

# MARIJUANA AND MENTAL HEALTH

**August 19, 2015**

Funded by the County of San Diego, Health and Human Services Agency,  
Behavioral Health Services

**MPI**

Marijuana  
Prevention  
Initiative

San Diego County

# **THANK YOU FOR HAVING US!**



**Joe Eberstein – Program Manager of the San Diego County Marijuana Prevention Initiative and the Center for Community Research Inc.**

**Dr. Mary ET Boyle – UCSD Department of Cognitive Science**

# AGENDA

- Trends
- Mental Illness
- Edibles
- Paraphernalia

# PERFECT STORM

- Decrease in perceived risk of harm. 
- Favorable policies & attitudes toward marijuana.
- Higher potency products produced and marketed.
- Increase in access to marijuana (delivery, masked products). 

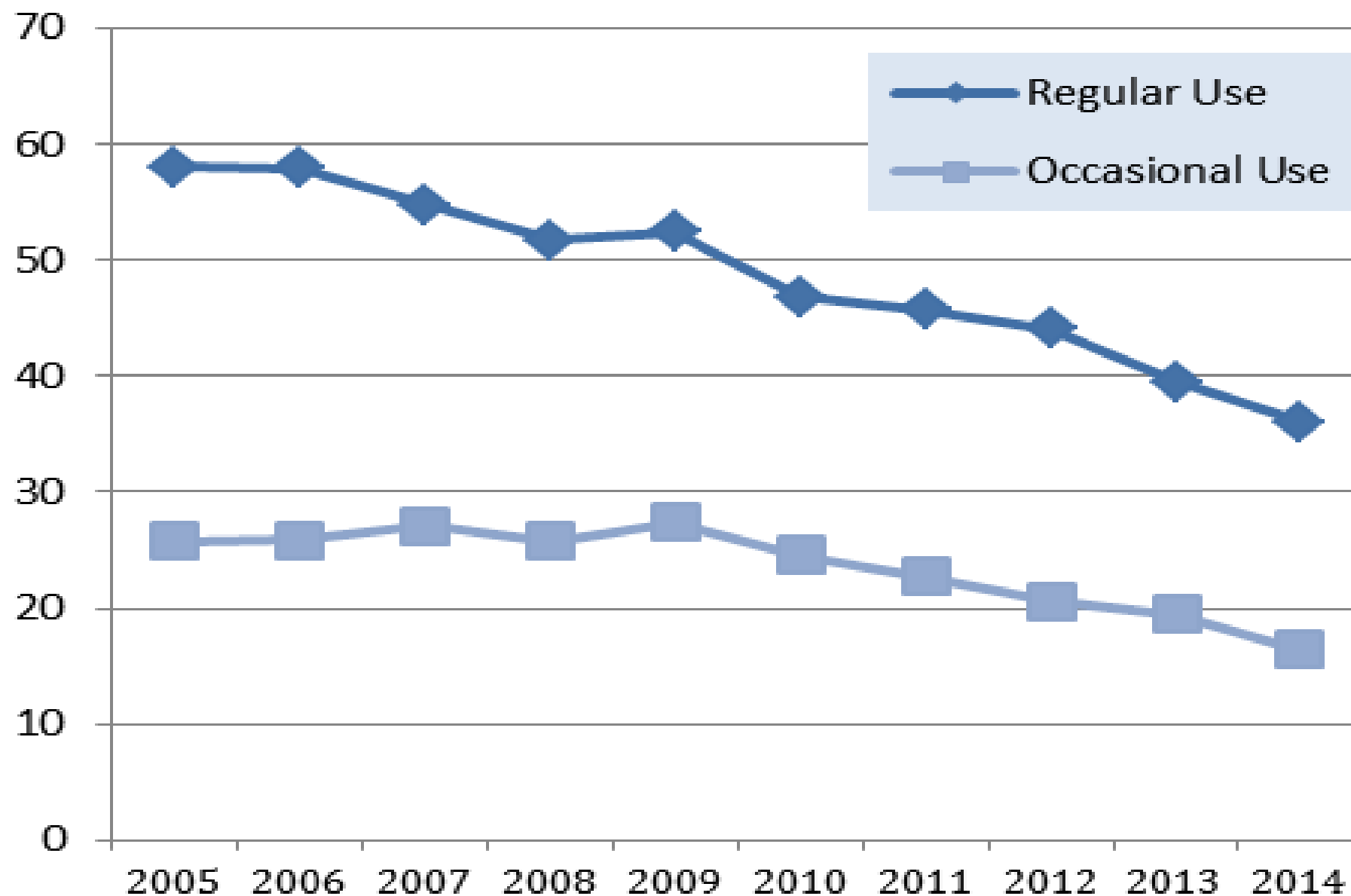
The good news ....

- Increasingly available research regarding the effects of marijuana on the adolescent brain.
- Some studies link use to mental health issues and poor academic performance.

# MONITORING THE FUTURE

## 2014

**Percentage of 12th Graders  
Perceiving Marijuana as "Great Risk"**



# CA 2016?

Recreational use on the ballot in 2016, advocates had to weigh against the potential downside of more than two years of on-the-ground experience in states that have legalized.

## Group aims to legalize marijuana use in California

Marijuana advocacy group says it will pursue pot legalization ballot measure in California

AP September 24, 2014 11:00 AM



FILE - This Feb. 1, 2011 file photo shows medical marijuana clone plants at a medical marijuana dispensary in Oakla...

SAN FRANCISCO (AP) -- The nation's largest marijuana policy advocacy group plans to begin raising funds for a ballot measure in 2016 to legalize recreational marijuana use in California.

The Marijuana Policy Project says it will file paperwork Wednesday with the California secretary of state's office for a new committee that





# WAX, BUTANE HASH OIL, EDIBLES

(AVERAGE JOINT CONTAINS 1-3% THC, CONCENTRATES MAY CONTAIN 30-90% THC)



# THC INCREASE

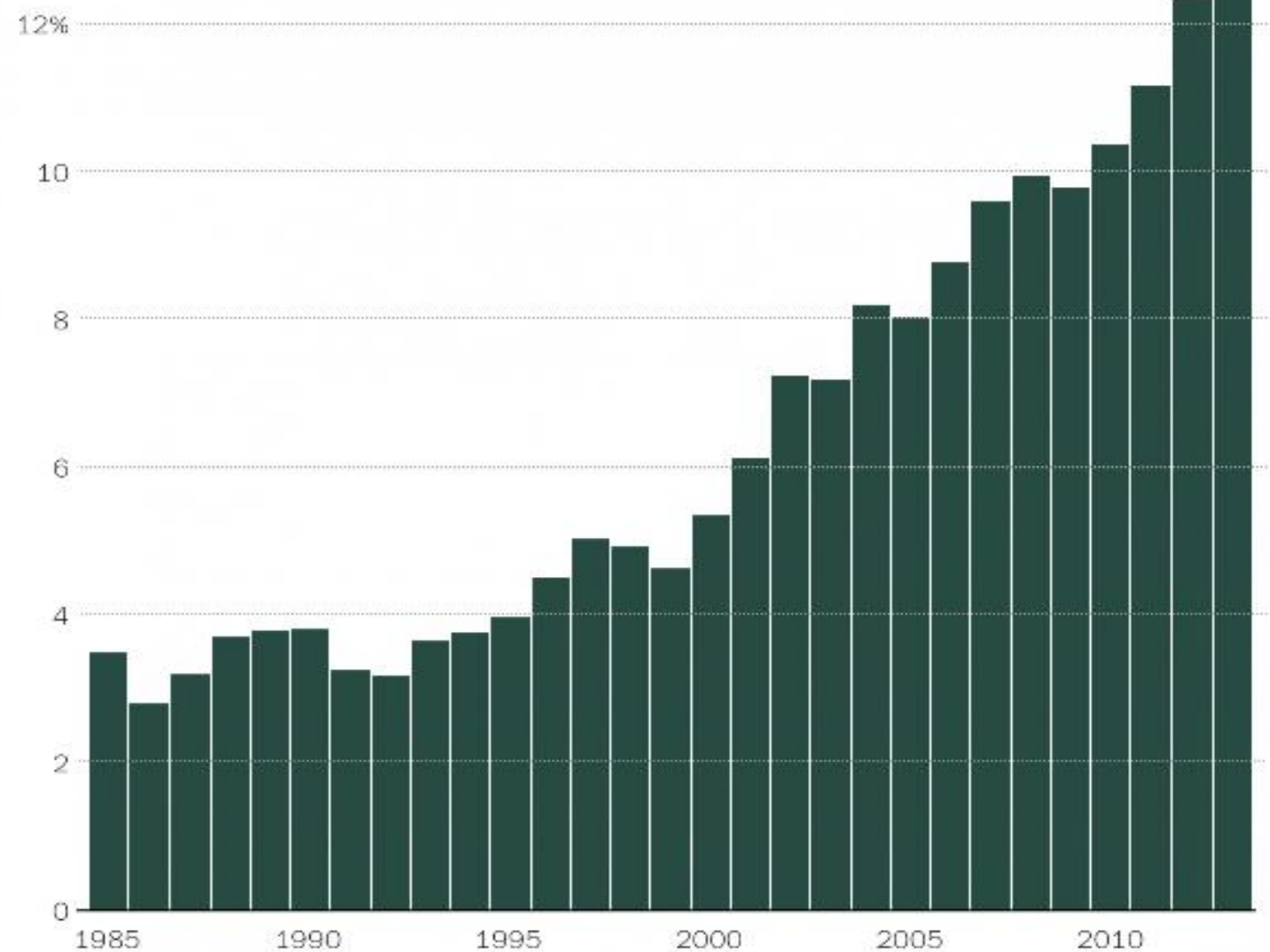
Strength of weed seized by federal authorities has steadily risen over time.

**Denver retail outlets advertise strains containing 25 +% THC\*.**

\*THC is tetrahydrocannabinol the main psychoactive ingredient in marijuana.

## Weed is getting stronger

Average THC percentage in federal seizures of imported marijuana, 1985 - 2013



WASHINGTONPOST.COM/WONKBLOG

Source: White House Office of Nat'l Drug Control Policy

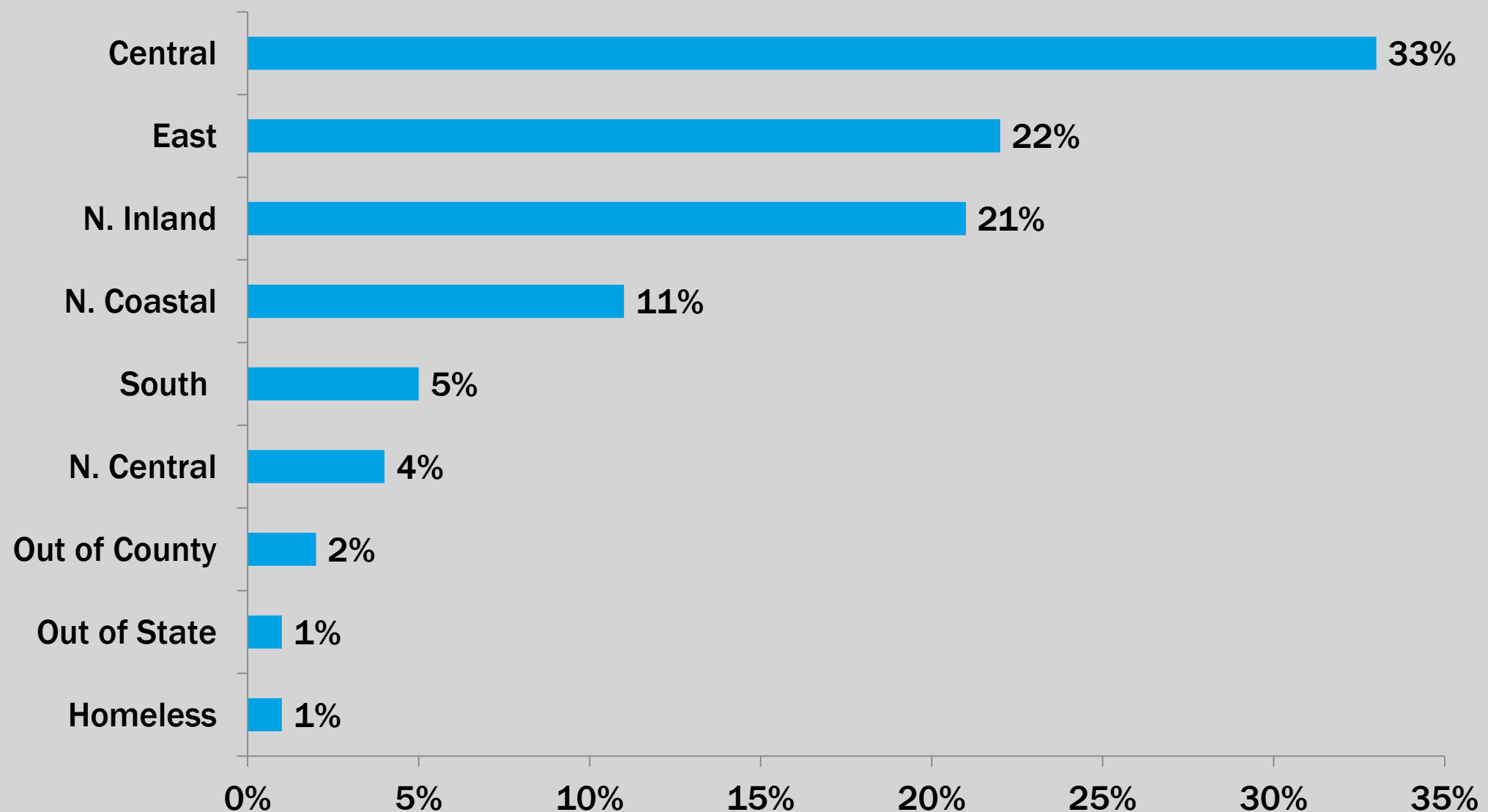


# TREATMENT 2015

*Currently, marijuana is the primary drug of choice for youth ages 12-17 in San Diego county funded drug treatment, “8 out of every 10 youth were admitted for marijuana addiction in March 2015.”*

## TREATMENT DATA: ADOLESCENT ADMISSIONS BY REGION\* (98 OUT OF 117 ADMISSIONS)

Percent of adolescents admitted to a County-funded treatment facility in **March 2015** reporting marijuana/hashish as their primary drug of choice.



\*Region is determined by the zip code of reported client residence.

# **NATIONALLY :USE AMONG YOUNG ADULTS (AGES 19-28)**

- **Past 30 Day Marijuana Use among young adults ages 19-28 at the highest level since 1988.**
- **Daily Marijuana Use among young adults ages (19-28) at the highest since 1986!**

*Source: Monitoring the Future Survey 2013 volume 2 - College Student and Adult ages 19 - 55*

# HOW POTENT IS MARIJUANA TODAY?

- Delta 9 THC (Tetrahydrocannabinol) is the chemical responsible for most of marijuana's high.
- THC levels vary depending on **strain** or **variety**, how it is **grown**, the **part** of the plant used, and it is **prepared** for use and **stored**.
- The cannabis plant has over 400 other chemicals in it.
- Some chemicals derived from pot may help control seizures and vomiting.  
(Cesamet and Marinol)

# MENTAL HEALTH ISSUES AND MARIJUANA

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# NATIONAL ALLIANCE ON MENTAL ILLNESS

The overwhelming consensus from mental health professionals is that marijuana is not helpful—and potentially dangerous—for people with mental illness.

Using marijuana can directly worsen symptoms of anxiety, depression or schizophrenia through its actions on the brain. People who smoke marijuana are also less likely to actively participate in their treatment—missing more appointments and having more difficulty with medication-adherence—than people who abstain from using this drug.

This is particularly concerning, as approximately one-third of people in America with schizophrenia regularly abuse marijuana.

# EVERYONE REACTS DIFFERENTLY TO DRUGS USE!

- Metabolism
- Genetic pre-disposition (mental illness and certain drugs)
- Environment

**“Well Steve Jobs was a pot smoker and look what he did”!**

# SCHIZOPHRENIA

The association between adolescent marijuana abuse and future development of psychosis has become accepted in literature.

- The risk of developing long-term psychosis has been found to increase proportionally with increasing frequency of marijuana use.
- Adolescence have an age related risk of developing long-term hallucinations or schizophrenia from abusing marijuana.
- *Casual marijuana users showed abnormalities in 2 core brain structures both involving working memory.*

# ALCOHOL AND MARIJUANA

The bodies response when consuming too much alcohol is to vomit, when taken with marijuana can inhibit an individuals ability to vomit.

- This may lead to alcohol poisoning!
- Alcohol enhances the THC levels in the blood.



# POPULAR COMBO

## Benzodiazepines (Depressant) and Marijuana

- **Xanax** (aka **alprazolam**, **bars**, **footballs**), **Klonopin** (aka **clonazepam**, **klonies**), **Valium** (aka **diazepam**, **blues**), **Ativan** (**lorazepam**), **Versed** (**midazolam**).



When mixed with marijuana, the sedative effects of benzodiazepines are increased causing impaired memory, poor concentration and confusion.



# **DO NOT TAKE YOURSELF OFF OF DR. PRESCRIBED MEDICATION!**

- Frequent calls for service for people that have taken themselves off of Doctor prescribed mental health medications and supplementing with marijuana.

**Most psychotropic drugs require a weaning off period.**



# EDIBLES



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# **SD COUNTY: UNREGULATED FOOD PRODUCTS**

- **Marijuana food products are currently unregulated!**
  - ✓ While all food products and drug products are regulated, there is no federal (FDA) or state oversight
  - ✓ There are no quality control requirements regarding dosage or use to safeguard against unintentional poisoning or overdose
  - ✓ Food and snack packaging is youth friendly

# COLORADO AND EDIBLES

The proliferation of edible products stunned state and industry leaders, during the first year of legal recreational marijuana sales.

- Potent cookies, candies and drinks — once considered a niche market — now account for roughly 45% of the legal marijuana marketplace.

A YEAR OF LEGAL POT

## Pot edibles were big surprise in first year of recreational sales

By Jordan Steffen  
*The Denver Post*

POSTED: 12/26/2014 02:05:13 PM MST | UPDATED: 7 MONTHS AGO

2 COMMENTS



Dixie Elixirs & Edibles employees Jaymie Giordano, left, and Zak Mishaw carefully cut the marijuana-infused Colorado Bars produced at the Denver company. Each bar contains 100 milligrams of THC, the psychoactive chemical in marijuana, or 10 times the recommended amount. (Photos by Helen H. Richardson, *The Denver Post*)

As one of the people charged with implementing marijuana legalization in Colorado, Ron Kammerzell thought he had considered everything.

And then inexperienced users bit off more than they could chew,

### RELATED STORIES

**Dec 29:**

• Aurora's journey on pot sales a bit rough to start

# EXPLOSIONS SAN DIEGO





# HASH OR HONEY OIL

- Oil can be whipped into a *budder* and cooked into products like brownies, cookies, etc.
- Sprayed onto generic candies
- Vaped in vape pens
- Made into drops known as tinctures.



# EDIBLE EFFECTS

- May not feel effects for **30 to 60 minutes** (on a full stomach it could take nearly two hours).
- High can last **4 to 8 hours** while the effects from smoking can wear off in an hour or less.





# HOW MUCH IS TOO MUCH?

## Colorado Teen Jumps To His Death After Eating Marijuana Cookie

Newser April 3, 2014

[Leave a Comment](#) // [News](#)



15



2



0



For the first time since Colorado legalized weed for recreational use, a coroner has listed "marijuana intoxication" as a contributor to a death. Wyoming student Levy Thamba was in Denver on spring break with three friends when he jumped to his death from a Holiday Inn balcony after eating a marijuana cookie, reports the *Denver Post*. His friends told investigators he "exhibited hostile behavior" after eating the cookie, and though initial attempts to calm him down seemed to work, he ended up leaping from the balcony, *USA Today* reports. [Read more on Newser...](#)

- **The pot infused cookie contained as much THC as six high-quality joints.**
- **Takes longer to feel the high, people ingest more than recommended**
- **Severe Hallucinations**

# 23 YEAR OLD LUKE GOODMAN

- Consumed 5 peach tart candies
- Each candy containing 10mg of THC.
- Started becoming jittery and speaking incoherently.
- Shot himself

## Food Safety News

Breaking news for everyone's consumption

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### Third Death in Colorado Linked to Marijuana Edibles

BY NEWS DESK | MARCH 27, 2015

The third death associated with marijuana edibles could not have come at a worse time for the state's 15-month-old legal pot industry. Services are being held today in Tulsa, OK, for Luke Goodman, 23, who reportedly killed himself last Saturday night in a condo at Colorado's Keystone Ski Area, where he was staying for two weeks with his family.

It will be a few weeks before toxicology reports will be returned, but Goodman's family and friends suspect that edible marijuana was a factor in the self-inflicted gunshot death. His mother, Kim Goodman, blames her son's death on "a complete reaction to the drugs."

Another controversy from a death linked to marijuana edibles was not what the industry needed, especially this week when it was making legislative moves to kill a regulation taking effect in 2016 calling for all marijuana-infused foods to have a distinct look.

The bill to loosen the coming requirement that marijuana-infused cookies or candies be clearly identified as pot-infused did not get a single vote in the committee. The outcome was hailed as a bipartisan agreement that pot-infused food is going to look different than regular food in Colorado come 2016.

It left the conservative Colorado Springs Republican who sponsored the bill to repeal the requirement, state Sen. Owen Hill, charging his colleagues with "micromanagement."

Edibles account for about 45 percent of Colorado's newly legal pot market.

Goodman and his cousin, Caleb Fowler, reportedly purchased \$78 worth of marijuana products, including edibles, last Saturday afternoon. They began ingesting peach tart candies, each containing the recommended dose of 10 mg of THC, or tetrahydrocannabinol, which is the chemical responsible for most of marijuana's psychological effects.

Fowler says his cousin ate at least five of the candies and later became jittery and was talking incoherently.





# CANNABIS LOZENGES (2013)

<http://kindbake.org/about.html>

San Ysidro High School two 14-year females took three of these lozenges at school: One had elevated heart rate of over 150 beats per minute, constricted pupils, cold sweats. The other girl had a decreased heart rate, extremely low blood pressure and dilated pupils.

Originated from San Diego based online company "Kind Bake"

45% THC





# **SIDE EFFECTS**

- **Hallucinations**
- **Paranoia**
- **Anxiety**
- **Panic**
- **Depression**

**Everyone has a different metabolism!**

# SMOKING VS. EATING

**When smoking cannabis, 80% of the cannabinoids are burnt off.**

- **Body is able to absorb about 20% of the cannabinoids that end up in our lungs.**
- **When eating cannabis body can absorb most of the THC content, close to 95%.**

# **LACK OF MEDIA COVERAGE ON THE ISSUE!**

**Despite the rush to legalize marijuana for various purposes, the media will eventually be forced to cover the link between marijuana use and mental illness because of the growing number and severity of violent incidents involving schizophrenic individuals using the drug.**

**Dr. Christine Miller, Molecular Neuroscientist**

# NO QUALITY ASSURANCE

***“Everyone is making their own batch”***

- No FDA approval
- In CO some edible products contained banned hazardous chemicals, mold, bacteria,, e coli, salmonella
- No accurate reporting on potency or quality

# FDA

**A business/website/advertisements cannot make unsubstantiated claims about a product having medicinal qualities, unless that product has been tested and approved by the FDA.**

# **FDA COMPLAINT SYSTEM**

## **(SAM- WEBSITE)**

**The FDA only finds out about violations if they are reported to them.**

**In the complaint state the marijuana company's website and any claims they make that marijuana can be used to treat any medical condition. That is key. They have to claim it can treat medical conditions.**

**Ask that your complaint be confidential.**

**Send complaints to**

■ **[OUDLCMail@fda.hhs.gov](mailto:OUDLCMail@fda.hhs.gov)**

**and to:**

■ **[CMail@fda.hhs.gov](mailto:CMail@fda.hhs.gov)**

**Also letters can be sent to the head of the FDA and encourage them to take action.  
Send a paper copy to:**

**Dr. Stephen Ostroff  
Acting Commissioner  
U.S. Food and Drug Administration  
10903 New Hampshire Avenue  
Silver Spring, MD 20993**

# DRIVING-NO SET STANDARDS

- No uniform BAC limit (Alcohol .08)
- Stricter laws to obtain blood samples
- Perceived risk of impairment from THC is low
- Prosecutions are low when drugs “only” are involved!
- Metabolism – marijuana can stay in system for 30 to 40 days, does not mean impaired.





# 2014 SD COUNTY: MEDICAL EXAMINER REPORT

- Motor vehicle-related fatalities accounted for 291 cases in 2014, up from 247 the previous year, an increase of nearly 18%. Accidental pedestrian deaths made up 88 of those cases. Those 88 cases are up from 64 deaths the previous year.
- Almost half of the accidental pedestrian deaths who were tested were under the influence of alcohol and/or illicit drugs – most commonly methamphetamine or **THC**.
- Many of those killed were people running across freeways while it was dark outside.

# AWARENESS

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# ACCESS

- Facebook, Snapchat, Instagram, vines, craigslist other sites may be useful in looking at an individuals history, yet also make drug dealing easier.
- Over 200 delivery services in the county.
- Many illegal dispensaries in operation.
- Weed maps and nughunter (GPS) to identify pot shops.

# E-CIGS, VAPE PENS, EDIBLES, BRACELETS

- Small and easy to hide
- Easy to purchase online
- Don't really have a smell ( **Vaping** )
- Brownies, cookies, jello, etc. looks just like a typical snacks!





# GRINDERS

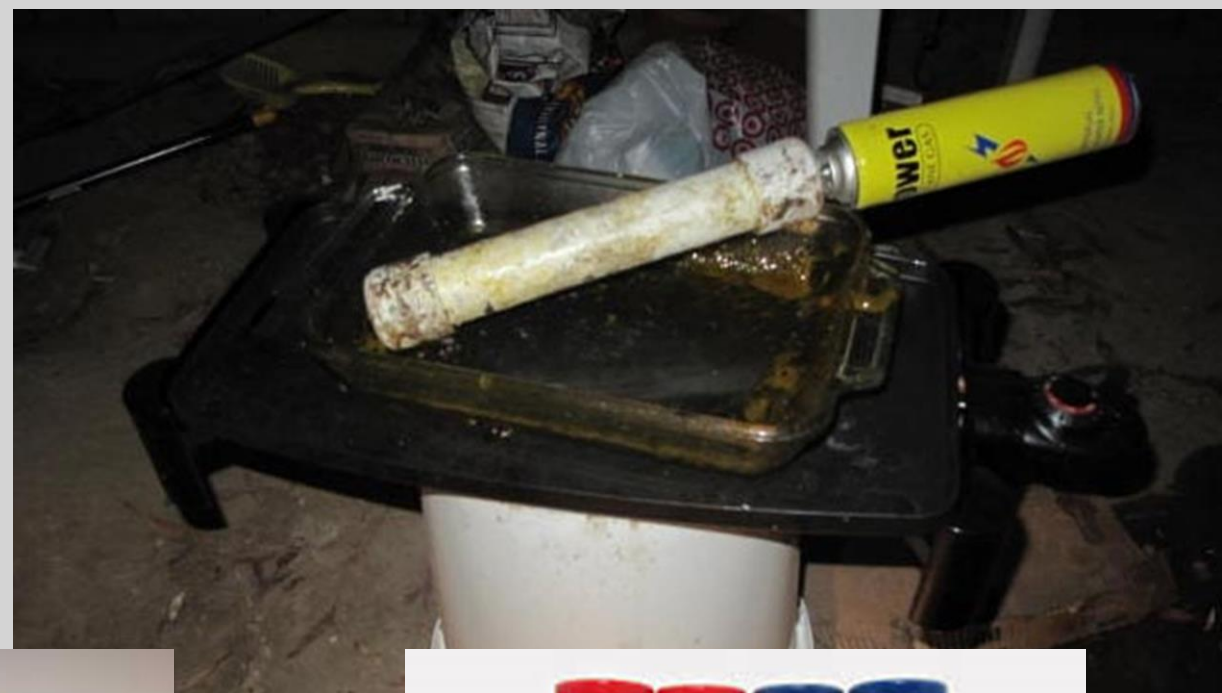
Youth being caught with grinders.

- Herb is ground up into small consistent pieces, which maximizes surface area.
- Provides an even burning/vaporizing
- No annoying aspect from sticky fingers when breaking up buds by hand, those sticky fingers are soaking up trichomes and **hurting potency.**



# YOUR SURROUNDINGS

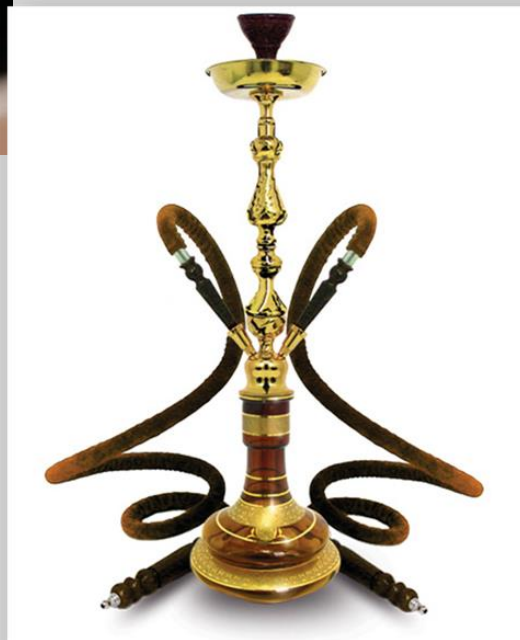
Paraphernalia related to BHO production.





# VAPING DEVICES

- Vaping devices can be used for many drugs and may look like familiar products.

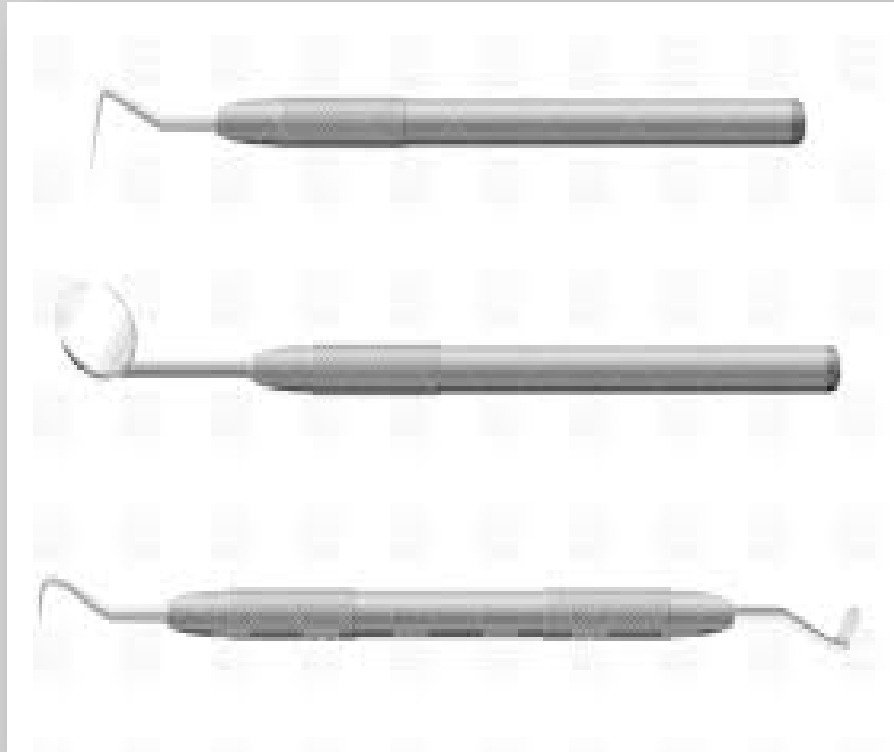


# **DABBING** PARAPHERNALIA

**Paper clips,  
dental tools,  
small screw  
drivers and  
pens with  
residue on  
tip.**



# TOOLS FOR DABBING

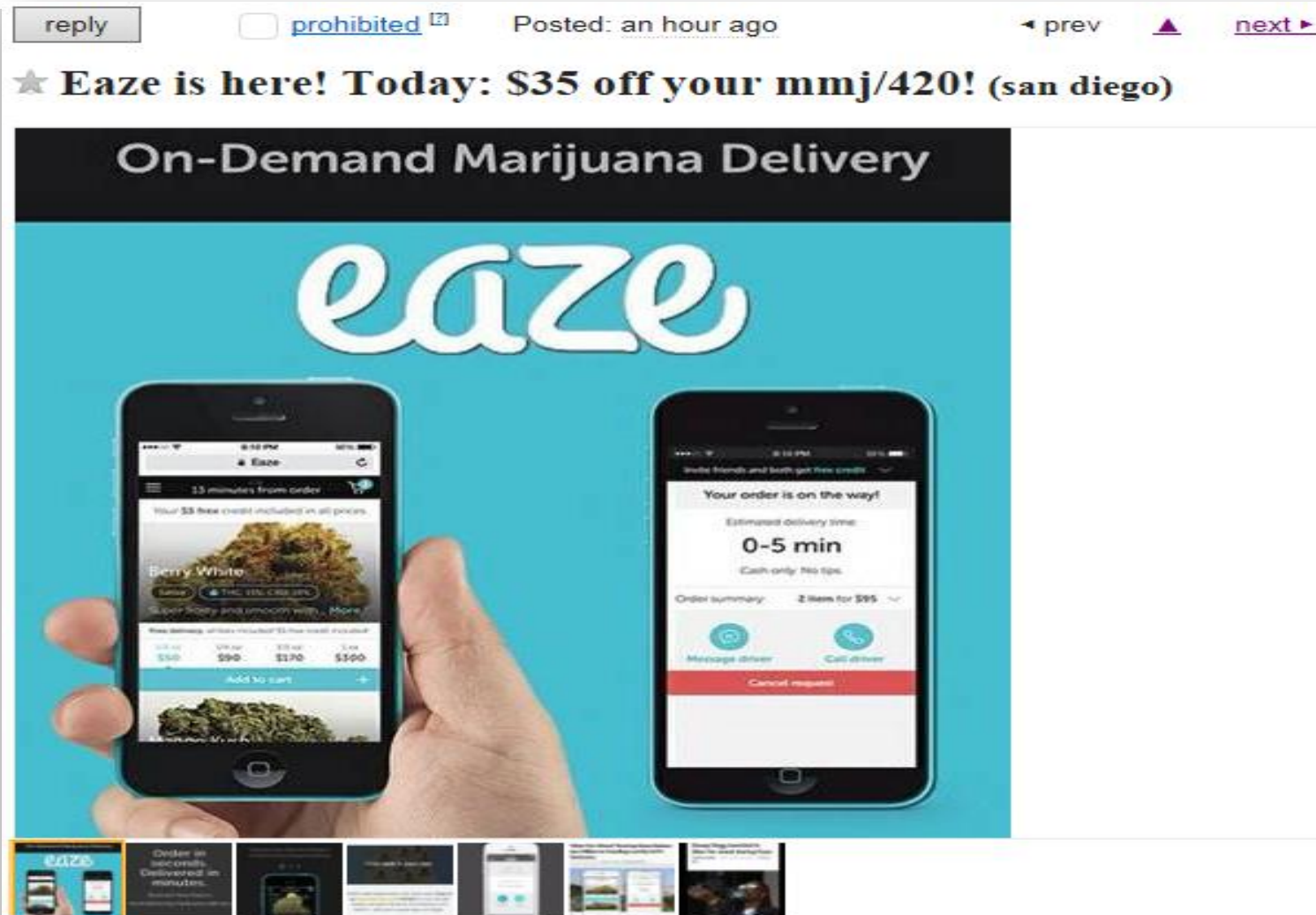


**The wax is placed onto the heated coil in the vape devise.**

**No second hand smoke!!!!!!**



# EAZE APP!



I just have to rant and rave how excited I am Eaze is finally here in SD!  
Eaze is the revolutionary new MMJ delivery service that is now serving San Diego.  
We have been featured in Forbes, on Jimmy Kimmel, Snoop is even an investing partner!

Its super easy, lightning fast and ultra safe. This is the future of 420 delivery!

We believe in the service so much that we are willing to put our money where our mouth is:  
Try a delivery from Eaze today and get \$35 OFF YOUR ORDER!  
No gimmicks, no catch, just use promo code NUG183.

Yes, seriously, \$\$ THIRTY FIVE OFF YOUR ORDER with code NUG183.  
Cant lose on that!  
Check it out today on EazeUP (dot)com!

# MPI WEBSITE

***[mpisdcounty.net](http://mpisdcounty.net)***



- **Multiple resources, info cards, data, PowerPoints available for download.**
- **Half day trainings available marijuana, RX and synthetics.**

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QUESTIONS?