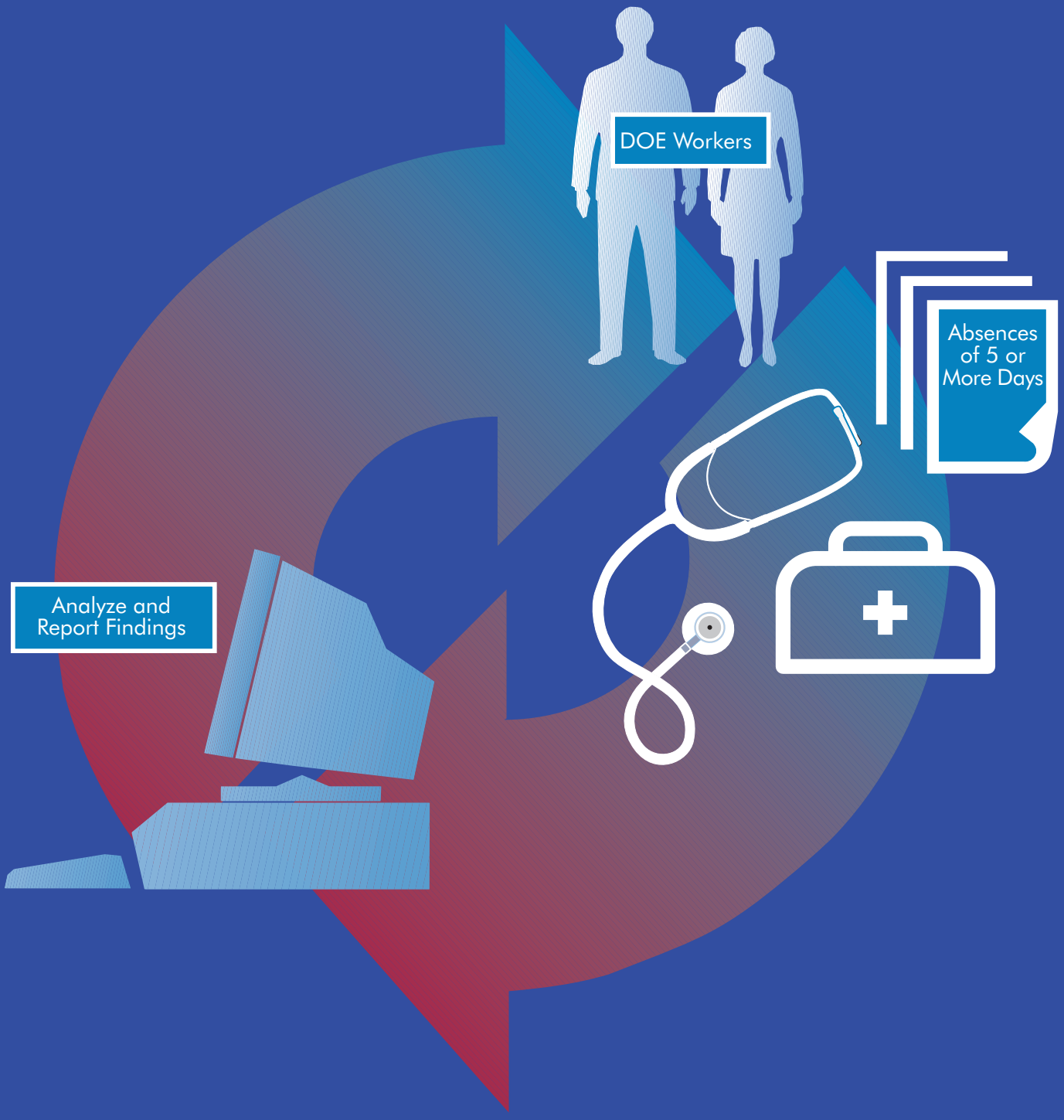
1995 Annual Epidemiologic Surveillance Report for

Pantex Plant



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Additional information about the Department of Energy's Office of Epidemiologic Studies, the Epidemiologic Surveillance Program, and annual reports for DOE sites participating in this program can be found at:

http://tis-nt.eh.doe.gov/epi

Introduction

The U.S. Department of Energy's (DOE) commitment to assuring the health and safety of its workers includes the conduct of epidemiologic surveillance activities that provide an early warning system for health problems among workers. A number of DOE sites participate in the Epidemiologic Surveillance Program. This program monitors illnesses and health conditions that result in an absence of five or more consecutive workdays, occupational injuries and illnesses, and disabilities and deaths among current workers.

This report provides a summary of epidemiologic surveillance data collected from the Pantex Plant from January 1, 1995 through December 31, 1995. The data were collected by a coordinator at Pantex and submitted to the Epidemiologic Surveillance Data Center, located at Oak Ridge Institute for Science and Education, where quality control procedures and data analyses were carried out.

The annual report for 1995 has been redesigned from reports for previous years. Most of the information in the previous reports is also in this report but some material now appears in the appendixes instead of the main body of the report. The main sections of the report are the same as in previous years, namely work force characteristics, absences that lasted at least five consecutive workdays (health events); workplace injuries, illnesses, and deaths that were reportable to the Occupational Safety and Health Administration (OSHA-recordable events); and disabilities and deaths among current workers. This 1995 report provides additional information describing the work force by age and occupational groups.

The information presented in the main body of the report provides a descriptive analysis of the data collected from the site. Additional information in the appendixes provides more detail. The report also contains an expanded Glossary and an Explanation of Diagnostic Categories which gives examples of health conditions that may cause a person to be absent from work.

The data presented here apply only to Pantex. The DOE sites are varied, so comparisons of Pantex with other DOE sites should be made with caution. It is important to keep in mind that many factors can affect the completeness and accuracy of health information collected at the sites as well as affect patterns of illness and injury observed.

Pantex At a Glance — 1995:

- Material handlers are a relatively small occupational group at Pantex; 121 workers in 1995. They were at significantly elevated risk for illnesses involving the circulatory, respiratory, and digestive systems compared with other Pantex workers. In addition, they had a sevenfold risk of occupational related back strains compared with other Pantex workers and were at significantly increased risk for other occupational injuries such as open wounds and other sprains and strains. Further evaluation of these initial surveillance observations is recommended. The identification of factors contributing to the high rates in this group should reduce the impact of illness and injuries.

- Security staff were at twice the risk for illnesses involving the respiratory and digestive systems and were five times more likely to experience a dislocated joint than were other Pantex workers. Production technicians were also at about twice the risk for illnesses of the respiratory and digestive systems and had a fivefold risk of back strains compared with other workers. Further evaluation of joint dislocations in the security forces and back strains among production technicians may provide additional insights leading to improved injury prevention in these groups.

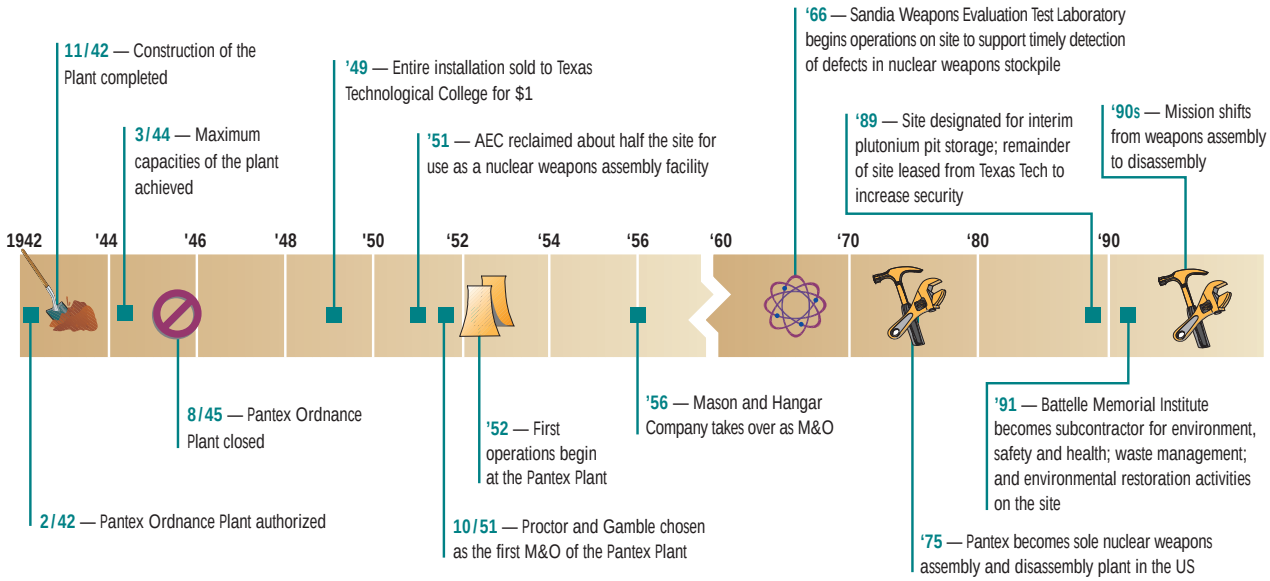
- In most diagnosis categories the number of health events increased substantially between 1994 and 1995. The number of illnesses and injuries approximately doubled in some categories (e.g., digestive system, pregnancy and childbirth, injury and poisoning) and showed even larger increases in others (e.g., circulatory, nervous system and sensory, respiratory). Changes in management and supervisory practices that increase the likelihood of workers seeking return-to-work clearance through occupational medicine clinics following illness absences can increase the number of health events reported. The addition of a third year of data will permit an analysis for trends and should result in a more informed interpretation of the health status of Pantex workers.

- The 1995 Epidemiologic Surveillance report has been redesigned to make health and safety information more accessible and to summarize a wider range of information. Extensive tables of rates and risk estimates are in the appendixes for those who want more detail. Among the noteworthy changes, greater emphasis is given to separate evaluations of men and women workers because their rates of injury and illness show distinct differences. More detailed occupational groups have been analyzed separately wherever sufficient numbers of health events permit.

Site Overview

The Pantex Plant, located on the Texas Panhandle 17 miles northeast of Amarillo, was constructed in 1942 to serve as a conventional bomb plant for the U.S. Army. The plant was deactivated when World War II ended and remained vacant until 1949 when Texas Technological University purchased the site for $1 for experimental cattle-feeding operations. The land was sold subject to recall under the National Security Clause, and the Atomic Energy Commission requested the Army to reclaim and reopen the site in 1951 in order to expand nuclear weapons assembly facilities. The purpose of this decision was to duplicate all critical nuclear weapons manufacturing functions; if one site became disabled, the production of nuclear weapons would not be interrupted. In 1975, the Pantex Plant became the only nuclear weapons assembly and disassembly plant when other sites were closed. With the downsizing of the DOE complex, the site assumed new responsibilities. Interim storage of plutonium pits was transferred to the plant in 1989 when a plutonium processing center was deactivated. With the easing of political tensions between the U.S. and the former Soviet Union in the 1990s and the resulting efforts of both nations to reduce their nuclear stockpiles, the disassembly of nuclear weapons at the Pantex Plant became a vital part of this operation. Today, the Pantex Plant has five primary operational missions: weapons assembly, weapons disassembly, evaluation of weapons, high explosive research and development, and interim plutonium pit storage.

Proctor and Gamble Defense Corporation was awarded the first five-year management and operating contract for the Pantex Plant in 1951. The current contractor, Mason and Hanger, took over the management and operating functions on October 1, 1956.



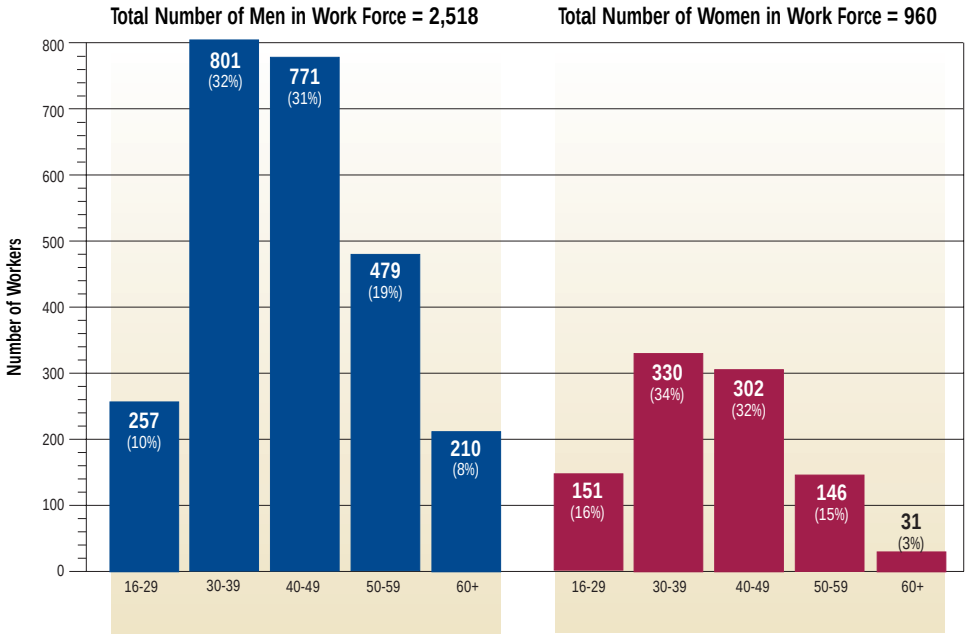
Timeline of Major Activities at the Pantex Plant

The Pantex Work Force

A total of 3,478 Pantex employees were included in epidemiologic surveillance in 1995, 76 more workers than were present in 1994. There were over two and a half times as many men (2,518) as women (960). The Pantex work force was relatively young compared with the general population. The average age of Pantex workers was 43 years among men and 40 years among women (figure 1). The majority of the Pantex workers was White (82%). Hispanics comprised about 10% and African Americans about 6% of the work force; Asians and Native Americans made up the remaining 2% of the workers (figure 2). Men and women were not distributed equally among the various occupational groups; the largest difference was seen in the office management and administration group (figures 3 and 4). A more detailed distribution of the work force by gender, age, and occupational group is in appendix A.

This report evaluates worker health by examining illness and injury rates for various occupational groups. Not all occupations pose equal risks for illness or injury, so comparisons of rates among several occupational categories are made to determine whether some occupational groups are at greater risk than others for these health events. The number of illnesses or injuries reported in any specific occupation may be very small in a given year or the number of workers in a given occupation may be small. These small numbers limit the certainty with which illness and injury rates can be calculated and compared and in some cases are so few in number that they cannot be analyzed separately. The analyses presented in this report use broad occupational categories (see figure 3) because there were not enough health events in many specific occupations to permit more detailed analyses, but you can find which occupational category you are in by referring to figure 5. This figure lists many of the job titles that are grouped into each of the categories used for the analyses.

Figure 1. The Work Force by Gender and Age



Figures 2a and 2b. Racial Composition of the Work Force by Gender

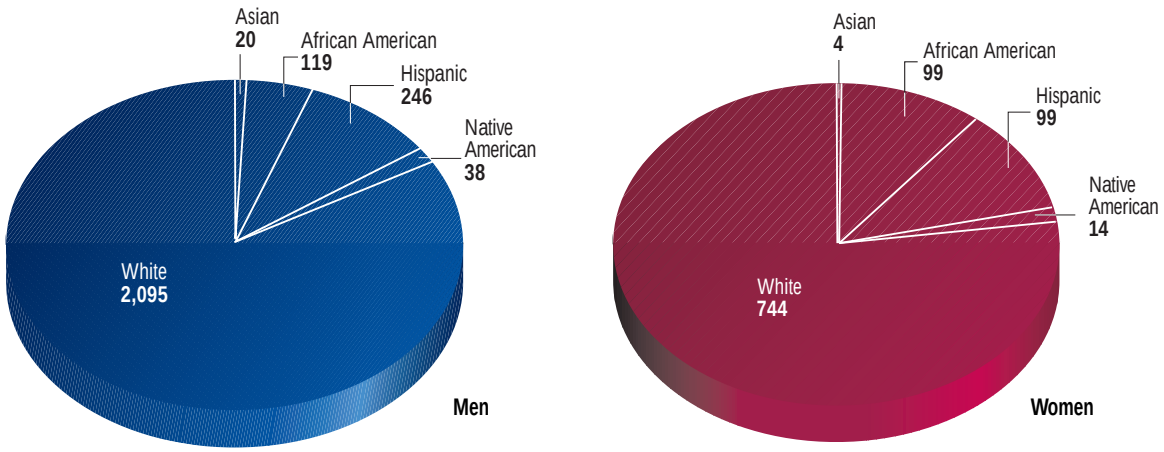
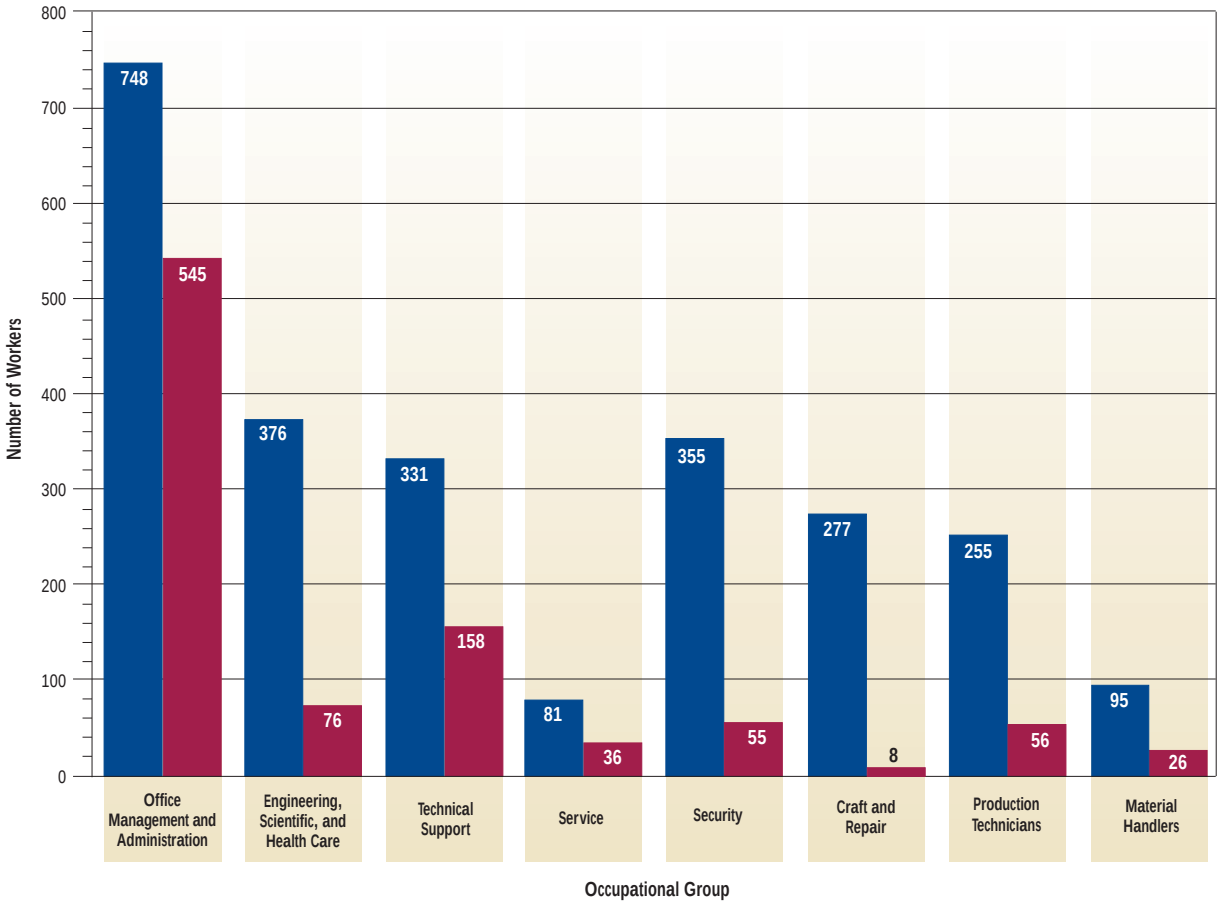


Figure 3. The Work Force by Gender and Occupation



Figures 4a and 4b. Percentage of Workers in Different Occupations by Gender

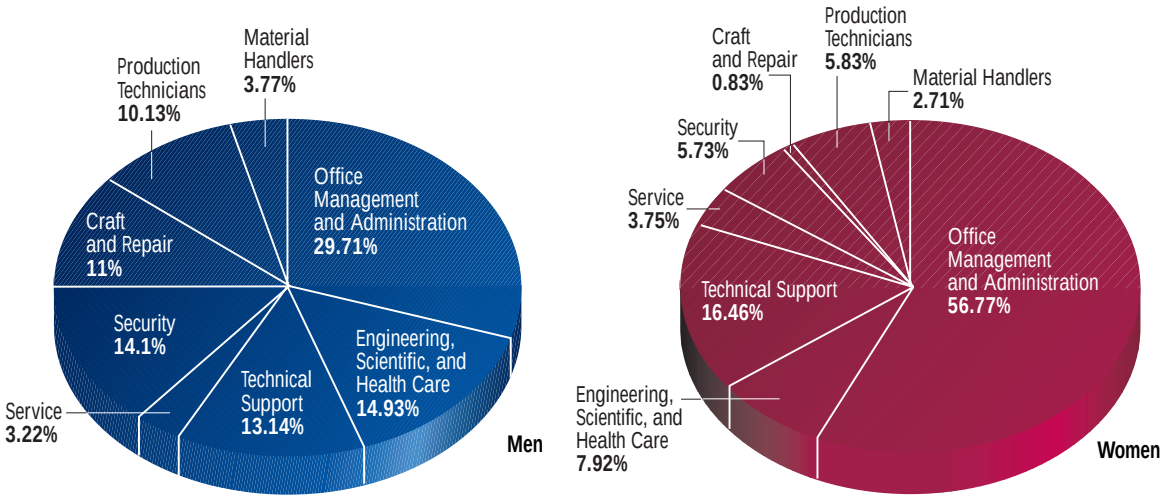


Figure 5. Most Common Job Titles in Each Occupational Group

OFFICE MANAGEMENT AND ADMINISTRATION

ACCOUNTANT
ACCOUNTING SPECIALIST
ACCOUNTING TECHNICIAN
ADMINISTRATIVE ASSISTANT
ADMINISTRATIVE CLERK
ADMINISTRATIVE SECRETARY
ADMINISTRATIVE SECRETARY I
ADMINISTRATIVE SPECIALIST
ADVISORY BOARD LIAISON
ASSISTANT FACILITY MANAGER
ATTORNEY
ATTORNEY I
ATTORNEY II
BENEFITS SPECIALIST
BUDGET MANAGER
BUYER
CASHIER
CHIEF INTERNAL AUDITOR
CLASSIFICATION OFFICER
COMMUNICATIONS TECHNICIAN
COMMUNITY RELATIONS SPECIALIST
CONTRACT ADMINISTRATOR
CONTRACT ANALYST
CRAFTS SUPERVISOR
DEPARTMENT MANAGER
DEPARTMENT MANAGER II
DEPARTMENT MANAGER III
DIVISION MANAGER I
DIVISION MANAGER II
DIVISION STAFF COORDINATOR
EMPLOYEE RELATIONS SPECIALIST
EXECUTIVE SECRETARY
FACILITY MANAGER
GENERAL CRAFTS SUPERVISOR
GENERAL MANAGER
GENERAL MANAGER'S STAFF
GENERAL MANUFACTURING SUPV.
GENERAL WAREHOUSE SUPERVISOR
HUMAN RESOURCES CLERK
HUMAN RESOURCES MANAGER
INTERNAL AUDITOR
LABOR RELATIONS MANAGER
LABOR RELATIONS SPECIALIST
LEAD ACCOUNTANT
LEGAL ASSISTANT
MAINTENANCE SUPERINTENDENT
MANAGER-ADVANCED TECH OFFICE
MANUFACTURING SUPERVISOR
N DEPARTMENT MANAGER
ORGANIZATION DEVELOPMENT MGR.
P PROJECT SPECIALIST
PERSONNEL SERVICES SUPERVISOR
PHYS. DISTR. SUPERINTENDENT
PLANNING SUPPORT COORDINATOR
PLANT SHIFT SUPERINTENDENT
PRE-PROFESSIONAL TRAINEE
PRIME CONTRACT ADMINISTRATOR
PRODUCTION MANAGER
PRODUCTION PLAN. COORDINATOR
PRODUCTION PLANNER
PROGRAM COORDINATOR
PROGRAM MANAGER
PROJECT ACCOUNTANT
PROJECT ACCOUNTING SPECIALIST
PROJECT ADMINISTRATIVE SPEC.
PROJECT ASSISTANT
PROJECT ASSOCIATE
PROJECT BENEFITS SPECIALIST
PROJECT COMPENSATION ANALYST
PROJECT EMPLOYEE REL. SPEC.
PROJECT LEADER
PROJECT MANAGER
PROJECT RECRUITER
PROJECT SPECIALIST
PROJECT TRAINING SPECIALIST
PURCHASING MANAGER
QUALITY ANALYST
QUALITY SUPERVISOR
RECRUITER
REPRODUCTION CLERK
SECRETARY
SECRETARY TO THE GENERAL MGR.
SECTION MANAGER
SECTION MANAGER I
SECTION MANAGER II
SECTIONAL TRAINING SPECIALIST
SECURITY OPERATIONS MANAGER
SECURITY PLANNING SPECIALIST
SENIOR BUYER
SENIOR CLERK
SENIOR INTERNAL AUDITOR
SENIOR PROJECT LEADER
SENIOR QUALITY ANALYST
SENIOR SECRETARY
SENIOR TRAINING SPECIALIST
SR. ACCOUNTANT
SR. ADMINISTRATIVE CLERK
SR. ADMINISTRATIVE SECRETARY
SR. ADMINISTRATIVE SPECIALIST
SR. BENEFITS SPECIALIST
SR. COMPENSATION ANALYST
SR. CONTRACT ADMINISTRATOR
SR. FACILITY MANAGER
SR. LABOR RELATIONS SPECIALIST
SR. PROJECT ACCOUNTANT
SR. PROJECT COMP. ANALYST
SR. PROJECT EMPLOYEE REL. SPEC
SR. PROJECT INTERNAL AUDITOR
SR. PROJECT TRAINING SPEC.
SR. RECRUITER
SUPPORT SERVICES SUPERVISOR
TECHNICAL LIBRARY MANAGER
TELEPHONE OPERATOR
TRAINING MANAGER
TRAINING SPECIALIST
TRANSPORTATION SUPERVISOR
TRAVEL CLERK
WAREHOUSE SUPERINTENDENT
WAREHOUSE SUPERVISOR

(Continued)

Figure 5. Most Common Job Titles in Each Occupational Group (cont.)

ENGINEERING, SCIENTIFIC, AND HEALTH CARE
AREA SAFETY ENGR/SPECIALIST
DEPARTMENTAL ENGINEER
DEPARTMENTAL SCIENTIST
DIVISION SYSTEM SPECIALIST
ENGINEER
HEAD OCCUPATIONAL HEALTH NURSE
HEALTH PHYSICIST-IND HYGIENIST
INDUSTRIAL PHYSICIAN
MEDICAL DEPT. AIDE
MEDICAL DIRECTOR
NURSE PRACTIONER
OCCUPATIONAL HEALTH NURSE
P PROJECT SCIENTIST
PROGRAM ENGINEER/SCIENTIST
PROJECT ENGINEER
PROJECT SCIENTIST
QUALITY ENGINEERING SPECIALIST
R & D PROGRAM ENGINEER/SCIENT.
RESEARCH & DEVELOPMENT SCIENT.
SAFETY ENGINEER/SPECIALIST
SCIENTIST
SECTIONAL ENGINEER
SECTIONAL SCIENTIST
SENIOR AREA SAFETY ENGINEER
SENIOR ENGINEER
SENIOR PROJECT ENGINEER
SENIOR PROJECT SCIENTIST
SENIOR SCIENTIST
SR HEALTH/PHYS-IND HYGIENIST
SR PROGRAM ENGINEER/SCIENTIST
SR. SAFETY ENGINEER/SPECIALIST
SR.AREA SAFETY ENGR/SPECIALIST
STAFF PSYCHOLOGIST

TECHNICAL SUPPORT
ACCESS CONTROL TECHNICIAN
ASSISTANT TECHNICIAN
CONSOLE OPERATOR
ELECTRONIC TECHNICIAN
ENG. TECH. (WASTE OPER.)
ENG. TECH. I (WASTE OPER.)
ENG. TECH. II (REUSE FACILITY)
ENG. TECH. II (WASTE OPER.)
ENGINEERING TECH II(GAS ANALY)
ENGINEERING TECH. I (LAB.)
ENGINEERING TECH. I (OPER.)
ENGINEERING TECH. I(GAS ANALY)
ENGINEERING TECH. II (LAB.)
ENGINEERING TECH. II (OPER.)
ENGINEERING TECH.II(GAS ANALY)
INFO. MGMT. SPEC (INTERN)
INFORMATION MGMT. SPECIALIST
LABORATORY TECHNICIAN I
LABORATORY TECHNICIAN II
LABORATORY TECHNICIAN III
LEAD ACCOUNTING SPECIALIST
LEAD INFO. MGMT. SPECIALIST
LEAD INFO. MGMT. TECHNOLOGIST
LEAD PROGRAMMER/ANALYST
LEAD RECORDS MGMT. SPECIALIST
METROLOGY SPECIALIST
METROLOGY TECHNICIAN
METROLOGY TECHNICIAN I
METROLOGY TECHNICIAN II
PHOTO LAB TECHNICIAN I
PHOTO LAB TECHNICIAN II
PRINCIPAL INFO. MGMT. TECH.
PRINCIPAL PROGRAMMER/ANALYST
PRODUCT ACCEPTANCE TECHNICIAN
PROGRAMMER/ANALYST
PROJ. INFO. MGMT. SPECIALIST
PROJ. INFO. MGMT. TECHNOLOGIST
PROJECT PROGRAMMER/ANALYST
PROJECT TECHNICAL WRITER
QUALITY ASSURANCE TECH I
QUALITY ASSURANCE TECH II
RADIATION PROTECTION TECH I
RADIATION PROTECTION TECH II
RADIATION PROTECTION TECH III
RECORDS MANAGEMENT SPECIALIST
SPECIAL MECHANIC INSPECTOR
SR. DRAFTING TECHNICIAN I
SR. DRAFTING TECHNICIAN II
SR. GRAPHIC ARTS SPECIALIST
SR. INFO. MGMT. SPECIALIST
SR. INFO. MGMT. TECHNOLOGIST
SR. PROGRAMMER/ANALYST
SR. PROJ. INFO. MGMT. SPEC.
SR. PROJ. INFO. MGMT. TECH.
SR. PROJECT GRAPHIC ARTS SPEC.
SR. PROJECT PROGRAMMER/ANALYST
SR. RECORDS MANAGEMENT SPEC.
SR. TECHNICAL WRITER
STAFF INFO. MGMT. TECH.
TECHNICAL SECURITY TECH I
TECHNICAL SECURITY TECH II
TECHNICAL WRITER
TECHNICIAN ASSOCIATE
TELEPHONE SERVICE TECH.

SERVICE
ALARM DISPATCHER
ASSISTANT FIRE CHIEF
CONDUCTER RR
ENGINEER RR
EXPEDITER
EXPLOSIVE OPERATIONS LEADER
FIRE CAPTAIN
FIRE CHIEF
FIRE LIEUTENANT
FIREFIGHTER
FIREFIGHTER/PARAMEDIC
FIRST COOK
FOOD SERVICES ATTENDANT
FRY COOK
GENERAL EXPLOSIVE OPER. LEADER
JANITORIAL CUSTODIAN
JANITORIAL OPERATOR
LAUNDRY & CHGHSE. ATTEN.
LAUNDRY OPERATOR
SAFETY DIRECTOR
SECOND COOK

SECURITY
ADMINISTRATIVE ASSISTANT
ARMORER
ASST CHIEF OF PROTECTIVE FORCE
CHIEF OF PROTECTIVE FORCE
COMMUNICATIONS SGT.
DEPARTMENT MANAGER
PHYSICAL FITNESS SPECIALIST
PROGRAM COORDINATOR
PROJECT MANAGER
PROJECT TRAINING SPECIALIST
PROTECTIVE FORCE 1ST LIEUT.
PROTECTIVE FORCE 2ND LIEUT.
PROTECTIVE FORCE 2NS LIEUT.
PROTECTIVE FORCE CAPTAIN
SECURITY OFFICER
SECURITY PLANNING SPECIALIST
SECURITY TRAINING SPECIALIST
SENIOR TRAINING SPECIALIST
SPECIAL RESPONSE 1ST LIEUT.
SPO II (DEFENSIVE)
SPO III
SR. ADMINISTRATIVE CLERK
SR. PROJECT TRAINING SPEC.

CRAFT AND REPAIR
APPREN. AREA MECH.
APPREN. CARPENTER
APPREN. INSTRUMENT MECH.
APPREN. PIPEFITTER
AREA MECHANIC
BOILERMAKER
CARPENTER
ELECTRICIAN
GARAGE MECHANIC
HEAVY EQUIP. OPERATOR
INSTRUMENT MECHANIC
LT. EQ. & YD. MNTCE. OPER.
MACHINE TOOL MAINTENANCE MECH.
MASTER MECHANIC
METAL TR. & GR. OPER.
MOTOR PUMP OPERATOR
OPER. ENG. (UTILITIES OPER)
PAINTER
PIPEFITTER
PLASTICS MECHANIC
REFRIGERATION MECHANIC
SHEETMETAL WORKER
SPECIAL MECHANIC
SPECIAL MECHANIC-VEHICLE MNTCE
SS MECH. INSTRUMENT MECH.
SS MECH. MACHINIST
SS MECH. PLASTICS
TOOLMAKER
YARDWORKER

PRODUCTION TECHNICIANS
NUCLEAR MATERIAL CUSTODIAN
PRODUCTION TECHNICIAN

MATERIAL HANDLERS
MATERIAL HANDLER

Number and Length of Absences

As in the 1994 report, this report includes absences that lasted at least five consecutive workdays. The five-day length of absence is used because DOE Order 440.1 requires contractor management to notify Occupational Medicine when a worker has been absent for five or more consecutive workdays. Epidemiologic surveillance refers to these absences as "health events." Throughout this report worker health is examined in terms of gender, age, and occupation because the risk of illness and injury varies by these factors. When the number of days absent is reported, they include weekends unless otherwise stated.

Among both men and women, the percentage of health events increased with age. Men had about 70% more health events than women during 1995; since the work force contained over twice as many men as women, the percentage of women (14%) with at least one health event was greater than men (9%) (figure 6). This gender difference in health events was also seen in 1994, although the percentage of both men and women with one or more absences was lower (6.4% of women, 4.0% of men). The higher percentages reported in 1995 may reflect improved data collection in 1995 rather than a genuine increase in health events. Most sites participating in epidemiologic surveillance improve their reporting as data collection issues are resolved during startup. The shaded box explains how these percentages were calculated. Overall, the average length of absence for a health event was 40% longer for women (24.0 days) than for men (17.2 days) (figure 9).

Comparing the duration of absences between men and women, the age groups that showed large differences were the 16-29, 30-39, and 60+ age groups. The longer average duration of absence among women aged 16 to 39 may reflect maternity leave; pregnancy/childbirth was the diagnostic category most frequently reported for women in this age group (figure 13; appendix F). Two of the eight absences among women aged 60 and older were over 70 days. The diagnoses for these two absences were for arthritis and problems of the reproductive system. The other six absences lasted fewer than 30 days.

The service group had the highest percentage of workers with a health event; 21% of the men (figure 7) and 36% of the women (figure 8) reported at least one absence. The percentage of material handlers with at least one absence was similar (18% of men, 38% of women). Although these two groups had the highest percentage of workers with at least one absence, the average length of their absences was among the lowest (figure 10). For men and women combined, workers in the administrative (28.4 days) and the engineering, scientific, and health care (29.7 days) groups had the highest average number of days absent for each health event. Appendixes B-E provide more detail about the number and length of absences for men and women in different age and occupational groups. The diagnoses underlying these absences are examined in the Rates of Disease Occurrence section of this report.

How Are Percentages Calculated?

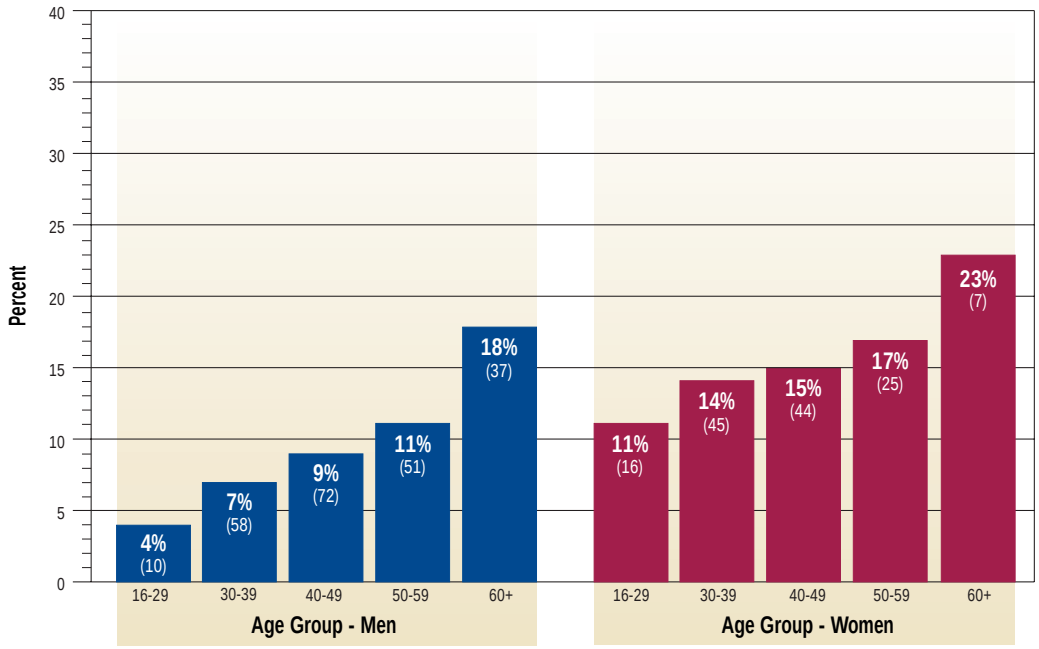
The percentages are calculated by dividing the number of workers with at least one health event in a given age and gender group by the number of employees in the same group. This number is multiplied by 100 to give a percent. The number of employees in each group is shown in figure 1. An example is given below:

10 (number of men aged 16-29 with at least one health event from figure 6)

÷257 (number of men aged 16-29 in the work force from figure 1)

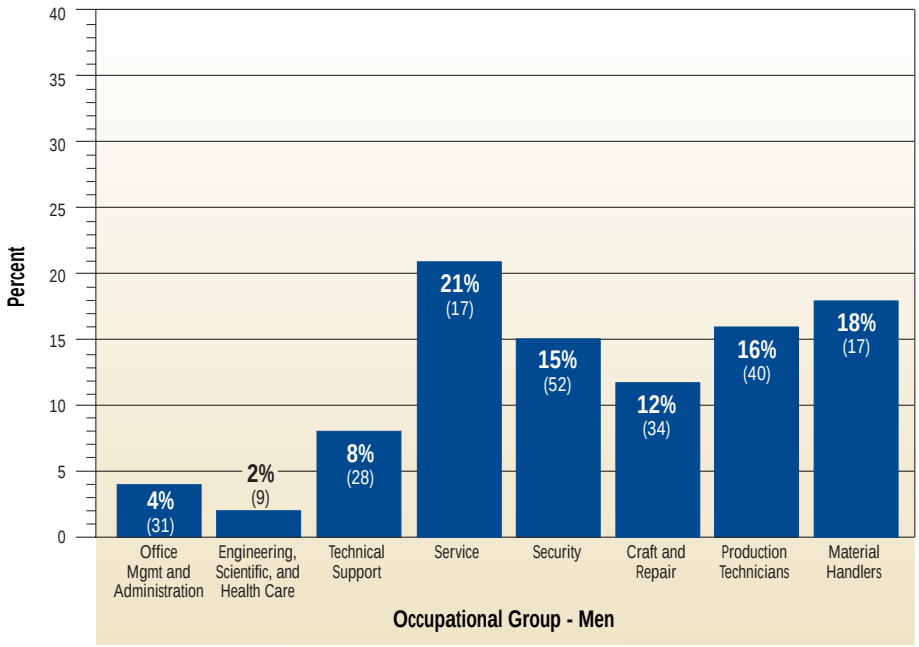
= .039 x 100 = 4%

Figure 6. Workers with at Least One Health Event by Gender and Age*



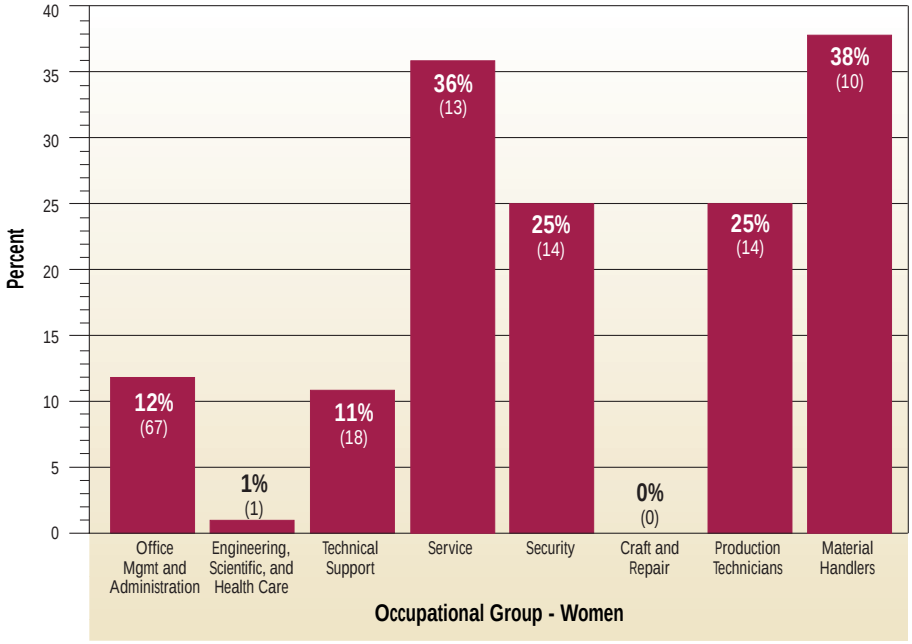
*Numbers in parentheses represent number of workers with at least one event.

Figure 7. Men with at Least One Health Event by Occupation*



*Numbers in parentheses represent number of workers with at least one event.

Figure 8. Women with at Least One Health Event by Occupation*



*Numbers in parentheses represent number of workers with at least one event.

Figure 9. Number of Days Absent by Gender and Age

Men

Age Group	Total Number of Days Absent	Total Number of Health Events	Average Number of Days Absent
16-29	121	10	12.1
30-39	1,022	65	15.7
40-49	1,169	82	14.3
50-59	1,041	61	17.1
60+	1,089	41	26.6
All Men	**4,442**	**259**	**17.2**

Women

Age Group	Total Number of Days Absent	Total Number of Health Events	Average Number of Days Absent
16-29	520	16	32.5
30-39	1,272	50	25.4
40-49	720	48	15.0
50-59	688	28	24.6
60+	401	8	50.1
All Women	**3,601**	**150**	**24.0**

Figure 10. Number of Days Absent by Gender and Occupation

Men

Occupation	Total Number of Days Absent	Total Number of Health Events	Average Number of Days Absent
Office Management and Administration	743	32	23.2
Engineering, Scientific, and Health Care	236	9	26.2
Technical Support	759	28	27.1
Service	202	18	11.2
Security	821	55	14.9
Craft and Repair	621	43	14.4
Production Technicians	723	49	14.8
Material Handlers	337	25	13.5
All Occupations	**4,442**	**259**	**17.2**

Women

Occupation	Total Number of Days Absent	Total Number of Health Events	Average Number of Days Absent
Office Management and Administration	2,129	69	30.9
Engineering, Scientific, and Health Care	61	1	61.0
Technical Support	318	22	14.5
Service	261	16	16.3
Security	298	15	19.9
Craft and Repair	0	0	0
Production Technicians	363	16	22.7
Material Handlers	171	11	15.5
All Occupations	**3,601**	**150**	**24.0**

Diagnostic Categories

Epidemiologic surveillance monitors both occupational and nonoccupational illnesses and injuries among active workers. For many health conditions it is simply not possible to say with certainty what caused the condition, so epidemiologic surveillance assesses the health of the work force in a very broad way. Most of the diagnoses analyzed in epidemiologic surveillance are reported by the workers when they visit their site's occupational medicine clinic and receive a return-to-work clearance following an absence. Separate analyses are conducted of the occupational injuries and illnesses recorded on the OSHA 200 Log.

This report organizes diagnostic categories by type of disease or condition (e.g., cancer) or body system (e.g., lung/respiratory). Categories can be broken down into specific health conditions. For example, rheumatism is one health condition under the diagnostic category of muscles and skeleton. Bronchitis is a condition under lung/respiratory. You can find the specific health conditions in each diagnostic category in the Explanation of Diagnostic Categories in this report. A health event can involve more than one diagnosis, and epidemiologic surveillance includes all diagnoses reported. If a worker reported more than one health condition for a single absence and all of these health conditions fell into the same diagnostic category, all of them were counted.

In 1995, two of the three categories of health conditions reported most often by both men and women were lung/respiratory and muscles and skeleton. The other category for men was injury and poisoning and for women, pregnancy/childbirth. With the exception of lung/respiratory conditions, these also tended to be the diagnostic groups with the most calendar days of absence (figure 11). The three categories reported most frequently by men did not change from 1994, but health conditions associated with the digestive tract ranked third for women in 1994 and fifth in 1995. Some of the more frequent diagnoses within these categories are shown in figure 12. The most frequently reported health conditions varied with age and gender (figure 13 and appendix F). Health conditions involving the muscles and skeleton ranked among the top three for men in all age groups. Almost half (47.5%) of these ailments were back problems and arthritis, and rheumatism made up most of the remainder. For men under age 60, lung/respiratory conditions were among the most commonly reported, and acute respiratory infections accounted for almost half (44.9%) of these conditions. Sinusitis, pneumonia, and bronchitis made up the remainder.

Diagnoses associated with pregnancy/childbirth were the most common reasons for absence for 16-39 year old women (figure 13). Lung/respiratory diagnoses were among the top three conditions reported for women aged 30-59. The types of conditions were similar to those reported by men. Diagnoses involving the digestive system were prominent among men in all age groups except 16-39 year olds and women of all ages except 30-49 year olds. The types of diagnoses observed among men and women were similar except for hernias. For both men and women, disorders of the teeth, gastroenteritis and colitis, and gallbladder disease were the most frequently reported diagnoses, but hernias were reported only among men (appendix F).

Diagnoses for injury and poisoning occurred relatively frequently in this work force. While poisoning is included in this diagnostic category, only one (1.3%) of the 78 diagnoses was related to poisoning, an allergic reaction to medicine. Complications of medical care are also included in the injury and poisoning category; two such diagnoses were reported. Injury and poisoning was among the three most common diagnostic categories for men in all occupational groups (figure 14). The predominant type of injury was sprains and strains followed by dislocations and fractures (appendix H). Among women, these diagnoses were among the top three for office management and administration and service workers. With the addition of bruises, the most common types of injuries among women were the same as among men. It is clear that injuries, including both occupational and nonoccupational injuries, affect many occupational groups and are not confined to a narrow age range (figures 13 and 14). Other sections of this report focus specifically on job-related health events that are reported under Occupational Safety and Health Administration (OSHA) guidelines.

Figure 11. Total Number of Health Conditions Reported and Total Number of Days Absent from Work by Gender and Diagnostic Category

	Men		Women	
Diagnostic Category	Total Number of Health Conditions Reported	Total Number of Days Absent	Total Number of Health Conditions Reported	Total Number of Days Absent
Benign Growths	3	25	4	83
Blood	0	0	1	12
Cancer	1	48	4	27
Digestive	40	3 618	20	266
Endocrine/Metabolic	5	82	2	19
Existing Birth Condition	1	14	1	41
Genitourinary	10	144	21	3 402
Heart/Circulatory	30	568	6	305
Infections/Parasites	4	208	3	32
Injury and Poisoning	2 63	2 890	15	193
Lung/Respiratory	1 72	575	1 32	264
Mental	4	25	8	139
Muscles and Skeleton	3 61	1 1,140	3 22	2 595
Nervous System	21	226	11	140
Pregnancy/Childbirth	NA	NA	2 24	1 1,150
Skin	5	63	3	32
Unspecified Symptoms	12	123	7	76

Figure 12. Health Conditions Reported Under Selected Diagnostic Categories by Gender

Men	Women
Cancer • Prostate	**Cancer** • Breast • Skin
Injury and Poisoning • Burns • Contusions • Dislocations • Fractures • Open Wounds • Sprains and Strains	**Lung/Respiratory** • Bronchitis • Laryngitis • Sinusitis • Upper Respiratory Infection
Lung/Respiratory • Bronchitis • Flu • Sinusitis • Sore Throat • Upper Respiratory Infection	**Muscles and Skeleton** • Back Problems • Bursitis • Joint Disorders • Tendonitis
Muscles and Skeleton • Acquired Toe Deformities • Arthritis • Back Problems • Disc Disorders • Lumbago • Pain in a Limb • Rheumatism	**Genitourinary** • Disorders of the Female Reproductive Organs • Ovarian Cyst • Urinary Tract Infection

Figure 13. Three Diagnostic Categories Reported Most Often by Gender and Age

		16-29	30-39	40-49	50-59	60+
Men	Most Common Diagnostic Category	Lung/Respiratory	Injury and Poisoning	Lung/Respiratory; Muscles and Skeleton	Lung/Respiratory; Injury and Poisoning	Heart/Circulatory
	Second Most Common Diagnostic Category	Muscles and Skeleton	Lung/Respiratory	Injury and Poisoning	Digestive; Muscles and Skeleton	Muscles and Skeleton
	Third Most Common Diagnostic Category	(3)	Muscles and Skeleton	Digestive	Heart/Circulatory	Digestive
Women	Most Common Diagnostic Category	Pregnancy/Childbirth	Pregnancy/Childbirth	Lung/Respiratory	Digestive	Genitourinary; Injury and Poisoning
	Second Most Common Diagnostic Category	Genitourinary	Lung/Respiratory	Muscles and Skeleton	Heart/Circulatory	Muscles and Skeleton
	Third Most Common Diagnostic Category	Digestive	(3)	Injury and Poisoning	Lung/Respiratory	Nervous System; Digestive

(1) This diagnostic category was reported the same number of times as the one above it.
(2) No additional health conditions were reported.
(3) More than two diagnostic categories tied.

Figure 14. Three Diagnostic Categories Reported Most Often by Gender and Occupation

		Office Management and Administration	Engineering, Scientific, and Health Care	Technical Support	Service
Men	Most Common Diagnostic Category	Muscles and Skeleton	Heart/Circulatory	Injury and Poisoning	Muscles and Skeleton
	Second Most Common Diagnostic Category	Heart/Circulatory; Digestive	Digestive; Injury and Poisoning	Muscles and Skeleton	Injury and Poisoning
	Third Most Common Diagnostic Category	Nervous System; Injury and Poisoning	(3)	Lung/Respiratory; Digestive	Lung/Respiratory; Digestive
Women	Most Common Diagnostic Category	Pregnancy/Childbirth	Pregnancy/Childbirth	Cancer; Lung/Respiratory	Lung/Respiratory
	Second Most Common Diagnostic Category	Lung/Respiratory; Muscles and Skeleton	(2)	Muscles and Skeleton	Injury and Poisoning
	Third Most Common Diagnostic Category	Injury and Poisoning	(2)	(3)	Nervous System; Genitourinary

		Security	Craft and Repair	Production Technicians	Material Handlers
Men	Most Common Diagnostic Category	Lung/Respiratory	Lung/Respiratory; Injury and Poisoning	Lung/Respiratory	Lung/Respiratory
	Second Most Common Diagnostic Category	Injury and Poisoning	Nervous System	Muscles and Skeleton	Muscles and Skeleton
	Third Most Common Diagnostic Category	Muscles and Skeleton	Digestive	Injury and Poisoning	Injury and Poisoning
Women	Most Common Diagnostic Category	Digestive; Pregnancy/Childbirth	(2)	Digestive; Genitourinary	Lung/Respiratory
	Second Most Common Diagnostic Category	Lung/Respiratory	(2)	Nervous System	Digestive
	Third Most Common Diagnostic Category	Genitourinary; Muscles and Skeleton	(2)	Heart/Circulatory	(3)

(1) This diagnostic category was reported the same number of times as the one above it.
(2) No additional health conditions were reported.
(3) More than two diagnostic categories tied.

Rates of Disease Occurrence

Some occupational groups had only a small number of workers who reported very few health events in 1995 (appendix H). Because events among a small number of workers can vary widely just by chance, the eight occupational groups were combined into four larger groups. The five age groups were also combined into two age groups for the same reasons (figure 15). The age groups, less than 40 years and 40 years and older, were chosen because the rates of many illnesses begin to change more rapidly among persons over 40 years of age.

The likelihood of getting cancer increases with age, and cancer diagnoses were reported only among older workers (figure 16). Only five such diagnoses were reported during 1995, four of them among women. These five diagnoses were reported by three technical support workers. The two women who reported cancers were in the 40-49 year old age group. One reported cancer of the breast and an unspecified site and the other reported skin cancer. The man was over 60 years old who reported prostate cancer. Three cancer diagnoses were reported in 1994, one among women and two among men. None of these workers reported cancer during 1995.

Production technicians and material handlers showed the highest rates of diseases affecting the circulatory system. Of the 36 circulatory system diagnoses reported, only 1 occurred among workers under age 40 (figure 16, appendix F). Among the 30 diagnoses reported by men, 10 were for ischemic heart disease (restricted blood flow through an artery) and 8 involved either varicose veins or hemorrhoids. Six diagnoses were reported among women, 3 of which were for ischemic heart disease. Three of these 6 diagnoses occurred among production technicians and material handlers (appendix H). The risk of circulatory disease was 6.9 times greater among material handlers than other workers (appendix J).

A Word about Rates...

The previous section considered the **number** of health events among various groups, but comparing these numbers may be misleading. For example, figure 11 shows that during 1995 men reported 63 diagnoses involving injuries; women reported 15. You can honestly say that men reported over four times as many injuries as women. Does this mean that men were at greater risk of injury in 1995? Comparing the number of injuries among men versus women will not answer this question. To answer the question, the number of men and women in the work force must be considered (figure 1). Since there are over two and a half times as many men as women working at Pantex, it is reasonable to expect more injuries among men than women. A more accurate way to compare men and women is to calculate the injury rate for each group. The rates are calculated by dividing the number of injuries in a given group by the number of employees in the same group. The number is multiplied by 1,000 to give a rate per 1,000 workers. For example:

(63 injuries ÷ among 2,518 men) = .0250 x 1,000 = 25.0 injuries per 1,000 men

(15 injuries ÷ among 960 women) = 0.156 x 1,000 = 15.6 injuries per 1,000 women

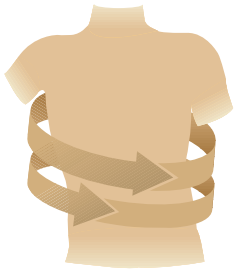
These rates account for differences in the number of men and women in the work force, and comparing them suggests that the rate of reported injuries among women is lower than among men, although not as different as a comparison of 63 injuries versus 15 injuries might suggest. They are called crude rates because they do not account for possible differences between men and women with regard to age, occupation, and other factors that might affect the individual's risk of getting an injury. Not all age groups are equally susceptible to various diseases and injuries, so epidemiologists often take age into account when calculating rates. For example, figure 16 of this report shows that injury rates vary not only by occupation, but by both age and gender. Among men, injury and poisoning rates are relatively similar for men under age 40 compared with older men, but the difference in injury and poisoning are very different for women under age 40 compared with older women. Because these differences can be dramatic, age-specific rates for workers under age 40 and those age 40 or older are presented in this section of the report. Definitions of diagnostic rates and age-specific rates also appear in the Glossary of this report.

The lung/respiratory category contains very different kinds of diseases: acute infectious diseases such as colds, influenza, and pneumonia; allergies, sinusitis, and bronchitis; and chronic diseases like asthma and emphysema. Over half of the diagnoses in this category involved acute infections or sinusitis. Respiratory disease rates were consistently higher among workers in service, security, craft and repair and production technicians and material handlers than among other occupational groups. For both men and women, rates were lower in younger workers in all occupational groups except production technicians and material handlers. The majority of diagnoses among the production technicians and material handlers were for acute infections and other diseases of the upper respiratory tract (appendix H). The respiratory disease risk among production technicians was 2.6 times higher and among material handlers was 5.5 times higher than other workers (appendix J).

In the injury and poisoning category, only one diagnosis involved poisoning, so this category really focuses on injuries. Injury rates did not change consistently with age. The variation in the rates among the women was probably due to the small number of diagnoses reported (15). The high rate among women in the service, security, and craft and repair group was based on 4 diagnoses of which 2 were bruises (figure 16 and appendix H). Among the men, about half of the diagnoses were for sprains and strains. Production technicians were particularly likely to have this type of injury with 8 of the 12 diagnoses reported for this group being sprains and strains (appendix H). They were 4.8 times more likely to sustain a back sprain or strain as were other workers (appendix J). Men in the security group were 4.8 times as likely to report a dislocation as were other occupational groups. Five of the 10 dislocations reported by men were among security workers, which made up 14% of the men in the work force.

Figure 15. Rates for All Diagnostic Categories Combined by Gender, Age, and Occupation

All Diagnostic Categories

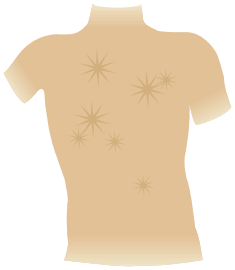


Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	31	145
	40+	61	165
Engineering, Scientific, and Health Care/Technical Support	<40	18	84
	40+	117	176
Service/Security/ Craft and Repair	<40	136	367
	40+	253	436
Production Technicians/Material Handlers	<40	250	267
	40+	319	462

Figure 16. Rates for Selected Diagnostic Categories by Gender, Age, and Occupation

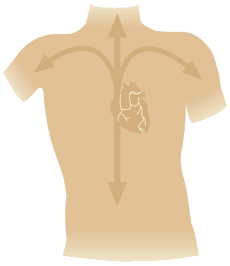
Diagnostic Category

Cancer



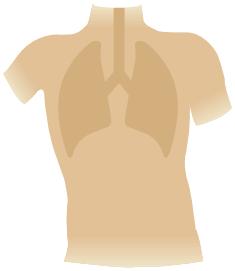
Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	0	0
	40+	0	0
Engineering, Scientific, and Health Care/Technical Support	<40	0	0
	40+	3	44
Service/Security/ Craft and Repair	<40	0	0
	40+	0	0
Production Technicians/ Material Handlers	<40	0	0
	40+	0	0

Heart/Circulatory



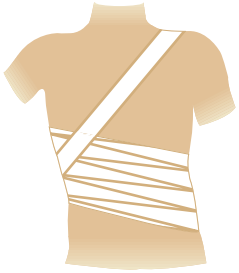
Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	0	0
	40+	12	3
Engineering, Scientific, and Health Care/Technical Support	<40	0	0
	40+	27	11
Service/Security/ Craft and Repair	<40	3	0
	40+	16	26
Production Technicians/ Material Handlers	<40	0	0
	40+	33	58

Lung/Respiratory



Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	0	20
	40+	4	30
Engineering, Scientific, and Health Care/Technical Support	<40	0	7
	40+	13	33
Service/Security/ Craft and Repair	<40	39	50
	40+	52	128
Production Technicians/ Material Handlers	<40	129	100
	40+	67	58

Injury and Poisoning



Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	8	4
	40+	6	24
Engineering, Scientific, and Health Care/Technical Support	<40	12	0
	40+	16	22
Service/Security/ Craft and Repair	<40	39	0
	40+	44	103
Production Technicians/ Material Handlers	<40	64	33
	40+	43	0

Occupational Sentinel Health Events

An occupational sentinel health event (SHEO) is a disease, disability, or injury whose occurrence may serve as a warning signal that workplace conditions may need to be changed or additional attention may be required to reduce its occurrence. Injuries and poisonings resulting from accidents in the workplace as well as 64 disease conditions have been identified as SHEOs from studies of workplace exposures and disease in many different industries. These disease conditions can be considered in the following three categories (Appendix K has additional information about what diseases and conditions are included in each SHEO group).

Definitely SHEOs: Consists of diseases that are unlikely to occur in the absence of an occupational exposure. Asbestosis, a lung condition resulting from exposure to asbestos, is an example of this group.

Possibly SHEOs: Includes such conditions as lung cancer and carpal tunnel syndrome, which may or may not be related to occupation. Additional information about the person's hobbies, personal habits, and work history are required to establish a link between disease and occupation. For example, lung cancer can result from asbestos exposure as well as smoking. Carpal tunnel syndrome may result from a job requiring typing or from a hobby such as playing piano.

Accidents: Includes all types of on-the-job accidents and resulting health conditions. Accidents specifically identified as occurring in the home, on the farm, or during recreation are excluded.

In 1995, 8 of the 409 health events (2%) reported were identified as SHEOs of which three involved accidents (figures 17 and 18). None of the accidents were specifically indicated as occurring in the workplace. Among the five SHEOs that were not accidents, three were carpal tunnel syndrome. Two of these were reported by women aged 30-39 years old. One woman worked in office management and administration, and the other was a material handler. The man was in the 40-49 year old age group and a technical support worker. These three absences accounted for 36.7% of the total number of days absent from SHEOs.

Figure 17. Characteristics of Health Events for SHEOs and Days Absent by Gender

		Total Number of Workers	Total Number of Health Events	Total Number of Health Conditions	Total Number of Days Absent
Men	Definite	0	0	0	0
	Possible	2	2	2	31
	Accident	2	2	5	22
	Total	**4**	**4**	**7**	**53**
Women	Definite	0	0	0	0
	Possible	3	3	3	36
	Accident	1	1	2	9
	Total	**4**	**4**	**5**	**45**

Figure 18. Number of Accidents by Gender, Age, and Occupation*

Occupation	Age Group - Men		Age Group - Women
	30-39	40-49	40-49
Technical Support	1		
Service			1
Craft and Repair		1	
Total	**1**	**1**	**1**

*Blank space is equal to zero.

Disability Among Active Workers

At Pantex, a worker is placed on long-term disability when absent 30 days or more. Forty-two workers were placed on long-term disability during 1995, but information about the medical reason for the disability was available for only 11 of the 42. Among these 11 workers, 6 went on disability for heart/circulatory conditions and 1 each for autoimmune disease, emphysema, knee surgery, back surgery, and post-traumatic stress. Production technicians and material handlers, especially those at least 50 years old, appeared to be at higher risk than other workers. Thirty-six percent of the disabilities occurred among production technicians and material handlers, who made up 12% of the total work force (figure 19b). While workers over 49 years old made up 25% of the work force, they accounted for 64% of the disabled workers (figure 19a). The percentage of disabled workers among production technicians and material handlers aged 50 or more was even higher (73%), although the average age of workers in these two occupational groups was not different from that of other occupational groups. The total of five workers reported as placed on disability in 1994 probably underestimated the number of disabilities because the mechanism for reporting them was not well established during Pantex's first year of participation in epidemiologic surveillance.

Figures 19a and 19b. Workers Placed on Long-Term Disability by Age and Gender; Workers Placed on Long-Term Disability by Gender and Occupation

Age	Total Number of Disabilities	
	Men	Women
16-29	0	0
30-39	4	1
40-49	3	7
50-59	15	4
60+	8	0
Total	**30**	**12**

Age and Gender

Occupation	Total Number of Disabilities	
	Men	Women
Office Management and Administration	6	7
Engineering, Scientific, and Health Care	2	1
Technical Support	1	1
Service	1	1
Security	3	1
Craft and Repair	3	0
Production Technicians	7	1
Material Handlers	7	0
Total	**30**	**12**

Gender and Occupation

Deaths Among Active Workers

During 1995, nine deaths occurred among active workers: eight men and one woman. As in 1994, the predominant causes of death were cancer and cardiovascular disease. Four deaths were due to heart/circulatory disease, two to cancer (one lung cancer and one prostate cancer), and one each to kidney disease, Lou Gehrig's disease, and a foreign substance entering the lungs. Additional characteristics of the workers who died are given in figure 20.

Figure 20. Active Workers Who Died by Gender, Age, and Occupation*

Occupation	Age Group - Men				Age Group - Women
	30-39	40-49	50-59	60+	16-29
Office Management and Administration		1			
Engineering, Scientific, and Health Care			1	2	1
Service				1	
Security	1				
Production Technicians			1	1	
Total	**1**	**1**	**2**	**4**	**1**

*Blank space is equal to zero.

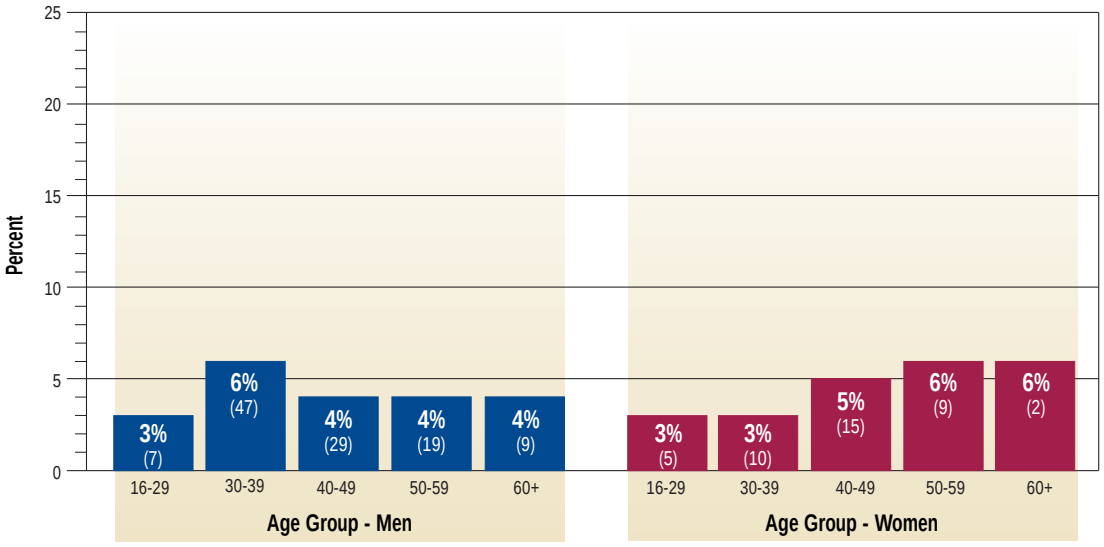
OSHA-Recordable Events

The Occupational Safety and Health Administration (OSHA) requires employers to maintain a record of occupational injuries and illnesses occurring among employees and to make that information available to OSHA on request. Information from these OSHA-recordable events is maintained in the OSHA 200 Log. OSHA-recordable events differ from health events captured through return-to-work clearances in at least two important respects: 1) they do not necessarily result in days lost from work, and 2) they are usually accompanied by a specific determination that they are job-related.

The 152 workers with at least one OSHA event in 1995 represented an approximate 7% increase over the number of workers with a recordable event in 1994. The percentage of workers with an OSHA event was about the same for men and women in 1995. The distribution of these events by age of the workers involved tended to follow the age distribution of the work force (figures 1 and 21). The number of workdays lost or with restricted activity averaged 10 days longer for women (16.1 days) than for men (6.2 days) (figure 24).

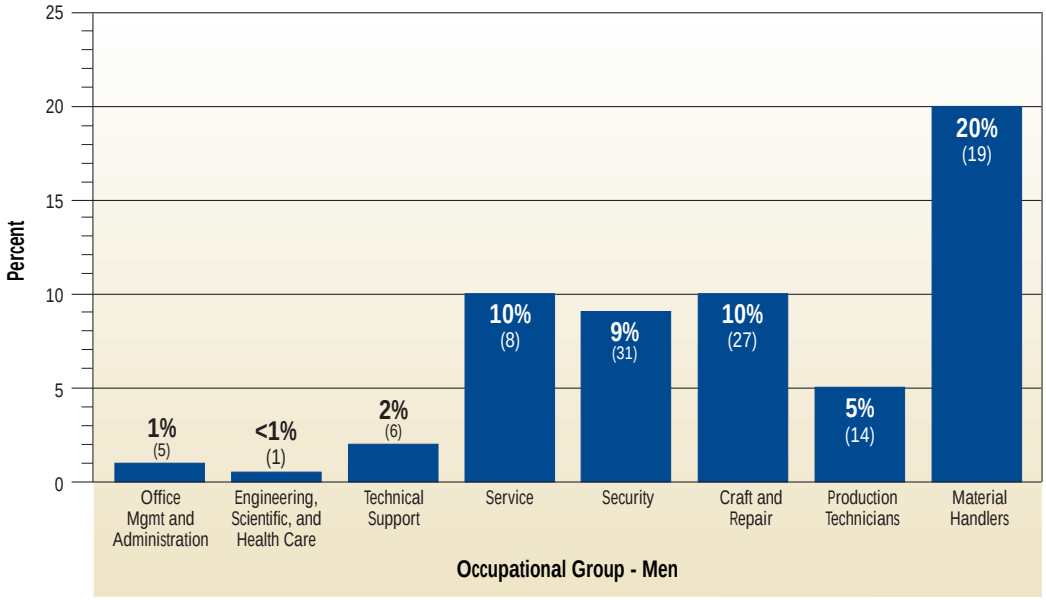
For men and women combined, material handlers (16.5%) and service workers (13.7%) had the highest percentage of workers with an OSHA event (figures 22 and 23). Twenty percent of the men classified as material handlers had at least one OSHA event. In women, the highest category was service, in which 22% had at least one OSHA event. There was a higher percentage of women in the production technician group with one or more OSHA events (14%, figure 23) than among men in this group (5%, figure 22). Among security workers, OSHA events occurred at about the same rate in men and women. Technical workers had the highest average number of workdays lost or with restricted activity for each OSHA event (19.1 days for men and women combined; figure 25). Appendixes L-N contain more detailed data about the number of OSHA events and days of work lost or with restricted activity for men and women in different age and occupational groups.

Figure 21. Workers with at Least One OSHA Event by Gender and Age*



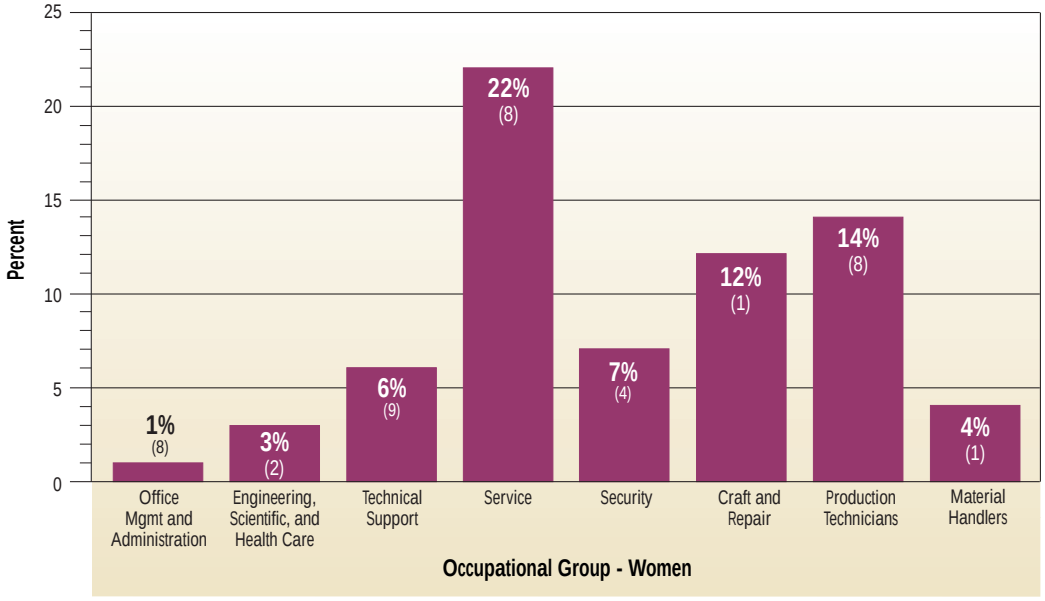
*Numbers in parentheses represent number of workers with at least one event.

Figure 22. Men with at Least One OSHA Event by Occupation*



*Numbers in parentheses represent number of workers with at least one event.

Figure 23. Women with at Least One OSHA Event by Occupation*



*Numbers in parentheses represent number of workers with at least one event.

Figure 24. Lost and Restricted Workdays by Gender and Age

Men

Age Group	Total Number of Days Lost/Restricted		Total Number of OSHA Events		Average Number of Days Lost/Restricted
16-29	26	÷	7	=	3.7
30-39	219	÷	53	=	4.1
40-49	195	÷	30	=	6.5
50-59	176	÷	21	=	8.4
60+	133	÷	9	=	14.8
All Men	**749**	÷	**120**	=	**6.2**

Women

Age Group	Total Number of Days Lost/Restricted		Total Number of OSHA Events		Average Number of Days Lost/Restricted
16-29	11	÷	5	=	2.2
30-39	131	÷	10	=	13.1
40-49	301	÷	17	=	17.7
50-59	220	÷	9	=	24.4
60+	30	÷	2	=	15.0
All Women	**693**	÷	**43**	=	**16.1**

Figure 25. Lost and Restricted Workdays by Gender and Occupation

Men

Occupational Group	Total Number of Days Lost/Restricted	Total Number of OSHA Events	Average Number of Days Lost/Restricted
Office Management and Administration	3	5	0.6
Engineering, Scientific, and Health Care	0	1	0.0
Technical Support	173	6	28.8
Service	18	8	2.2
Security	52	35	1.5
Craft and Repair	170	28	6.1
Production Technicians	157	16	9.8
Material Handlers	176	21	8.4
All Occupations	**749**	**120**	**6.2**

Women

Occupational Group	Total Number of Days Lost/Restricted	Total Number of OSHA Events	Average Number of Days Lost/Restricted
Office Management and Administration	25	9	2.8
Engineering, Scientific, and Health Care	1	2	0.5
Technical Support	113	9	12.6
Service	117	8	14.6
Security	0	4	0.0
Craft and Repair	107	1	107.0
Production Technicians	177	9	19.7
Material Handlers	153	1	153.0
All Occupations	**693**	**43**	**16.1**

Diagnostic and Accident Categories for OSHA-Recordable Events

Over 75% of the health conditions reported were for injury and poisoning. Sprains and strains remained the most common type of OSHA-recordable injury among both men and women, accounting for 48% of all OSHA-recordable injuries in 1995 (43% in 1994). Open wounds also occurred frequently among men, as did conditions related to the muscles and skeleton among women (figure 30). Age and occupation did not appear strongly related to the type of accident or the type of injury sustained (figures 30, 31, 32, and 33; appendixes O and S).

Twenty-five OSHA events were not the result of an accident. To be defined as an accident, an injury of poisoning diagnosis resulted from the OSHA event. In this group, 67% of the diagnoses were related to the muscles and skeleton and 21% to the nervous system. Over half of the latter were carpal tunnel syndrome. Of the 138 OSHA events that resulted from an accident, the type of accident was not reported for 54 (39.1%). The types of accidents reported most often were "other accidents," a broad category that includes being struck by an object, injuries from cutting or piercing objects, lifting, overexertion, and contact with hot or corrosive material (figures 27, 28, 31, and 33). Overexertion or strenuous movements accounted for 60% of these accidents. Five of the 8 injuries among women were sprains and strains. Men sustained 29 sprains and strains as well as 11 open wounds (figures 29a and 29b).

Figure 26. Health Conditions by Gender and Diagnostic Category

Diagnostic Category	Total Number of Health Conditions Reported	
	Men	Women
Mental	0	2
Nervous System	4	3
Lung/Respiratory	1	2
Skin	4	1
Muscles and Skeleton	15	14
Unspecified Symptoms	2	0
Injury and Poisoning	114	39
• Upper Limb Fractures	4	0
• Dislocations	1	1
• Back Sprains and Strains	21	7
• Other Sprains and Strains	35	10
• Open Wounds - Head, Neck, Trunk	3	1
• Open Wounds - Upper Limb	15	3
• Open Wounds - Lower Limb	1	0
• Superficial Injuries	4	0
• Bruises	10	7
• Crushing Injuries	0	1
• Foreign Bodies Entering Orifice	3	0
• Burns	6	1
• Unspecified Injuries	0	2
• Adverse Reaction to Nonmedical Substances	5	3
• Adverse Reaction to External Causes	6	3

Figure 27. Types of Accidents and the Number of Lost or Restricted Workdays by Gender

Accident Category	Men			Women		
	Number of Accidents	Number of Days Restricted	Number of Days Lost	Number of Accidents	Number of Days Restricted	Number of Days Lost
Motor Vehicle Traffic	1	11	4	0	0	0
Motor Vehicle Nontraffic	0	0	0	1	0	0
Other Road Vehicle	1	0	0	0	0	0
Accidental Poisoning by Other Substances	4	0	0	2	0	0
Falls	4	8	3	4	4	1
Natural/Environmental Factors	9	8	0	1	0	4
Submersion/Suffocation/Foreign Bodies	2	0	0	0	0	0
Other Accidents	44	362	117	9	218	9
Adverse Reaction to Medication	1	0	0	1	0	0

Figure 28. Types of Accidents that Occurred within the Category of Other Accidents by Gender

Men	Women
Cutting/piercing instrument/object	Hot, corrosive, or caustic material/steam
Hot, corrosive, or caustic material/steam	Overexertion and strenuous movements
Overexertion and strenuous movements	Struck by an object
Struck by an object	

Figure 29a. Injuries Associated with Each Type of Accident by Gender*

Type of Injury	Type of Accident – Men						
	Motor Vehicle Traffic	Accidental Poisoning by Other Substances	Falls	Natural/ Environmental Factors	Submersion/ Suffocation/ Foreign Bodies	Other Accidents	Adverse Reaction to Medication
Upper Limb Fractures			1			2	
Dislocations							
Back Sprains and Strains						9	
Other Sprains and Strains			2			20	
Open Wounds– Head, Neck, Trunk						3	
Open Wounds – Upper Limb						8	
Open Wounds – Lower Limb				1			
Superficial Injuries				3			
Bruises	1					1	
Foreign Bodies Entering Orifice					2	1	
Burns						4	
Unspecified Injuries							
Adverse Reaction to Nonmedical Substances		4		1			
Adverse Reaction to External Causes				5			1

*Blank space is equal to zero.

Figure 29b. Injuries Associated with Each Type of Accident by Gender*

Type of Injury	Type of Accident – Women: Motor Vehicle Nontraffic	Accidental Poisoning by Other Substances	Falls	Natural/ Environmental Factors	Other Accidents	Adverse Reaction to Medication
Upper Limb Fractures						
Dislocations			1			
Back Sprains and Strains			2		2	
Other Sprains and Strains					3	
Open Wounds– Head, Neck, Trunk				1		
Open Wounds – Upper Limb						
Open Wounds – Lower Limb						
Superficial Injuries						
Bruises	1		2		1	
Foreign Bodies Entering Orifice						
Burns					1	
Unspecified Injuries			1		1	
Adverse Reaction to Nonmedical Substances		2		1		
Adverse Reaction to External Causes		1				1

*Blank space is equal to zero.

Figure 30. Three Diagnostic Categories Reported Most Often by Gender and Age

		16-29	30-39	40-49	50-59	60+
Men	Most Common Diagnostic Category	Sprains and Strains	Sprains and Strains	Sprains and Strains	Sprains and Strains	Open Wounds
	Second Most Common Diagnostic Category	Open Wounds	Muscles and Skeleton	Open Wounds	Open Wounds	Sprains and Strains; Adverse Reaction to Nonmedical Substances
	Third Most Common Diagnostic Category	Muscles and Skeleton; Adverse Reaction to Nonmedical Substances	Bruises	(3)	Muscles and Skeleton	(3)
Women	Most Common Diagnostic Category	Adverse Reaction to External Causes	Sprains and Strains	Sprains and Strains	Muscles and Skeleton; Sprains and Strains	Muscles and Skeleton
	Second Most Common Diagnostic Category	(3)	Mental; Bruises	Muscles and Skeleton	Open Wounds; Nervous System	Sprains and Strains; Bruises
	Third Most Common Diagnostic Category	(2)	(3)	Bruises	(3)	(2)

(1) This diagnostic category was reported the same number of times as the one above it.
(2) No additional health conditions were reported.
(3) More than two diagnostic categories tied.

Figure 31. Three Accident Categories Reported Most Often by Gender and Age[1]

		16-29	30-39	40-49	50-59	60+
Men	Most Common Accident Category	Other Accidents	Other Accidents	Other Accidents	Other Accidents	Accidental Poisoning by Other Substances; Other Accidents
	Second Most Common Accident Category	Accidental Poisoning by Other Substances	Falls; Natural/Environmental Factors	Natural/Environmental Factors	Natural/Environmental Factors	Natural/Environmental Factors
	Third Most Common Accident Category	(3)	(4)	(4)	(3)	(3)
Women	Most Common Accident Category	Motor Vehicle Nontraffic	Other Accidents	Other Accidents	Falls	(3)
	Second Most Common Accident Category	Accidental Poisoning by Other Substances (2)	(3)	Falls	Natural/Environmental Factors (2)	(3)
	Third Most Common Accident Category	Falls (2); Other Accidents (2)	(3)	Accidental Poisoning by Other Substances; Adverse Reaction to Medication	Other Accidents (2)	(3)

(1) Type of accident was not reported for 39 OSHA events among men and 15 OSHA event among women.
(2) This accident category was reported the same number of times as the one above it.
(3) No additional accident categories were reported.
(4) More than two accident categories tied.

Figure 32. Three Diagnostic Categories Reported Most Often by Gender and Occupation

		Office Management and Administration	Engineering, Scientific, and Health Care	Technical Support	Service
Men	Most Common Diagnostic Category	Sprains and Strains	Open Wounds	Sprains and Strains	Open Wounds
	Second Most Common Diagnostic Category	Nervous System	(2)	Muscles and Skeleton	Unspecified Effects External Causes
	Third Most Common Diagnostic Category	(3)	(2)	Open Wounds; Unspecified Effects External Causes	Toxic Effects Nonmedical Substances; Muscles and Skeleton
Women	Most Common Diagnostic Category	Muscles and Skeleton	Dislocations	Sprains and Strains	Sprains and Strains
	Second Most Common Diagnostic Category	Nervous System	Sprains and Strains (1)	Muscles and Skeleton	Muscles and Skeleton
	Third Most Common Diagnostic Category	Springs and Strains; Mental Disorders	(2)	(3)	Contusions

		Security	Craft and Repair	Production Technicians	Material Handlers
Men	Most Common Diagnostic Category	Sprains and Strains	Sprains and Strains	Sprains and Strains	Sprains and Strains
	Second Most Common Diagnostic Category	Contusions; Muscles and Skeleton	Open Wounds	Toxic Effects Nonmedical Substances	Muscles and Skeleton
	Third Most Common Diagnostic Category	(3)	Burns	Open Wounds; Contusions	Open Wounds
Women	Most Common Diagnostic Category	Sprains and Strains	(2)	Sprains and Strains	Open Wounds
	Second Most Common Diagnostic Category	Contusions (1); Burns (1)	(2)	Contusions; Toxic Effects Nonmedical Substances	Crushing Injuries (1)
	Third Most Common Diagnostic Category	Unspecified Effects External Causes (1)	(2)	Muscles and Skeleton	(2)

(1) This diagnostic category was reported the same number of times as the one above it.
(2) No additional health conditions were reported.
(3) More than two diagnostic categories tied.

Figure 33. Three Accident Categories Reported Most Often by Gender and Occupation[1]

		Office Management and Administration	Engineering, Scientific, and Health Care	Technical Support	Service
Men	Most Common Accident Category	Other Accidents	(3)	Other Accidents	Natural/Environmental Factors; Other Accidents
	Second Most Common Accident Category	Falls	(3)	Natural/Environmental Factors	Other Road Vehicles
	Third Most Common Accident Category	(3)	(3)	(3)	Adverse Reaction to Medication (2)
Women	Most Common Accident Category	Natural/Environmental Factors	Falls	Falls	Other Accidents
	Second Most Common Accident Category	Other Accidents (2)	(3)	(3)	(3)
	Third Most Common Accident Category	(3)	(3)	(3)	(3)

		Security	Craft and Repair	Production Technicians	Material Handlers
Men	Most Common Accident Category	Other Accidents	Other Accidents	Accidental Poisoning by Other Substances	Other Accidents
	Second Most Common Accident Category	Falls	Natural/Environmental Factors	Other Accidents	Falls
	Third Most Common Accident Category	Natural/Environmental Factors; Submersion/ Suffocation/ Foreign Bodies	Motor Vehicle Traffic; Submersion/ Suffocation/Foreign Bodies	(3)	(3)
Women	Most Common Accident Category	Other Accidents	(3)	Accidental Poisoning by Other Substances; Other Accidents	(3)
	Second Most Common Accident Category	Motor Vehicle Nontraffic	(3)	Falls	(3)
	Third Most Common Accident Category	Adverse Reaction to Medication (2)	(3)	(3)	(3)

(1) Type of accident was not reported for 39 OSHA events among men and 15 OSHA events among women.
(2) This accident category was reported the same number of times as the one above it.
(3) No additional accident categories were reported.
(4) More than two accident categories tied.

Rates of OSHA-Recordable Events

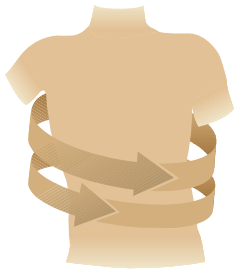
Workers in the service, security, and craft and repair group and the production technicians and material handlers had the highest rates for all occupational health conditions combined. These rates were higher among women aged 40 or older than among younger women, but in men the relationship with age was less clear. The data suggest that men under age 40 may have had higher rates than older men (figure 34). Most of the OSHA health conditions were occupational injuries and poisonings (figure 35).

When the category of injury and poisoning was considered separately, high rates were noted among production technicians and material handlers and among women aged 40 or greater in the service, security, and craft and repair occupations. Age did not appear to be related to rates of injury among women working as production technicians and material handlers, but in this occupational group the injury rates were lower among men aged 40 or older than among younger men. By contrast, injury rates among men in the service, security, and crafts and repair occupations varied little with age, but women aged 40 or older in these occupations had an injury rate about three times higher than that of younger women. Some of this variation in injury rates for older versus younger workers may simply reflect the necessity to combine several occupational groups for analysis due to small numbers of health events in a given occupational category. It is also possible that within a given occupational group men and women may be performing duties with different injury risks. Future reports with additional years of data may explore the relationship between age and injury risk more fully, but at present there does not appear to be a consistent relationship between the age of the worker and the risk of occupational injury at Pantex.

Occupational injuries were responsible for substantial numbers of restricted and lost workdays. Production technicians and material handlers were more likely to have an OSHA event that resulted in days lost from work or with restricted activity than were other groups of workers. Together these two groups of workers comprised 12% of the work force but had 38% of the days lost and 48% of the days restricted (appendix N); all of these lost and restricted workdays resulted from "other accidents" (appendix V). The material handlers were at particularly high risk for occupational injuries with an overall risk 4.5 times greater than other groups of workers. They were at significantly higher risk for back strains (7 times the risk of other workers), other sprains and strains (6.5 times the risk of other workers), and open wounds involving the arm (8.8 times the risk of other workers) (appendix W). The magnitude of these risks suggests that additional attention should be given to injuries among material handlers. The 22 OSHA events among these workers resulted in 299 days of restricted activity and 30 lost workdays, representing substantial lost productivity. Further investigation may reveal opportunities for injury reduction efforts that can contribute to lower injury rates, reduced health care costs, and greater productivity among these workers.

Figure 34. Rates for all Diagnostic Categories Combined by Gender, Age, and Occupation

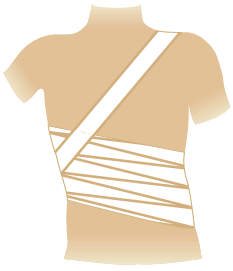
All Diagnostic Categories



Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	16	12
	40+	8	40
Engineering, Scientific, and Health Care/Technical Support	<40	9	49
	40+	13	99
Service/Security/ Craft and Repair	<40	127	67
	40+	104	308
Production Technicians/Material Handlers	<40	150	167
	40+	100	173

Figure 35. Rates for Injury and Poisoning by Gender, Age, and Occupation

Injury and Poisoning



Occupational Group	Age	Rate per 1,000 Men	Rate per 1,000 Women
Office Management and Administration	<40	4	0
	40+	6	17
Engineering, Scientific, and Health Care/Technical Support	<40	6	35
	40+	11	77
Service/Security/ Craft and Repair	<40	97	67
	40+	94	179
Production Technicians/Material Handlers	<40	129	133
	40+	86	135

Glossary

Adjustment: A mathematical procedure for rates in which the effects of differences of a characteristic (such as age or gender) between groups have been removed. The purpose of adjustment is to allow comparisons between two or more groups with the effect of the differences for the characteristic removed.

Age-Adjusted Rate: A rate that has been mathematically adjusted to account for the effects of differences in the age composition between groups. This allows one rate per group to be compared.

Age-Specific Rate: A rate that is calculated for a group that is a specific age (e.g., 16 to 29 years old). Only people in the specific age group are included in the calculation of the rate. The purpose of calculating age-specific rates is to identify differences in the rate that occur as the age changes. Any differences that are related to age can be seen by comparing age-specific rates for the different age groups.

Confidence Interval: A mathematical procedure used to determine in what range the true value of an event is likely to be. The width of the confidence interval (i.e., how wide the range is) is affected by the size of the group being studied and how often the event whose true value is sought occurs. Generally, as the size of the group or the frequency of the event increases, the width of the confidence interval decreases. The level of confidence, for example a 95% confidence level, indicates the percentage (e.g., 95%) of time that the true value is expected to fall within the confidence interval if the mathematical procedure is repeated 100 times.

Demographics: Characteristics of human populations related to their size, density, distribution, and health.

Diagnosis (diagnoses): Identification of a disease or health condition from its signs and symptoms.

Diagnosis Rate: The number of occurrences of a given disease or health condition observed among DOE workers during a given time period per 1,000 DOE workers at risk of getting that disease during the time period. It is calculated as follows (using 1995 as the time period):

$$\text{Diagnosis rate for a disease during 1995 (per 1,000 DOE workers)} = \frac{\text{Number of occurrences of the disease reported during 1995}}{\text{Number of DOE workers at risk for the disease during 1995}} \times 1{,}000$$

Diagnostic Category: A particular type of disease, a group of related health conditions, or diseases that all affect the same organ system. Cancer is an example of a diagnostic category that contains a particular type of disease, and pregnancy/childbirth is an example of one that contains a group of related health conditions. Lung/respiratory is an example of a diagnostic category that contains diseases that all affect the same organ system.

Epidemiologic Surveillance: The ongoing evaluation of the health of a human population which is based on the collection and interpretation of demographic and health information for that population.

Epidemiology: The study of the occurrence and distribution of diseases and health conditions in human populations.

Health Condition: A specific disease or medical condition. Health conditions are grouped together to form diagnostic categories. Tuberculosis is a specific disease that is part of the diagnostic category of infections/parasites. A fractured arm is a specific health condition included in the diagnostic category of injury and poisoning.

Health Event: An absence from work that lasted at least five consecutive workdays.

ICD-9-CM Code: An abbreviation for the *International Classification of Diseases, Ninth Revision, Clinical Modification*. It is internationally accepted as a standardized system for the classification of disease and health data collected from medical records and is useful to describe the disease and health characteristics of a population.

OSHA: An acronym for the Occupational Safety and Health Administration.

OSHA Event: An abbreviation used throughout this report for an OSHA-recordable event.

OSHA-Recordable Event: An accident that occurs on the job and involves fatalities (regardless of time between injury and death), time lost from work, transfer of employment, medical treatment other than first aid, loss of consciousness, or restriction of work or motion. Also included is any diagnosed occupational health event reported to the employer that is neither fatal nor results in workdays lost. By law, these events are recordable in the OSHA 200 Log.

Person-Year: A unit of measurement combining the number of people being studied with the time that each was observed equivalent to one person followed for one year. For example, 5 persons followed for one year contribute five person-years, as do 10 people each followed for half a year. In the epidemiologic surveillance reports, rates are often expressed as the number of events per 1,000 person-years.

Relative Risk: The rate of occurrence of a disease or health condition in one group compared to the rate of occurrence of that same disease or health condition in another group.

Explanation of Diagnostic Categories

Throughout this report, health conditions have been grouped into a number of diagnostic categories which come from the *International Classification of Diseases* (ICD-9-CM). For the text of this report the categories are abbreviated to make the report easier to read. In the appendixes a different set of abbreviations was used for the categories. These names are the same as the ones used in previous annual reports. The table that begins on the next page lists the categories in numeric order according to ICD-9-CM and gives examples of common diseases included in each category. The last column of the table below links the category names in the reports and the appendixes to the table that begins on the next page.

Diagnostic Categories Used in This Report	Diagnostic Categories Used in the Appendix and Previous Annual Reports	ICD-9-CM Codes
Benign Growths	Benign and Other Neoplasms	210-229,235-239
Blood	Blood and Blood Forming Organs	280-289
Cancer	Malignant Neoplasms	140-208,230-234
Digestive	Digestive System	520-579
Endocrine/Metabolic	Endocrine and Metabolic Diseases	240-279
Existing Birth Condition	Congenital Anomalies	740-759
Genitourinary	Genitourinary System	580-629
Heart/Circulatory	Circulatory System	390-459
Infections/Parasites	Infectious and Parasitic Diseases	001-139
Injury and Poisoning	Injury and Poisoning	800-999
Lung/Respiratory	Respiratory System	460-519
Mental	Mental Disorders	290-319
Muscles and Skeleton	Musculoskeletal System	710-739
Nervous System	Nervous System and Sense Organs	320-389
Pregnancy/Childbirth	Pregnancy and Childbirth	630-676
Skin	Skin and Subcutaneous Tissue	680-709
Unspecified Symptoms	Symptoms, Signs and Ill-Defined Conditions	780-799

Categories and Subcategories of Diagnoses	ICD-9-CM Codes	Diseases
All conditions	001-V82	All reported health events
Infectious and parasitic diseases	001-139	Diseases caused by bacteria, viruses, and parasites
• Intestinal infections	001-009	Infections of the bowel or gut
• Tuberculosis	010-018	TB in the lungs and other organs
• Zoonotic bacterial diseases	020-027	Bacterial diseases that animals transmit to humans
• Other bacterial diseases	030-041	Whooping cough, diphtheria, strep throat, and gangrene
• Human Immunodeficiency Virus (HIV) infection	042	AIDS
• Poliomyelitis and other nonarthropod diseases of central nervous system	045-049	Viral meningitis (swelling of the layers covering the brain and spinal cord); viral encephalitis (swelling of the brain); and polio
• Viral diseases accompanied by exanthem	050-057	Diseases accompanied by rashes or blisters like chickenpox, measles, shingles, and herpes
• Arthropod-borne viral diseases	060-066	Encephalitis (swelling of the brain) caused by bites from virus-carrying ticks or mosquitoes
• Other diseases caused by viruses and chlamydiae	070-079	Viral hepatitis, mumps, rabies, and mononucleosis
• Rickettsioses and other arthropod-borne diseases	080-088	Rocky Mountain spotted fever, malaria, and lyme disease
• Other spirochetal diseases	100-104	Trench mouth and Weil's disease (jaundice caused by coil-shaped bacteria)
• Mycoses	110-118	Athlete's foot; fungal infections of fingernails and toenails; and thrush
• Helminthiases	120-129	Pinworms, tapeworms, roundworms, whipworms
• Other infectious and parasitic diseases	130-136	Lice, chiggers, scabies, and mites
• Late effects of infectious or parasitic diseases	137-139	Side effects of TB, chickenpox, or polio even though the disease is no longer active
Malignant neoplasms	140-208, 230-234	All cancers, regardless of the part of the body affected
• Lip, oral cavity, and pharynx	140-149	Lip, mouth, throat, and tongue
• Digestive organs and peritoneum	150-159	Cancers of the stomach, esophagus (tube that transports food to the stomach), intestines, colon, rectum, anus, liver, pancreas, and gallbladder
• Respiratory system and intrathoracic organs	160-165	Sinuses, throat, voice box, lungs, and heart
• Bone, connective tissue, and skin	170-173	Bone, muscle, ligament, tendon, blood vessels, fat, and skin
• Genitourinary organs	179-189	Cervix, uterus, prostate, kidney, and bladder
• Other and unspecified sites	190-199	Eye, brain, and thyroid
• Lymphatic and hematopoietic tissue	200-208	Leukemia, lymphoma, Hodgkin's disease, multiple myeloma, lymphosarcoma, and reticulum cell sarcoma
• Carcinoma in situ	230-234	A cancer that is confined to the site of origin (has not spread to neighboring tissue)
Benign neoplasms and neoplasms of uncertain behavior and unspecified nature	210-229, 235-239	Tumors that are not cancerous or do not exhibit cancerous behavior, regardless of the part of the body affected
Endocrine, nutritional, and metabolic diseases and disorders of the immune system	240-279	Diseases affecting the hormone secreting glands and organs. Overactive thyroid; underactive thyroid; vitamin deficiency; diabetes; gout; and problems affecting the antibody producing system
Disorders of the blood and blood forming organs	280-289	Anemia and hemophilia (excludes leukemia)
Mental disorders	290-319	Psychiatric diagnoses - Nonpsychotic disorders: depression; anxiety, fear, and stress disorders; alcoholism; drug dependence; and eating disorders, such as anorexia; Psychotic disorders: dementia, schizophrenia, and manic depression
Diseases of the nervous system and sense organs	320-389	Huntington's chorea; Alzheimer's and Parkinson's disease; epilepsy; multiple sclerosis; migraine; diseases of the eye, such as cataract and glaucoma
• Inflammatory diseases of the central nervous system	320-326	Bacterial meningitis (swelling of the layers covering the brain and spine); bacterial encephalitis (swelling of the brain); and brain and spinal abscesses

(Continued)

Categories and Subcategories of Diagnoses	ICD-9-CM Codes	Diseases
• Hereditary and degenerative diseases of the central nervous system	330-337	Alzheimer's and Parkinson's disease, tremors, and Huntington's chorea
• Other disorders of the central nervous system	340-349	Multiple sclerosis (MS), cerebral palsy, epilepsy, and migraine
• Disorders of the peripheral nervous system	350-359	Nerve disorders of the face, carpal tunnel syndrome, muscular dystrophy
• Disorders of the eye	360-379	Inflammation and ulcers of the eye and eyelid; detached retina; pink eye; problems with tear ducts; glaucoma; and cataracts
• Diseases of the ear and mastoid process	380-389	Infections of the outer, middle, or inner ear; ringing of the ears; hearing loss
Diseases of the circulatory system	390-459	Rheumatic fever, heart murmurs, heart attacks, angina, hardening of the arteries, varicose veins, hemorrhoids, and phlebitis
• Acute rheumatic fever	390-392	High fever and joint pain with possible heart damage
• Chronic rheumatic heart disease	393-398	Long lasting swelling and damage to the heart which results from rheumatic fever
• Hypertensive disease	401-405	High blood pressure
• Ischemic heart disease	410-414	Heart attack and angina
• Diseases of pulmonary circulation	415-417	Blood clots in the lung and pulmonary aneurysm (bulge that develops in the wall of the pulmonary artery, which is the artery that carries blood to the lungs)
• Other forms of heart disease	420-429	Swelling of the inner lining, middle lining, or sac enclosing the heart; heart failure; and irregular heartbeat
• Cerebrovascular disease	430-438	Stroke, bleeding in the brain, and blockage or low blood flow in blood vessels of the brain
• Diseases of the arteries and capillaries	440-448	Hardening of the arteries; aneurysm (bulge that develops in the walls of arteries); and blood clots
• Diseases of the veins, lymphatics, and other	451-459	Phlebitis (swelling of a vein) and thrombophlebitis (swelling of a vein which has a blood clot)
Diseases of the respiratory system	460-519	Colds, sinusitis, laryngitis, pneumonia, influenza, chronic bronchitis, asthma, and emphysema
• Acute respiratory infections	460-466	Colds, sore throat, sinus infections, swollen tonsils, and bronchitis
• Other diseases of the upper respiratory tract	470-478	Allergies, hay fever, sinus infections, bronchitis, and sore throat that continue for a long time
• Pneumonia and influenza	480-487	"The flu" and pneumonia caused by a bacteria or virus
• Chronic obstructive pulmonary diseases and allied conditions	490-496	Emphysema and asthma
• Pneumoconiosis and other lung diseases caused by external agents	500-508	Black lung; miners' asthma; asbestosis; silicosis; berylliosis; and conditions caused by chemical fumes and vapors
• Other diseases of respiratory system	510-519	Pleurisy (swelling of the lining of the lungs), collapsed lung, and respiratory failure
Diseases of the digestive system	520-579	Diseases affecting the teeth and mouth, salivary glands, digestive tract, and the abdominal cavity. Examples include dental abscess, ulcers, appendicitis, hepatitis (excluding viral hepatitis), cirrhosis of the liver, gallstones, pancreatitis, abdominal hernia, and intestinal polyps
• Diseases of the oral cavity, salivary glands, and jaw	520-529	Tooth problems (too many, too few, abnormal shape or size, cavities, bleeding gums, toothaches), and infections and swelling of the mouth, jaw, and tongue
• Diseases of the esophagus, stomach, and duodenum	530-537	Ulcers of the esophagus (tube that transports food to the stomach), stomach, and small intestine; indigestion; and uncontrollable vomiting
• Appendicitis	540-543	Swelling of the appendix (rupture, surgery, or both may result)
• Hernia of the abdominal cavity	550-553	Ruptures of the groin and diaphragm (muscle which separates the chest area from the lower part of the trunk)
• Noninfectious enteritis and colitis	555-558	Crohn's disease and swelling of the intestine and colon
• Other diseases of the intestines and peritoneum	560-569	Irritable bowel syndrome, blockage of the intestine, constipation, and diarrhea
• Other diseases of digestive system	570-579	Diseases of the liver, gallbladder, and pancreas; hepatitis; blood in stool; and bleeding in the stomach and intestine

(Continued)

Categories and Subcategories of Diagnoses	ICD-9-CM Codes	Diseases
Diseases of the genitourinary system	580-629	Diseases affecting the kidneys, the prostate, and testes; benign breast diseases; infertility (male and female); diseases of the ovary; pelvic inflammatory disease; and menstrual disorders
• Nephritis, nephrotic syndrome, and nephrosis	580-589	Swelling of the kidney; swelling of the small blood vessels in the kidney; and kidney failure
• Other diseases of the urinary system	590-599	Swelling and infection of the kidney and bladder; kidney stones; and difficulty urinating
• Diseases of the male genital organs	600-608	Enlarged prostate; swelling of the scrotum and prostate; and abscess of the prostate
• Disorders of the breast	610-611	Benign tumors, cysts, and infections of the breast
• Inflammatory disease of the female pelvic organs	614-616	Swelling of the uterus, ovary, fallopian tubes, or cervix
• Other diseases of the female genital tract	617-629	Conditions associated with menopause and postmenopause; PMS; infertility; and cramps
Complications of pregnancy, childbirth, and the puerperium	630-676	Miscarriage; complications of pregnancy, such as hemorrhage; pregnancy-related high blood pressure; preeclampsia; and premature labor or other complications of labor
• Ectopic and molar pregnancy	630-633	Development of fetus outside the uterus and growth of cysts
• Other pregnancy with abortive outcome	634-639	Miscarriage and complications associated with miscarriage
• Complications mainly related to pregnancy	640-648	Abnormal bleeding and possible miscarriage; infections; high blood pressure caused by pregnancy; and premature labor
• Normal delivery, and other indications for care in pregnancy, labor, and delivery	650-659	Delivery requiring little or no assistance; multiple births; breech birth; and problems of the fetus or placenta which affect care of mother
• Complications occurring mainly in the course of labor and delivery	660-669	Long labor; unusually fast delivery; and abnormal bleeding after delivery
• Complications of the puerperium	670-676	Infections of the breast; blood clot in lung; and varicose veins
Diseases of the skin and subcutaneous tissue	680-709	Acne, cellulitis, sunburn, psoriasis, and seborrhea
• Infections of the skin and subcutaneous tissue	680-686	Abscesses, boils, hair-containing cysts, and pus-filled blisters
• Other inflammatory conditions of skin and subcutaneous tissue	690-698	Skin rashes caused by detergents, oils, greases, solvents, sun, food, drugs, or medicine
• Other diseases of the skin and subcutaneous tissue	700-709	Corns, calluses, heat rash, swollen hair follicles, acne, and ingrown fingernails and toenails
Diseases of the musculoskeletal system and connective tissue	710-739	Arthritis, systemic lupus erythematosus, ankylosing spondylitis, herniated interverte-bral disc ("slipped disc"), lumbago, sciatica, rheumatism, tendonitis, and osteoporosis
• Arthropathies and related disorders	710-719	Arthritis; joint pain and stiffness; and other diseases of the connective tissue which supports and connects internal organs, forms bones and blood vessel walls, and attaches to bones
• Dorsopathies	720-724	Swelling of the spine; rheumatoid arthritis of the spine; lumbago; and sciatica
• Rheumatism, excluding the back	725-729	Swelling and degeneration of joints, muscles, tendons; tennis elbow; and bursitis
• Osteopathies, chondropathies, and acquired musculoskeletal deformities	730-739	Fracture caused by bone disease; osteoporosis; curvature of the spine; flat foot; hammer toe; and development of deformities of the nose, toes, feet, legs, arms, and hands
Congenital anomalies	740-759	Spina bifida; cleft palate; harelip; and various chromosomal anomalies, such as Klinefelter's syndrome
Certain conditions originating in the perinatal period	760-779	Maternal high blood pressure; maternal malnutrition; ectopic pregnancy; breech birth; fetal malnutrition or slow growth; injuries related to birth trauma; and perinatal jaundice
Symptoms, signs, and ill-defined conditions	780-799	Blackout, chills, dizziness, fatigue, pallor, abnormal weight loss, undiagnosed chest pain, and heartburn
• Symptoms	780-789	Hallucinations, fainting, convulsions, dizziness, fatigue, fever, sleep disturbance, rash, headache, sore throat, chest pain, nausea, vomiting, and heartburn
• Nonspecific abnormal findings	790-796	Abnormal x-ray, blood, stool, and urine test results

(Continued)

Categories and Subcategories of Diagnoses	ICD-9-CM Codes	Diseases
• Ill-defined and unknown causes of morbidity and mortality	797-799	Senility; asphyxia; respiratory arrest; nervousness; and unexplained death within 24 hours of onset of symptoms
Injury and poisoning	800-999	Dislocation of joints; sprains and strains of associated muscles; concussions; bruises; cuts; internal injuries from crushing, puncture, tearing or blunt impact; burns; blisters; poisoning; frostbite; heatstroke; and complications of medical or surgical care
• Fractures, all sites	800-829	Cracks or breaks of any bone
• Dislocations	830-839	Separation of a bone from its normal socket or joint
• Sprains and strains of joints and adjacent muscles	840-848	Strains are injuries to muscle from overuse or stretching the muscle beyond its normal limit; sprains are injuries involving tearing or overextending the ligaments of a joint
• Intracranial injuries excluding those with skull fractures	850-854	Concussions; internal bruises; and bleeding within the head without a fracture of the bones of the skull
• Internal injuries of the thorax, abdomen, and pelvis	860-869	Bruising, crushing, tearing, or rupturing the chest, abdomen, and pelvis and the organs within these areas of the body
• Open wounds	870-897	Animal bites; cuts; lacerations; punctures; and amputations, excluding the arteries and veins
• Other injuries and late effects of external causes	900-999	Miscellaneous injuries, including injuries to the arteries and veins; problems that occur an extended period of time after the injury has taken place (”late effects”); superficial bruises and abrasions; burns; post-injury shock; poisoning; toxic side effects of chemicals; heatstroke; electrocution; and altitude sickness
Supplementary classifications related to personal or family history of disease	V10-V19	Covers situations in which the person is not ill or injured but has a personal or family history of problems, such as cancer, mental illness, allergies, or arthritis that may affect his or her risk of illness
Supplementary classifications related to health care for reproduction and child development	V20-V28	Problems related to pregnancy, postpartum care, contraception, outcome of delivery, and physical development of child
Contact with health services for reasons other than illness or injury	V50-V59	Care for workers who have been treated previously for an illness or injury that is no longer present but who receive care to complete treatment or prevent recurrence

Reader Response

To help us serve your information needs better, please take a moment to answer the following questions. Then fold this postage paid form into thirds along the dotted lines, **tape** (do not staple) it together, and return to us. Thank you for sharing your thoughts with us!

1) Overall, the information in this report was (circle one...)

Too detailed About right Not detailed enough

2) Are there additional topics you would like to see covered in future reports?

Yes No

If yes, please list additional topics:

_____

_____

_____

_____

_____

_____

3) Please list suggestions for improving the Epidemiologic Surveillance reports:

_____

_____

_____

_____

_____

_____

4) Which of the following occupational categories best describes the type of work you do? (check one...)

_____ Management/Administrative
_____ Technical
_____ Professional/Scientific
_____ Crafts/Trades
_____ Clerical

5) I am employed by (check one...)

_____ U.S. Department of Energy (DOE)
_____ DOE contractor or subcontractor
_____ Other Federal agency
_____ Military
_____ State or Local government
_____ Other

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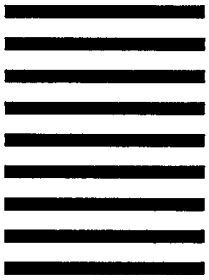

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Pantex 1995 Appendixes

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