

Effect of non-scheduled Urine Drug Tests among All Students in a Private High School in USA

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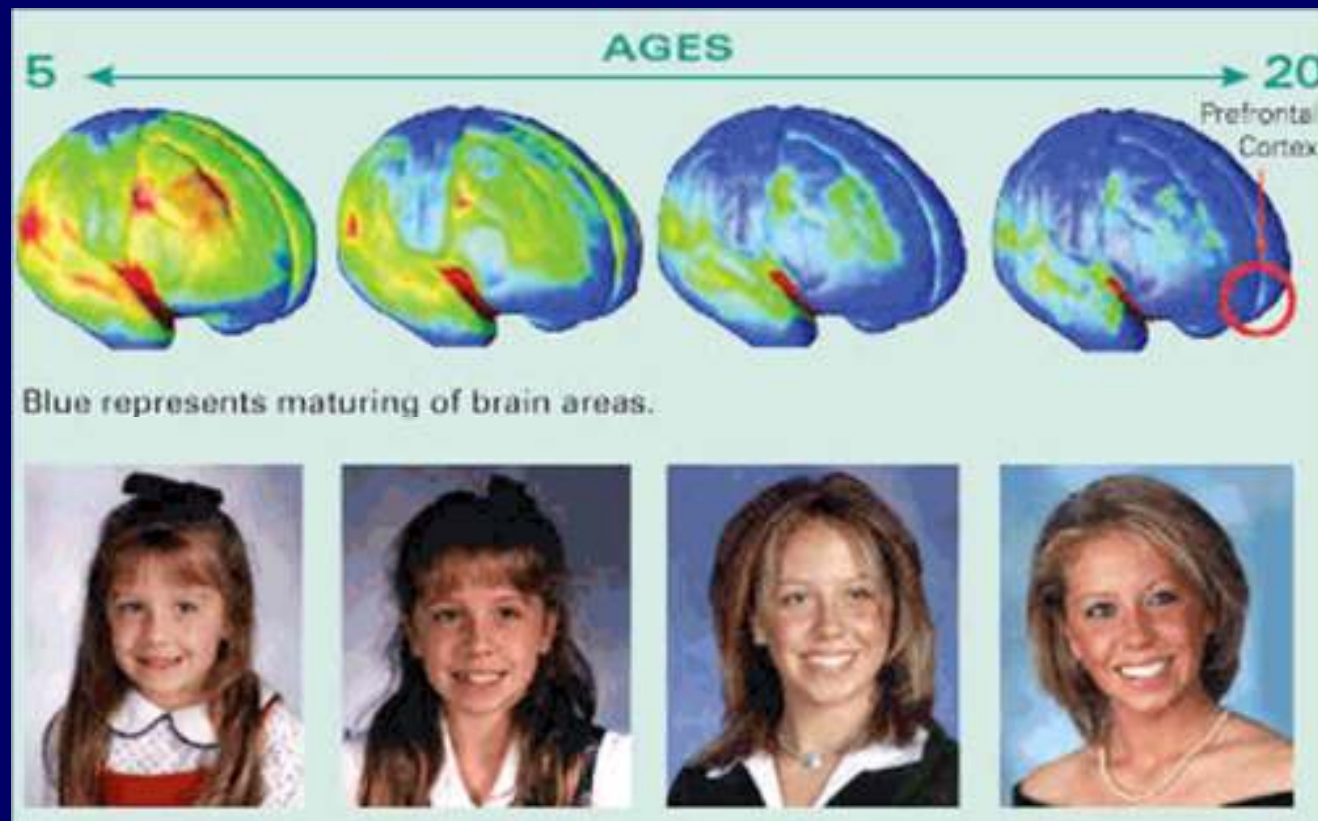
Adolescence :

Is the most vulnerable period to develop addiction if exposed to psychoactive substance.



Brain continues to develop during childhood and adolescence

Maturation state is being achieved only in adulthood



Prefrontal Cortex

Adolescence brain:

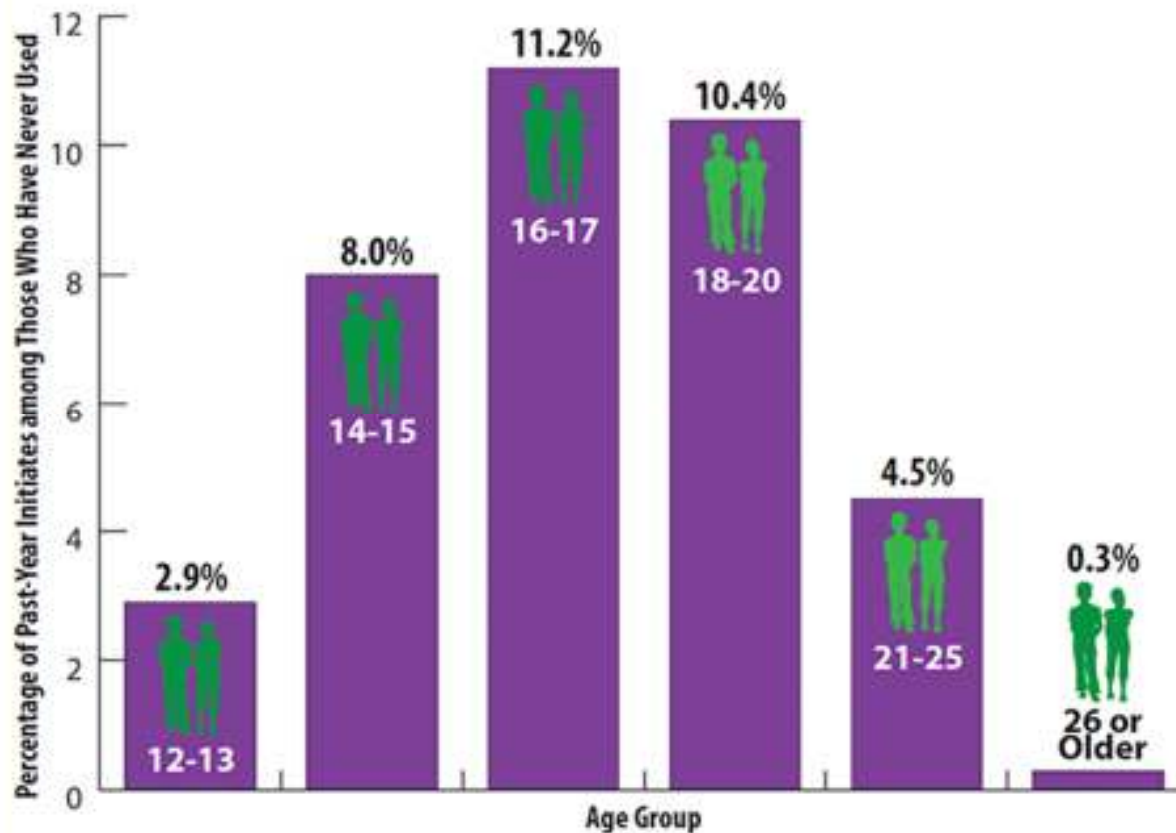


Prefrontal maturation state
is being achieved
only in adulthood

Reward system
(striatum) is active

Among those who never used: The percentage of past year initiate

The Drug Danger Zone: Most Illicit Drug Use Starts in the Teenage Years



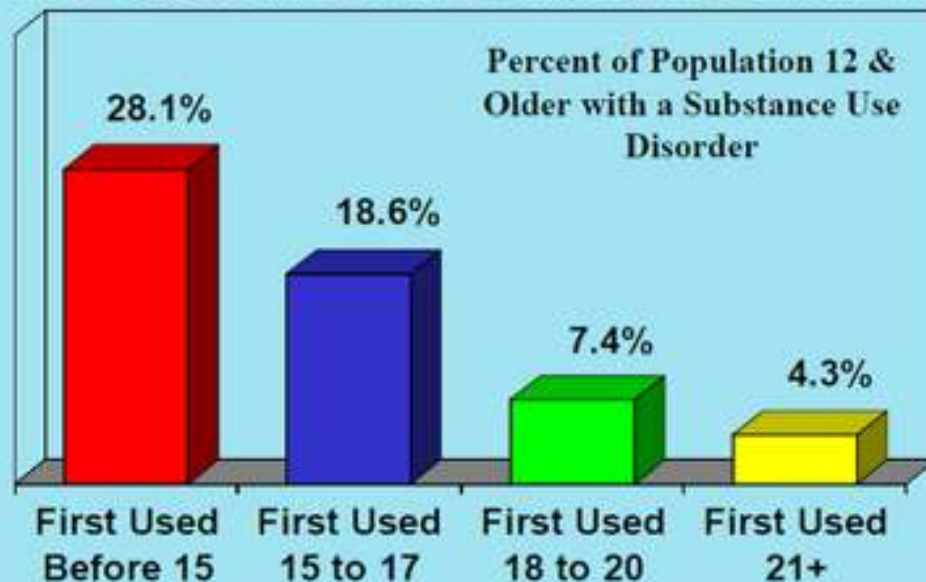
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2011 and 2012.



Adolescent Substance Abuse: America's #1 Public Health Problem

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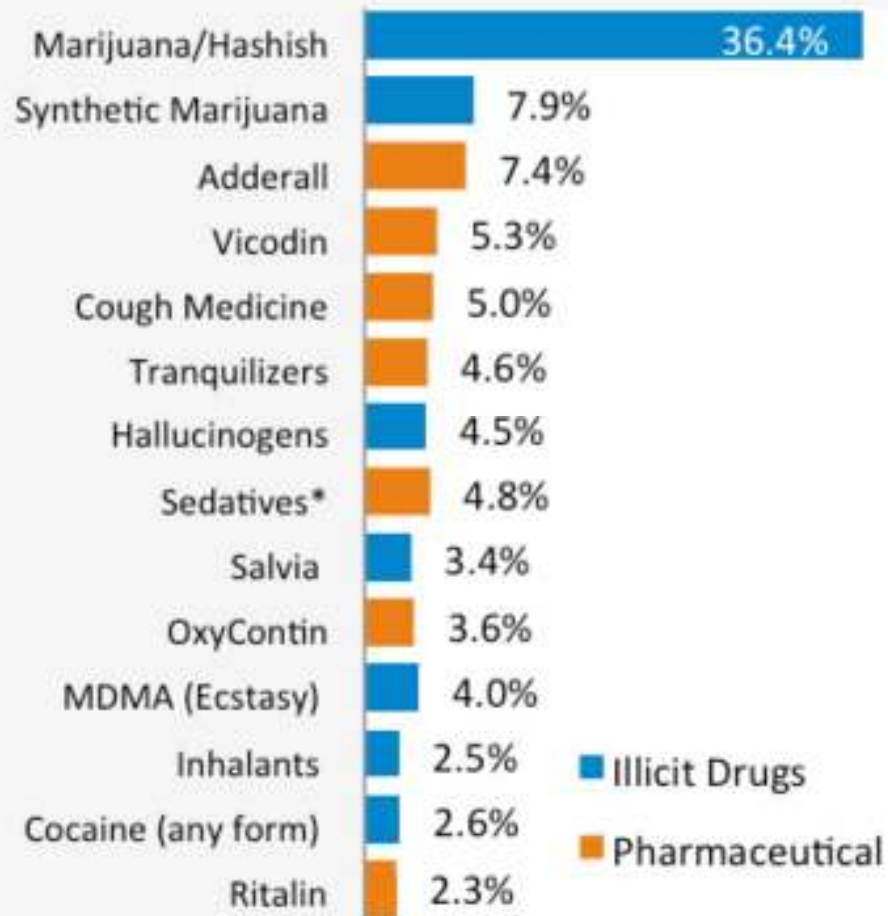
The Earlier Teens Use Any Substance, the Greater the Risk of Addiction



Source: CASA analysis of the *National Household Survey on Drug Use and Health (NSDUH)*, 2009.

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Past-Year Use of Various Drugs by 12th Graders (Percent) in the USA



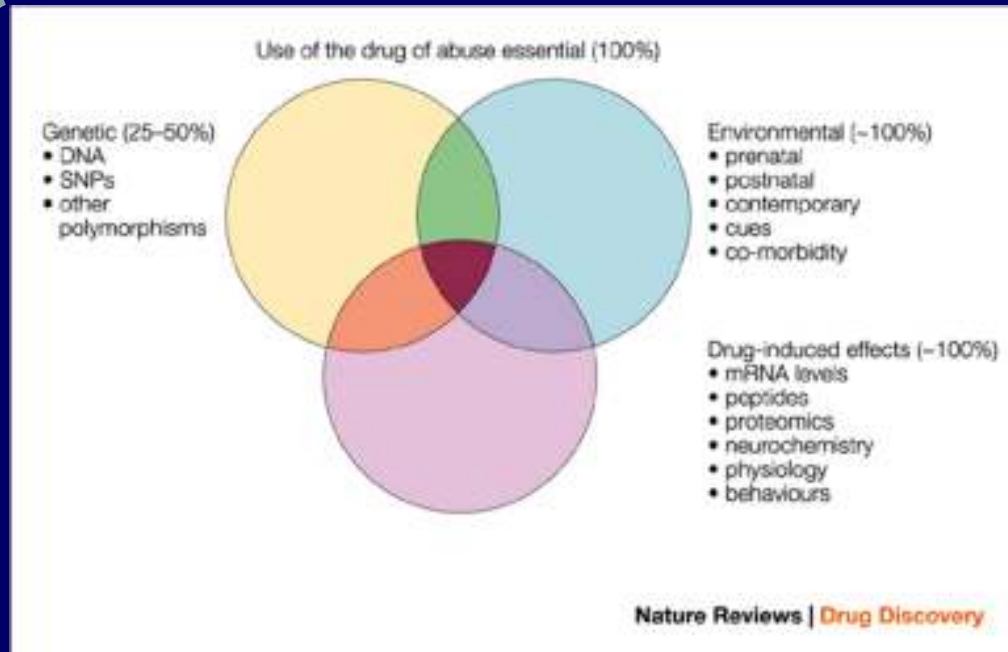
SOURCE: University of Michigan, 2013 Monitoring the Future Study

What have been done?

- Several prevention education programs were studied
- School students offered 1.62 prevention programs (based on national sample of 1,206 schools between 2001-2007)
- A trends in school drug testing between 1998-2002:
 - High schools > Middle schools
 - Most schools -testing is “for cause” (i.e. athletes)
- Drug testing was not associated with students’ reported illicit drug use.
- Few schools started or intend to start mandatory **random** urine or hair testing for substance abuse (i.e. Cleveland, Ohio)

Reasons to initiate substance abuse among adolescents:

Antagonism



Looking for new adventures

Peer pressures

Breaking the rules

Confusion

Study Population

- The Dr. Miriam & Sheldon G. Adelson Educational Campus
- Independent, nonprofit private Jewish and accredited college preparatory day school
- Include all faiths (85% are Jewish) and affiliations, from 18 months through the 12th grade.
- Many students pay usual independent school tuition; some (30%) have scholarships based on financial need

Inclusions

- Grades 9-12th high school students
- All school staff: academic, and administrative
- All staff, students, and their parent/guardian signed the agreement to participate.

Intervention:

Educational and urine testing drug program among all students and staff

Novelty:

- A program included urine test from **All students** (not random students)
- Tests included school **Staff, Academic & Administration personnel**

Aims:

- To identify students who have started using drugs to counseling
- To identify those who already have drug problems, to be referred for treatment
- To deter and give students a reason to resist peer pressure to take drugs

Methods

- Between 2008 to 2014 a random periodic (three to four times a year) collection of urine tests for substance abuse from all students and staff
- Urine samples tested for cannabinoids, cocaine, amphetamines, benzodiazepine, alcohol and opioids (both heroin and prescription pain killers).
- Positive tests were re-checked and were defined as positive if no medical prescriptions existed.

Educational program

A structured comprehensive educational program to eliminate or reduce alcohol, tobacco, and illicit drugs usage was performed.

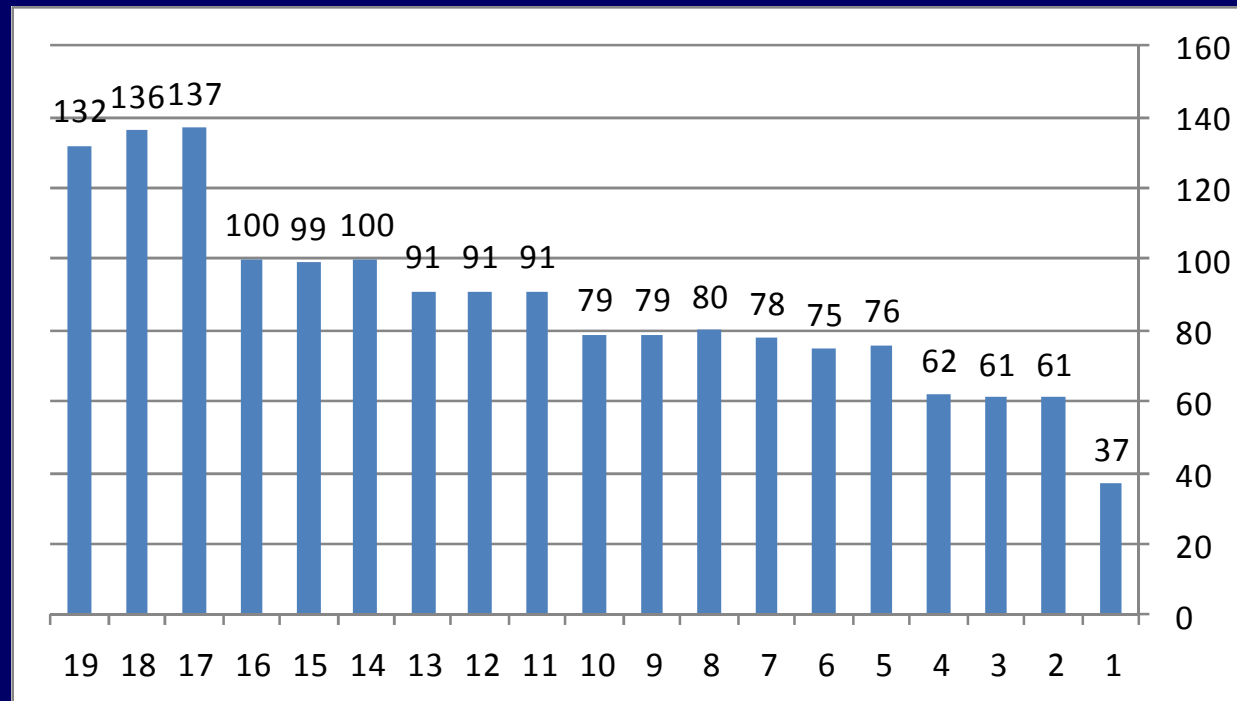
Including:

Personal lectured story - a meet with patients currently in methadone maintenance treatment.

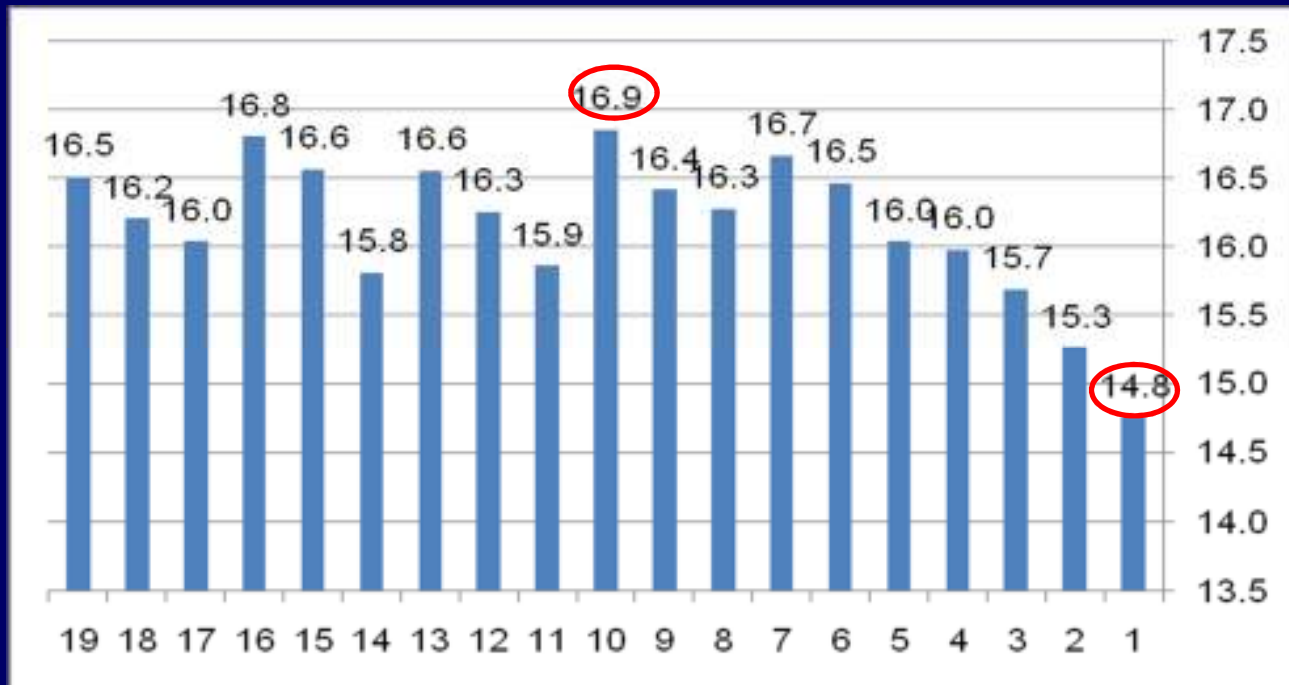
Results

Number of students in each of the 19 evaluations

N= 280 (ranged 37 and 137)



Mean age of students in each of the 19 evaluations



Mean students age ranged between 14.8 ± 1.7 y among 37 student at 1st evaluation and 16.9 ± 1.4 y among 79 students in 10th evaluation

4 male (out of 280) students were positive to cannabinoids,
(two of them only once, two more than once).

	Gender	times
	Male	2
	Male	2
	Male	1
	Male	1

Positive results for Opioids (all prescribed)

Table 1a: Positive urine for opioids by gender

	Male	Female	Total
Total	7	9	14
Codeine	2	1	3
Hydrocodone	0	2	2
Morphine	5	4	9

**14 students were positive once,
However all had prescriptions**

Positive results for Amphetamines

Table 2a: Positive urine for Amphetamines by gender

	Male	Female	Total
Total	6	9	15
Adderall*	0	1	1
Dextroamphetamine*	3	1	4
Vyvanse*	0	1	1
Pseudoephedrine**	3	6	9

*for ADHD, ** for cough

15 students- repeat uses (ADHD), or once (cough), all had prescriptions

Conclusion

The urine test program is a very successful program that described rare 1.4% drug usage among adolescents – the most vulnerable and damaging period to be exposed to substance use and develop addiction

We recommend an implementation of this intervention program to other schools, private and public as well

Limitations

- Our finding is limited to a private high school selective population group
- They all agreed to participate in the program when registered to the school or sign employment agreement
- Our experience and finding based on a small and homogenous population
- Future studies are needed

Thank you

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