

The Opioid Epidemic: A Perspective on Addiction

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Treating you better...for life.

Barbara's Story



Barbara was a cheerleader who enjoyed playing the clarinet, free-hand drawing and participating in gymnastics. She had a deep fondness for animals, especially her pet dog, 'Tater Tot'.

MOM,

5/16/10

I WANT TO THANK ^{for NOT} ~~giving~~ ^{appreciate} ~~up~~ ON ME. I REALLY ~~appreciate~~ ALL you've done for me in my life. I'm sorry for all the pain and EMBARRASSMENT you've suffered because of me. I'M such a screw up and ~~am~~ I'M NOT REALLY WORTH ALL THIS. I hope you know I love you even though I don't show it all the time. I think I get that distantness from daddy (hard). I'M starting to have less cravings as the days go on. I really wanna get this right this time and I have learned that if I slip I need to ask for help so I don't fall into the hole I always wind up in. I also learned I have to keep taking my meds so I don't fall into depression. The meds are starting to have a therapeutic effect now. I miss you & can't wait to see you.
Love,
Barbara
♡

Barbara's letter to her Mom after her second rehabilitation for her opioid addiction.

**Barbara Jean Stevenson,
27, of Spotswood, died
Sunday, April 6th 2014 at
her home.**

Barbara J. Stevenson

1986 - 2014 ▾ Obituary > Condolences



Barbara J. Stevenson

AGE: 27 • Spotswood

Barbara Jean Stevenson, 27, of Spotswood, died Sunday, April 6, 2014 at her home. Born in Staten Island, NY, Barbara was raised in Spotswood. She was a 2004 graduate of Spotswood High School. In earlier years, Barbara was a cheerleader for the Jersey Golden Knights and Immaculate Conception School. She enjoyed playing the clarinet, free-hand drawing and participating in gymnastics. She had a deep fondness for animals, especially her pet dog, 'Tater Tot.' Most recently, Barbara had worked on the wait staff of Café at Nordstrom's in Menlo Park Mall. Barbara was a loving and devoted daughter, sister and granddaughter who will be deeply missed by all of her family and friends.

Barbara is survived by her parents, William and Jean Stevenson of Spotswood; her brother, John Stevenson of Clark; her sister, Courtney Stevenson of Plainsboro, and; her maternal grandparents, Stanley and Kathryn Wroblewski of Staten Island, NY.

Funeral services will begin at 9:15 AM, Friday from Spotswood Funeral Home, 475 Main Street, Spotswood, followed by a 10:15 AM Mass of Christian Burial from Immaculate Conception Church, Spotswood. Committal services will be held at Holy Cross Burial Park, South Brunswick. The family will receive friends on Thursday from 1:00 to 4:00 PM and again from 7:00 to 9:00 PM at the Funeral Home. In lieu of flowers, the family is requesting that donations honoring Barbara's memory be made to the Animal Rescue Force (ARF) at P.O. Box 418, East Brunswick, NJ 08816. To send a condolence card to the family or sign our online guest book, please visit www.spotswoodfuneralhome.com.

Published in Home News Tribune on Apr. 9, 2014



Opioids

- **Derived from the opium poppy, or synthetic versions of it, and used for pain relief.**



Popular Opioids/Opiates

- **Codeine**
- **Morphine**
- **Hydrocodone (Vicodin, Lortab)**
- **Oxycodone (Percocet, Oxycontin)**
- **Oxymorphone (Opana)**
- **Methadone**
- **Demerol**
- **Fentanyl**
- **Loperamide (Imodium)**
- **Heroin**

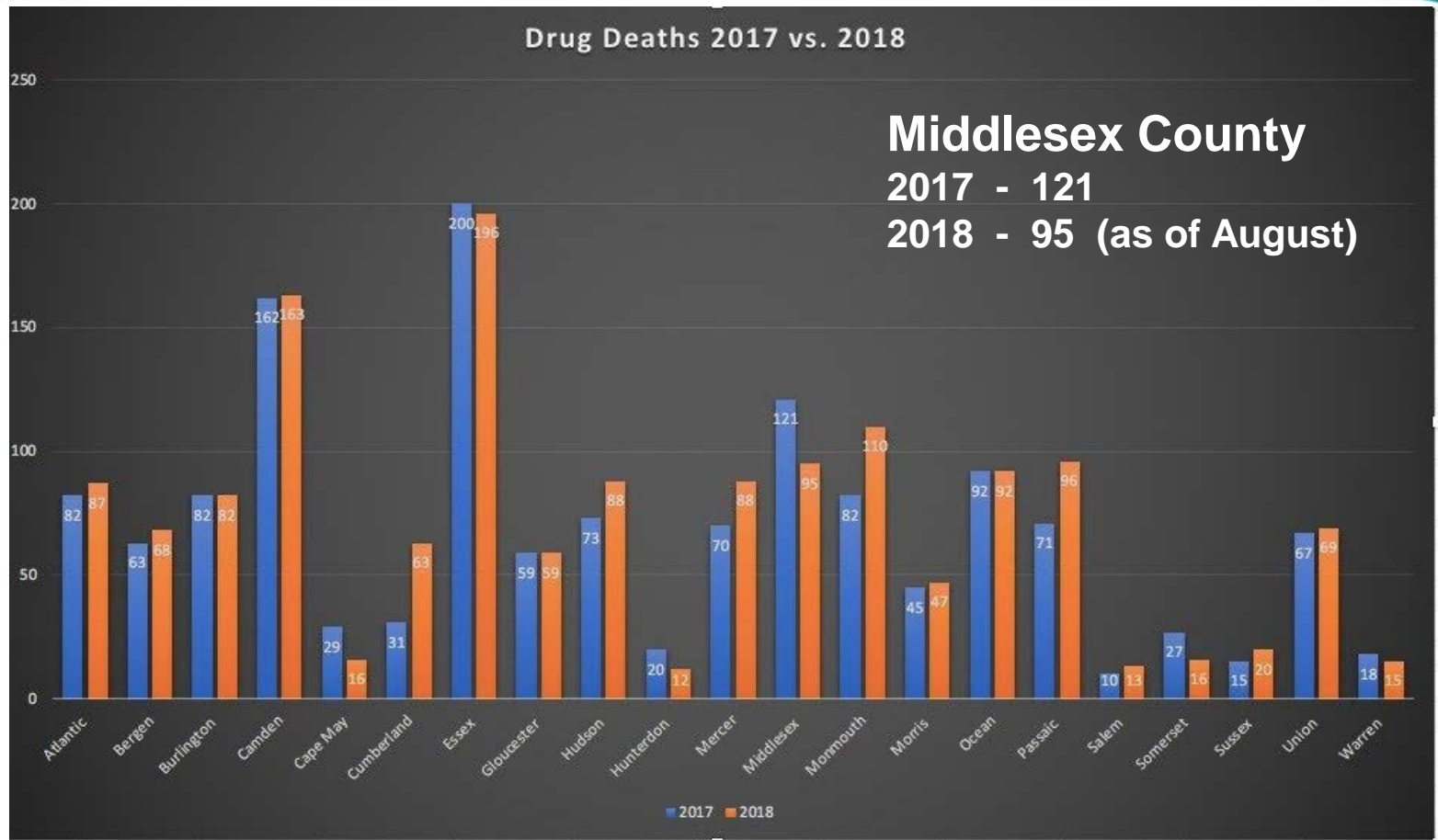
Prescription Pain Medicine Abuse

- **Nation's fastest growing public health crisis! Upwards of 9 million people in this country use prescription medication for non-medical uses.**
- **In 2012, *259 million prescriptions* written for opioids in the U.S.**
- **Opioid pain relievers were involved in more overdose deaths than cocaine and heroin combined.**

Is It Worth Dying For?

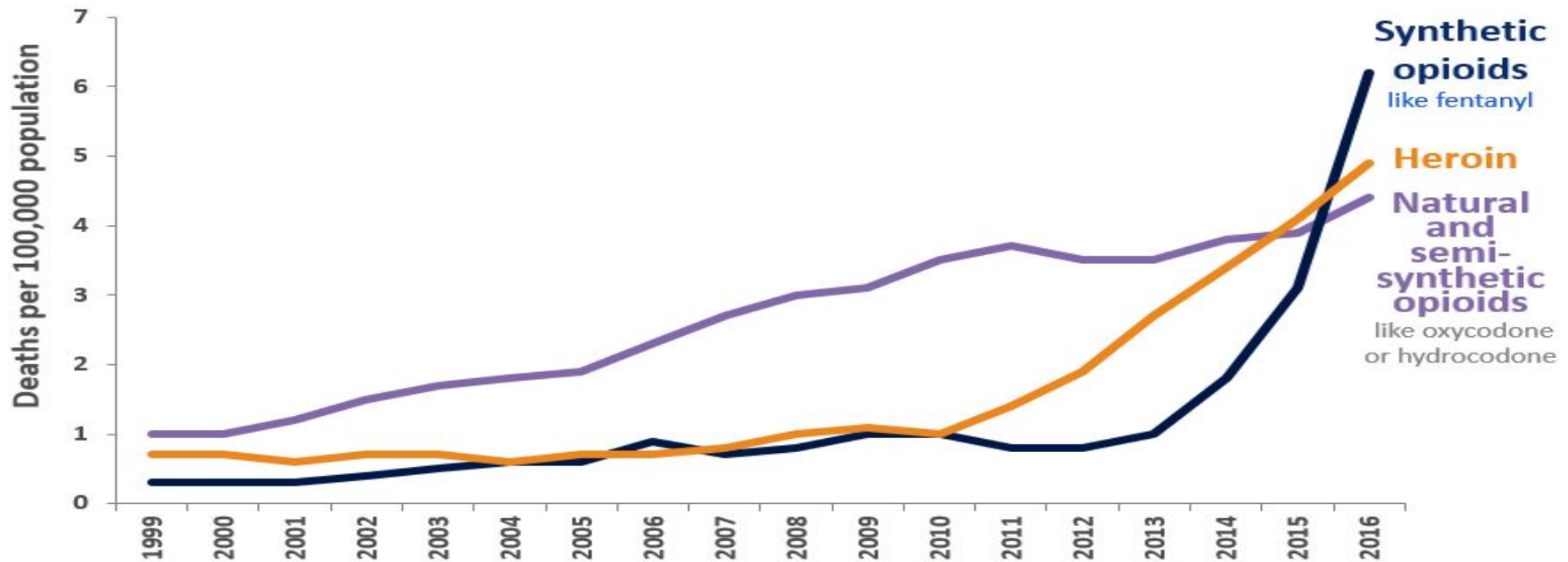
- **Drug overdoses caused more deaths in 2015 (52,404) than firearms (36,252) or vehicle crashes (38,300).**
- **70,000 drug overdose deaths nationally in 2017!**
- **Middlesex County 3rd highest in NJ**

Opioid Overdose Deaths



Understanding the Epidemic

3 Waves of the Rise in Opioid Overdose Deaths



Wave 1: Rise in Prescription Opioid Overdose Deaths

Wave 2: Rise in Heroin Overdose Deaths

Wave 3: Rise in Synthetic Opioid Overdose Deaths

SOURCE: National Vital Statistics System Mortality File.

THE OPIOID CRISIS

BY THE NUMBERS

MORTALITIES

174

Americans die
from drug overdose each day.¹

66,817

People died
from drug overdose for the
12 months ending June 2017.²

16.3%

Increase in
overdose deaths
between June 2016 and
June 2017.³

21%

Increase in drug
overdose deaths
between 2015 and 2016.⁴

300,000 people
reported using heroin
in the past year.⁹

26,500 overdoses reversed
by laypeople using naloxone from 1996
to 2014.¹⁰

2 million Americans had a
substance use disorder involving prescription
pain relievers in 2015.¹²

Three states with the highest
age-adjusted overdose rates
per 100,000.⁵



92,100 children in the foster care
system in fiscal year 2016,
whose removal from the home was
associated with circumstances
involving parents' drug abuse.¹¹

The opioid crisis cost
\$504 Billion in 2015.⁶

2.8% of GDP

Percentage of the U.S. Gross Domestic
Product associated with the cost of the
opioid crisis.⁷

20%
of reduction
in the male
workforce
is attributed to
opioid use.⁸

Substance Abuse

Addiction is a complicated, chronic, relapsing brain disease that requires treatment and is manifested by compulsive substance use despite harmful consequence. Reviving someone with Narcan gives them a second chance of recovery.

People with addiction have an intense focus on using a certain substance(s) to the point that it takes over their life” (Parekh, 2017)

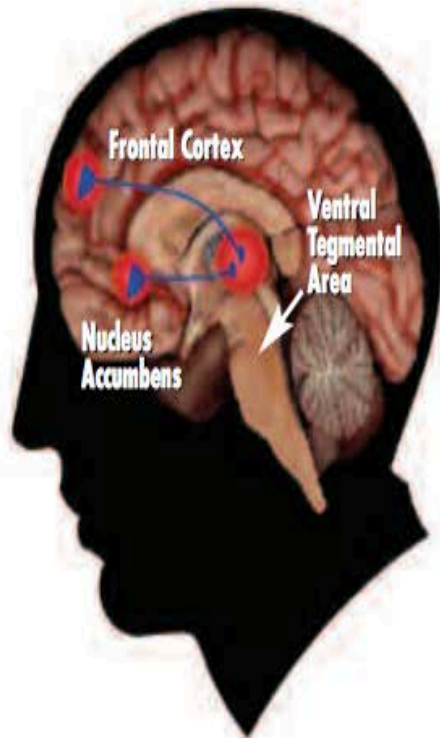


Why do people take drugs?

- **To Feel Good:**
 - Pleasure, euphoria, power
- **To Feel Better:**
 - Helps with anxiety, depression
- **To Do Better:**
 - Pressure to improve academic and athletic performance
- **Curiosity and Peer Pressure**

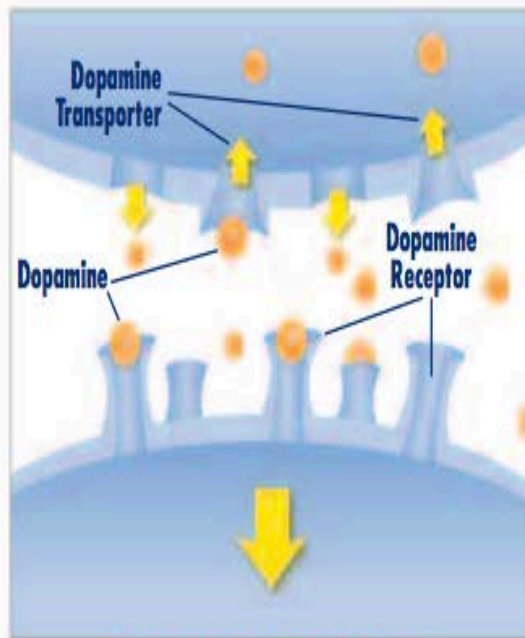
DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER

Brain reward (dopamine) pathways



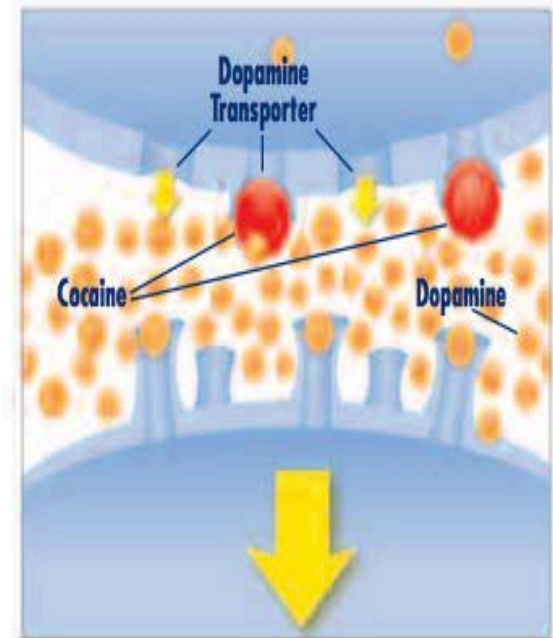
These brain circuits are important for natural rewards such as food, music, and sex.

Drugs of abuse increase dopamine



WHILE EATING FOOD

Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.

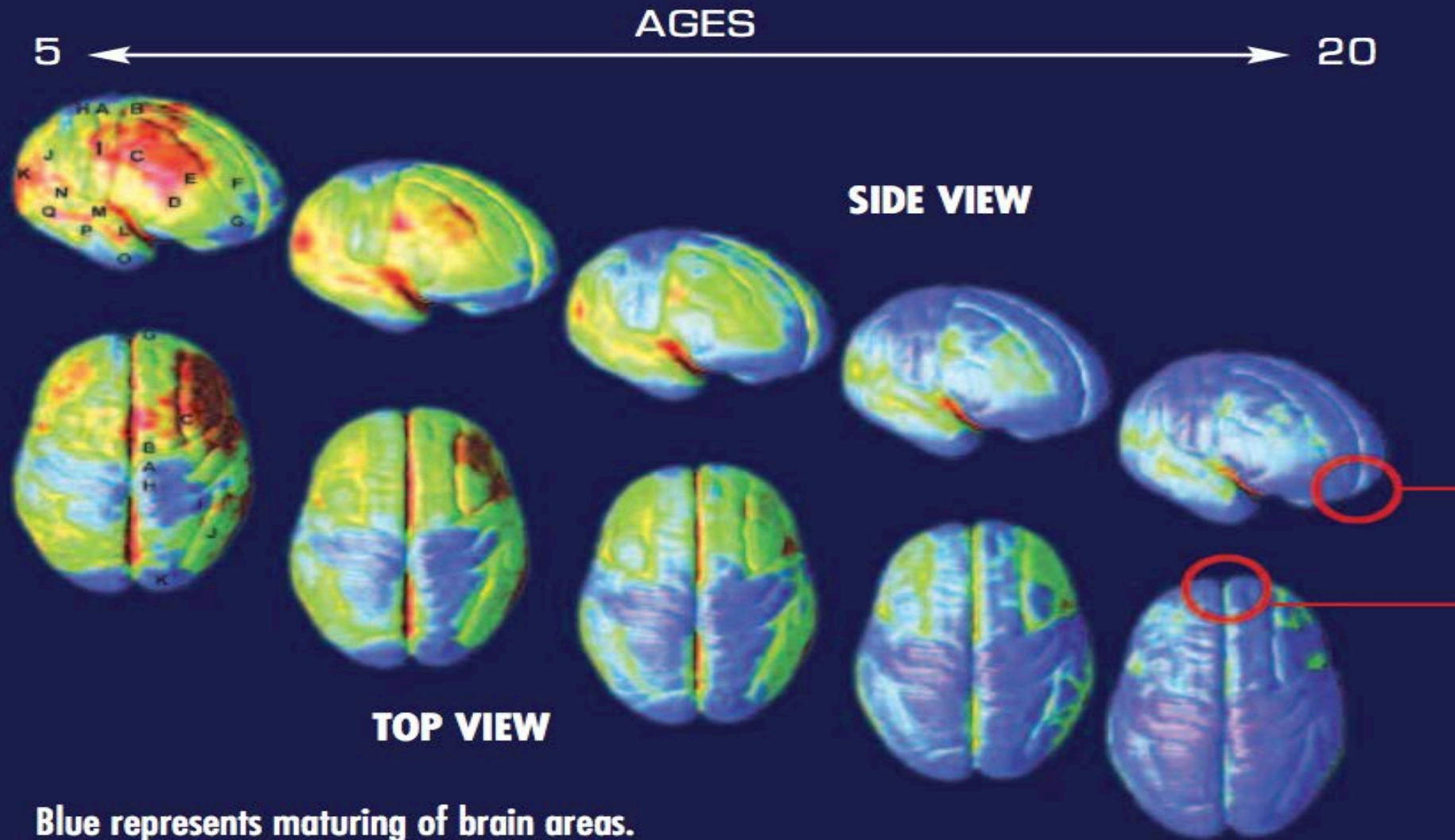


WHILE USING COCAINE

Is continued drug abuse a voluntary behavior?

- The initial decision to take drugs is voluntary, however with **continued use**, a person's ability to exert self control can become seriously impaired; this impairment in self control is the hallmark of addiction.
- Brain imaging studies shows **physical changes in areas of the brain that are involved in judgment, decision making, learning, memory and behavior changes** which may help explain the compulsive and destructive behaviors of addiction.

IMAGES OF BRAIN DEVELOPMENT IN HEALTHY CHILDREN AND TEENS (AGES 5-20)

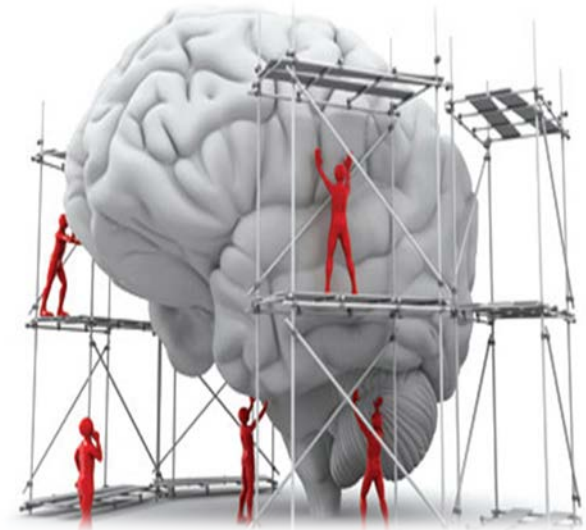
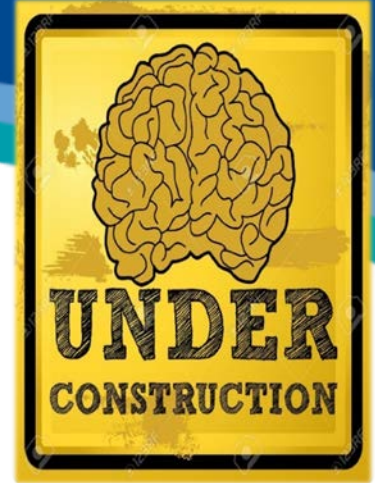


Teen Brain Development

Brain development and maturation continues well into our early 20s

What does this mean for teens?

- Physical and sensory connected activities may be preferred over intellectually demanding ones
- Activities with high excitement that require low effort are sought out
 - Video games
 - Sports
 - Sex
 - Drugs
- Exhibit poor self control and emotion management

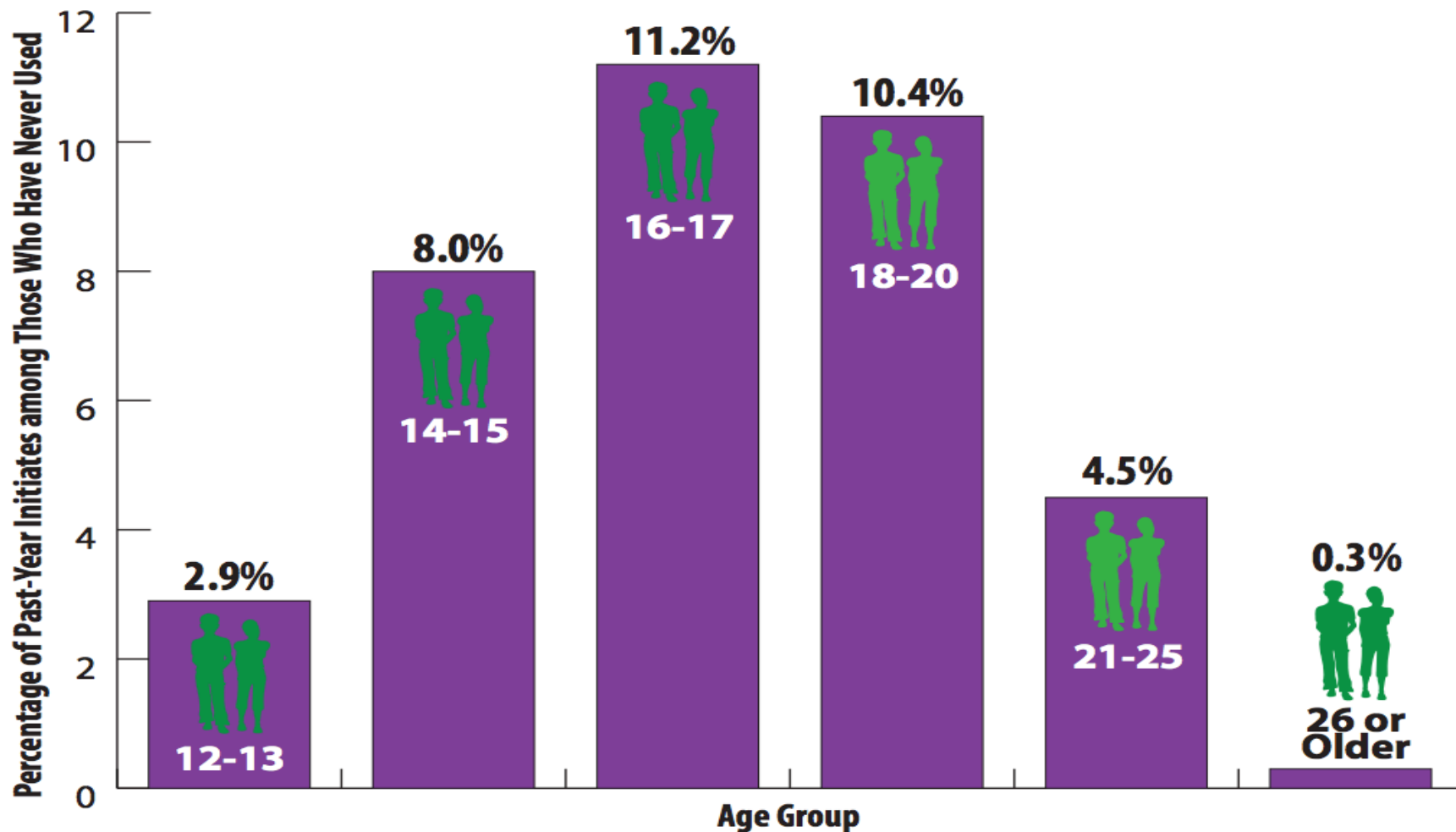


Teen Brain Development

- Areas of brain to develop in **EARLY** teen years:
 - Risk-taking
 - Sensation-seeking
 - Areas of the brain that develop in **LATER** years (20's):
 - Regulates emotions
 - Impulse control
 - Considering consequences
 - Judgment and decision-making
- 



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.

2013 Overdose Prevention Act

- **Encourages witnesses to and victims of drug overdoses to seek medical assistance in an effort to decrease overdose-related fatalities.**
- **Recognizes that greater availability and accessibility for the drug naloxone (Narcan), an opioid antidote, would reduce the number of opioid overdose deaths.**
- **Allows prescribers and dispensers to distribute naloxone (Narcan) without liability concerns.**

Naloxone (Narcan)

- **Works by attaching to the opioid receptors in the brain, almost immediately causing reversal of the overdose.**
- **Police departments, among other groups, are providing training to individuals and providing them with access to naloxone to administer when circumstances warrant it.**



Additional NJ Opioid Prescription Legislation

- **On February 15, 2017, P.L. 2017. c.28, was signed into law, imposing certain restrictions on how opioids and other Schedule II controlled dangerous substances may be prescribed.**
- **In response to the new law, the Attorney General and New Jersey's prescribing boards adopted new rules designed to reduce the risk of addiction. These rules included:**
 - ✓ **initial prescription for a 5-day supply for the management of acute, non-cancer pain with the lowest dose of an opioid;**
 - ✓ **documentation of the discussion of the risk of opioid dependency; and**
 - ✓ **review of the NJ Prescription Monitoring Program (PMP Aware) prior to writing a prescription.**

Time to remember. Time to act!

#EndOverdose

What is Vaping?

- Vaping is the act of inhaling and exhaling the aerosol (vapor) which is made by an e-cigarette or similar device.
- It does not produce tobacco smoke but an aerosol (NOT only water vapor)
 - Contains toxic chemicals linked with cancer, respiratory and heart disease
- JUUL
 - 72% of the market share of vaping products in the U.S.
 - Contains a high dose of nicotine and one pod or flavor cartridge containing about the same amount of nicotine as a whole pack of cigarettes

NEARLY

1 in 5



**STUDENTS BETWEEN
12 AND 17 YEARS OLD
HAVE SEEN JUUL
USED IN SCHOOL.**



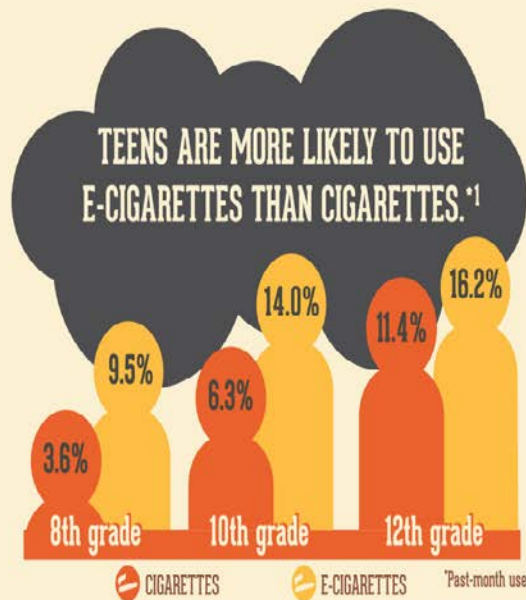
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GRIM STATISTICS

- ***Teens are more likely to use e-cigarettes than cigarettes.***
 - 2x as many boys use e-cigs as girls
- ***Teen e-cig users are more likely to start smoking.***
 - 30.7% percent of e-cig users started smoking within 6 months while 8.1% of non users started smoking (combustible tobacco products)
- ***What do teens say is in their e-cig?***
 - 66% say just flavoring, 13.7% don't know, 13.2% say nicotine, 5.8% marijuana and 1.3% other
- ***High teen exposure to e-cig advertising***
 - 7 in 10 teens are exposed to e-cig ads.

Teens and E-cigarettes



- 1 in 3 High School students have tried vaping
- High exposure to ads on internet
- Increase in calls to poison control centers
- Nicotine levels can be very high
- Not regulated by the FDA/most juice/devices made in China

63%

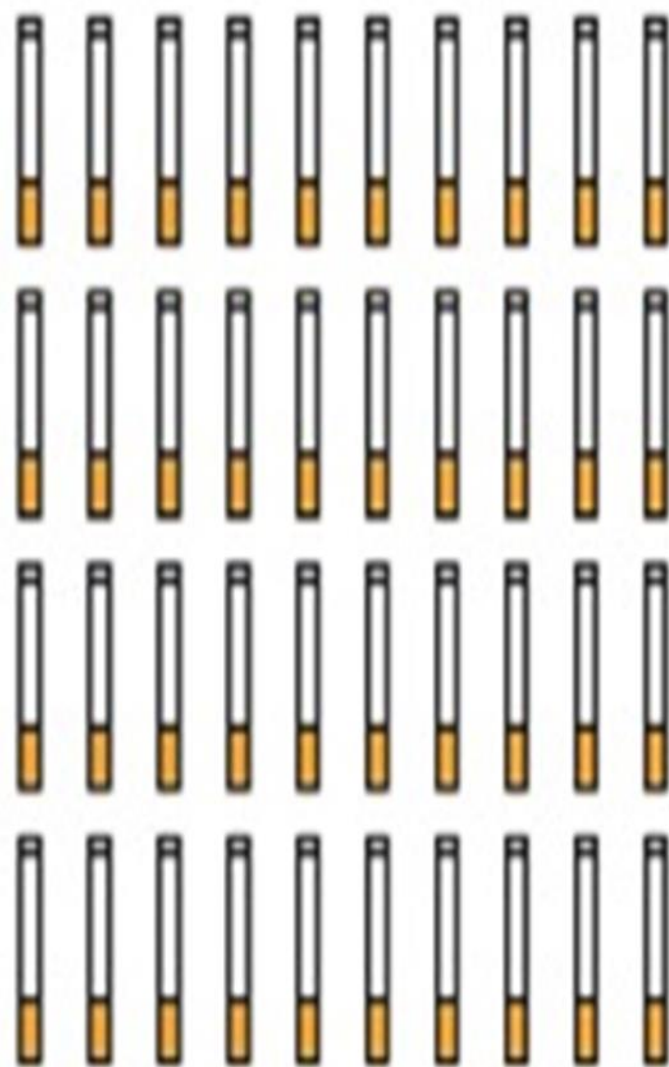
**OF JUUL USERS
DON'T KNOW THAT
THE PRODUCT
ALWAYS CONTAINS
NICOTINE.**



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1-2
packs of
cigarettes, or

20-40
cigarettes
are equal to

1
juul pod

Source Vox.com

What's Actually in E-Cigarette Aerosol?

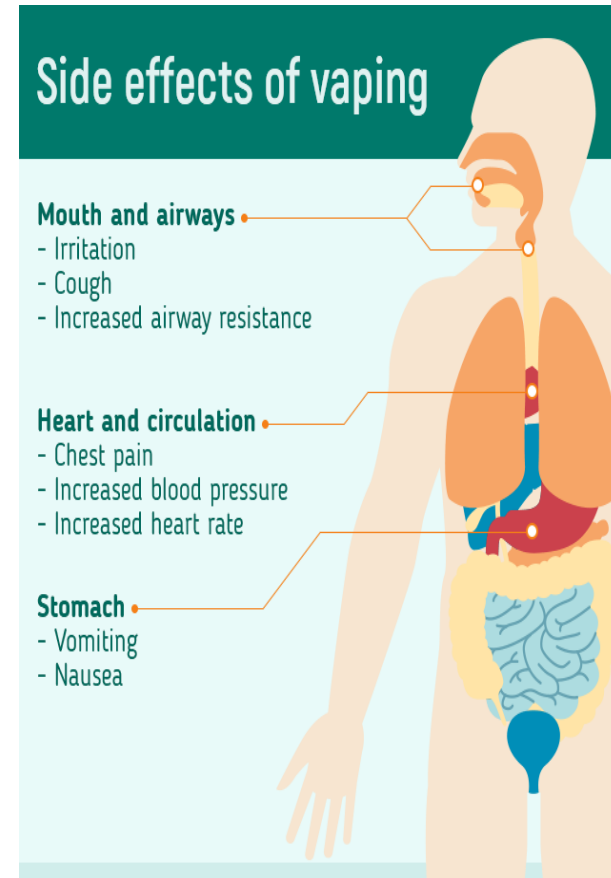
- **Some common chemicals include:**
 - **Nicotine**
 - **Acrolein** (used to kill weeds)-can cause lung injury, COPD, and lung cancer
 - **Aldehydes**- cause lung disease and cardiovascular disease
 - **Volatile organic compounds and small particles**
 - **Diacetyl** (flavoring)- chemical that causes microwave popcorn to pop; Dangerous when inhaled into the lungs
 - **Propylene glycol and vegetable glycerin**-toxic to cells
- Many of these chemicals have been FDA approved for **ingestion, NOT inhalation**

Health Effects

- Most E-cigarettes contain nicotine
 - Highly addictive!
 - Toxic to developing fetuses
 - Can harm adolescent brain development, which can last into the early 20s
 - Can change areas of the brain regarding: learning, attention, and memory
 - Primes the brain towards stages of addiction
- E-cigarettes contain other harmful chemicals and particles that can harm the lungs and body
- Can cause unintended injuries due to fires and explosions

Side Effects of Vaping

- **Dry mouth**
- **Dizziness**
- **Cough**
- **Dry skin/dry eyes**
- **Nose bleeds**
- **Bleeding gums**
- **Itchiness**



Popcorn Lung

- Harmful chemicals associated with "popcorn lung" are present in many types of flavored e-cigarettes (**particularly those with flavors like fruit and candy that may appeal to young smokers)
- Of the 51 flavored e-cigarettes tested, unregulated flavoring chemicals were found in 47
- Diacetyl present in most samples



Myth vs. Fact

- **Myth: E-cigarettes are nicotine free.**
 - Truth: It's difficult to know exactly what is in E-cigarettes, as many are marketed as “nicotine-free” but have been found to actually contain nicotine or higher amounts than labeled.

WARNING:
**This product contains
nicotine. Nicotine is an
addictive chemical.**

Science News

from research organizations

E-cigarette nicotine labels not always accurate

Date: July 22, 2016

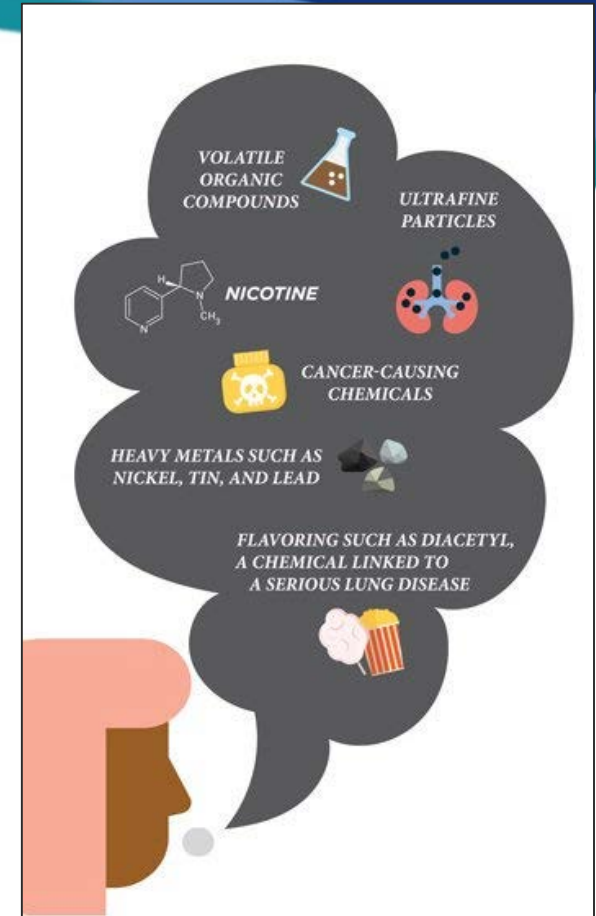
Source: North Dakota State University

Summary: A study found that 51 percent of labels on e-cigarette liquid nicotine containers from 16 North Dakota stores don't accurately reflect the levels of nicotine found in the products. In one instance, actual nicotine levels were 172 percent higher than labeled. The majority of e-cigarette liquid containers also did not provide child-resistant packaging.

— f —

Myth vs. Fact

- ***Myth: It's just a water vapor and it won't hurt anyone.***
 - Truth: It's an aerosol that contains nicotine and other harmful substances that can also inhaled by bystanders



Myth vs. Fact

- ***Myth: Vaping is far safer than smoking traditional cigarettes.***
 - Truth: E- liquids contain less harmful combustible carcinogens and chemicals than traditional cigarettes BUT there is NO current regulation of these chemicals which may be made unsafe in different concentrations



What are WE doing?

- **Partnerships are key!**
- **Schools, hospitals, law enforcement, health departments and others involved in finding solutions to this public health crisis.**
- **Law enforcement gearing towards treatment rather than punitive measures for addiction.**
- **Naloxone (Narcan) available over the counter at area pharmacies and retail stores (\$131-\$145) and in schools.**
- **All area hospitals providing accessibility to opioid overdose recovery coaches in their Emergency Rooms and connecting patients to treatment.**

What can YOU do?

- **Talk to your friends.**
- **Teach/model healthy coping skills.**
- **Use prescription medication exactly as prescribed.**
- **Dispose of expired/unused medication at drop boxes located at most police stations in the county.**
- **Know about resources in your area for help (school assistance counselors, health care provider, Middlesex County Office of Health Services, trusted adult).**
- **Understand that no one is immune!**

Community Resources



THANK YOU

