

How drugs and substance abuse have influenced our courts.

Statewide Drug Court Conference
September 4, 2008

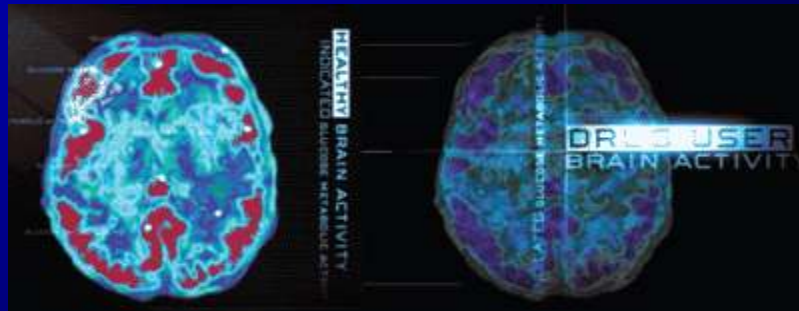
Addiction



What is an Addiction?

- A chronic, relapsing disease characterized by compulsive drug seeking and use – despite harmful consequences– and by neurochemical and molecular changes in the brain.

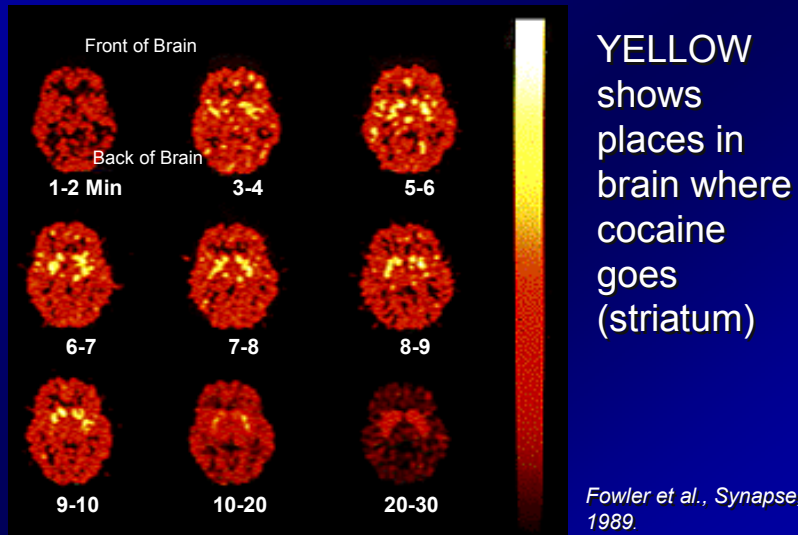
(NIDA)



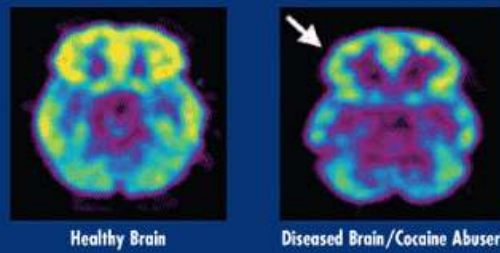
“Drug addiction is a brain disease that can be treated.”

Nora D. Volkow, M.D.
Director
National Institute on Drug Abuse

Your Brain on Drugs Today



DECREASED BRAIN METABOLISM IN **DRUG ABUSER**



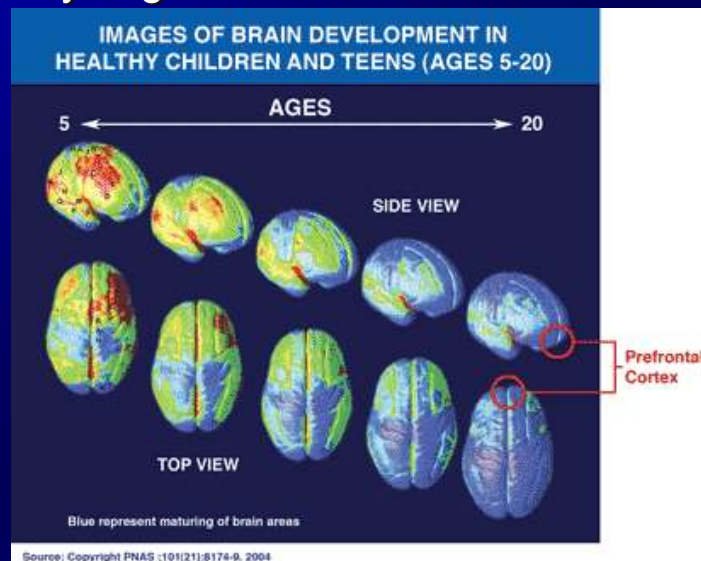
DECREASED HEART METABOLISM IN **HEART DISEASE PATIENT**



National drug use surveys indicate some children are already abusing drugs by age 12 or 13.



Addiction is a developmental disease – it typically begins in childhood or adolescence.



Is continued drug abuse a voluntary behavior?

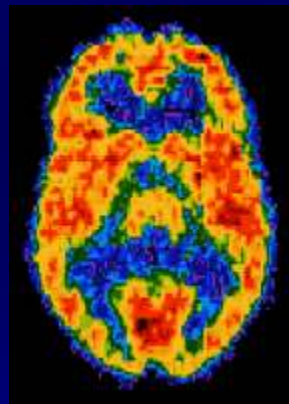
The initial decision to take drugs is voluntary...



...however, when drug abuse takes over, a person's ability to exert self control can be seriously impaired.

Is continued drug abuse a voluntary behavior?

Brain imaging studies from drug-addicted individuals show physical changes in areas of the brain that are critical to judgment, decision-making, learning, memory, and behavior control.*



*Source: *Drugs, Brain and Behavior: The Science of Drug Addiction*, NIDA 2007

Is continued drug abuse a voluntary behavior?

Scientists believe that these changes alter the way the brain works, and may help explain the compulsive and destructive behaviors of addiction.

**Drug Courts
Work!**

Let's Play Drug Jeopardy

Drug Jeopardy Rules:

- ✓ A category and answer will be given.
- ✓ Raise your hand if you know the question.
- ✓ All responses must be in the form of a question.

Street Names for Drugs

Rock

Street Names for Drugs

What is crack
cocaine?

Behaving Badly

A nickel, a dime,
a twenty

Behaving Badly

What is a five, ten
or twenty dollar
drug purchase?

Street Names for Drugs

Horse

Street Names for Drugs

What is heroin?

Chemistry

Dopamine & Serotonin

Chemistry

What are two of the brain's neuroreceptors that are produced in excess due to substance abuse?

Street Names for Drugs

Skunk

Street Names for Drugs

What is marijuana?
(term also used to mean heroin)

Street Names for Drugs

Foxy Methoxy

Street Names for Drugs

What is 5-methoxy-N,
N-diisopropyltryptamine?
(has effects similar to psilocybin –
hallucinogenic mushrooms)

Behaving Badly

420

Behaving Badly

What is an invitation
to get high?

(meeting at a designated spot on
campus at 4:20 p.m.)

Street Names for Drugs

Charlie, Flake
or Snow

Street Names for Drugs

What is cocaine?

Behaving Badly

Blowing A
Shotgun

Behaving Badly

What is exhaling of
marijuana smoke
directly into the face of a
friend?

Street Names for Drugs

O.C.

Street Names for Drugs

What is oxycontin?

(oxycodone HCL)

Street Names for Drugs

X

Street Names for Drugs

What is MDMA
or ecstasy?

Street Names for Drugs

K

Street Names for Drugs

What is Ketamine?

(also referred to as Special K or Vitamin K)

Street Names for Drugs

Z's

Street Names for Drugs

What is Xanax?

Street Names for Drugs

Sextasy

Street Names for Drugs

What do you get when
you mix Viagra and
ecstasy?

Behaving Badly

Hot Boxing

Behaving Badly

What is several passengers
in an enclosed vehicle
smoking marijuana
simultaneously with all the
windows closed?

Street Names for Drugs

Cheese

Street Names for Drugs

What is black tar heroin
mixed with Tylenol PM
or its generic equivalent?

Street Names for Drugs

Holy Smokes

Street Names for Drugs

What is the psychoactive herb Salvia divinorum, a potent, naturally occurring psychoactive compound?

Chemistry

Naltrexone

Chemistry

What is a promising new drug for the treatment of alcohol abuse that blocks the effects of alcohol?

**Thank You
For Playing**



What Are Drug Courts?

A drug court is a **special docket** within the criminal division of a court given the responsibility to handle cases involving substance-abusing offenders through **comprehensive supervision, drug testing, treatment services and immediate sanctions and incentives.**

Adapting the Drug Court Model

Juvenile Delinquency

- Family Counseling component added
- Treatment tailored to adolescents

Adapting the Drug Court Model

Dependency/Family Drug Court

- Treatment for parents of children who have been abandoned, neglected or abused.
- Goals- reunification, permanent placement, Termination of Parental Rights

Adapting the Drug Court Model

Re-entry Drug Courts

- Treatment follow-up for those returning to the community from prison or juvenile residential commitment programs.

Perpetrator Involved Drug Use:

**More than 50%
of violent crimes**

Perpetrator Involved Drug Use:

**60-70% of child
abuse and
neglect cases**

Perpetrator Involved Drug Use:

**50-70% of theft
and property
crimes**

Perpetrator Involved Drug Use:

**75% of drug
dealing**

-Belenko and Peugh, 1998; National Institute of Justice, 1999.

U.S. Prison Population



- Users become dealers
- Treatment is more effective than incarceration

U.S. Prison Population

- 1980's - 40,000 in prison in U.S. on drug related crimes
- Today – 500,000 in prison in U.S. on drug related crimes



New York Times,
Inmate Count in U.S. Dwarfs other Nations,
April 28, 2008

To treat or not to treat:

Evidence on the prospects of
expanding treatment to drug-
involved offenders

Avinash Singh Bhati

John K. Roman

Aaron Chalfin

Justice Policy Center, The Urban Institute
2100 M Street N.W. Washington D.C. 20037
April 2008

Drug Court National Return on
Investment Estimate

\$2.21 for every \$1

Drug Court's net benefit from treatment

\$624 million dollars annually

\$1 billion dollars in savings
from crime reduction

Removal of Drug Court Eligibility Barriers

Return would raise from \$2.21
to 3.36 per dollar spent.

\$46 billion dollars
projected return on the treatment investment

Drug Courts Work!

Osceola County Forensic Drug Testing Laboratory

Who we are!
What we do!
How we do it!

Paul J. Metzger
407-962-1432

pmet@osceola.org



Matthew Menard



Elesha Winn



Lab Hours: 0700-1145 & 1300-1615
Monday - Friday



Adequate lobby seating



For our clients, it's as simple as signing in and ringing the bell.



We have been provided a spacious, free standing building with a Conference Room which provides adequate space for training, meetings and research.



Our Certifications include: Olympus Diagnostics, Thermo Fisher Scientific, Alternative Biomedical Solutions, DATIA (Drug and Alcohol Testing Industry Association) CPCT and member of DATIA Standards Committee and an Active Membership with the Florida Division of International Association for Identification.



OCFDTL

When we show our lab we constantly asked, "How do you afford such an elaborate Lab"?

Here's How!

A fully functional, self contained, forensic drug testing lab requires the following:

AU640e Olympus Analyzer

Analyzer Control Computer and software

ELab Client Input Station and software

U.S. Filter D.I. water purification system

Technical Support for the chemistry component as well as an extended 'In House' service program for the AU-640e analyzer and computers.

With this in mind, Osceola County Procurement advertised for bids!

- THERMO FISHER SCIENTIFIC met all our specific requirements and was awarded the bid. We are near completion of our first year of a five year contract. I must say working with Thermo Fisher (Chemistry), Elab (software) and Bio Medical Solutions (analyzer support) has been professional, uneventful and problem free.
- We transitioned from the old to the new within two business days. Please note my GRAY HAIR!

AU-640e Olympus Analyzer
was provided by Thermo Fisher @ No Charge



Analyzer Control Computer.....
was provided by Thermo Fisher @ No Charge



E-Lab Client Input Station...and software was
provided by Thermo Fisher @ No Charge



Our D I Water Filtration System....was provided
@ No Charge!



Quarterly service for the D I water filtration
system is provided for the length of the contract.



Our Lab Work Stations, including the ELab software, and technical support was provided along with tech support and updates for the life of our contract.



Whoops, I forgot to mention, Biohazard pickup is also included



OCFDTL Contractual Obligation:

Purchase our reagents from Thermo Fisher for the life of the contract.

In the event you have any questions, please feel free to contact me. THANK YOU.....

Lab vs. the Cup Cup Cocaine Cut 300- Lab Cut 150

- Our lab ran a 90 day comparison on Cocaine positive results. 65% of all Cocaine positives were between 150 and 300. If we used the 300 cut (cup test), 65% of all clients would have missed sanctions.
- Cup: 300 only!

Lab vs. the Cup

- Lab: Reliable, repeatable positive showing rate of exposure.....
- Cup: No numerical results

Lab vs. the Cup

- Lab: Nationally Certified lab and lab staff by DATIA, Thermo Fisher, Alternative Biomedical Solutions
- Cup: Limited training on cup use.

Lab vs. the Cup

- Lab: Technical support staff available from Thermo Fisher and Alternative Biomedical Solutions.
- Cup: No tech support

Lab vs. the Cup

- Lab: All tests are tracked by an 'In Lab' computer and the results are sent via PDF or faxed within 24 to 48 hours.
- Cup: No automated reporting system.

Lab vs. the Cup

- Lab: Positive levels can be tracked by the requesting party to determine new use or a recent exposure.
- Cup: Not available.

Cup vs. the Lab

- Lab: Provides a centrally located Public Safety location to all Osceola County Agencies.
- Cup: Not Available

Lab vs. the Cup

- Lab: Test each specimen for Adulteration, Dilution, Tampering and Substitution.
- Cup: Not Available.

Lab vs. the Cup

- Lab: Observe each collection in a controlled collection area by DATIA certified collectors.
- Cup: Not Available

Lab vs. the Cup

- Lab: Attend court hearings and testify when necessary.
- Cup: Not available

Lab vs. the Cup

- Lab: Provide confirmation testing by a Medical Review Officer (MRO)
- Cup: Not Available

The Collection Process

Presented by Matthew Menard

What the Client Sees



The Input Station



The Collection – The Rules



The Collection Room



The Collection Room



The Collection Room (Reverse Angle)



The Collection Room (Mirrors)



The Collection Room (Another Mirror)



Sample Collection Wall



Preparing Tests and the use of the AU640 Analyzer

Presented by Elesha Winn

THE OLYMPUS AU640

- Precise analyzer that requires:
 - Routine Calibration (performed weekly)
 - Quality Control (performed daily)
 - These maintain and verify accuracy of results
 - Are run and results are checked before any samples are tested
 - Tests are NEVER run on the AU640 until all manufacturer specifications are met

The Olympus AU640 Analyzer



PROPER ALIQUOTTING TECHNIQUE

- This ensures lab staff safety
- Prevents the possibility of contamination and cross over of the samples
- All samples collected are considered biohazard!



PREPARING THE TEST

- Always wear gloves, lab coat, and eye protection
- After using QuickLab and creating the batch and 2 sets of barcodes, cups are arranged in order of the batch
- Place one set of barcodes on the test cups and the other set on the test tubes
- Match the barcodes with the cups and the tubes

PREPARING THE TEST cont..

- We then pipette 0.5 ml from the specimen cup into the appropriate test tube
- New pipette is always used for each sample. NEVER REUSE!
- Once samples are in the test tubes, they are ready to be run through the analyzer!



Transferring Samples




AU640's TIME TO SHINE

- Once test tubes are in their racks and placed in the analyzer, we hit the "PLAY" button on the controller computer and let the analyzer take over....
- The analyzer then runs the samples through and tests with the reagents that were requested to be tested for each individual sample (i.e. Cocaine, Methamphetamines, Alcohol, Opiates, Benzodiazepines, THC, Barbiturates, Methadone, PCP, PROPX, Creat, Specific Gravity)

Getting Ready to Run



NOW THAT TESTS ARE RUN

- Once completed, we review the results in QuickLab
 - **Positive** Samples are pulled from the **Negatives** and new tubes are labeled with newly printed barcodes
- 
- * **Positives** are run a second time and **Negatives** are properly disposed of

WHAT HAPPENS NEXT

- When a **positive** is run a second time and tests **negative**, that sample is considered **negative** and is disposed of
- When a **positive** is run a second time and tests **positive**, that sample is recorded and stored appropriately in the proper freezer.



Reporting Results

- All results are either faxed or e-mailed in PDF format to the appropriate agencies within two business days.
- All results are signed with an electronic signature.

Sending Results



Freezer Storage Unit



STORING POSITIVES

- WHY?
 - It may be needed to secure a judgment on a defendant
 - Defendant may want to contest his/her UA result
- If neither situation occurs, the sample will be disposed of after 30 days



The Biohazard Bin



CONTESTING UAs

- All clients have this option
- Clients can have their positive test results sent out for confirmation testing using GC/MS
- Their process for doing so, must be completed w/n 5 business days after the agency receives the test results from the lab

CONTESTING UA cont...

- Lab personnel will then fill out the GC/MS request and have it sent to Medical Review Officer Jock Sneddon, MD for confirmation



Substitution

Presented by Paul Metzger

Substitution and Trickery

- One of the things that we found out about human nature is ..when we designed our process of detection..... there is no limit to the creativity of human beings.
- Our experience at the lab and with our Drug Court Team partners, the case managers, IS that people will go to extraordinary lengths to conceal their use of drugs when they believe that our testing will discover that they have indeed used.

-
- We have experienced a number of attempts to fool or circumvent our detection and testing process.
 - The first category includes those individuals who have used devices, whether they are home made or manufactured, for the purpose of evading detection of a substituted sample.

-
- This means the client has used drugs and must now attempt to avoid detection. The client must first locate a donor with a clean urine sample. The next item to be considered is the complex nature of how the clean sample is going to be stored and transported in a concealed fashion.

-
- Another consideration is that our collections, and most tests, must be between 90 and 100 degrees Fahrenheit.
 - Once at the lab the method of delivery to the collection cup has to be sufficiently sophisticated to avoid detection of its placement into the sample cup!

-
- Remember our collection process is observed. WHY?
 - Well to begin with, there is a device that is marketed for the purpose of avoiding drug detection called the Whizzinator. I believe the name gives away some of the function and description of the device.

-
- Let me see how carefully and accurately I can describe this product. The device has a reservoir for the urine sample to be stored, near the body, so the temperature remains close to or mimics the temperature of the body.

-
- The Whizzinator has a digital thermometer which enables the user to monitor the temperature before attempting to leave the sample. The best way I can describe this device is to tell you it is perfect replica of the male penis. The company originally offered it only in one skin tone. Realizing they were limiting their profits they elected to offer it in multiple skin tones.

-
- After I conclude this presentation you will be able to view our confiscated collection.
 - The Whizzinator website markets and describes their devices as follows:
 - The Whiz is an easy to conceal, easy to use urinating device with a very realistic prosthetic penis. It has been extensively tested and proven to work under real life conditions.

-
- The Whiz is designed to be comfortable when worn as an undergarment for extended periods of time. Etc etc etc.....
 - The web site also describes the 5 different colors, white, tan, Latino, brown and black.
 - I will share one incident which occurred in our lab.....

-
- A participant of Osceola Drug Court, who was of African decent, born in Jamaica was observed by me attempting to provide a sample from a skin tone that did not remotely resemble his natural skin tone. That in itself was an obvious indicator that the client was attempting to provide and substituted sample.. TRICKERY at it's best.

-
- I did my best to be sure this very sensitive subject is Politically Correct.
 - It is instances like these the underscore the need and importance of Direct Observation to provide accountability of the testing protocol and the participants abstinence from drug use and abuse.

- There are devices that are not nearly as expensive nor as sophisticated. We've come across and confiscated plastic bottles and there is a catheter story which I must keep off camera. A male attached a shampoo bottle to his leg with duct tape. This was an easy snag since you can hear duct tape tearing in the next office. Our collection includes baby bottles to condoms. Please KEEP YOUR EYES OPEN. Michelle Jones is next. THX



OCFDTL Team

