudden onset of a medical condition which would affect operating or working on vessels

Detailed guidelines on potentially disqualifying medical conditions may be obtained from any U.S. Coast Guard Regional Exam Center (NVIC 2-98), or by calling the National Maritime Center at (202) 493-1000. Examples of impairment that could lead to disqualification include impaired vision, color vision or hearing; poorly controlled diabetes; multiple or recent myocardial infarctions; psychiatric disorders; and convulsive disorders. In short, any condition that poses an inordinate risk of sudden incapacitation or debilitating complication, and any condition requiring medication that impairs judgement or reaction time are potentially disqualifying and will require a detailed evaluation.

The Coast Guard estimates that the average burden for filling out this form is 5 minutes. You may submit any comment concerning the accuracy of this burden estimate or any suggestion for reducing the burden to the National Maritime Center, (202) 493-1000 or Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Desk Officer for DOT/USCG, Old Executive Office Building, Washington, DC 20593

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Applicant
 Name (Last, First, MI)

Date of birth (Day, Month, Year) Social Security Number

Physical Information

Hair color	Eye color	Weight _____ lbs
Height _____ ft _____ in	Blood Pressure _____ / _____	Distinguishing Marks

Vision

Uncorrected Vision		Corrected Vision		Field of Vision <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal Degrees	Glaucoma Pressure Test	
Right	%	Right	%		Right	Left
Left	%	Left	%			

Color Vision

PASS FAIL

Pseudoisochromatic Plates (Indicate the one used)

<input type="checkbox"/> Dvorine - 2nd Ed	<input type="checkbox"/> Eldridge - Green Perception Lantern
<input type="checkbox"/> AOC	<input type="checkbox"/> Farnsworth Lantern (Fulant)
<input type="checkbox"/> AOC Rev Ed	<input type="checkbox"/> Keystone Orthoscope
<input type="checkbox"/> AOC - IRR	<input type="checkbox"/> Keystone Telebinocular
<input type="checkbox"/> Ishihara 16, 24, 38 Plate Ed	<input type="checkbox"/> SAMCIT
	<input type="checkbox"/> Timius Optical Vision Test
	<input type="checkbox"/> Williams Lantern

**Color sensing lenses are prohibited*

Hearing

NORMAL IMPAIRED (If checked, complete audiometer, speech test, and discrimination test)

Audiometer Threshold Value	500 Hz	1000 Hz	2000 Hz	3000 Hz
Right Ear				
Left Ear				
Right Ear (aided)				
Left Ear (aided)				

Functional Speech Discrimination Test at 55 dB Left Ear _____ % Right Ear _____ %

Medications

List of medications (current and past), including dosage and possible side effects NO PRESCRIPTIONS MEDICATIONS

Merchant Marine Personnel Examination Report

Medical Professional Assessment

Does the applicant have or has ever suffered from any of the following?

If YES, • Identify the condition • Date of diagnosis • Current and past prescriptions used • Limitations prognosis

No	Yes	System	Condition
		1. Circulatory System	a. Heart disease (Provide stress test result)
			b. (Hypertension [surgery] eliminate)
			c. Chronic renal failure
			d. Vascular disease
			e. Blood disorder
		2. Digestive System	a. Severe digestive disorder
		3. Endocrine System	a. Thyroid dysfunction (Provide TSH level)
			b. Diabetes (Provide HGB results) NAIC
		4. Infections	a. Communicable disease
			b. Hepatitis A, B or C
			c. HIV
			d. Tuberculosis
		5. Neurological System	a. Psychiatric disorder
			b. Depression
			c. Attempted suicide
			d. Alcohol abuse
			e. Drug abuse
			f. Loss of memory
			g. Severe speech impediment
		6. Musculoskeletal System	a. Amputations
			b. Impaired range of motion
			c. Impaired balance/coordination
		7. Nervous System	a. Epilepsy
			b. Seizure → this could be incorporated into one
			c. Paralysis
		8. Respiratory System	a. Asthma (Provide PFT results)
			b. Lung disease
		9. Other	a. Allergies
			b. Deteriorating eye disease
			c. Dizziness or fainting
			d. Periods of unconsciousness
			e. Recent or repetitive surgery
			f. Sleepwalking
			g. Other not listed

only in order to be listed

NAIC

→ this could be incorporated into one

Considering the findings in this examination, and noting the duties to be performed by the applicant, I, as a vessel of the United States, consider the applicant. Please check one.

Competent Not competent

Name of Physician/Physician's Assistant/Nurse Practitioner/License Number/Telephone Number

Office Address

Name of Physician/Physician's Assistant/Nurse Practitioner

Date

I certify that all information provided by me is complete and true to the best of my knowledge.

Signature of applicant

Date

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