



DEA  
U.S. DRUG ENFORCEMENT ADMINISTRATION

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# *The National Pharmaceutical Situation Report*

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U.S. Department of Education  
Office of Safe and Drug Free Schools  
National Harbor, MD – August 2009

Joseph T. Rannazzisi  
Deputy Assistant Administrator  
Office of Diversion Control

# OBJECTIVES

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- History of Prescription Drug Abuse
  - Where we've been - Where we are going?
- Current controlled substance pharmaceuticals of abuse
- Non-controlled drugs of abuse
- New drugs of abuse

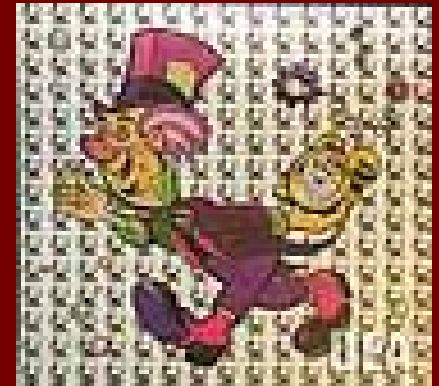
# The 1960's



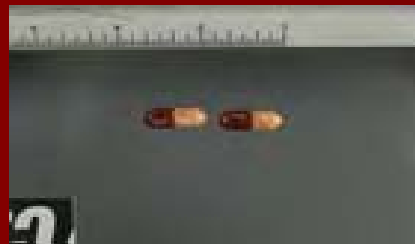
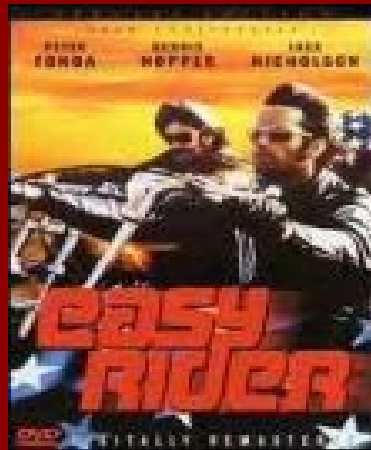
Marijuana



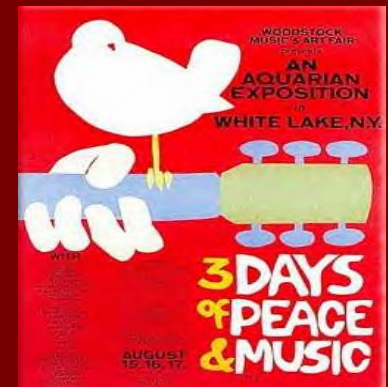
Seconal



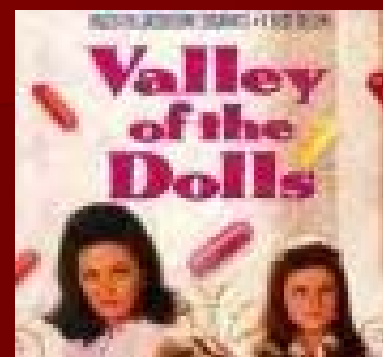
LSD



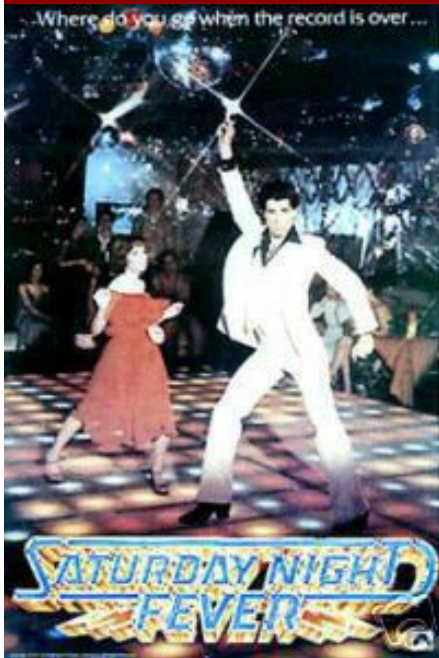
Dexedrine



Meproamate



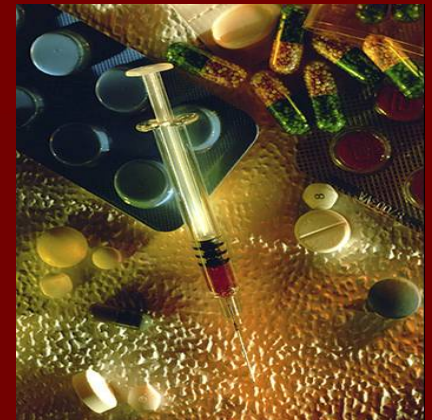
# The 1970's



Bottle of Methaqualone tablets  
Anonymous Photographer, © 2002 Erowid.org



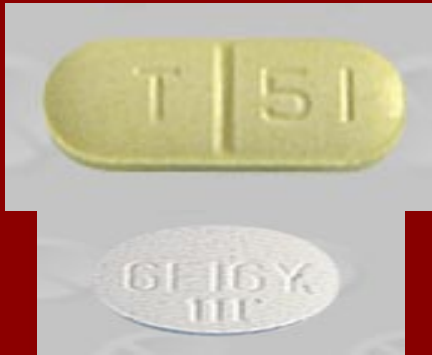
Heroin





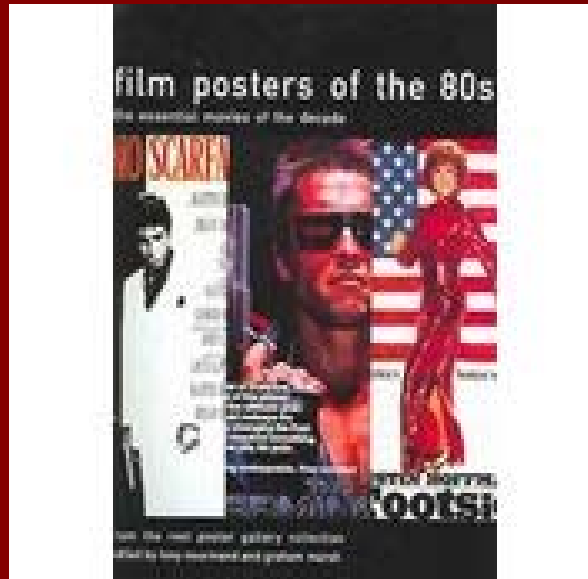
# T's and Blues

(Talwin and Pyrabenzamine)



Hydromorphone

# The 1980's



Cocaine

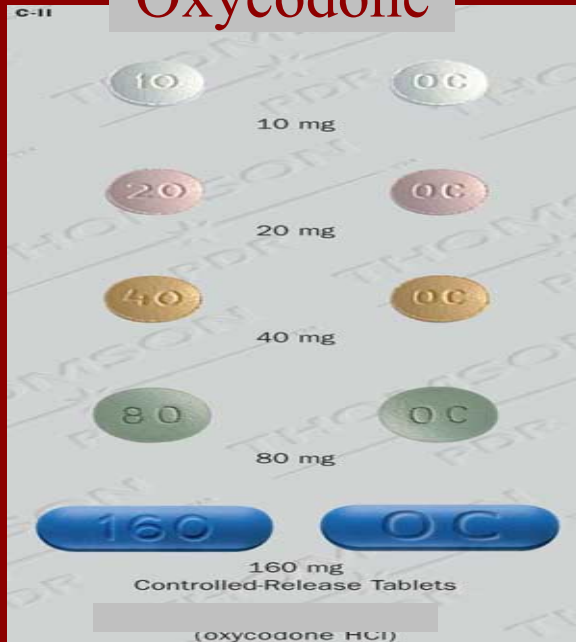
# 4's and Doors

Tylenol w/Codeine and Doriden



# The 1990's

## Oxycodone



## Methamphetamine





# TODAY

## Hydrocodone



## Flunitrazepam (Rohypnol)



## Alprazolam



## Ketamine

## MDMA



# THE PERFECT STORM

## ■ Technology

- Law enforcement struggling to keep up
  - Training
    - Rapidly changing environment
  - Equipment
    - Costly
    - Rapidly changing / outdated
  - Laws
    - Written prior to technological advancements
      - Encryption (Skype)
      - Wi Fi (Coffee shops)
- Jurisdictional issues
  - Drug seeker in one state
  - Web server in another state or offshore
  - Financial component in another location or offshore
  - Source of supply in yet another state or offshore







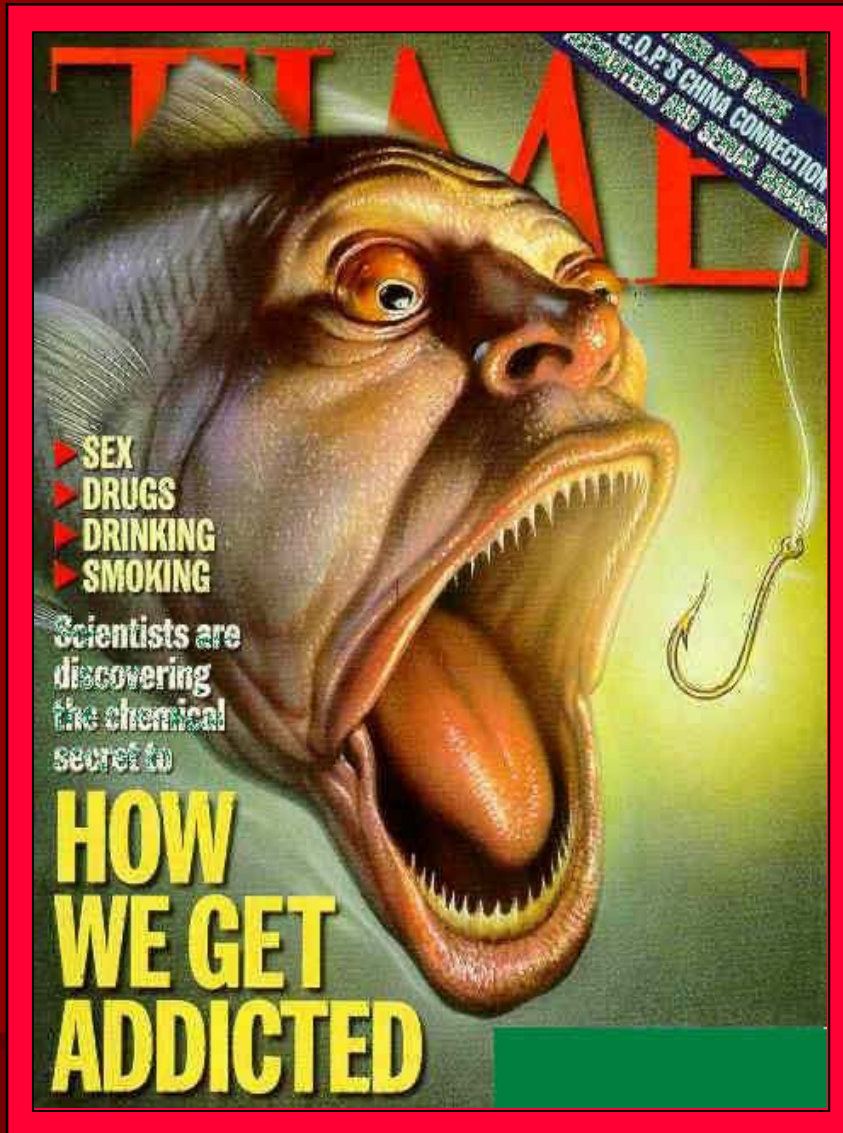
# The Pharmaceutical Storm Surge



# The Perfect Storm

- Misperception: When we don't see specific drugs anymore the problem has gone away
- Baby Boomers are retiring in large numbers and will need additional medications – more in the medicine cabinet
- Shift in the user / abuser population – Getting younger
- Dealing with the Information / Electronic era
  - Web sites such as Erowid
  - Social networking – blogging, twitter, MySpace, Facebook, text messaging or chat rooms for instant exchanges of information such as sources of the drugs
  - Anonymity – no more face-to-face meetings. Drugs are delivered right to your own home

# Current Users



**ANY ILLICIT DRUG:**

**19.9 million**

(8% of population)

**MARIJUANA: 14.4 million**

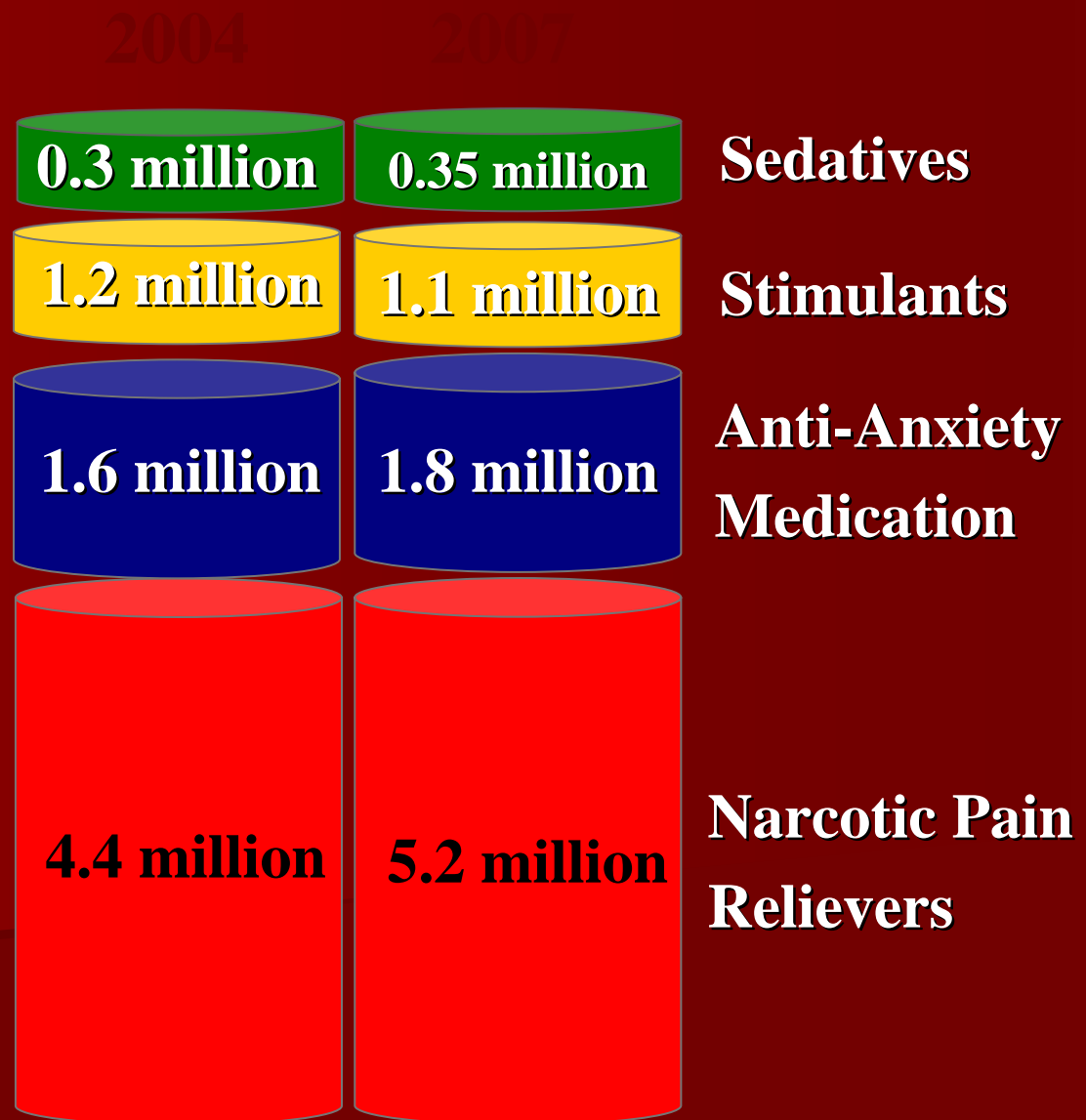
**PSYCHOTHERAPEUTIC  
DRUGS: 6.9 million**

**COCAINE: 2.1 million**

**METHAMPHETAMINE: 529,000**

**HEROIN: 153,000**

# Scope and Extent of Problem



Source: 2004 and 2007 National Survey on Drug Use and Health





# Methods of Diversion

## ■ Practitioners / Pharmacists

- Illegal distribution
- Self abuse
- Trading drugs for sex

## ■ Employee pilferage

- Hospitals
- Practitioners' offices
- Nursing homes
- Retail pharmacies
- Manufacturing / distribution facilities

## ■ Pharmacy / Other Theft

- Armed robbery
- Burglary (Night Break-ins)
- In Transit Loss (Hijacking)
- Smurfing

## ■ Patients / Drug Seekers

- Drug rings
- Doctor-shopping
- Forged / fraudulent / altered prescriptions
- The medicine cabinet

## ■ The Internet

# Juvenile Drug Diversion Sources...

- Obtain through friends or acquaintances
- 70% of youth obtain prescription drugs for free from friends or family
- From the medicine cabinet
- Can result in fatal overdoses when opiate naïve

# What are kids are listening to... Eminem?

- Rap star Eminem has a Vicodin® tattoo on his arm and a picture of a Vicodin® tablet on one of his CDs

- Lyrics from Eminem songs:

“I invented violence, you vile  
venomous volatile  
... vain Vicodin”



*'Vike'*



# About Eminem..

- “Relapse” CD released in 2009
- Admits to taking as many as 20 Vicodin, Ambien and Valium a day.
- 2005 almost overdosed on Methadone.





# What are kids are listening to...

## Lil' Wyte?

- Rap song “Oxycotton” (sic) about OxyContin and other prescription drugs. Can be found on the Internet & YouTube



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# **Commonly Abused Controlled Substance Pharmaceuticals**

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# Hydrocodone, APAP C-III

- Hydrocodone / Acetaminophen (toxicity)
- Similarities:
  - Structurally related to codeine
  - Equal to morphine in producing opiate-like effects
- Brand Names: Vicodin<sup>®</sup>, Lortab<sup>®</sup>, Lorcet<sup>®</sup>
- “Cocktail” or “Holy Trinity”
  - Hydrocodone
  - Soma<sup>®</sup> / carisoprodol
  - Alprazolam / Xanax<sup>®</sup>
- Street prices: \$2 to \$10+ per tablet depending on strength & region





# Hydrocodone

- Vicodin / hydrocodone second only to marijuana as the 'drug of choice' for teens
- From 2005 to 2007, non-medical use of Vicodin<sup>®</sup> increased\*:
  - 10th graders increased from 5.9% to 7.2%
  - 12th graders maintained an average 9.6%
- \*\*In 2004, the U.S. consumed 99% of world's supply of hydrocodone yet the U.S. makes up only 4.5% of the world's population

\*SOURCE: 2007 Monitoring the Future study released April 2008.

\*\*SOURCE: JAMA, January 17, 2007 – Vol 297, No 3, *Opioid Prescriptions Soar*





# Vicodin®-5/500mg



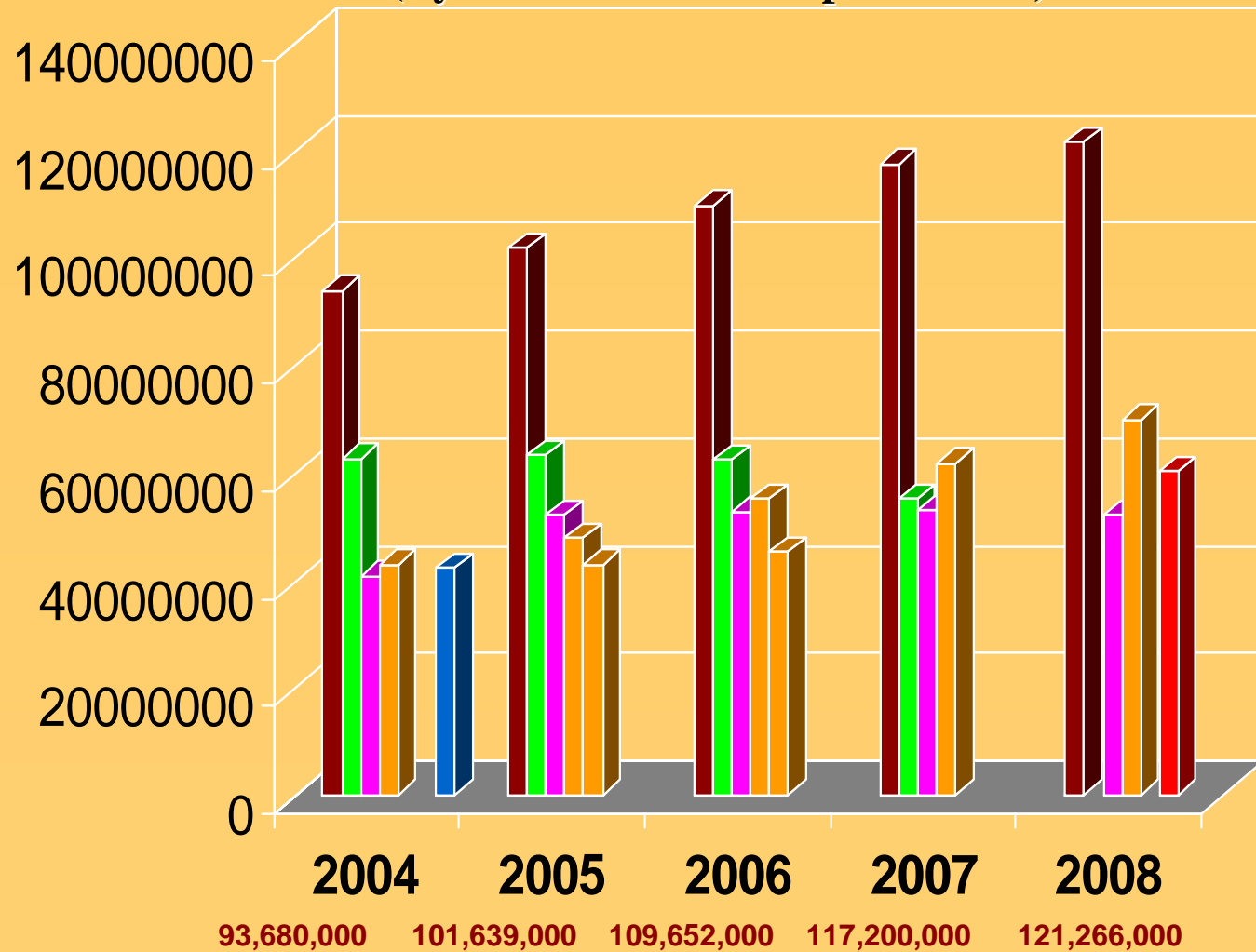


# Norco® 7.5/325mg



# Top Five Prescription Drugs Sold in the U.S. (2004-2008)

(By Number of Prescriptions Sold)



Source: Verispan

- Hydrocodone
- Lipitor
- Amoxicillin
- Lisinopril
- Hydrochlorothiazide
- Simvastatin
- Atenolol

1. Pain reliever
2. Cholesterol
3. Antibiotic
4. Blood pressure
5. Diuretic
6. Cholesterol
7. Heart disease

# Fentanyl



**Fentora®**

**Actiq®**



- Fentanyl Citrate dispensed in a berry flavored lollipop-type unit
- Fentanyl Patches
- Fentanyl is 100 times more potent than morphine
- Intended to be used for chronic cancer pain and only for people who are already taking and who are tolerant to prescription opioid (narcotic) pain medicines
- Abused for its intense euphoric effects



# OxyContin<sup>®</sup> (Schedule II)

- Controlled release formulation of Schedule II oxycodone
  - The controlled release method of delivery allows for a longer duration of drug action so it contains much larger doses of oxycodone
  - Abusers easily compromise the controlled release formulation by crushing the tablets for a powerful morphine-like high
  - Street Slang: “Hillbilly Heroin”
  - 10, 15, 20, 30, 40, 60, 80mg available
- Effects:
  - Similar to morphine in effects and potential for abuse/ dependence
- Street price: Approx. \$80 per 80mg tablet
- Since 2002, use among 12th graders has remained between approximately 4% and 5%\*



# OxyContin®- 80mg



# METHADONE



# KidsPeace Teens Overdose on Methadone



## **Girl who OD'd Dies:**

She and another girl allegedly took stolen methadone from counselor while at KidsPeace Recovery Institute.

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**EAST COUNTY COURTS**

# Woman is sentenced in teen's death

## Girl was given methadone pills

**By Angelica Martinez**  
STAFF WRITER

A Santee mother who gave a teenage friend of her daughter's a deadly dose of methadone and penicillin was sentenced yesterday to six years in prison.

Laura Susan Wion, 45, appeared disoriented and under the influence of medication as she told the court that she meant no harm when she gave Kelsea Phelps the pills to treat a sore throat in August 2006.

Friends and relatives who spoke on Wion's behalf called her a "wonderful" person who wouldn't intentionally harm anyone.

But prosecutor Chris Lindberg characterized the statements read on her behalf by relatives and friends as "the Laura Wion show."

"The fact is the victim would be alive if it weren't for the defendant's actions," he said.

Wion pleaded guilty June 11 to charges of involuntary manslaughter and felony child abuse.

Her defense attorney, Michael Maloney, asked Superior Court Judge Charles W. Er-

vin for a four-year prison sentence.

He portrayed Kelsea as a troubled teen who ran from home and used drugs.

Tracy Mae, Kelsea's mother, said Kelsea was a loving daughter who was depicted unfairly.

"Six years is absolutely nothing to give to this woman who killed my daughter," Mae said. "Kelsea was made out to be a person she truly was not."

Kelsea died Aug. 21, 2006, after visiting Wion's daughter. She had complained of a sore throat and other cold symptoms during the visit.

Wion, who had been prescribed methadone and other

medications, gave methadone to the girl.

Kelsea then went to her Santee home and briefly spoke with relatives before she went to bed. Her mother discovered her dead in her bed the next morning when she went to wake Kelsea for school.

Investigators found 18 methadone pills near Kelsea's bed. The drug is commonly prescribed for relief of severe pain and used to ease withdrawal symptoms for those addicted to opiates such as heroin.

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angelica.martinez@outinrtg.com



400 Greenley Road  
Sonoma, CA 95370

# The Union Democrat

THE MOTHER LODE'S LEADING INFORMATION SOURCE

## Report finds trends in child deaths

By ALISHA WYMAN  
*The Union Democrat*

Prescription drug abuse, suicide and vehicle accidents were the most prevalent causes of death last year among children and young adults in Tuolumne County, according to a recently-released report.

The Child Death Review Team, made up of officials from the Sheriff's Office, the Sonoma Police Department, the Public Health Department, Child Welfare Services and other agencies, examined 11 deaths of youths through age 25. Most were teens and young adults.

One of the concerning trends was a

rise in abuse of prescription drugs, particularly methadone, Sheriff's spokesman Lt. Dan Bressler said.

"What we're finding is even small amounts of methadone mixed with alcohol can cause death," he said. "It doesn't take much."

Three young people died of accidental overdose in 2007, two of which

involved a mixture of alcohol and methadone, a painkiller also used to help with withdrawals of harsher drugs such as heroin.

Tuolumne County isn't the only area to see a rise in prescription drug abuse, said Dr. Todd Stolp, county public health officer.

"It's a national issue, but we're in the

process of identifying the extent of the problem and how to address the problem," he said.

There were three suicides in 2007. The number could be higher, however, because there were some drug-related cases in which there wasn't enough

SEE DEATHS PAGE 3



# Methadone (Sch. II)

- “Growing drug problem” (according to toxicology experts)
- Abuse linked to:
  - Increased prescribing by doctors of methadone to treat pain (5 & 10 mg vs 40mg tablets)
  - Inexpensive compared to alternative opioids
  - High level of diversion to illicit market
- Increasing chances of an overdose
  - Remains in the body much longer than other similar substances
  - Overdoses and deaths have quadrupled since 1999
- Street Prices: \$1 per mg (\$10 per 10mg tablet)



# Methadone-10mg



Mallinckrodt Pharmaceuticals 10mg



# Other Controlled Substances

- Phentermine C-IV
- Phendimetrazine C-III
  - Bontril®
- Benzodiazepines
  - Alprazolam/Xanax ®
- Amphetamines
  - Adderall C-II
  - Methylphenidate C-II
    - Ritalin®
    - Concerta®



# Ritalin® / Concerta® and Adderall

- Used legitimately to treat ADHD
- Used non-medically to get high and as an academic “performance-enhancer” to improve memory and improve concentration – gain the edge
  - Higher GPA
  - Higher SAT / ACT score
  - Get that scholarship





# Alprazolam Xanax<sup>®</sup> (Z-bars)

C-IV

- Drug abusers often prefer alprazolam due to its rapid onset and longer duration of action
- Alprazolam was ranked third in the number of prescriptions for controlled substances in 2003, 2004, 2005 and 2006\*
- For all sales of generic pharmaceuticals, alprazolam was ranked 7<sup>th</sup>\*\*

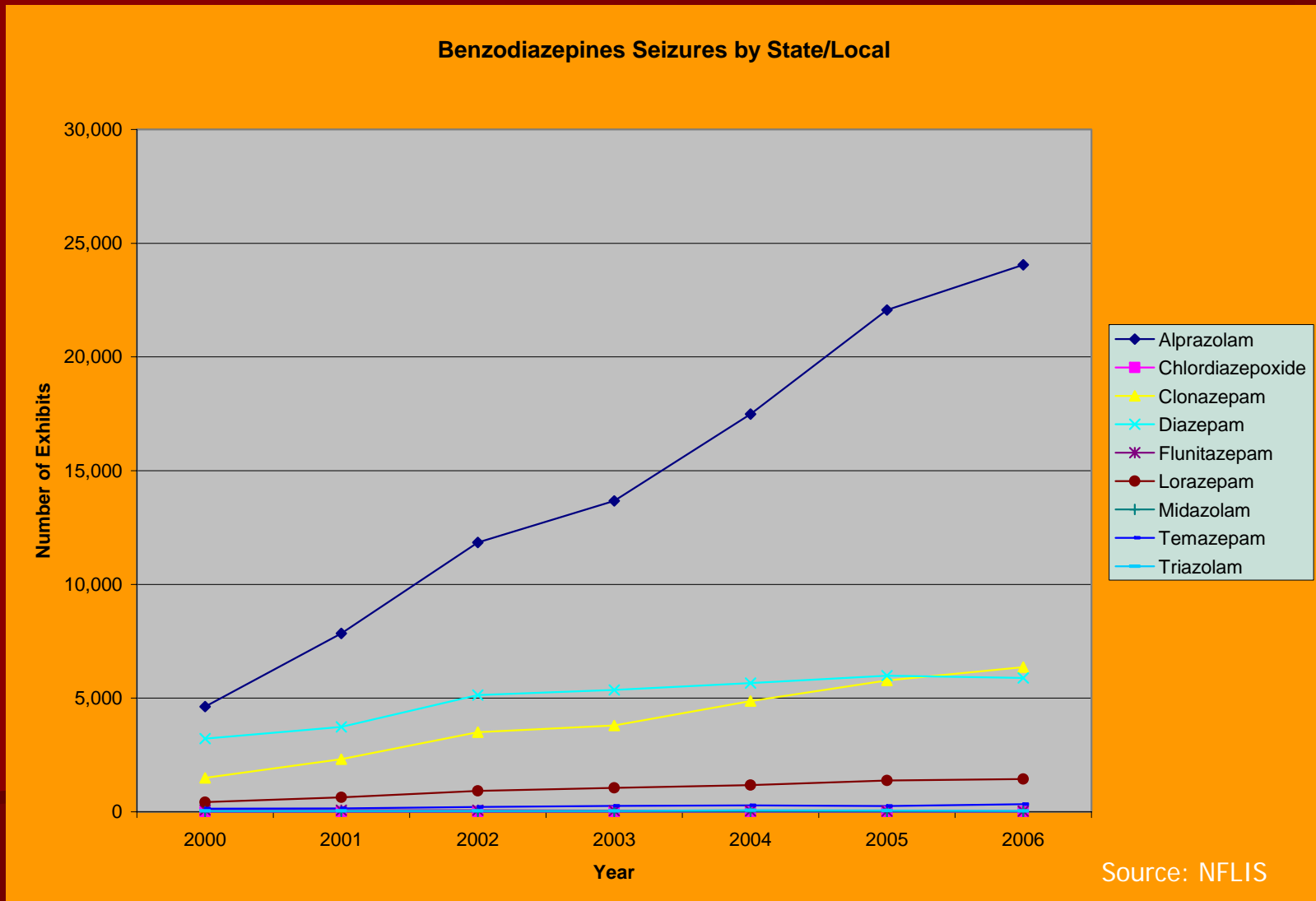
\* Source IMS Health

\*\* Source Verispan VONA





# State and Local Seizure Data





# Non-Controlled Substances

## ■ Analgesic:

- Tramadol (Ultram®, Ultracet®)
  - Arkansas, and Kentucky

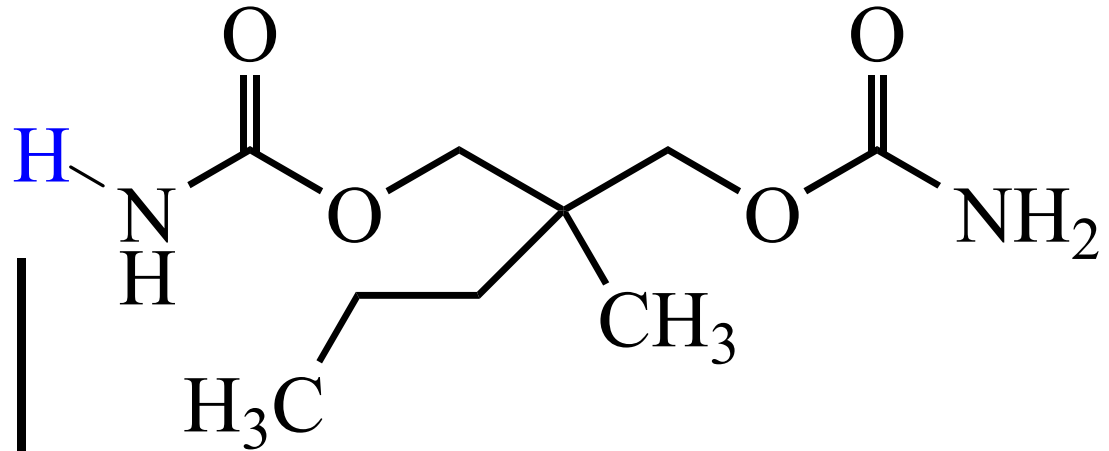
## ■ Muscle Relaxant:

- Carisoprodol (Soma®)
  - Alabama, Arkansas, Arizona, Connecticut, Florida, Georgia, Hawaii, Indiana, Kentucky, Massachusetts, Minnesota, Nevada, New Mexico, Oklahoma, Oregon, and West Virginia.
- Cyclobenzaprine (Flexeril®)

## ■ Cough Suppressant:

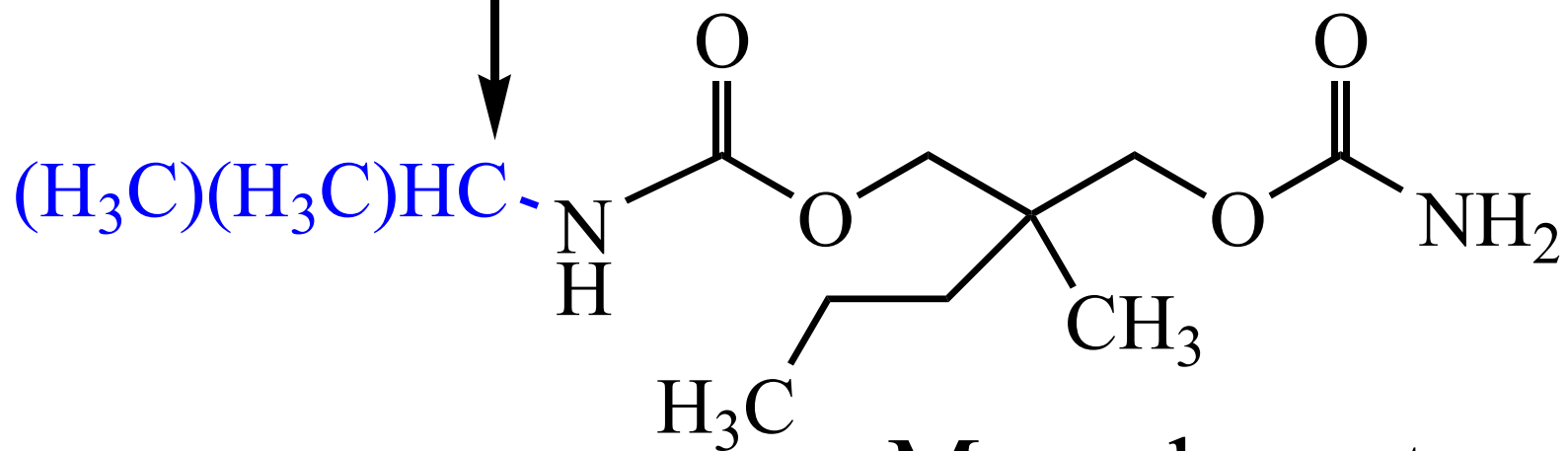
- Dextromethorphan (DXM)
  - Over-the-Counter (OTC) cold medication, such as: Coricidin HPB Cough and Cold Tablets and Robitussin Cough Syrup

# Carisoprodol



Structural Change

by Enzymatic Action in the Body



# Meprobamate



# Methods of Diversion

## ■ Practitioners / Pharmacists

- Illegal distribution
- Self abuse
- Trading drugs for sex

## ■ Employee pilferage

- Hospitals
- Practitioners' offices
- Nursing homes
- Retail pharmacies
- Manufacturing / distribution facilities

## ■ Pharmacy / Other Theft

- Armed robbery
- Burglary (Night Break-ins)
- In Transit Loss (Hijacking)
- Smurfing

## ■ Patients

- Drug rings
- Doctor-shopping
- Forged / fraudulent / altered prescriptions
- The medicine cabinet

## ■ The Internet



# Prescription Requirements

	Schedule II	Schedule III	Schedule IV	Schedule V
Written	Yes	Yes	Yes	Yes
Oral	Emergency Only*	Yes	Yes	Yes
Facsimile	Yes**	Yes	Yes	Yes
Refills	No	Yes#	Yes#	Yes#
Partial Fills	Yes***	Yes	Yes	Yes

\* Must be reduced in writing, and followed by sign, hard copy of the prescription.

\*\* A signed, hard copy of the prescription must be presented before the medication is dispensed.

\*\*\* 72 hour time limitation.

# With medical authorization, up to 5 in 6 months.



# **Internet Diversion**

# Rogue Internet Pharmacy



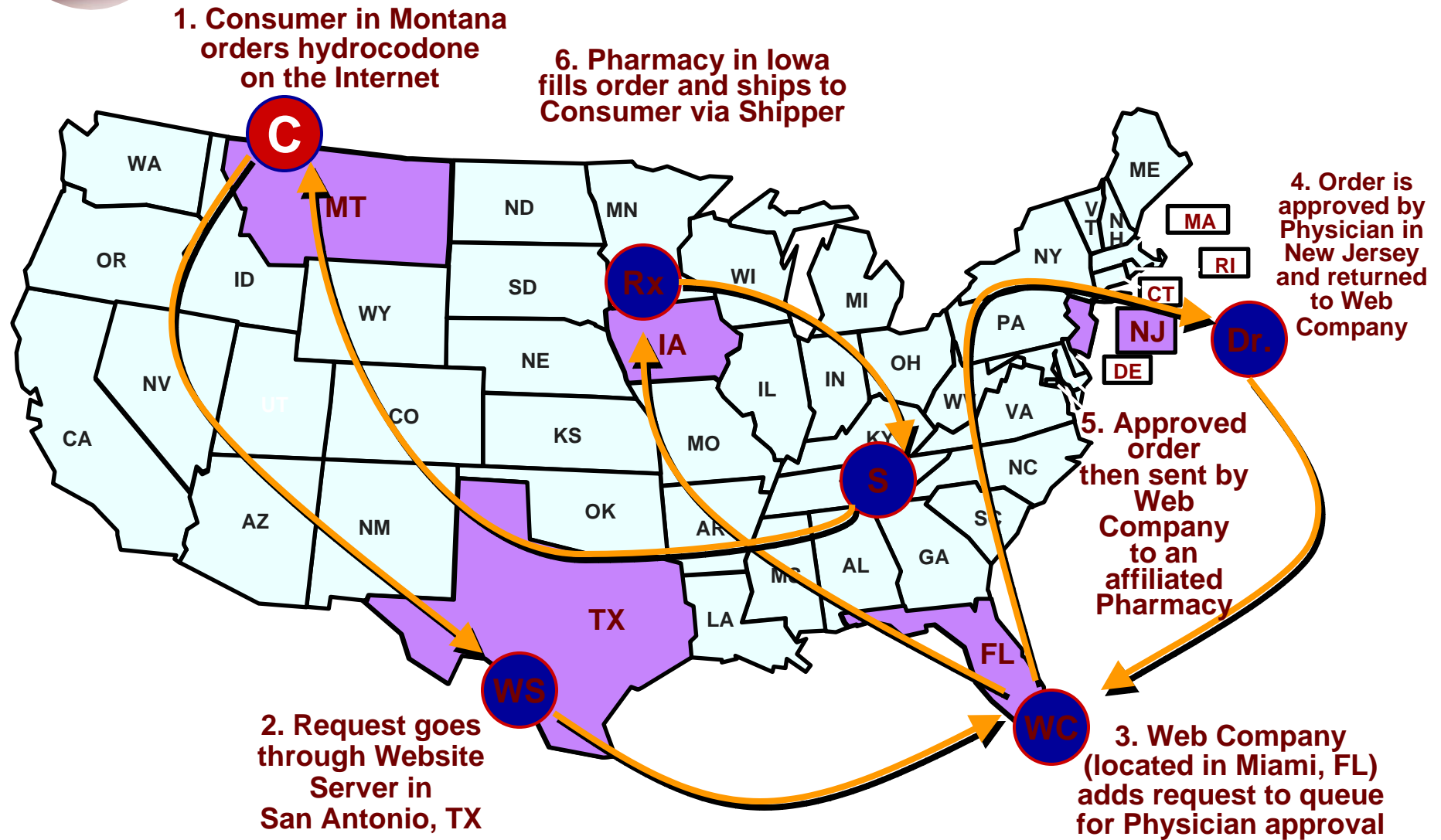


# Components for a Domestic Rogue Internet Operation

- Web Broker / Facilitator (optional)
- Practitioner
- Pharmacy
- \*\*All members of scheme are complicit thereby eliminating all checks and balances
- Source of Supply



# Domestic 'Rx' Flow



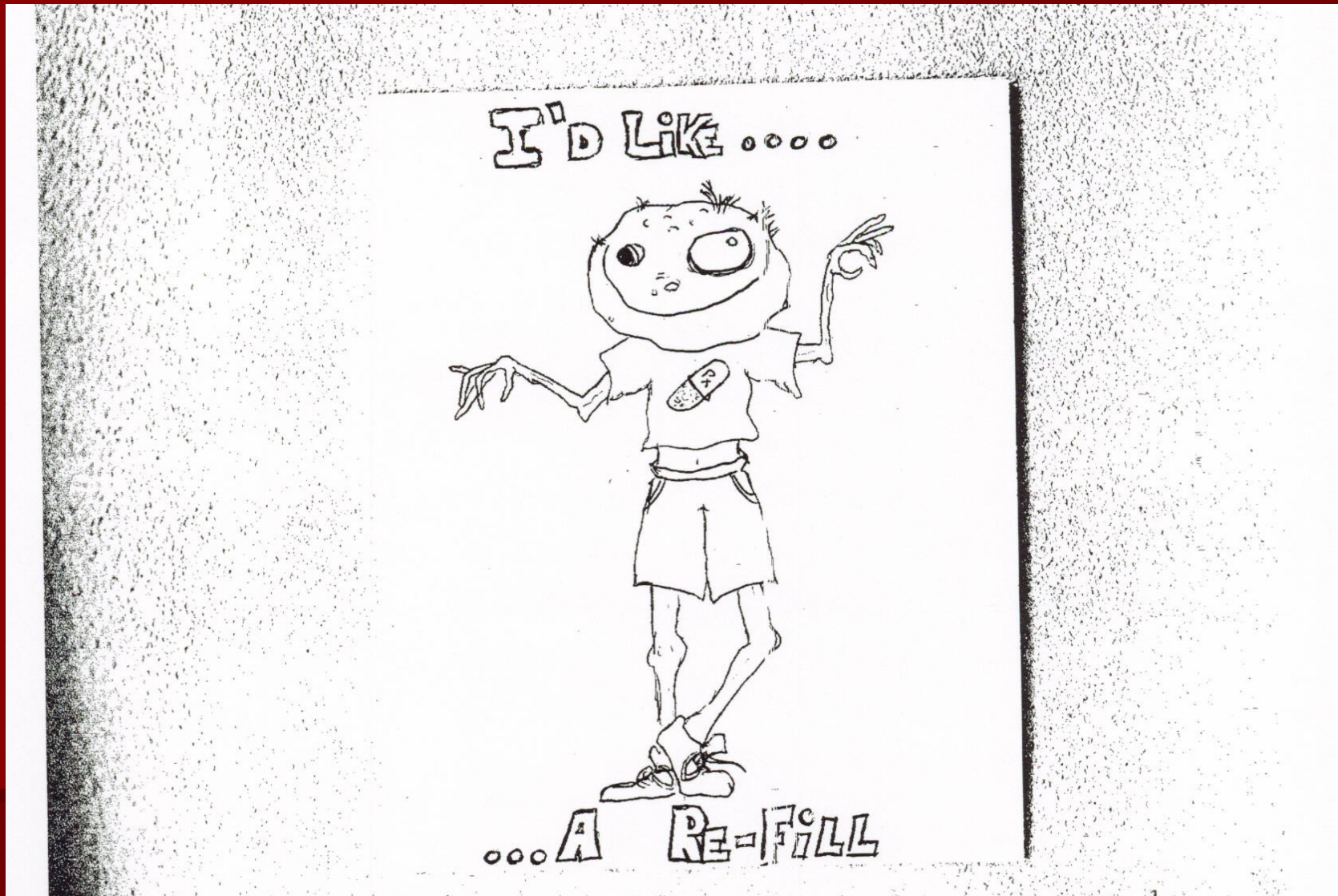


# **Case Example**

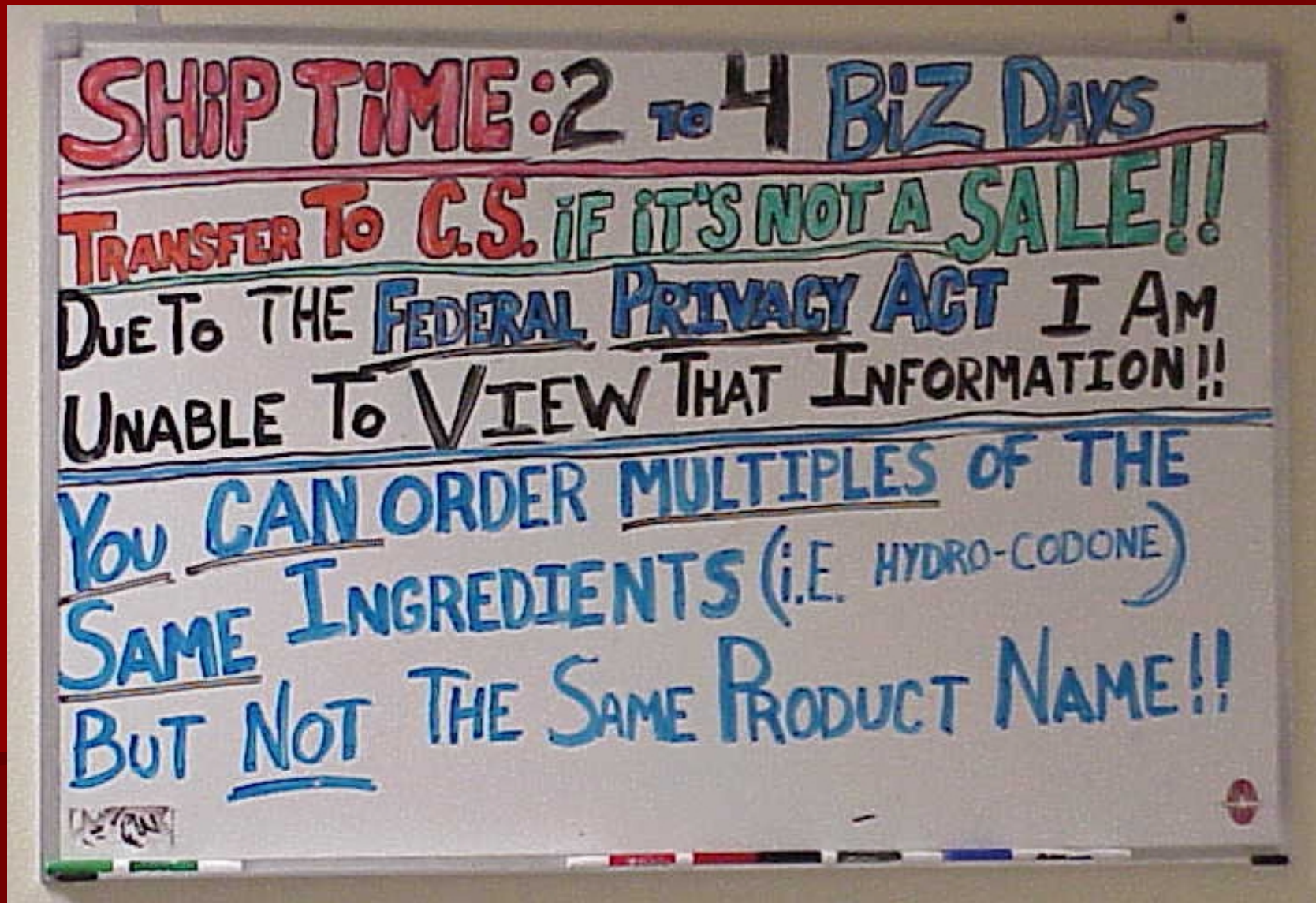
## **Minneapolis, Minnesota**



# Defendant's Attitude Toward His Customers



## Defendant's Attitude Toward His Business






\* \$300 Cash Bonus

to the Highest Discover Card  
Orders (5/4 - 5/13) Sales Agent

5/5/5  
→ use: [www.xpress-rx.com/digi/](http://www.xpress-rx.com/digi/)

**REMINDER:**

**NEW customers cannot ORDER  
HYDRO-CODONE WITH MASTERCARD!!**

Ask For Discover Card 1st 

PAID WITH Discover Card









































**Total Forfeiture:**

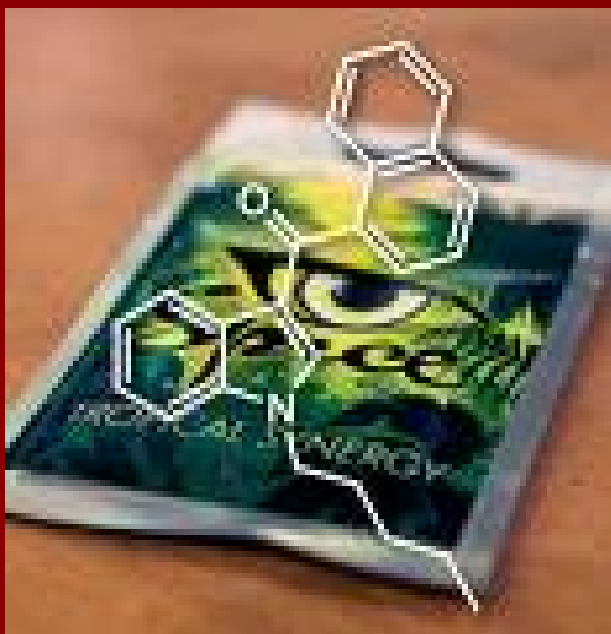
**\$4,370,258.80**

# THC-like Substances (“Spice”)



- An herbal mixture called “Spice” is sold in European countries mainly via Internet shops. It is also encountered in the U.S.
- “Spice” is purported to contain substances with marijuana-like psychoactive effects (e.g., HU-210, HU-211, JWH-018, JWH-073 and CP 47,947 & homologues) and it may be abused via smoking.

# THC-like Substances (“Spice”)



- **HU-210** is both chemically and pharmacologically similar to  $\Delta^9$ -THC, the main active ingredient in marijuana.
- **HU-211** is chemically, but not pharmacologically similar to  $\Delta^9$ -THC
- **JWH-018**, **JWH-073** and **CP 47,497** are pharmacologically, but not chemically, similar to  $\Delta^9$ -THC

# Salvia Divinorum

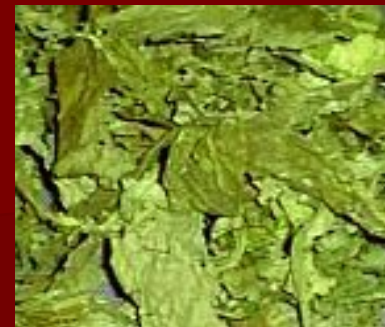
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- Indigenous to the state of Oaxaca, Mexico.
- One of several "vision-inducing" plants employed by the Mazatec Indians living in the mountains and uplands valleys of northeastern Oaxaca in Mexico.
- Abused primarily by adolescents and young adults for its hallucinogenic effects by
  - smoking (common) or
  - chewing

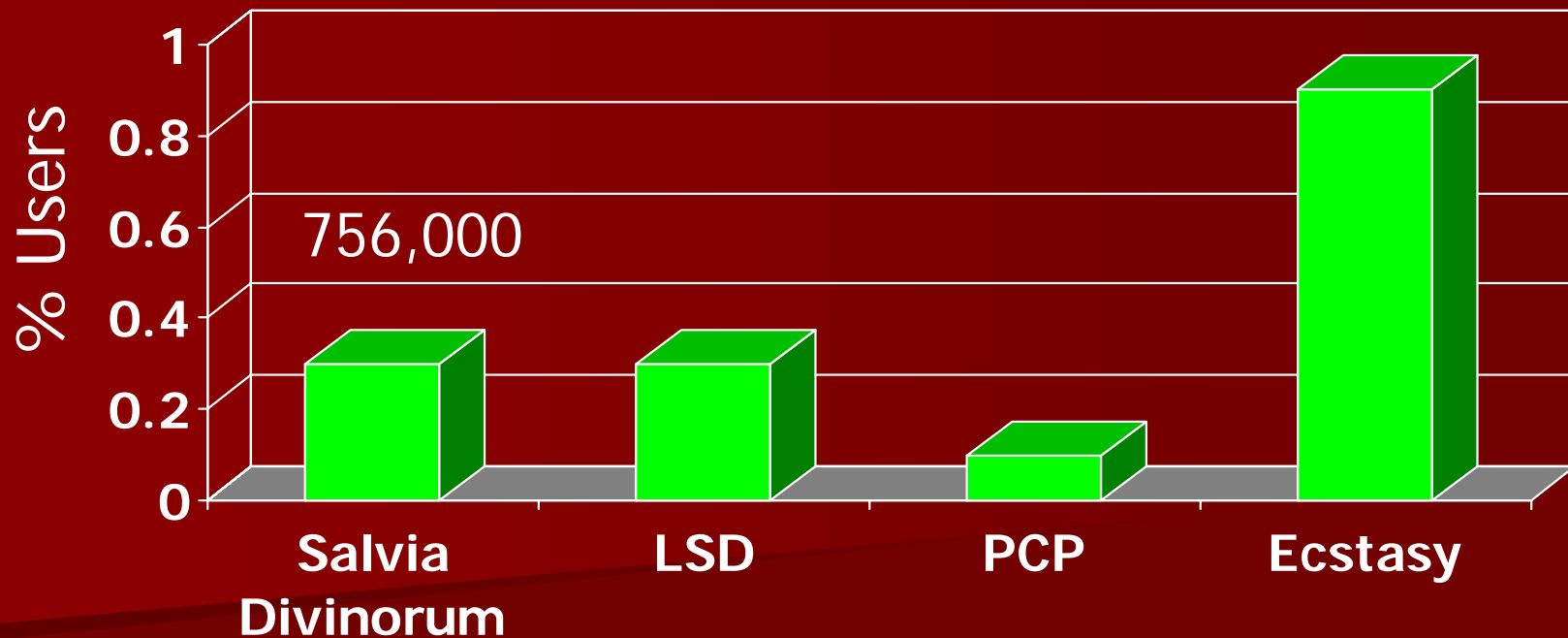
# Salvia Divinorum

- A perennial herb in the mint family (Labiatae or Lamiaceae).
- Internet sites advertise Salvia as a legal alternative to other controlled hallucinogens
- “Maria Pastora”, “Sage of the Seers”, “Diviner’s Sage”, “Salvia”, “Sally-D”, “Magic Mint”
- Sold as fresh and dried leaves, whole plants, cuttings & extracts



# Hallucinogens Use

Percentages of past year hallucinogen use among persons aged 12 or older



Source: NSDUH Report, February 2008



# Anabolic Steroids



# What are Anabolic Steroids?



- "Performance enhancing" drugs
- Synthetic testosterone
- Available as injectables, tablets, capsules, gels, and creams

# Anabolic Steroids

- Build tissue up (“anabolic”) by increasing protein synthesis and nitrogen retention (e.g., stimulate healing in burn victims). Treat some forms of anemia.
- Synthetic variations on the testosterone molecule, these are “androgens” and thus have masculinizing effects (“androgenic”) as well as anabolic.
- More properly called “anabolic-androgenic steroids” (or AAS).

# Classification as an Anabolic Steroid

Steroids effect reproductive tissue, muscle, bone, hair follicles, liver, kidneys, immune, and central nervous systems

Androgenic Effects

Mascularization

vs.

Anabolic Effects

Protein building in skeletal muscle and bone



# POSSIBILITIES

WITH FOCUS, DEDICATION AND STEROIDS, MEN CAN ACHIEVE IMPOSSIBLE DREAMS.  
LIKE BREAKING A WORLD RECORD. OR GROWING THEIR OWN BREASTS.

[www.despair.com](http://www.despair.com)

# Health effects of steroids

## Men

Baldness

Oily skin, acne

Bigger breasts

Liver cancer

Reduced sperm count, shrinking of the testicles



*Symptoms also include rage, mania, delusions and heart attacks in both sexes.*

## Women

Hair loss

Deeper voice

Oily skin, acne

Smaller breasts

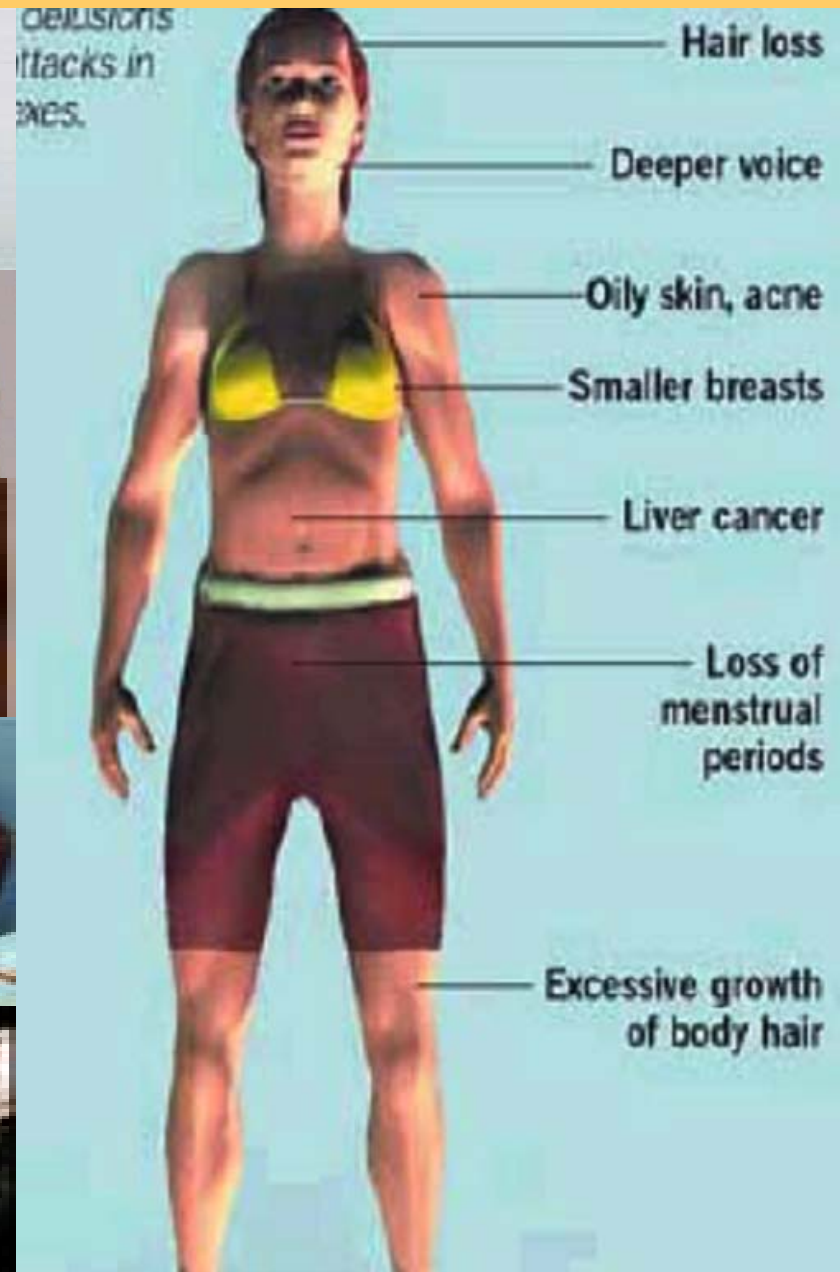
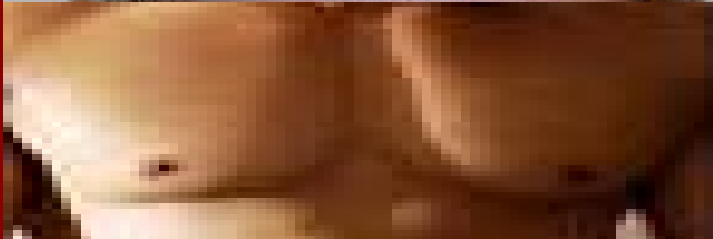
Liver cancer

Loss of menstrual periods

Excessive growth of body hair



# Side Effects of Steroid Use: Women





# Health effects of steroids

Men

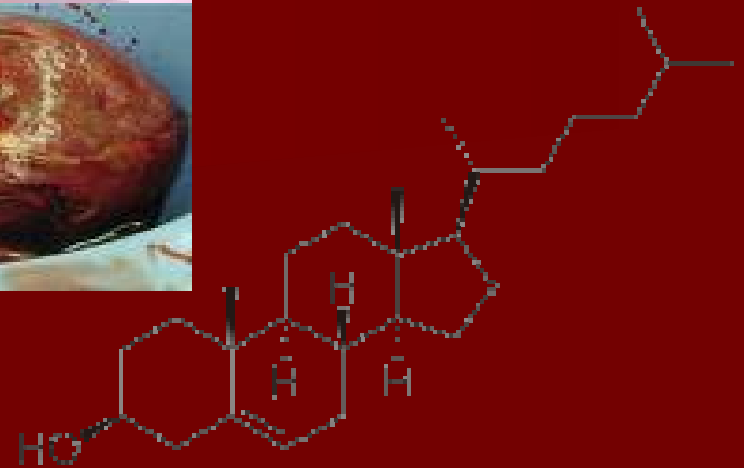
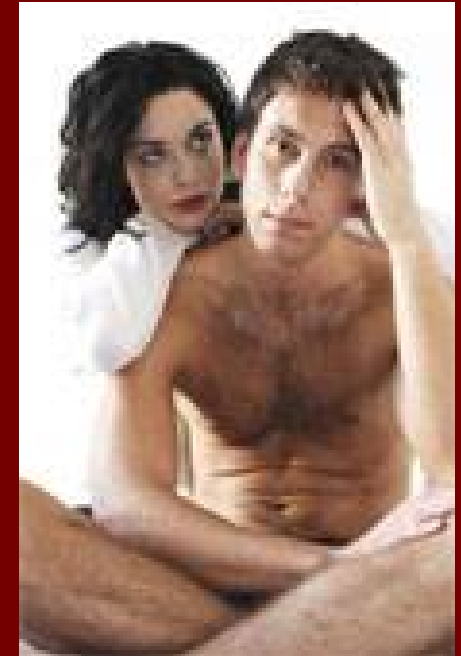
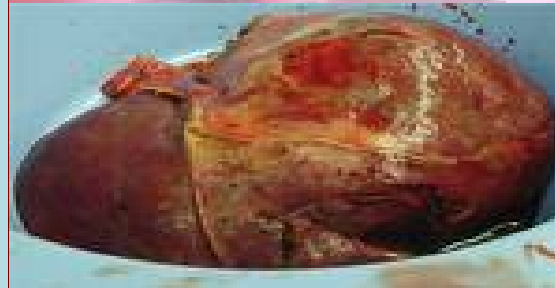
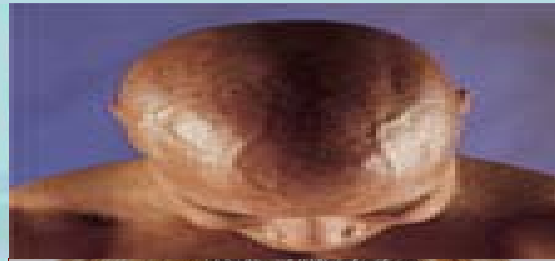
Baldness

Oily skin, acne

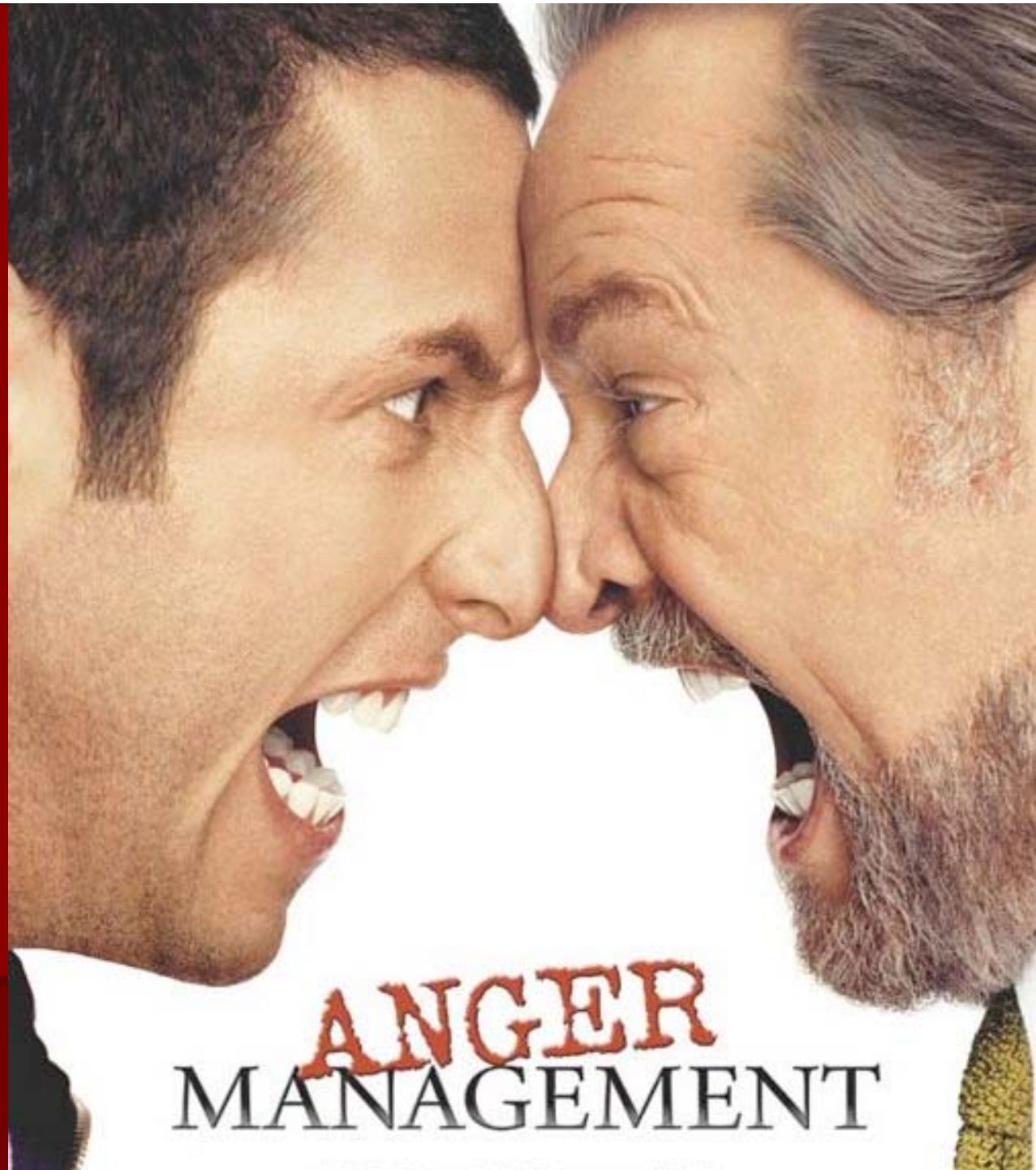
Bigger breasts

Liver cancer

Reduced sperm count, shrinking of the testicles







**ANGER**  
MANAGEMENT

## One Cycle – Approximately 12 Weeks



Before



After

35 Pound Increase in Body Weight

Single Workout Bench Press Increase of 30 Pounds

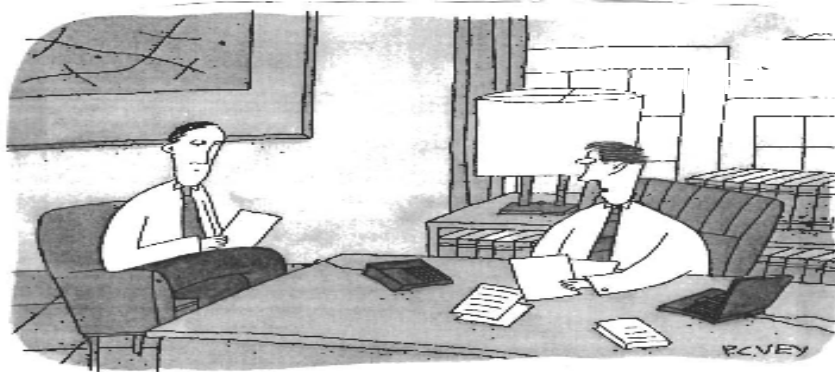
# Concomitant Drug Use with AAS

<b>Stimulants</b> Sympathomimetics	93.5%	Ephedrine	<b>Antidepressants</b>	48.3%	Paroxetine Citalopram Venlafaxine
<b>Sedatives</b> Benzodiazepine derivatives Phenothiazine derivatives Azaspirone derivatives	64.5% 22.6% 6.4%	Diazepam Oxazepam Promomethazine Fentiazin	<b>Anti-oestrogens</b>	38.7%	Proviron
					Tamoxifen Clomiphene
			<b>Anti-inflammatories, NSAIDs</b>	12.9%	Naproxen Ketoprofen
			<b>Diuretics</b>	12.9%	Spirolactone Furosemide
<b>Andrenergic drugs</b>	58.3%	Clenbuterol Salbutamol Ethylmorphine/ephedrine	<b>Anti-acne preparations</b>	9.7%	Roaccutane
<b>Testosterone Releasers</b>	51.6%	hCG Menotrophin	<b>Antihypertensive drugs</b>	6.4%	Clonidine hydrochloride
<b>Analgesics</b>	48.3%	Acetylsalicylic acid Codeine Morphine Dextropropoxiphen	<b>Miscellaneous</b>		
			Muscle Oil	9.7%	Synthol
			Dopamine inhibitors	3.2%	Levodopa

e

**N=32 subjects, Sweden**

# Dietary Supplements



*"These new regulations will fundamentally  
change the way we get around them."*

***"These new regulations will fundamentally  
Change the way we get around them"***



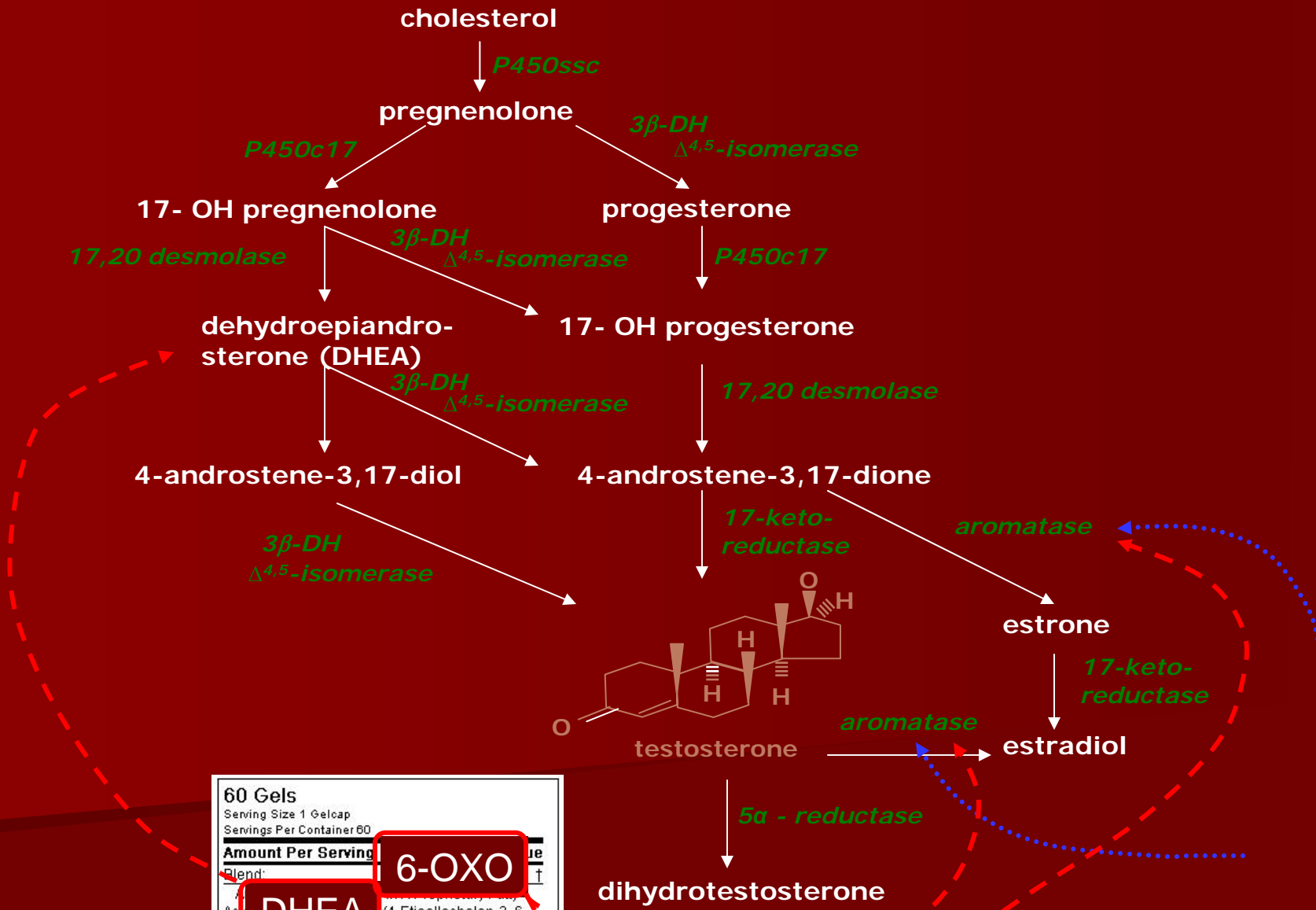
## DRUGS

Must be proven  
*safe before*  
*approved* for  
market

## SUPPLEMENTS

Must be proven  
*harmful before*  
*removed* from  
market

# Synthesis of Testosterone



60 Gels	
Serving Size 1 Gelcap	
Servings Per Container 60	
<b>Amount Per Serving</b>	
Blend:	<b>6-OXO</b>
Ac	(4-Etioallocholen-3, 6,
17	hydroxy-Ecdysterone, -(-)3,
4-Divanyltetrahydrouran	
† % Daily Value not established	

**DHEA**

**6-OXO**



# **Three Steroids to be added to the CSA**

- **DEA in process to control three anabolic steroids in schedule III of the CSA**
  - **Boldione (Madol)**
  - **Desoxymethyltestosterone**
  - **19-nor-4,9(10)-androstadienedione**
- **As of August 2008, 58 dietary supplements were purported to contain one or more of these three steroids**

U.S. DEPARTMENT OF JUSTICE  
DRUG ENFORCEMENT ADMINISTRATION

**OFFICE OF DIVERSION CONTROL**

HOME PRIVACY POLICY CONTACT US WHAT'S NEW HOT ITEMS SITEMAP SEARCH

**DIVERSION PROGRAMS**  
 APPLICATIONS & ON-LINE FORMS  
 ARCOS  
 CHEMICALS  
 CONTROLLED SUBSTANCE SCHEDULES  
 IMPORT AND EXPORT  
 IFLIS  
 QUOTAS  
 REGISTRATION SUPPORT  
 REPORTS REQUIRED BY 21 CFR

**RESOURCES**  
 CAREER OPPORTUNITIES  
 DRUGS/CHEMICALS OF CONCERN  
 e-COMMERCE INITIATIVES  
 FEDERAL REGISTER NOTICES  
 MEETINGS & EVENTS  
 OFFICES & DIRECTORIES  
 PROGRAM DESCRIPTION  
 PUBLICATIONS  
 QUESTIONS & ANSWERS  
 REGULATIONS & CODIFIED CSA

**LINKS**  
 FEDERAL AGENCIES & RELATED  
 INDUSTRY RELATED  
 PUBLIC INTEREST

**REGISTRATION VALIDATION**

**CASES AGAINST THE DOCTORS**

**WELCOME TO THE DIVERSION CONTROL PROGRAM**

Registration Number  
Toll Free: 1-800-882-9539

**REGISTRATION SUPPORT**

 Save time by applying for and/or renewing your DEA Registration on-line. Data will be entered through a **secure connection** to the **ODWIF** on-line web application system. Minimum requirements: Credit Card and a web browser that supports **128-bit encryption**.

**NEW REGISTRATION FEE EFFECTIVE NOVEMBER 1, 2006**

- To Apply for Renewal Applications for Registration On-Line
- To Apply for New Applications for Registration On-Line
- To Apply for Registration by Mail
- For Registration Changes  
(Address, Drug Codes, Name, Schedules)
- Duplicate Certificates
- Order Forms

For Registration Matters  
1-800-882-9539

**WHAT'S NEW**

**RENEWAL**  
Apply On-Line  
REGISTRATION APPLICATIONS  
Renewal Applications

**NEW APPLICATIONS FOR REGISTRATION**  
New Registration Applications

**DEA FORM 104 ONLINE**  
REPORT THEFT OR LOSS OF CONTROLLED SUBSTANCES

Sales of Ephedrine & Pseudoephedrine Products  
**COMBAT METH ACT 2005**  
Combat Methamphetamine Epidemic Act 2005

**www.DEAdiversion.usdoj.gov**  
 or  
**www.dea.gov**



Questions?