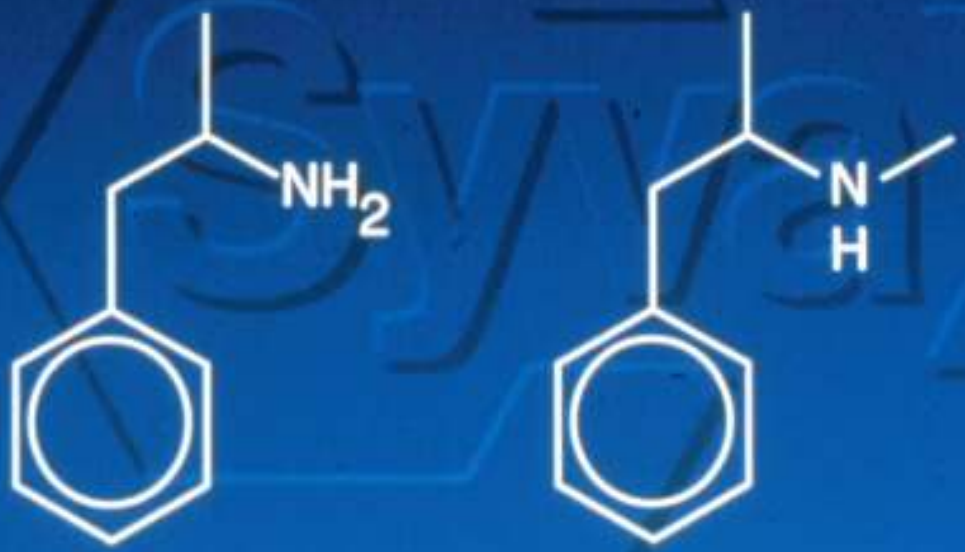
CONCENTRATED
BATH SALTS
For an invigorating, energizing and truly
Scentual experience
"Synthetics"
The New Face
of
Drug Abuse
Ritalin LA®
10 mg
ADDERALL XR
Spice
TROPICAL SYNERGY
SCOOBY SNAX
POTPOURRI
K2

Amphetamines

- CNS stimulants

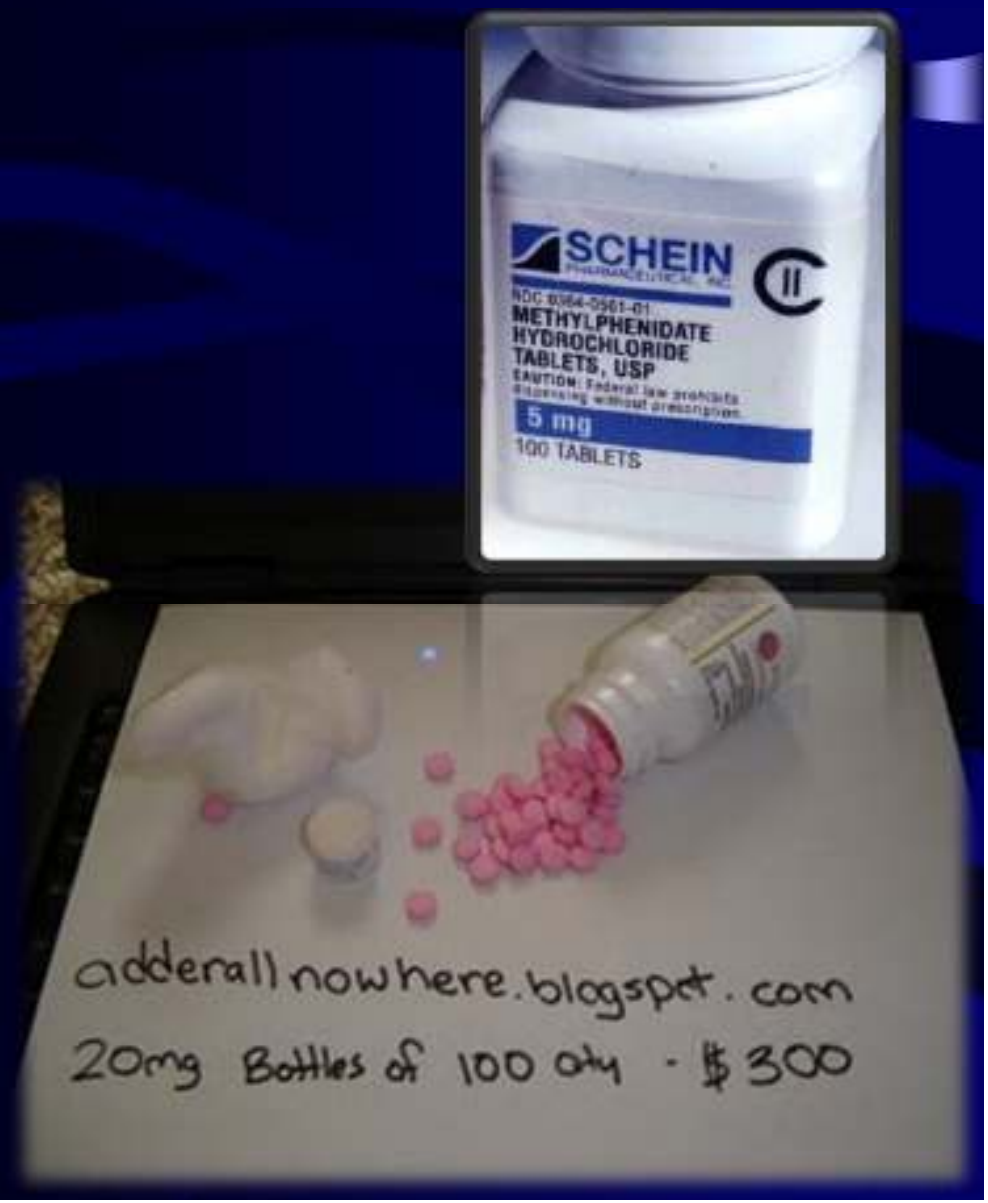


Amphetamine Methamphetamine

Adderall, Ritalin – CII Drugs

An *excellent* drugs to treat ADD & ADHD

- Increases attention, alertness (helps focusing)
- Also abused:
  - A.k.a. Vitamin R, Vitamin A, "the cramming drugs"



"Risky Rise of the Good-Grade Pill"

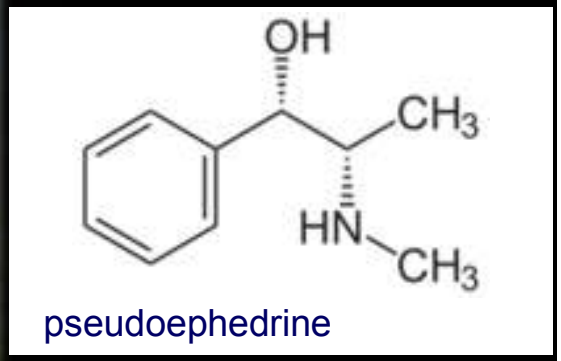
- *High use in academically competitive high schools, colleges and graduate schools*
- *Use and abuse can lead to health risks from cardio to depression & psychosis*
- *Schedule II drugs, felony*
- *Gateway to sleep aids and painkillers*
- *Prefrontal cortex and changing brain chemistry*
- *Cheating issue*

Stimulant abuse comes with serious side effects:

- Possible cardiac problems
- Tremors, seizure potential, stroke
- Pulmonary granulomas from snorting pills

Methamphetamine

- Cheaper and longer lasting than **other** stimulants!
  - Easy to make
  - High lasts 6 to 12 hours
- *A.k.a: "meth, speed, chalk, ice, crank crystal, glass, Go-fast"*



pseudoephedrine

Many synthetic methods:
Birch or "Nazi" Method
- Anhydrous ammonia

Meth: *illicit manufacturing*

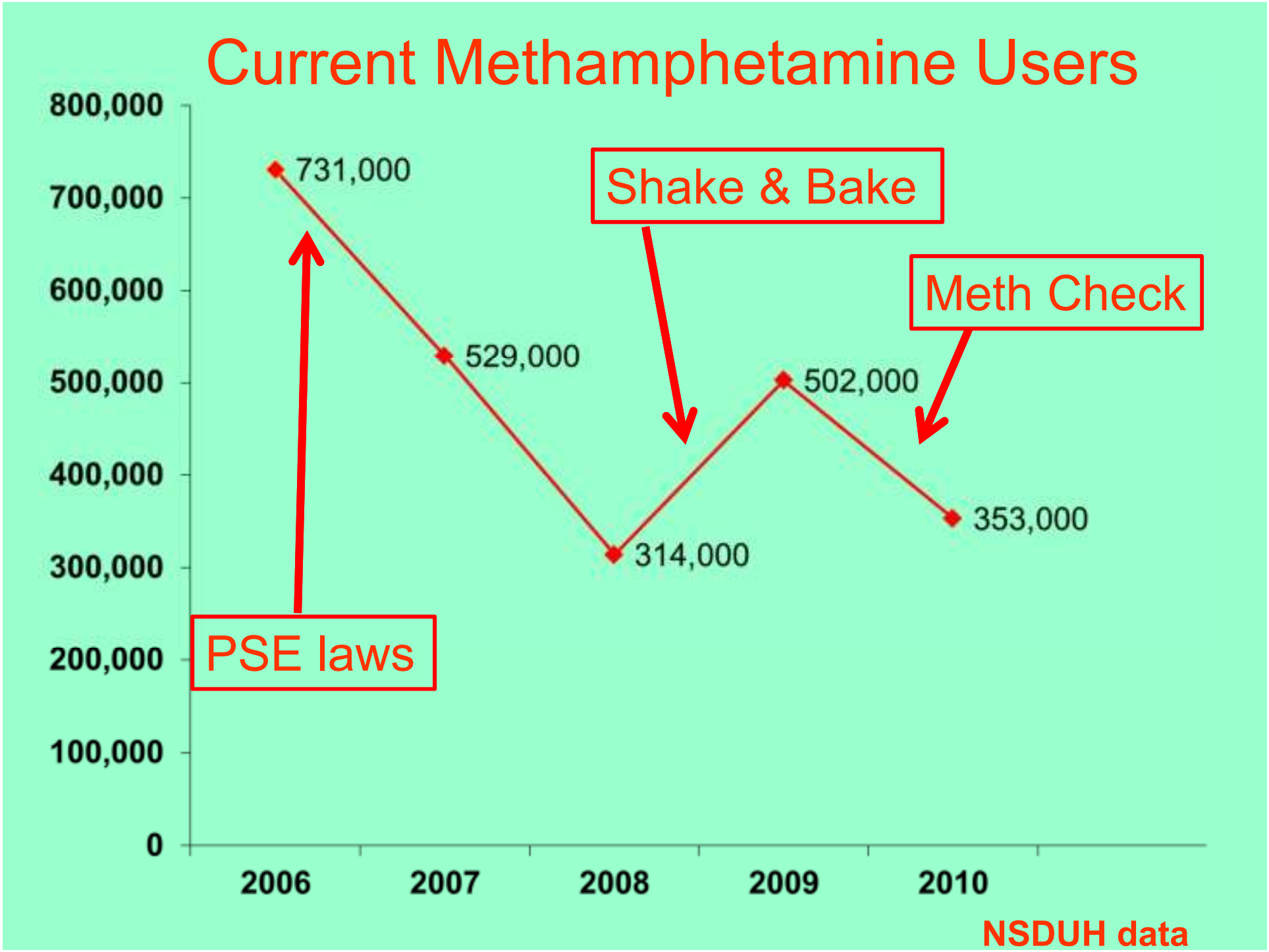
Precursor materials and chemicals:

- OTC diet pills or decongestants
- Starter fluid (ether), Liquid plumber (sulfuric acid), lithium batteries, Drano (sodium hydroxide), ammonia hydroxide

Shoplift and steal materials

Meth: *illicit manufacturing*

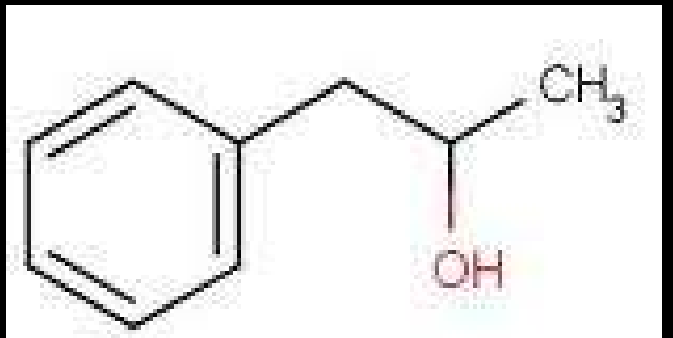
- Acetone, ether, ammonia, sulfuric acid, HCl gas, etc.
- Danger of combustion and fire are very high
- Health risks are enormous


Current Methamphetamine Users
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
731,000
529,000
314,000
502,000
353,000
Shake & Bake
Meth Check
PSE laws
2006
2007
2008
2009
2010
NSDUH data

Meth Makers in Mexico

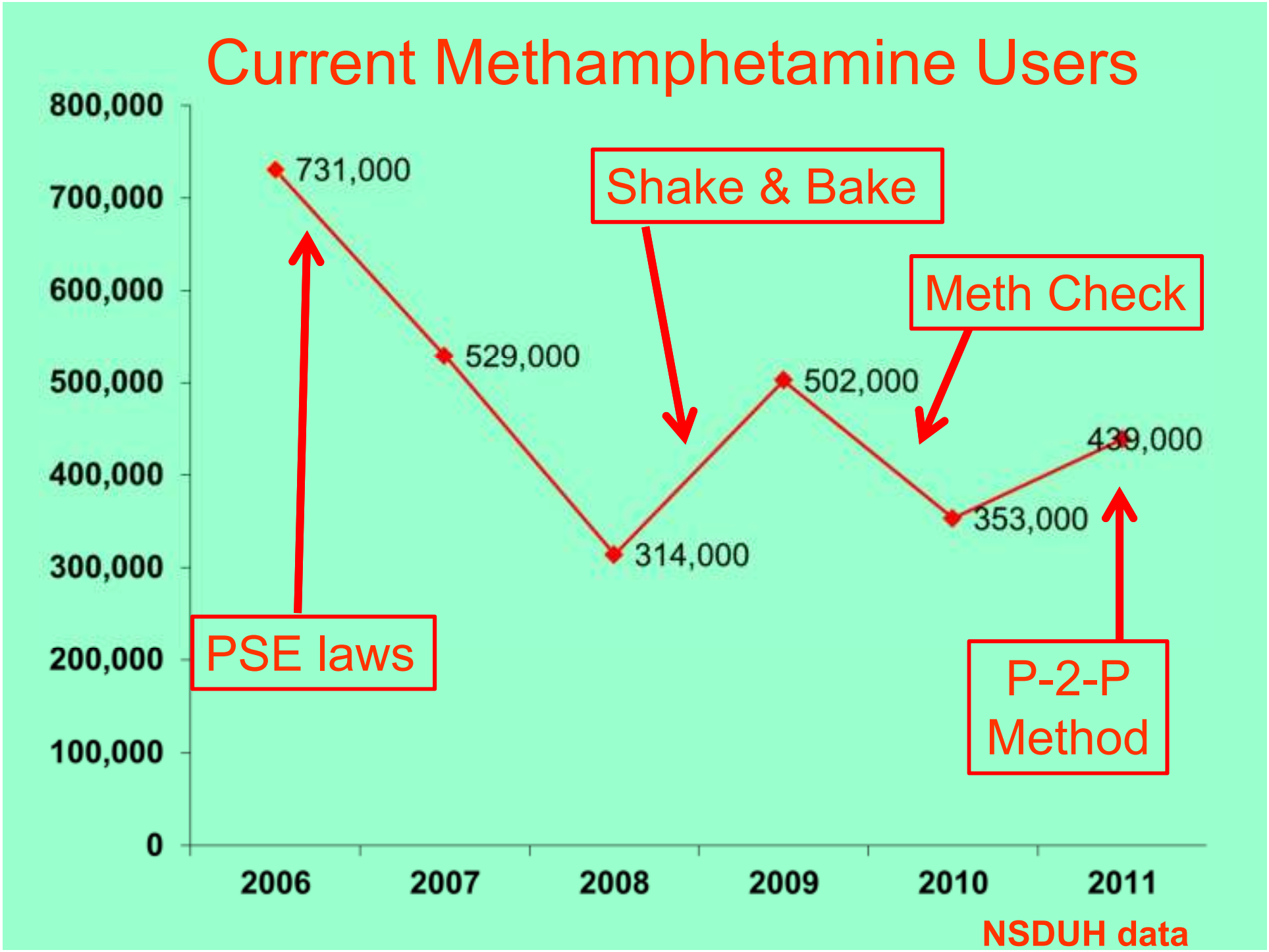
P-2-P method reemerged:

- Iodine, red phosphorus, lithium method
- P-2-P is a CII controlled substance
- Using phenylacetic acid



Phenyl-2-propane

Current Methamphetamine Users



Behavior Warning Signs

- Erratic behavior
- Constantly misplacing things
- Lying
- Skipping school
- Isolation
- Paranoia
- Weird eating & sleeping patterns

Hollowed out pens

Cards for crushing

Burns on thumb

Butane lighters

Straws, gum wrappers

Red or irritated nostrils

DANGER SIGNS

CBS
Share
Embed
Party Drugs & Raves
in LA & SF in 2010
cbsnews
.com

"Ecstasy" – The Party Drug!

- Enhances energy, endurance, sociability and sexual arousal
- Hallucinogenic effects

Ecstasy - very appealing

- *"Ecstasy is the fuel that drives the Rave or Party engine"*
- Helps them feel one with the loud "techno" music:

  "I become one with the beat"

  "It feels like my heart is outside chest"

It's a dance party, turn the lights out. (Run by the owner…

Public Event · By

Join Maybe

When Friday, February 10, 9:30pm-12:30am

Where TANGOS Banquet Hall, 241 East Brannon Rd., Nicholasville, KY

Get Directions

Details BRING ANY FRIENDS. AND INVITE THEM ON HERE.

Ages: High School

The first half hour girls can come free and guys pay $5. After that it is $10 for everyone!

Casual wear.

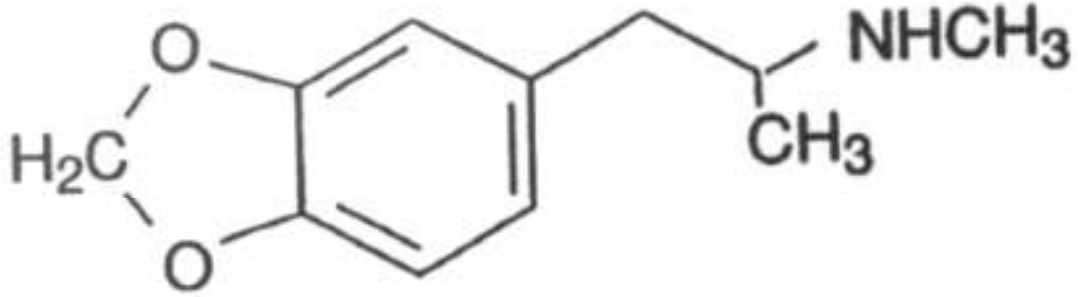
No illegal substances can be used please. Thanks!

Also, if anyones parents want to call an adult about the party, please tell them to call 859-309-1362. That is the number for Prageeth Hettiarachchi. He is the owner of the studio and who is putting on the party also.

If anyone has any questions about anything else, just post on here, or message me!

Ecstasy (MDMA)

- Ecstasy is both a stimulant and psychedelic drug:
  - *User doesn't lose touch with reality but many claim altered perceptions or feelings:*



3,4-methylenedioxymethamphetamine

MDMA

Adulterants

- Illicit manufacture in Clandestine labs:
  - No quality control, impurities, dose unknown,…
- Dealers often mix drugs:
  - methamphetamine/LSD
  - meth/Ketamine
  - nasty synthetic drugs

You really don't know what you're getting

"Snorting Bath Salts"

- Appeared in '09

The New Craze

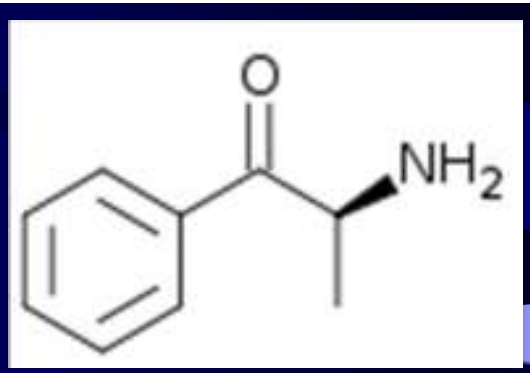
- Sold as bath salts, fertilizer, insect repellent, …on Internet and in gas stations & convenient stores

"Bath Salts"

- "White Lightning, Ivory Wave, Vanilla Sky, White Dove, Zoom, Aura"…
  - $20-50 a container
- *Labeled: "Not for human consumption"*

- *Young people are swallowing, snorting, and injecting these substances*

Khat Plant



- Drugs in Bath Salt are derivatives of chemicals found in Khat plant leaves:
  - Cathinones are beta-ketone amphetamines
- Used for centuries in Southeast Asia
  - Chewed for its euphoric effects

"Bath Salts"

- Synthetic Cathinones: Mephedrone, methedrone , MVPV (methylenedioxy-pyrovalerone)…
- Referred to as *"legal cocaine"*
- Produce a meth type high with LSD effects
- Dose 3-20mg.
- High risk for overdose
- Peak effect 1-2 hrs., drug effects may last 6-8 hrs.

Synthetic Cathinones are CNS Stimulants:

- Desire effects: increases energy, empathy, openness and increased libido
- Adverse effects: elevated heart rate and blood pressure, profuse sweating, agitation, psychotic features, paranoia, and suicidal thoughts.

Bath Salts

- Physical effects: hypertension, rapid heart rate, hyperthermia, seizures
- Psychological effects: psychotic episodes, paranoia, hallucinations, suicidal thoughts
  - *Jared shot himself after snorting Bath Salts*

Thousands of reports to Poison Control Centers across the country

Jared, 21 yrs. old

Table 1. Physical and Behavioral Effects of Psychoactive "Bath Salts."

Physical Effects	Behavioral and Mental-Status Effects
Tachycardia	Panic attacks
Hypertension	Anxiety
Vasoconstriction	Agitation
Arrhythmias	Paranoia
Hyperthermia	Hallucinations
Sweating	Psychosis
Mydriasis	Aggressive behavior
Muscle tremor and spasms	Violent behavior
Seizures	Self-destructive behavior
Stroke	Self-mutilation
Cerebral edema	Suicidal ideation
Respiratory distress	Insomnia
Cardiovascular collapse	Anorexia
Myocardial infarction	Depression
Death	

Ross, Watson, Goldberger; NEJM 365:967-968, 2011

"Bath Salts" Intoxication

Comments from NEJM article:

1. Overdose is a real concern – care and monitoring
2. Drug screens do not detect these drugs
3. Patients may need physical restraints and sedatives (IV benzos) to control seizures
4. IV fluids for hyperthermia and suspicion of rhabdomyolysis

Ross, Watson, Goldberger; NEJM 365:967-968, 2011

“Life-threatening necrotizing fasciitis due to ‘bath salts’ injection”

- 34-year-old women presented in ER with right arm pain and infection
- Broad-spectrum antibiotic therapy
- Infection continued to progress rapidly
- Diagnosis of necrotizing fasciitis and surgery indicated

www.orthosupersite.com Jan, 2012

Synthetic Drug Abuse Prevention Act of 2012

- Put 31 synthetic drugs put into Schedule I of the Controlled Substances Act:
  - No currently accepted medical use
  - Illegal to manufacture, distribute, or dispense, or possess

Passed and signed 7/20/12

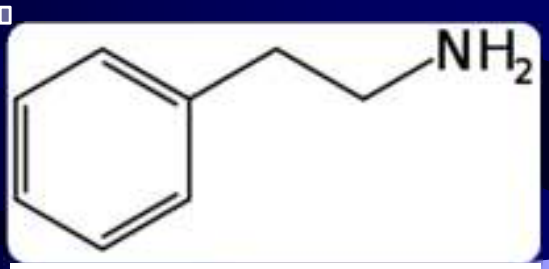
Synthetic Drug Abuse Prevention Act of 2012

Bath Salt Drugs in C1:

- 4-methylmethcathinone (Mephedrone)
- 3,4-methylenedioxypyrovalerone (MDPV)

Passed and signed 7/20/12

2C Series Synthetic Psychedelics



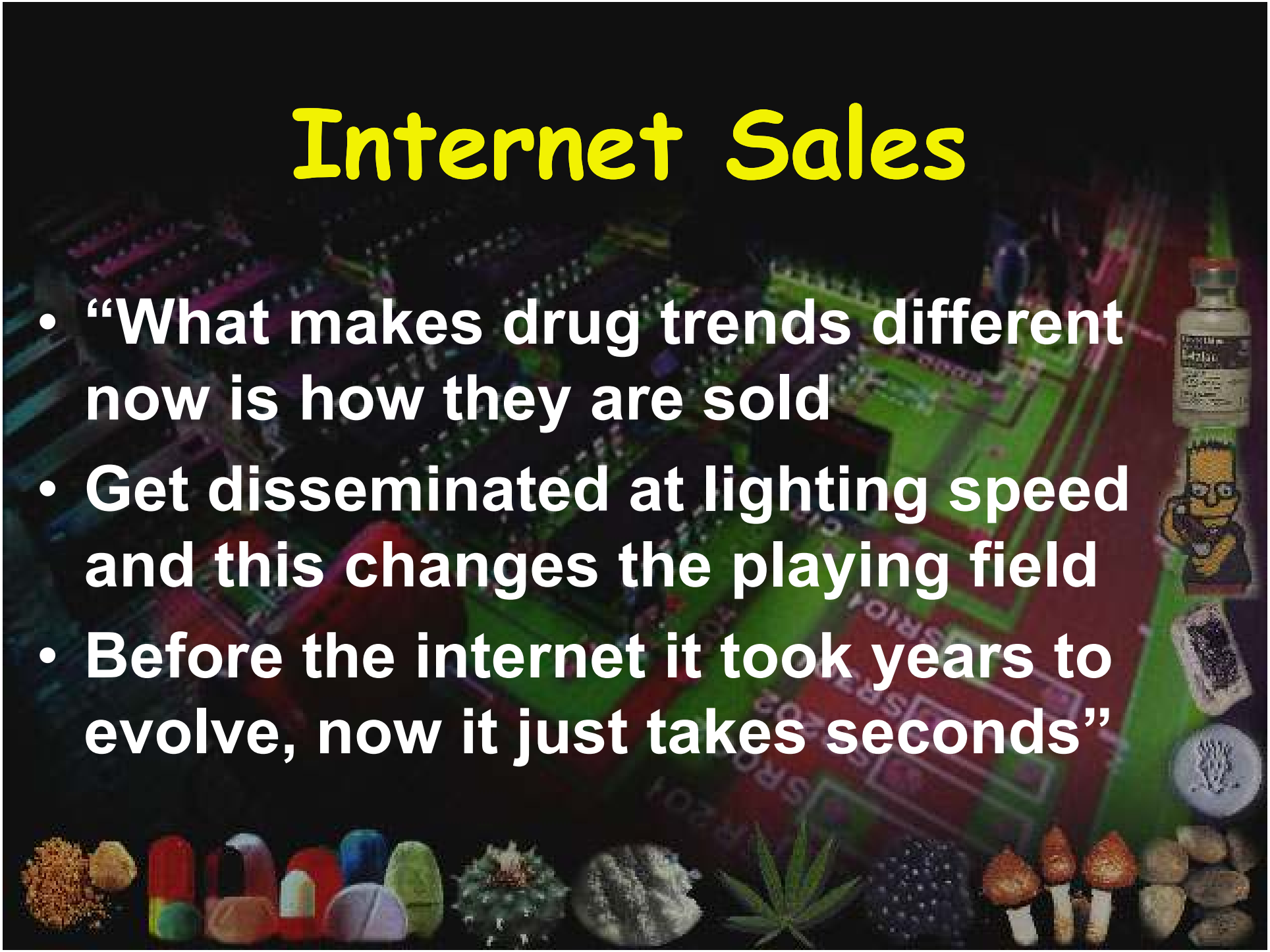
phenylethylamines

Hallucinogenic stimulants:

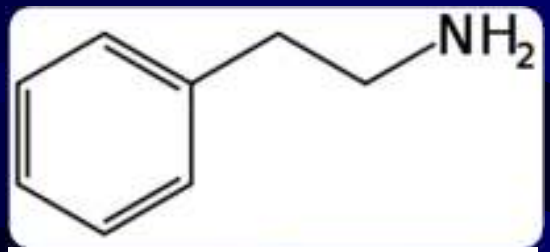
- 2C-I replacing Bath Salts
- 2C-B or Nexus, 2CT-7 or Blue Mystic, 2C-E,
- 3C-bromo-dragonfly, *etc*…

Internet Sales

- "What makes drug trends different now is how they are sold
- Get disseminated at lighting speed and this changes the playing field
- Before the internet it took years to evolve, now it just takes seconds"



2C Series Synthetic Psychedelics



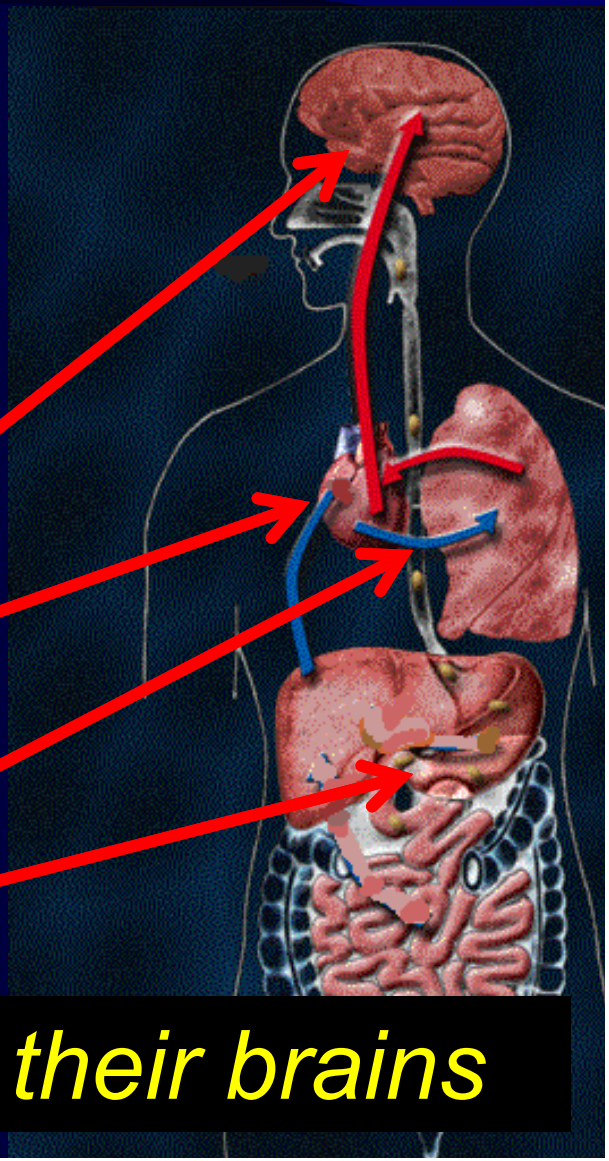
phenylethylamines

- **Sought after for:** Sense of well being, increased body awareness and enhanced receptiveness of visual, auditory, olfactory, and tactile sensation
- **Nasty side effects:** Tachycardia, arrhythmias, hyperventilation, psychotic experiences… *fatalities*

"2C Series" Synthetics

More dangerous than LSD, psilocybin or mescaline:

- Act on serotonin receptors but also affect other vital chemical signals (DA & NE)
- Can have drastic and unexpected effects on vital functions i.e. heart rate, blood pressure, body temperature, kidney failure



Playing Russian roulette with their brains

2C-1
25B (25B-NBOMe)
5:16 72°
CBS 2 HD

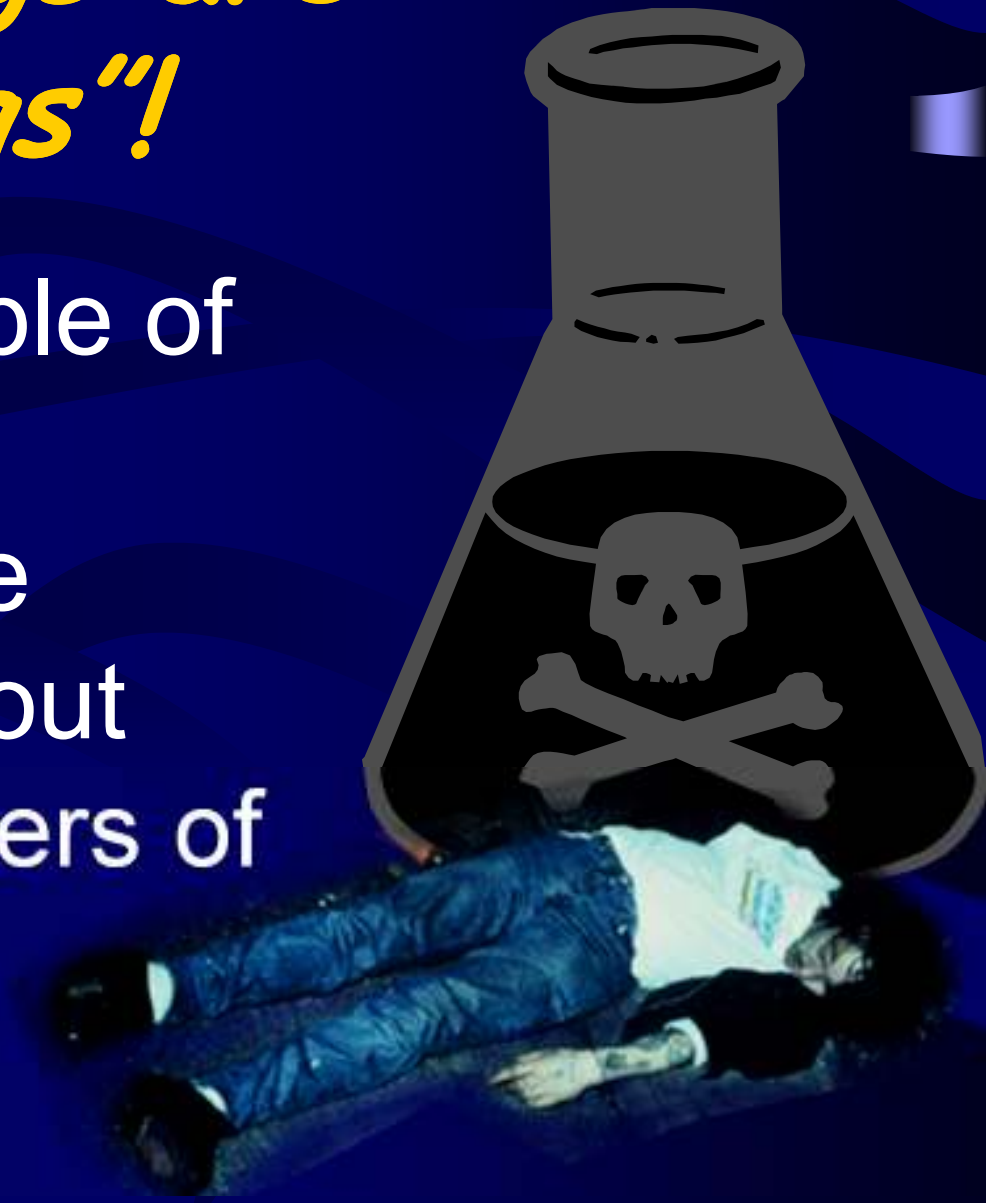
Synthetic Drug Abuse Prevention Act of 2012

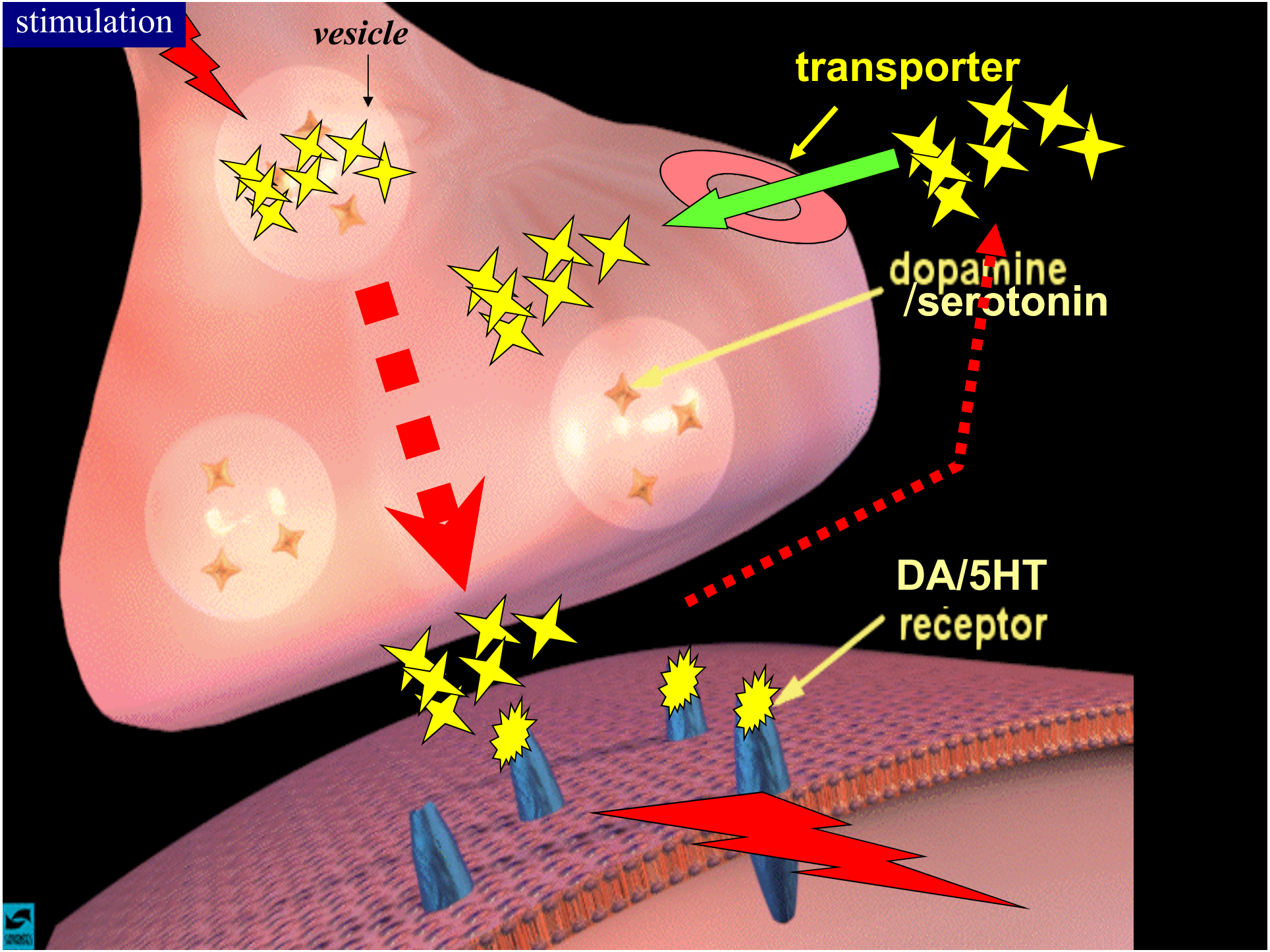
- Several synthetic hallucinogens scheduled:
  - 2C-E, 2C-D, 2C-C, 2C-I, 2C-T-2, 2C-T-4, 2C-H, 2C-N, and 2C-P

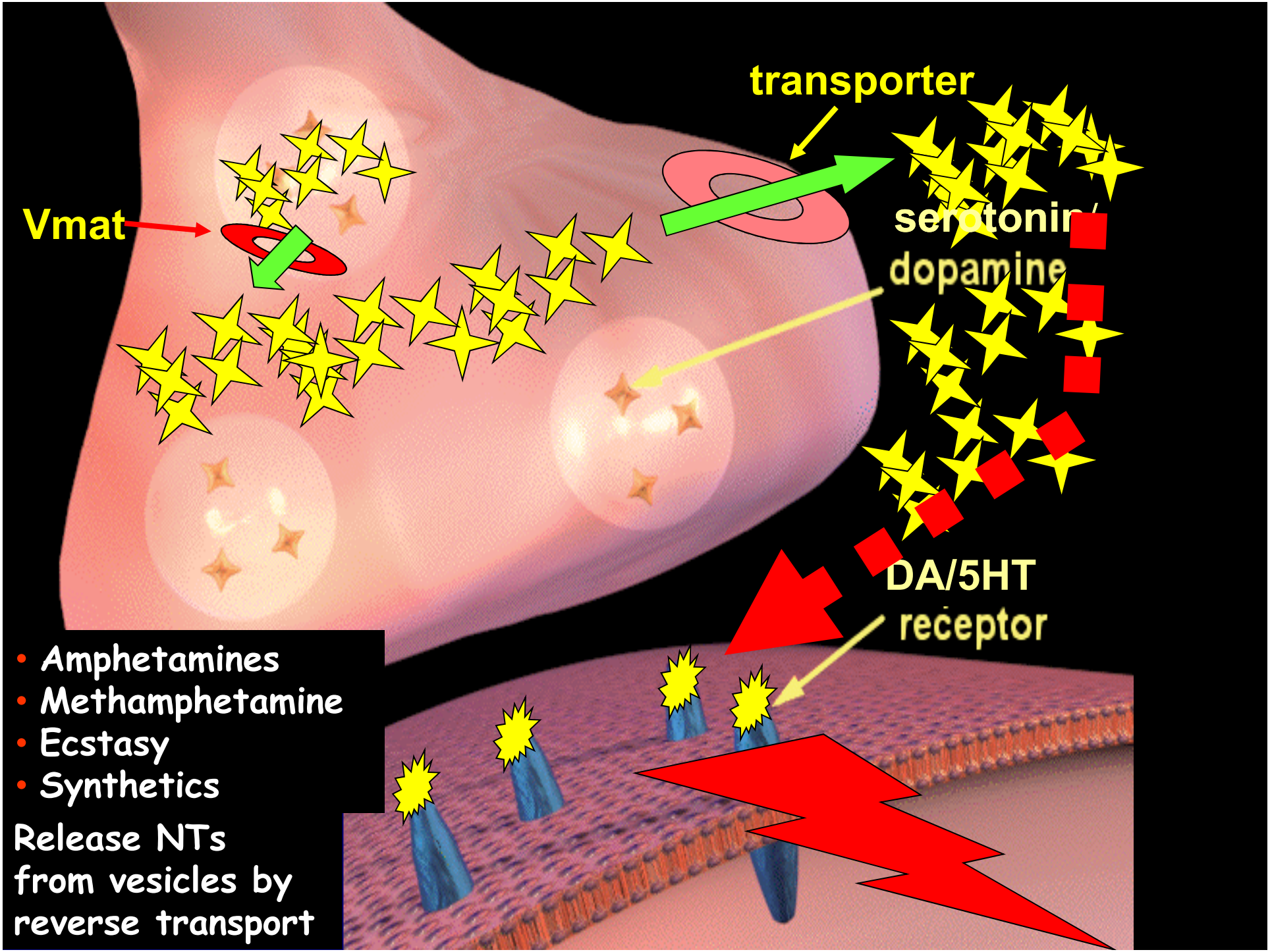
Passed and signed 7/20/12

Synthetic Drugs are *NOT* "Fun Drugs"!

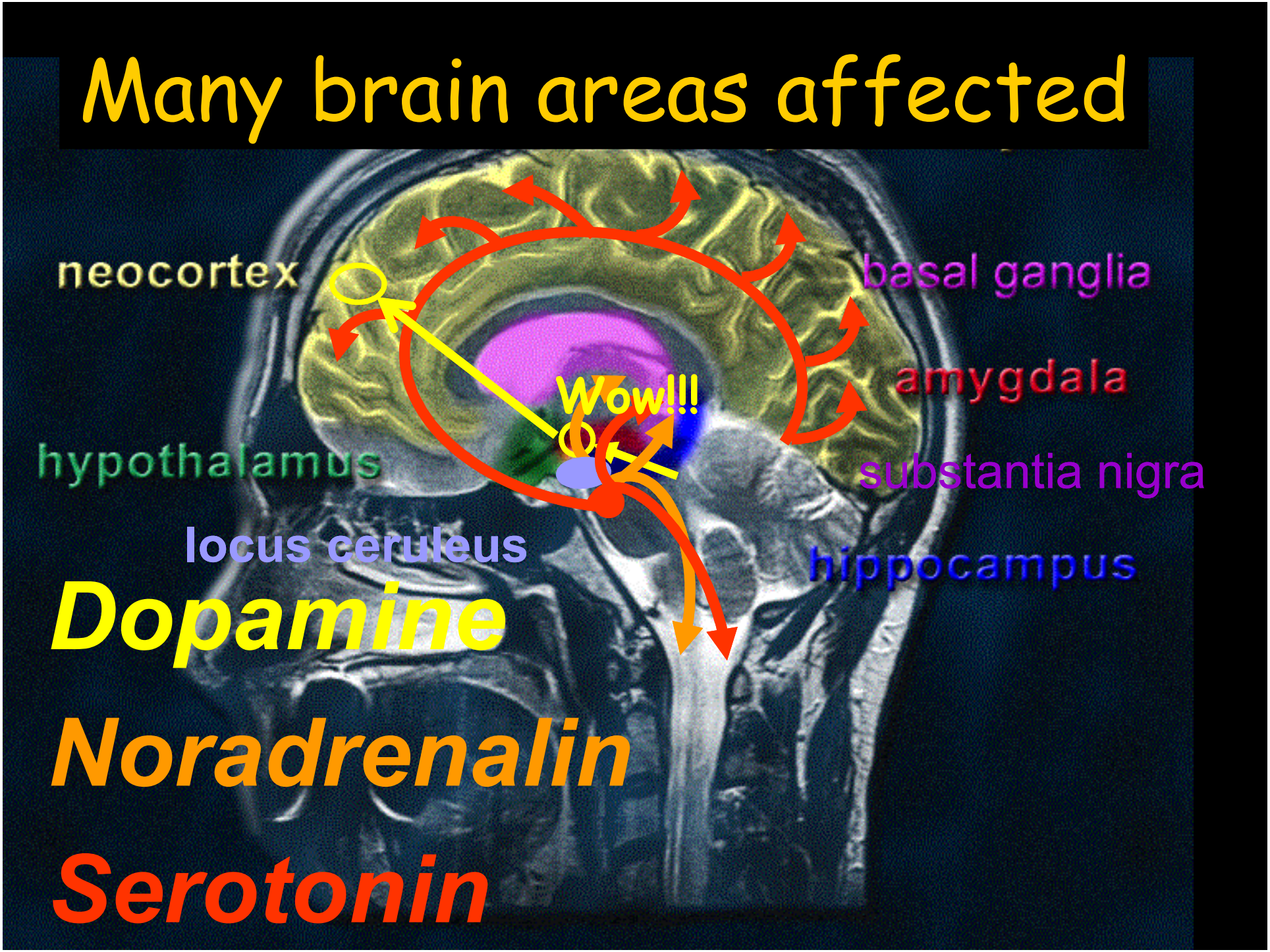
There are a multiple of physical and psychological side effects that point out the *extreme* dangers of their use!

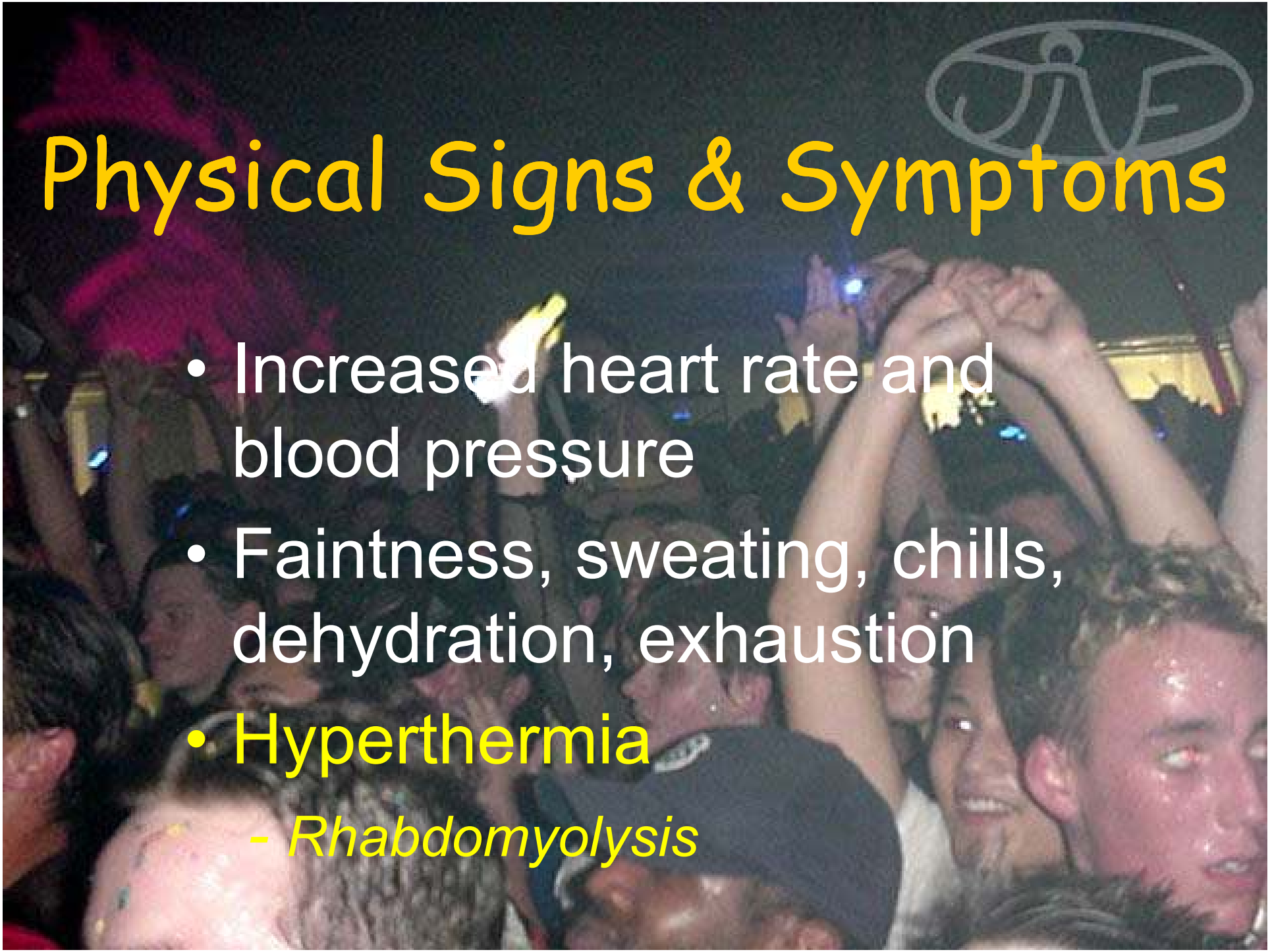



stimulation
vesicle
transporter
dopamine
/serotonin
DA/5HT
receptor


transporter
Vmat
serotonin/
dopamine
DA/5HT
receptor
• Amphetamines
• Methamphetamine
• Ecstasy
• Synthetics
Release NTs
from vesicles by
reverse transport

Many brain areas affected

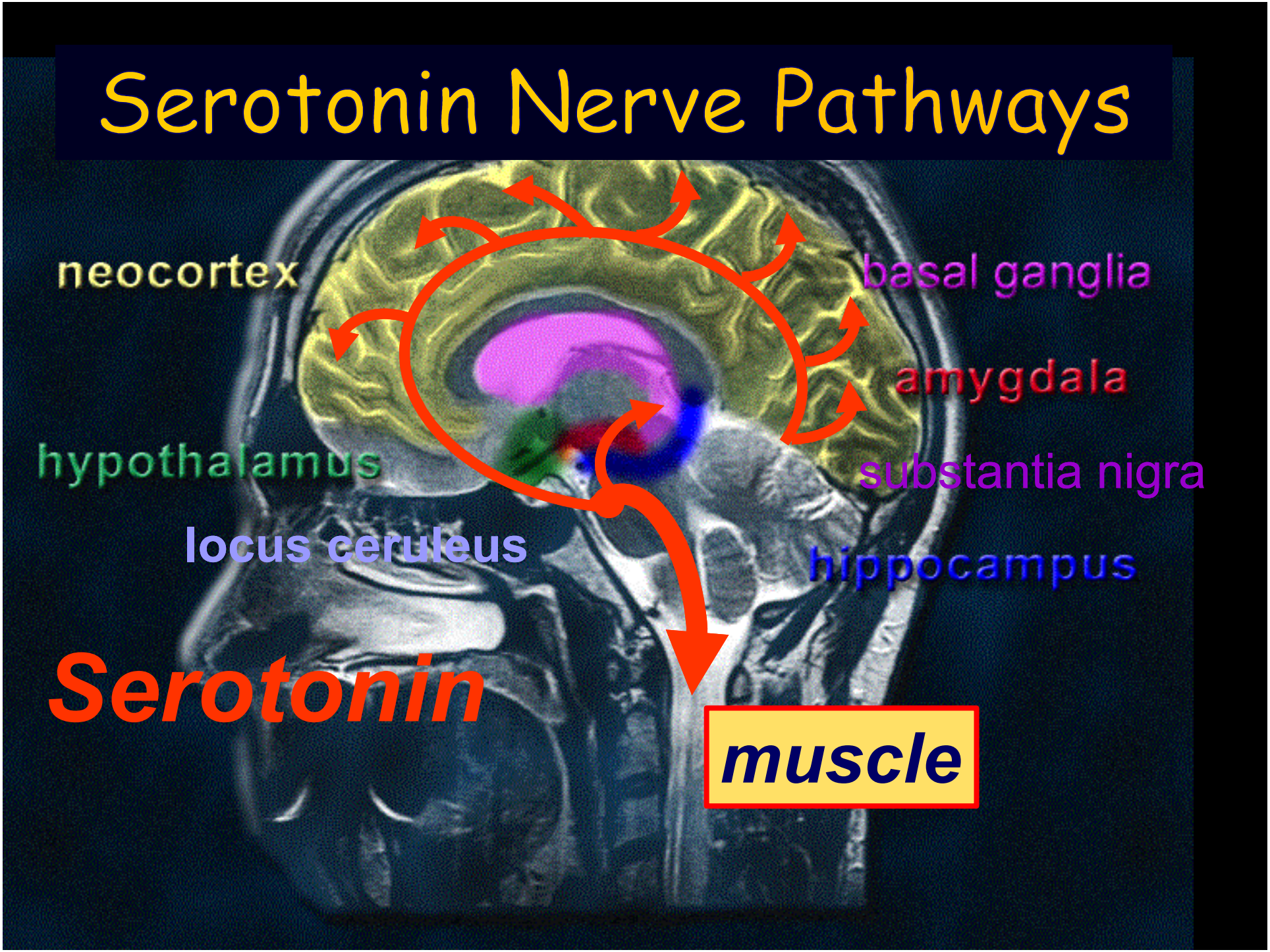




Physical Signs & Symptoms

- Increased heart rate and blood pressure
- Faintness, sweating, chills, dehydration, exhaustion
- Hyperthermia
  - *Rhabdomyolysis*

Serotonin Nerve Pathways



Signs & Symptoms of Use

- Generalized muscle tension and spasms
- Teeth grinding, clenching
- Jaw muscle spasm or locking

Bruxism & Trismus

Ecstasy as the "Hug Drug"

- *Ecstasy has been dubbed the "Hug Drug"*
- *"It's more about a loving feeling than increased sexual activity"*
- Gives kids feelings of *"kissy, huggy, lovey"*

Ecstasy as the "Hug Drug"

- They like to "touch and fondle each other"

  "It's OK, he's my boyfriend, we met two hours ago"

BUT…

- *It may not be about sex, but … the party/drug scene certainly opens the door to problems:*

Inappropriate sexual behavior, *STD's, and to exploitation by sexual predators*

Neurotoxicity of Synthetic Drugs

- Disorientation and confusion
- Agitation, anxiety, irritability, mood swings
- Depression – *may last several days*
- Hallucinations, depersonalization and insomnia
- Panic attacks, delirium, or even psychotic & worse episodes have occurred

"Goodbye fun… Hello problems"

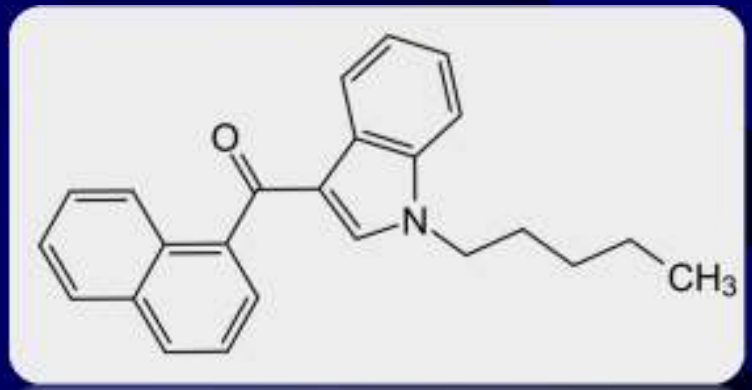
Warning signs of stimulant abuse What to look for:

- Possession of hollowed out pens, pacifiers, lollipops, glow sticks
- Red irritated nostrils, increased heart rate and blood pressure
- Dilated pupils, blurred vision, rapid eye movement
- Headaches, dizziness, muscle aches, clenching of the jaw, sore jaw, grinding teeth

What to look for:

- Nausea, vomiting, weight loss
- Changes in sleep pattern, awake for extended periods of time
- Chills or sweating, high body temperature, dehydration
- Faintness, confusion, trance-like state
- Depression, anxiety, panic attacks and paranoia

Spice



JWH018

Incense and Herbal Smoking Blends

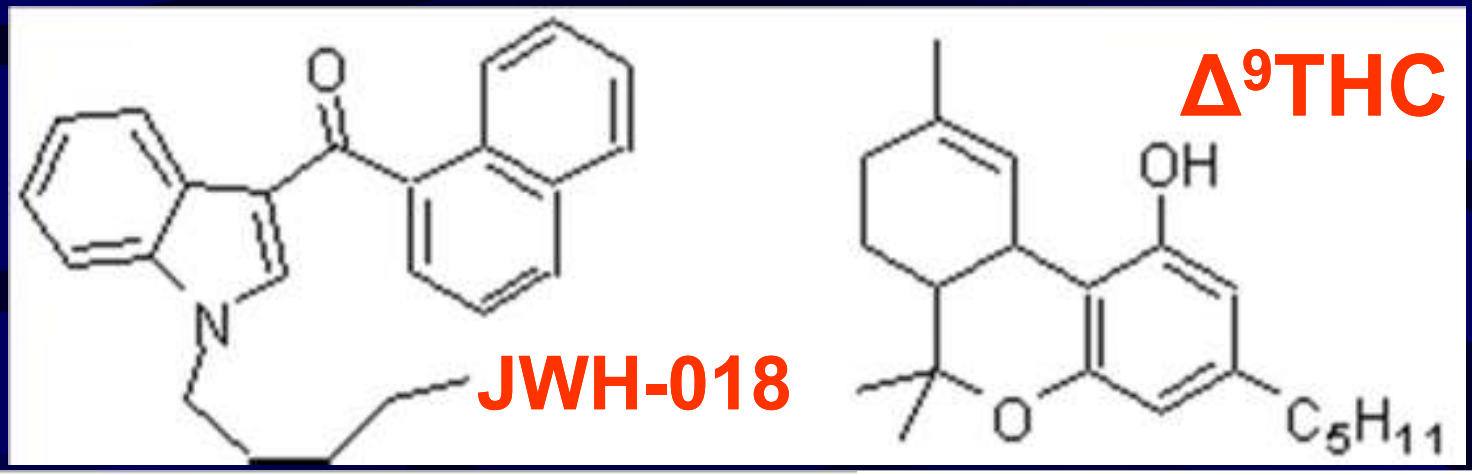
- New products popped up on the internet and in head shops in 2002
- Variety of trade names: Spice Gold®, Spice Silver ®, K2®, Buddha Melt®, Yucatan Fire®, Genie®, Fire n Ice®…

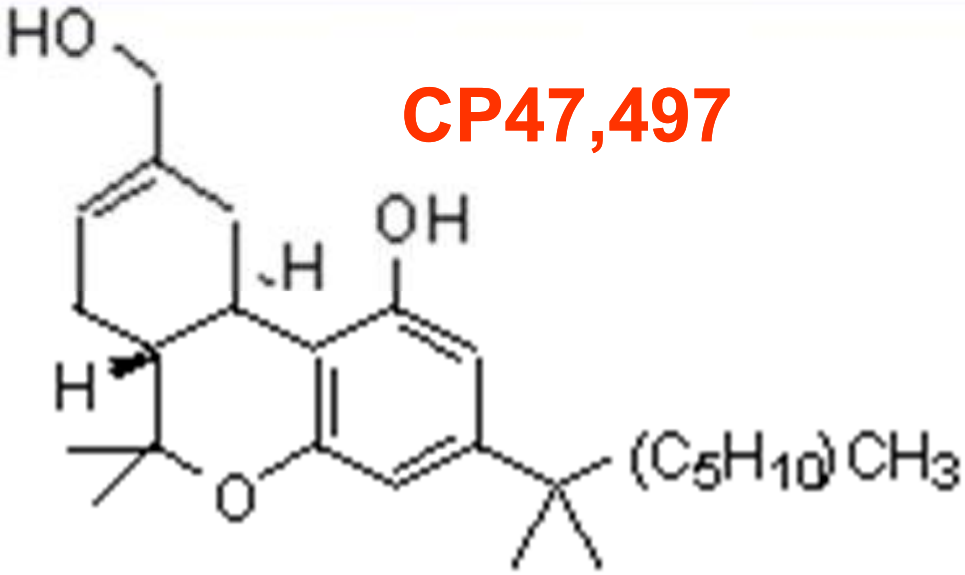
Incense and Herbal Smoking Blends

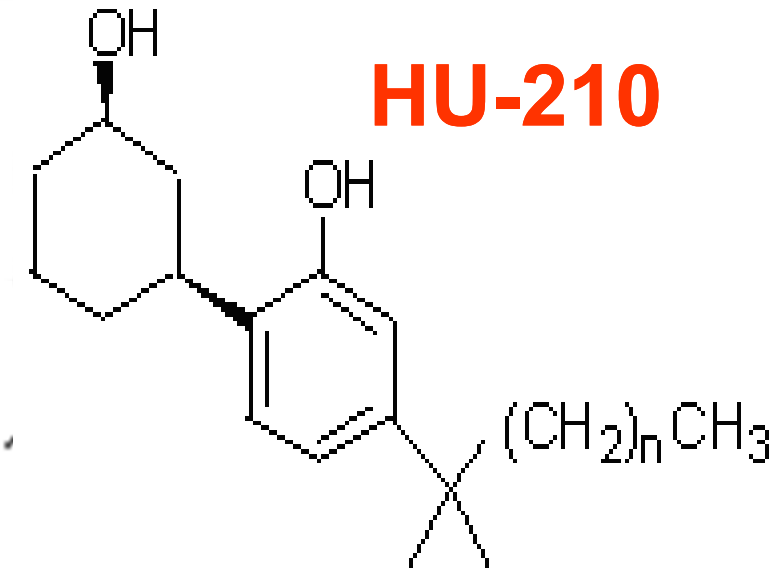
Synthetic Cannabinoids

- Smokers claimed they produced strong marijuana-like effects
- Analysis could not detect any chemical responsible for alleged effects
- In Dec. 2008 a synthetic cannabinoid JWH-018 was discovered in Spice®
- Other synthetic cannabinoids: HU-210, HU-211, and JWH-073 have been found in these products and are responsible for the psychoactive effects

Drug Screening Tests are now available for some Designer Cannabinoids







Manufactures spray herbs with synthetic marijuana analogues

Incense products

Sold online, in head shops, gas stations, convenience stores for $30-40 for 3 gm bags

5x Mojo 3gr - Lowest Price Incense

~~$325.00~~ $199.99

Add To Cart

Spice Tropical Synergy 3gr - Lowest Price Incense

~~$65.00~~ $44.99

Add To Cart

Spice Gold Spirit 3gr - Lowest Price Incense

~~$65.00~~ $44.99

Add To Cart

NEW! Smoke Vanilla 3gr - Lowest Price Incense

~~$70.00~~ $49.99

Add To Cart

5x Spice Diamond Spirit 3gr - Lowest Price Incense

~~$350.00~~ $224.99

Add To Cart

Tribe 3gr - Lowest Price Incense

~~$65.00~~ $44.99

Add To Cart

Yucatan Fire 2gr -

Fire N' Ice 3gr - Lowest

Buzz 3gr - Lowest Price

Synthetic Cannabinoids

- Poison control centers and hospitals reported multiple cases of people becoming ill after smoking these products:
  - Hypertension, tachycardia, nausea, vomiting, anxiety, paranoia, seizures, and suicidal ideations
  - Racing heart rate, elevated blood pressure, agitation, anxiety, hallucinations, seizures
- Many states restricted or scheduled these products

Synthetic Cannabinoids

- Poison control centers and hospitals reported multiple cases of people becoming ill after smoking these products:
  - Racing heart rate, elevated blood pressure, agitation, anxiety, hallucinations, seizures
- Many states restricted or scheduled these products

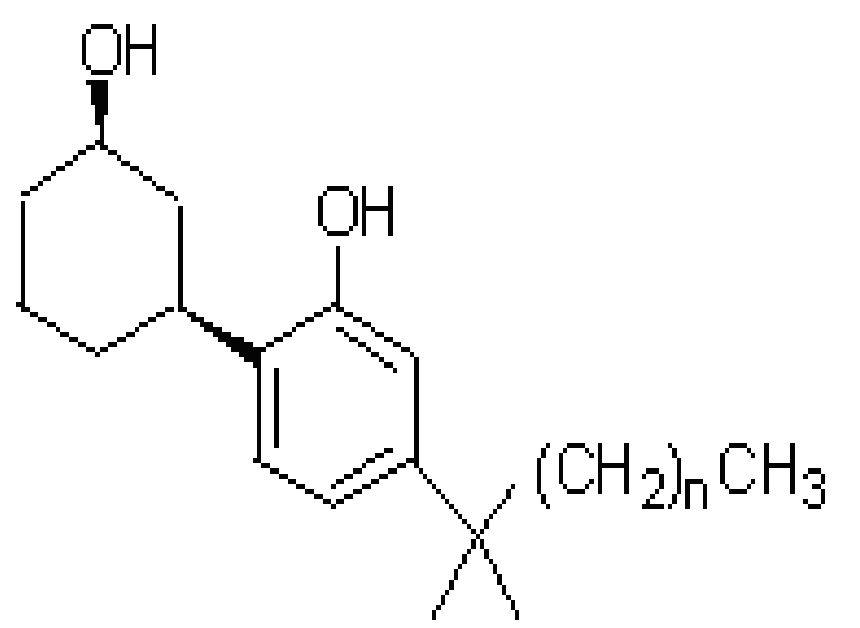
Synthetic Drug Abuse Prevention Act of 2012

- 20 synthetic marijuana compounds scheduled:
- Many current marijuana analogues: CP-47,497, JWH-018, JWH-073, JWH-200, AM2201, AM694, SR-19, RCS-4…

Passed and signed 7/20/12

Synthetic Drug Abuse Prevention Act of 2012

- Also scheduled several compounds with a variety of substitutions and specific ring structures; *all potential active products*
- *For example:*
  - *Cannabicyclohexanols*



Passed and signed 7/20/12

"Spice" Manufacturers Change Recipe

- Skirt the laws against synthetic drugs

Salvia Divinorum

- Hallucinogenic herb grown in Mexico, around for centuries, recently gaining in popularity
- Leaves contain the extremely potent Salvinorin A
- Usually smoke but can chewed or drunk the tea
- Produces short out of body experiences with sense of traveling thru time and space

Salvia Divinorum

- Aka: Sally-D, Magic or Mexican Mint and Diviner's Sage
- One ounce of leaves sells for $30 on Internet, liquid extract also available
- Big problem with use is judgment impairment
- Poorly studied psychedelic drug
- Several states working to criminalize its use

DMT
Dimethyltryptamine

- Another designer/hallucinogen drug originally from South American plant; tribes called it *yopo*

Ayahuasca

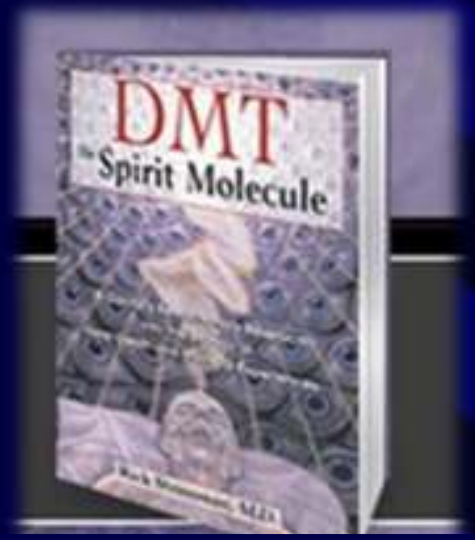
- *Synthetic DMT available*
- Users soak DMT with parsley flakes or marijuana leaves, dry and smoke

DMT
Dimethyltryptamine

- Popularity has grown recently with use at *"Spiritual Retreat Weekends"*

"DMT the Spirit Molecule"

"The Essential Psychoactive Guide"



Psychopharmacology of serotonin & the potential beneficial properties of psychedelic drugs

"Shadow people" and "Alien Abductions"

DMT
Dimethyltryptamine

- Rapid onset of action, resembling LSD in ettects, lasts about an hour:
  - Produces mystical experiences in some individuals; others have had terrifying experiences
  - Users have reported anxiety attacks after these *“retreat weekends”*
  - At high doses individuals may become catatonic and lose consciousness