

Forms & Potencies

Marijuana Presentation

1. Physiological Effects
- 2. Forms & Potencies**
3. Parent Communication

Marijuana: 3 Forms – extremely potent

1. Plant - dried flower or herb – smoke-able
2. THC* Concentrates
 - Liquid - vaping
 - Solid - dabbing
3. Edibles – THC* infused food & drink

**THC is the cannabinoid in marijuana that intoxicates a user or gets a user "high"*

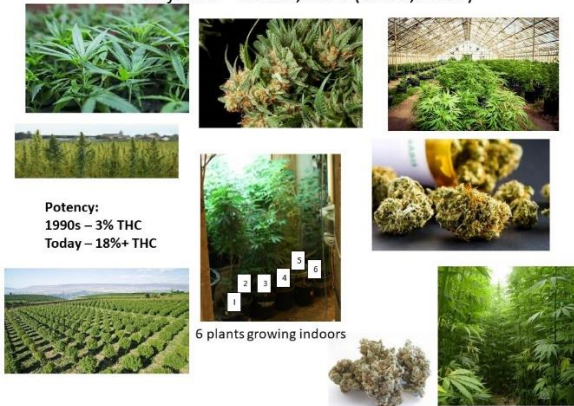
Advertising & branding are a new normal

Marijuana today is nothing like it was even 20 years ago. Today there are liquid and solid concentrates and edibles that did not exist. THC potency is exponentially higher and increasing all the time.

Also, advertising and branding have become a new normal.

THC is the cannabinoid in marijuana that makes a user "high" or intoxicated.

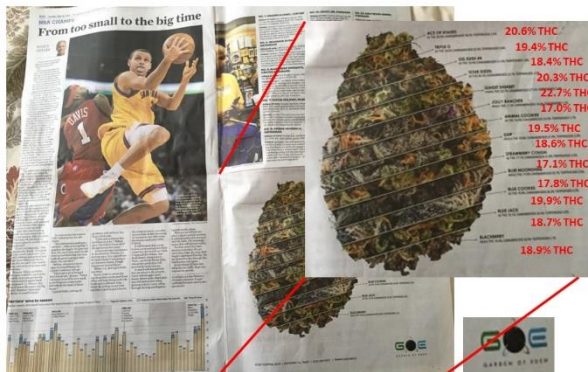
Marijuana – flower, herb (dried, fresh)



Potency:
1990s – 3% THC
Today – 18%+ THC

Plant form marijuana, aka flower or herb, contained 3% THC on average in the 1990s. Today you cannot buy plant form with less than 18% THC.

Various types of marijuana farms and growing scenarios are pictured. The center picture shows 6 plants from an in-house grow, which is legal in most RecLegal states, i.e. California. 6 plants produce an enormous amount of pot. Figure on average a pound/plant.



San Francisco Chronicle, Sunday June 21, 2015 – National Championship circular
 "Garden of Eden advertising in 2015 as a medical marijuana dispensary"
 In 2015, laws were silent on advertising marijuana for medical purposes, many – like GOE – risked possible consequences.
 In 2017, advertising for recreational use in all media is legal according to California Law established by Prop 64

**Marijuana – new normal
Branding, Advertising (all mediums) & Promotion –
(logo gear & giveaways)**



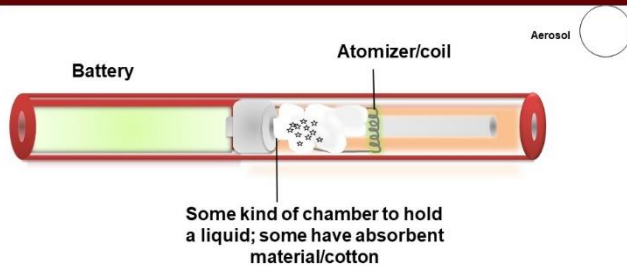
Prop 64 in California allows for advertising in all forms – TV, print, radio, billboard, internet banner, pop up and social media campaigns.

With advertising comes feature and benefit language encouraging consumers or all ages to use marijuana.



Swag, logo gear, promotional items of all kinds can be found, bought and are given away by the marijuana industry.

What Are Vapes / E-Cigarettes?



Marijuana concentrates – liquid form - vapes

Vape pens or e-cigarettes contain a battery, a chamber that can hold a liquid (called e-Juice or e-Liquid), an atomizer or coil that is heated by the battery; when it touches the liquid an aerosol is create that can be breathed in and out

What goes in a Vape pen?

1. Liquid Nicotine concentrate
2. Liquid THC (marijuana) concentrate
3. Benign flavors

How can you tell what's in a vape pen?

- You can't
- No label, no smell



How strong is the liquid in a vape pen?

- You don't know
- Vape liquid concentrate is not generally well labeled
- Potency can be anything 18% or 50% +

Source: Human Relations Media – drug fact pack

Any liquid can go in a vape pen, but users today primarily consume 1) nicotine, 2) THC or 3) benign flavored liquids. A user cannot tell what type of liquid is in a vape pen (unless they put it in themselves). There is typically no smell with nicotine or THC liquids. e-Liquids or eJuices are typically poorly labeled and potencies vary widely. 6-30mg/ml of nicotine is typical. Juuls contain 59 mg/ml of nicotine- roughly a pack of cigarettes.

THC potencies have been seen from 18-50%

The liquid itself is poisonous and very dangerous if swallowed

Pens (open) vs Pods (closed)
www.vape360.com www.vapet.com



Pens (open system) – an e-liquid is bought separately and poured or squirted into a vape “pen.”

Pods (closed system) – these vape pens come with specially designed pods of liquid that snap into the pen itself. When all the liquid is consumed, the pod is thrown away and a new pod is snapped in.

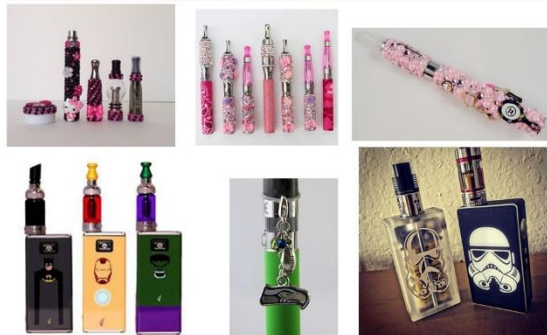
Juuls



Juuls can charge via a USB connection – they look very much like a flash drive

- ALL juul pods contain nicotine (no flavor-only pods) - 80% of 15-24 that could identify Juuls did not know they contained nicotine
- THC-filled pods are available after market – Juul does not currently manufacture them
- 72% of market place – is valued by investors at \$16B
- Some adults use to get off cigarettes, most do not; teens do not use juuls to stop smoking
- kids very drawn to them b/c Juuls are “tech” - cool gadgets, inconspicuous, doesn't look like a lightsaber or drug delivery device; they like the nicotine buzz
- unfortunately, these are addicting a new generation to nicotine
- \$50 for starting kit; pack of 4 pods - \$16
- Juul describes their pods as containing 200 puffs/pod – roughly a pack a day
- Heavy draws and holds – change the # of puffs and amount of nicotine/THC a user receives
- 59 mg/ml is 3x the amount of nicotine allowed in the EU - juuls not sold there; US does not have any restrictions on these devices or liquids

“Trendy” Products



Mods (or modifications) & Tanks refer to vape devices that are more boxy in shape (vs pen-like) or devices that have been made out of something else (i.e. can, lighter, pipe, etc...)

These pictured show attractive and kid-friendly themes and colors

Flavors

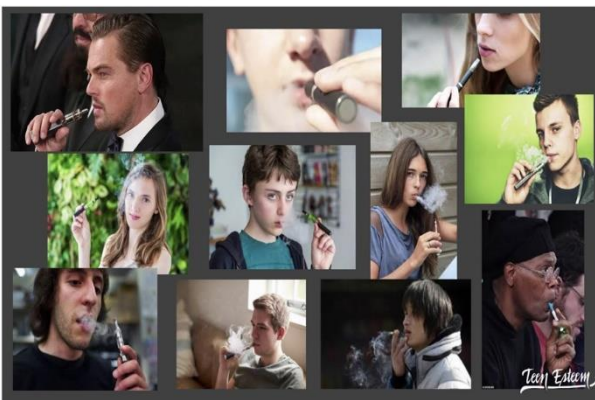


e-Juice or e-Liquids can contain nicotine or THC with or without additional flavoring

e-Juice or e-Liquids flavors can be bought without nicotine or THC

Typically, these bottles are poorly labeled for contents as well as potency of nicotine or THC Very little industry oversight exists.

Message: Vaping is cool



The vape industry wants us to see vaping as cool.

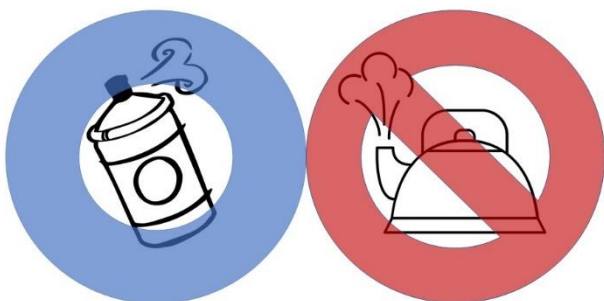
Unfortunately, even vaping benign liquids trains a user to associate the act of inhaling and exhaling on a device with other events, activities and parts of their lives. It's behavioral addiction training.

Recent FDA activity on Vaping (September 2018)

- 75% increase in # of high schoolers who used e-cigarettes in the past 30 days -Preliminary data from the CDC's 2018 National Youth Tobacco Survey
- "Teenage use of electronic cigarettes has reached 'an epidemic proportion,'" - Dr Scott Gottlieb – FDA Commissioner
- "We must do more to stem what I see as an epidemic of use of e-cigs among teens, and deeply disturbing trends that show no sign of abating," - Dr Scott Gottlieb – FDA Commissioner
- FDA has threatened to eliminate flavors from the marketplace as they strongly appeal to kids

- Some better news is that the FDA has taken notice, calling - "teen vaping an epidemic showing no signs of abating."
- The FDA approached Juul in April 2018 about their marketing practices towards teens.
- In September, the FDA gave Juul 60 days to prove they can keep their devices away from minors.

It's an Aerosol, Not a Vapor



Vape liquids are not good for the user. The "smoke" inhaled is not a water vapor but rather an aerosol that contains suspended chemical particles from the liquid itself or that result from heating the liquid.

2017 - Stanford Tobacco Toolkit Image Credit: via thenounproject.com

Third-hand Smoke



ui 2017 - Stanford Tobacco Toolkit

Nicotine & other chemicals

Vape aerosol is a second-hand smoke if inhaled by a non-user.

And the chemical particles can fall out of the aerosol and lie on surfaces – creating newly identified - third-hand smoke.

Aerosol Composition

<ul style="list-style-type: none"> Propylene glycol Glycerin Flavorings (many) Nicotine NNN NNK NAB NAT Ethylbenzene Benzene Xylene Toluene Acetaldehyde Formaldehyde Naphthalene Styrene Benzo(b)fluoranthene 	<ul style="list-style-type: none"> Chlorobenzene Crotonaldehyde Propionaldehyde Benzaldehyde Valeric acid Fluoranthene Benz(a)anthracene Chrysene Retene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene 	<ul style="list-style-type: none"> Benzo(ghi)perylene Acetone Acrolein Silver Nickel Boron Copper Selenium Arsenic Nitrosamines Polycyclic aromatic hydrocarbons 	<ul style="list-style-type: none"> Cadmium Silicon Lithium Lead Magnesium Manganese Potassium Titanium Zinc Zirconium Calcium Iron Sulfur Vanadium Cobalt Rubidium Diacetyl
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All of these have been found in e-cigarette/vape pen aerosol

All the chemicals on this list have been found in vape liquids and aerosols.

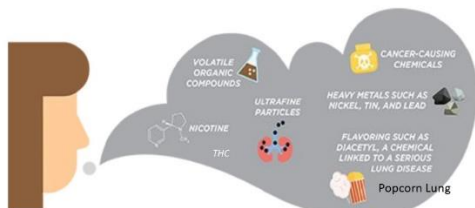
Aerosol Composition

Compounds in red are from FDA 2012, Harmful and Potentially Harmful Substances – Established List

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The chemicals in red are also on the FDA's 2012 list of Harmful and Potentially Harmful Chemicals

Summary – Nothing good is found in eLiquids



Vaping impairs the function of alveolar macrophages – cells that remove dust, bacteria & allergens – which are vital to the immune system – study out of Birmingham England, published in Thorax Journal

Nothing good comes from vape liquids. Volatile organic compounds, heavy metals, intoxicants like nicotine and THC which cause addiction, ultrafine particles that can seriously interfere with the immune system and so many flavorings that can cause serious lung damage.

THC Solid Concentrates - Dabs

Marijuana is not "just a plant"
Potency: 80-95% THC



Marijuana concentrates – solid form - dabs

Extremely potent. Can be close to 100% THC. The oily, waxy substance is typically burned via flame in a bong like device. This is called dabbing. It is extremely dangerous.



Dabbing material (aka hash, hash oil, wax, budder, shatter) can be purchased in marijuana dispensaries. However, amateur extraction methods also exist and can be very dangerous – explosions are common.

There are vape devices that now accommodate dabbing.

Marijuana Edibles

- THC not evenly distributed thru product
- No taste; can't tell the difference between THC & non-THC product
- No Child-Proof containers
- Takes a longer to feel the high - 20-30 min
- Serving sizes unrealistic
- Half the market in Colorado

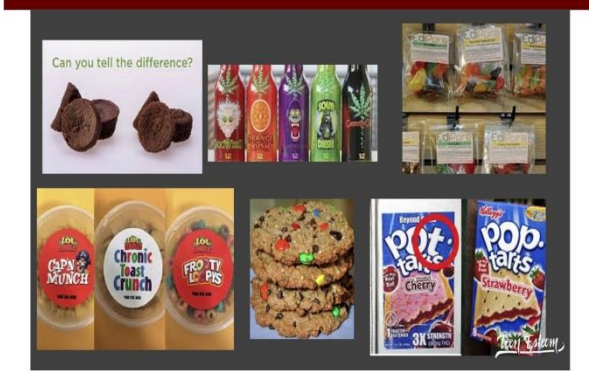


Marijuana edibles

Everything we drink or eat can be infused with THC (via the liquid or solid concentrates we just seen). There are many problems and issues:

- THC not evenly distributed thru product
- No taste; can't tell the difference between THC & non-THC product
- No Child-Proof containers
- Takes longer to feel the high when eating vs smoking - 20-30 min; easy to over dose.
- Serving sizes are unrealistic
- Half the commercial market in Colorado

More Edibles



More examples of edibles

FDA-approved THC - Dronabinol - contains up to 10mg of THC/pill;
Common brand names: Marinol, Syndro



→ Dank Grasshopper Chocolate bar contains 420 mg THC per bar – “Extremely Potent!”



Contrary to common understanding, THC has actually been available via a prescription since the 1970s. Dronabinol comes in 2mg, 5mg, and 10mg tablets.

Today’s marijuana industry has quasi-adopted “10mg” as a “single serving” size.

Both of these contain the same number of servings – 42. 42 – 10mg pills & 1 candy bar with 420mg of THC



Mint Black - 1,000MG THC
Our infamous 1,000mg THC Black Bar with the ever popular mint addition of Andes mint baking chips and mint drizzle.

Nutrition Facts

Entire Package Approx. Weight: 100g	
Servings Per Container: 100	
Amount Per Package	
Calories 440	Calories from Fat 100
	% Daily Value*
Total Fat 22g	34%
Saturated Fat 12g	60%
Trans Fat 0	
Cholesterol 40mg	13%
Sodium 120mg	5%
Total Carbohydrate 62g	21%
Dietary Fiber 5g	20%
Sugars 39g	
Protein 7g	
Vitamin A 10%	Vitamin C 0%
Calcium 8%	Iron 10%

Korova is another example of hyper-potent edibles available on the market today. 1000mg per cookie.

In European countries, like Holland (think Amsterdam), marijuana containing more than 17% THC is considered a hard drug.

All American marijuana in legal and black markets is hard-drug qualified.

Most American’s do not understand today’s marijuana. The Marijuana Industry counts on this as it continues to roll through local and state political systems demanding legitimization.

Their sophisticated lobbying tactics in Washington DC and their incessant courting of Wall Street, put those that believe in the value of drug-free communities at great risk.