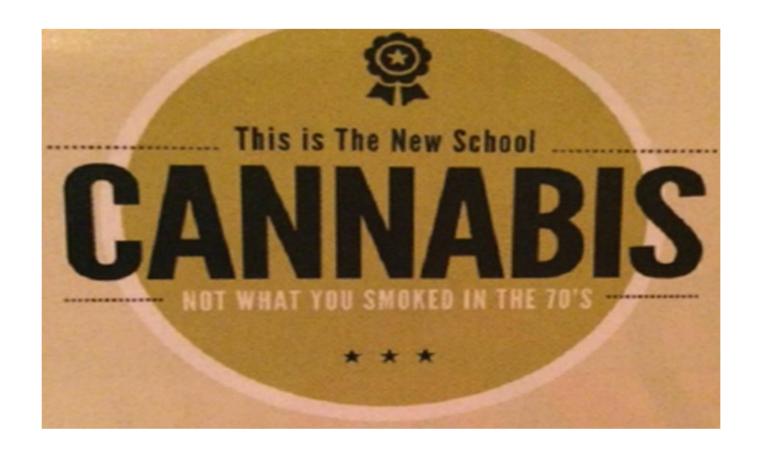


What You'll Need to Know

What I've Been Up To

- Kids and Colorado
- Recovery
- Phoenix Multisport 2007-12
- > UCH 2012-17
- Book "Weed Inc"
- > Cannabis in Medicine: An Evidence Based Approach
- > TED Talk 2017
- Consulting (Treatment, Athletics, Labor)
- > US States, Canada, New Zealand
- > Foundry
- Other Affiliations
 - NALGAP
 - NMI
 - University of Florida
 - SAM

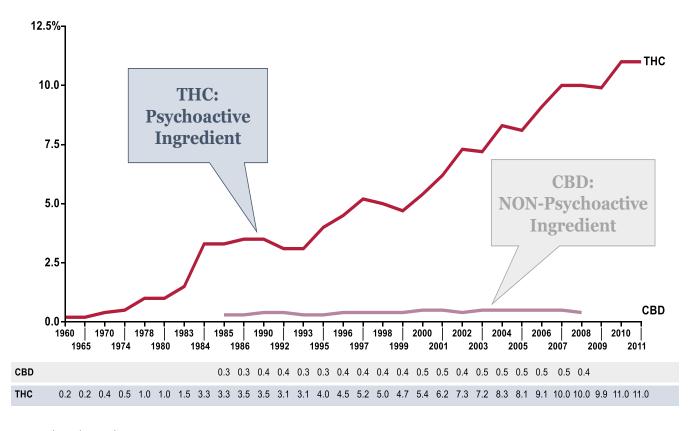
The Times They Are A Changin'





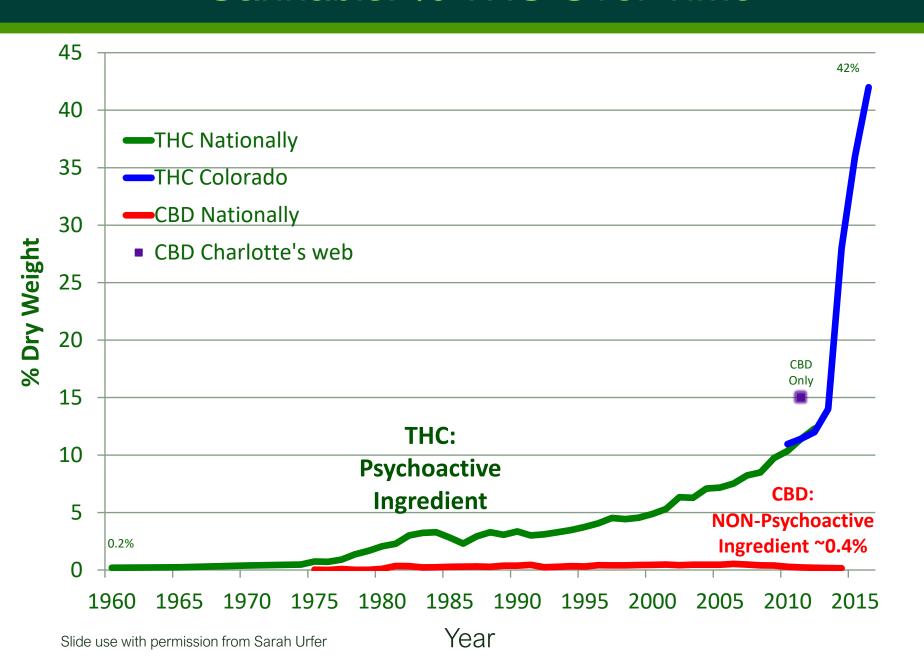
Marijuana has become significantly more potent since the 1960s

Average THC and CBD levels in the United States



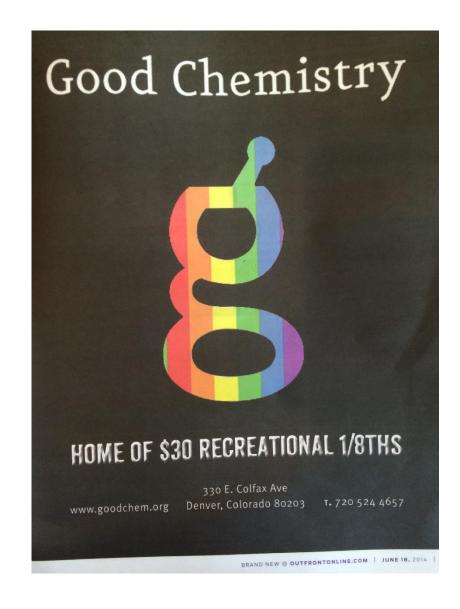
• Source: Mehmedic et al., 2010

Cannabis: % THC Over Time



Gardening vs. Chemistry



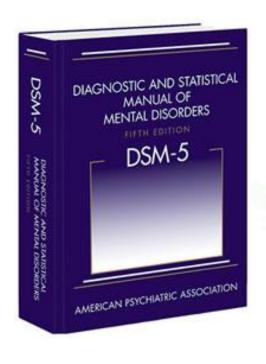


What is Substance Use Disorder (Addiction)

2–3 criteria indicate a mild disorder, 4–5 a moderate disorder, 6 or more, a severe disorder

- 1. Taking the substance in larger amounts or for longer than the you meant to
- 2. Wanting to cut down or stop using the substance but not managing to
- 3. Spending a lot of time getting, using, or recovering from use of the substance
- 4. Cravings and urges to use the substance
- 5. Not managing to do what you should at work, home or school, because of substance use
- 6. Continuing to use, even when it causes problems in relationships
- 7. Giving up important social, occupational or recreational activities because of substance use
- 8. Using substances again and again, even when it puts the you in danger
- Continuing to use, even when the you know you have a physical or psychological problem that could have been caused or made worse by the substance
- 10. Needing more of the substance to get the effect you want (tolerance)
- 11. Development of withdrawal symptoms, which can be relieved by taking more of the substance.

Marijuana & Addiction



The DSM-5 clearly spells out the **objective** criteria for addiction, and for the first time "**cannabis withdrawal**" is listed as a diagnosis.

THC and Addiction

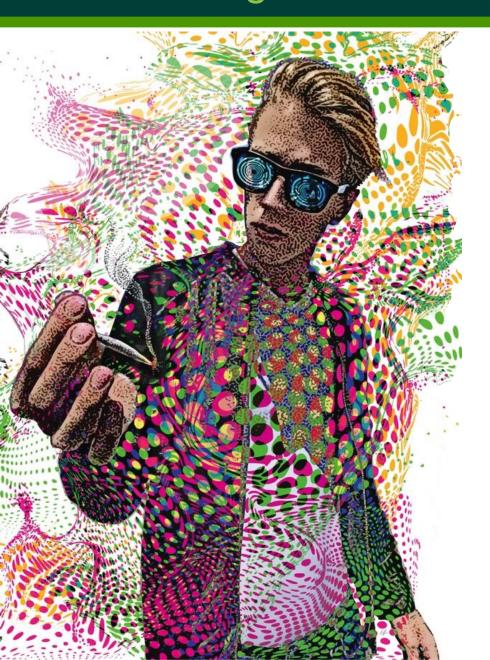
- This is very real and not easy to treat
- Often requires long stays in treatment and anti-psychotic medications
- Traditional rates were around 10%
- Rates today are reaching up to 30% as a result of increased potency (Janni Leungn et al 10/20)
- Many of these addicted patients require physical detox and medical intervention

Econ 101

- Less than 300 cannabis facilities in 2014
- > 1,190 Cannabis facilities exist in Colorado in 2017
- >2,709 in 2019
- How can Colorado support this amount of retail?
- How does this growth continue?
- ➤ Why does the old 80/20 rule matter here?

(6.1% of MJ users in CO purchase 75.7% of the THC products)

Contributing Factors to Marijuana Dependence



Age of Onset Frequency of Use THC Potency



Coming Attractions

Consumption Trends – Beyond Smoking



Concentrates



Edibles



Vape







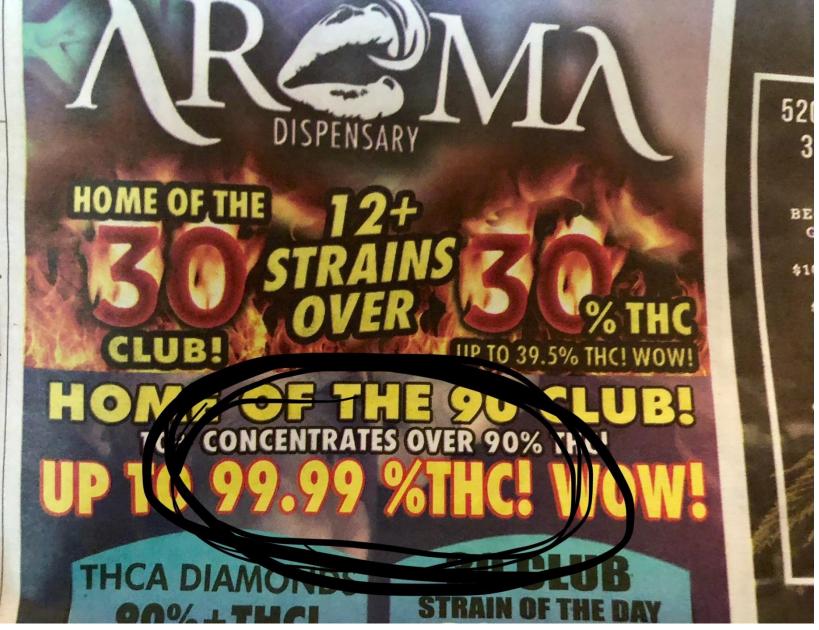
PURE THCA

SUMMIT CONCENTRATES
WHOLESALE
GROWN AND PROCESSED IN-HOUSE
SUMMITCONCENTRATES.COM



THCA CRYSTALS

HARMONY EXTRACTS
GROWN BY: HARMONY EXTRACTS GARDENS
PROCESSED IN-HOUSE
WHOLESALE
HARMONYDENEVER.COM



Consumption Trends

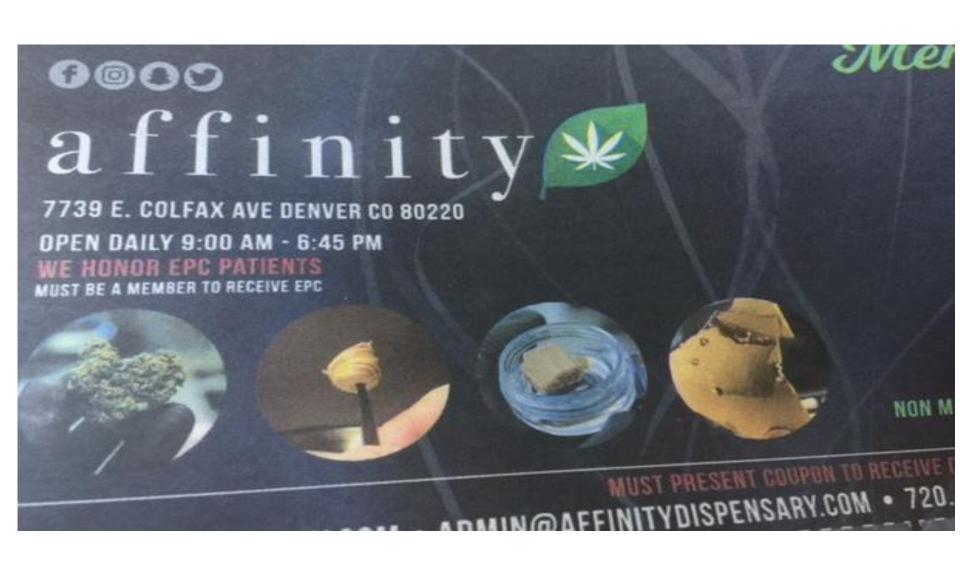
2 videos to watch on consumption of concentrates:

https://www.youtube.com/watch?v=uxan2qvNlls

https://www.youtube.com/watch?v=SIPMFpKBBmY&t=191s













Sweet Summer Devis

GOOD MEDS EXCLUSIVE LIVE RESIN DEALS

\$495 (oz) & \$134.10 (7g): Member \$540 (oz) & \$152.10 (7g): Non-Member

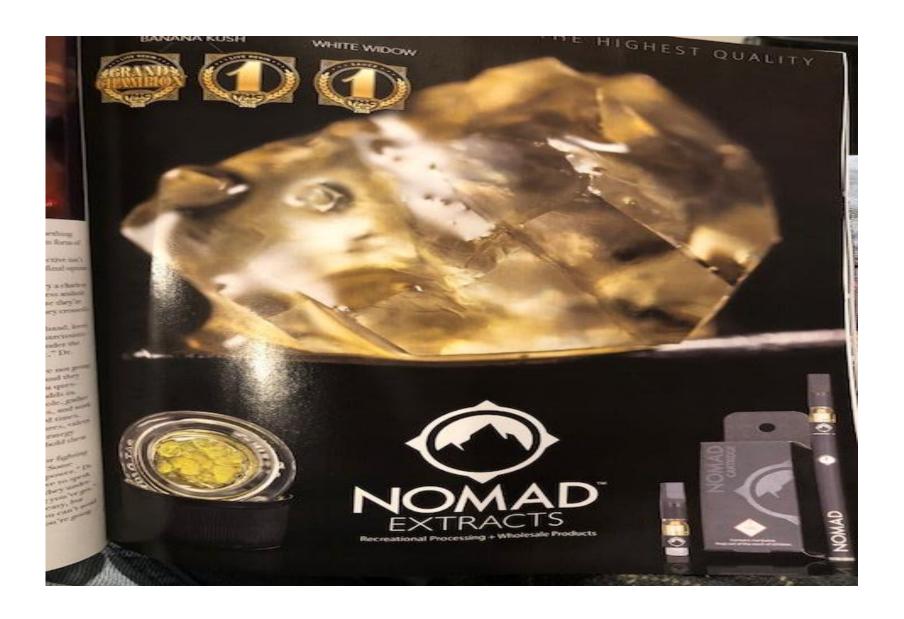
THROUGH SUNDAY, JUNE 24 LIMIT 56 GRAMS, WHILE SUPPLIES LAST

GOOD MEDS ENGLEWOOD

3431 S. Federal Blvd Englewood, Colorado

GOOD MEDS LAKEWOOD

8420 W. Colfax Ave. Lakewood, Colorado









DISTILLATE

WATER CLEAR. NO ALCHEMY. JUST PURE SCIENCE,



THE COLORADO Cannabis Co



Colorado Cannabis Company is leading the industry in producing high potency, water clear distillate.

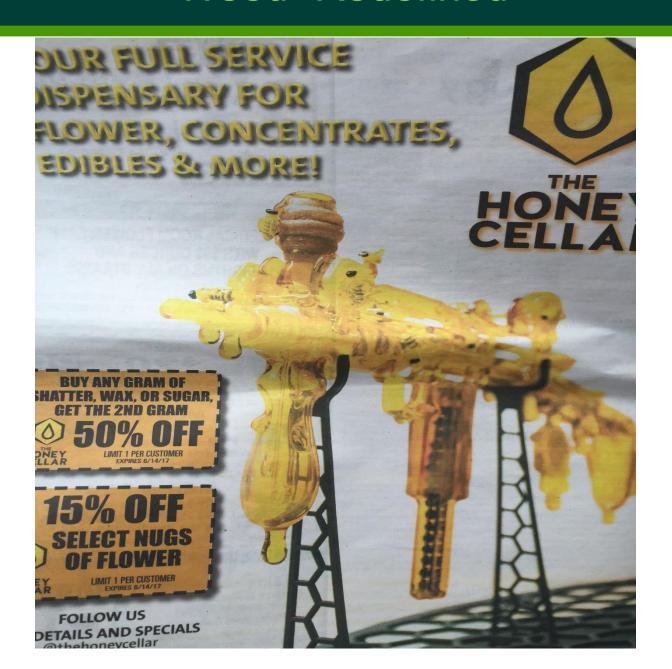
Our clean, pure distillate contains no additives or cutting agents and is available in sleek 1,000 mg glass syringes, 500 mg refillable vape cartridges, and 250 mg disposable vape pens depending on your needs.

We re-infuse our distillate with strain specific 100% cannabis-derived terpenes to bring out the essence of the plant. The effects, flavor, and aroma of our offerings reflect the true characteristics of each strain as if it were just freshly





DENVER // BOULDER THE NET



DOUB



BLACK

QUALITY / SELECTION / PURITY





POWERED BY SCIENCE | Fueled By Mature

Powered by Science. Fueled by Nature.





edCBD.com

Six gram experts only jars.

Experts inquire at your favorite dispensary.

Colorado Product Services

coloradoproductservices.com

@coloradoproductservices • @officialdoubleblackextracts2.0

Part of Pop & Fashion Culture



"It's Natural"



cal & Recreational at both locations - Aurora locations opening soon - Debit of

Expires 7/16/15

nd \$50 ^{ybrid} Cone Penny!

oned with other offers

Concentrate
Mondays & Tuesdays
20% Off

O.penVAPE, White Mousse, Top Shelf, Essential Extracts, Botanico & Live Resin EVERY DAY THIS WEEK through 7/10



Driving Trial, Sound Familiar?







Vapes



YOUR NUMBER O.NE FAN EASY SLEEK DISCREET NO CARTRIDGE NO CHARGER NO SMOKE NO SMELL NO MESS NO PROBLEM IT'S WHAT'S INSIDE THAT COUNTS 189.MS OPENVAPE COM The O.penVAPE O.ne comes pre-loaded and pre-charged with 100mg of premium cannabis oil meaning the device is ready to

deliver the perfect puff



The Adjusta Agricor Lab Bear Mortg Bulldog Pro Cannabis T Cannopoly CLogistics The Clinic Cohen Me Colorado (Concentra CWC Soil DoobyDa EndoCani Escape/E Evolve Fo Franklin Greenho GreenLin Hybrid F Kindred L'Eagle Lab Soc Lowspa LUXX R Mac & marQa Mary Ja MedPh Monte

Vapes





Titanium Grasshopper leaps to next level of discretion, packs surprising power (review)













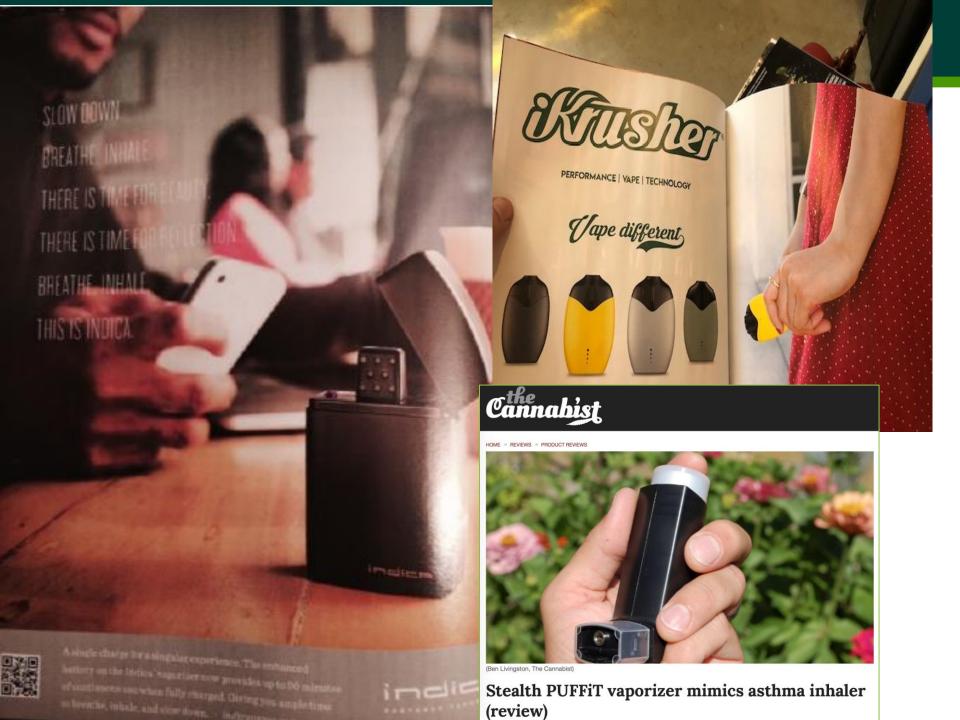


PUBLISHED: NOV 30, 2016, 4:15 PM • UPDATED: NOV 30, 2016, 4:15 PM

By Chris Thomas, The Cannabist Staff

The days of Tim "Tool Man" Taylor have long passed, but I'm still a sucker for more power.

There's something oddly satisfying about using a well-made, powerful tool. There's a reason people buy muscle cars, iPhones and power drills. Not



Vapes



The Incredible, Edible Weed









drafted off and disappeared somewhere in the cabin.

SAGITTARIUS

NOV. 22-DEC. 21: The laste yourse in your head may here layagets, has they're will specifing their cracked

wide, steas, too. Your first assepances in the coming works, my force Power, is to make more that eaching girts planted in the wrong place. Your second assignment is to focus all your intelligence and love on locating the right plants for new words to be planted.



100MG HYBRID ASSORTED SWEET PEAKS

NOW INFUSED WITH

HYBRID DERIVED

THC DISTILLATE





SHATTER WAX







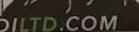
LIVE RESIN







MED

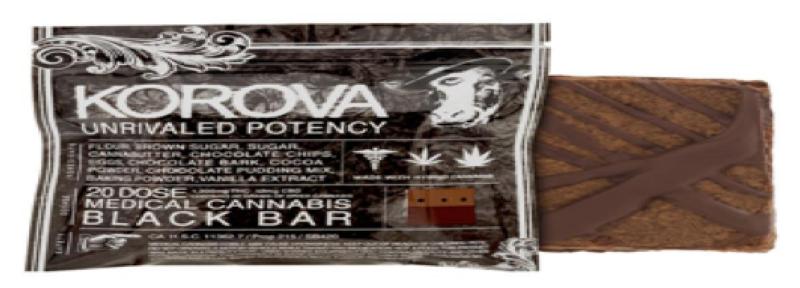


ALL CONCENTRATES MADE IN-HOUSE

QUALITY - TRANSPARENCY - EDUCATION TIZES SOUTH PUBLIC RD LAFAYETTE CO. 80026 - 13031 862-7457

February 22, 2018

A New Record!



Edible

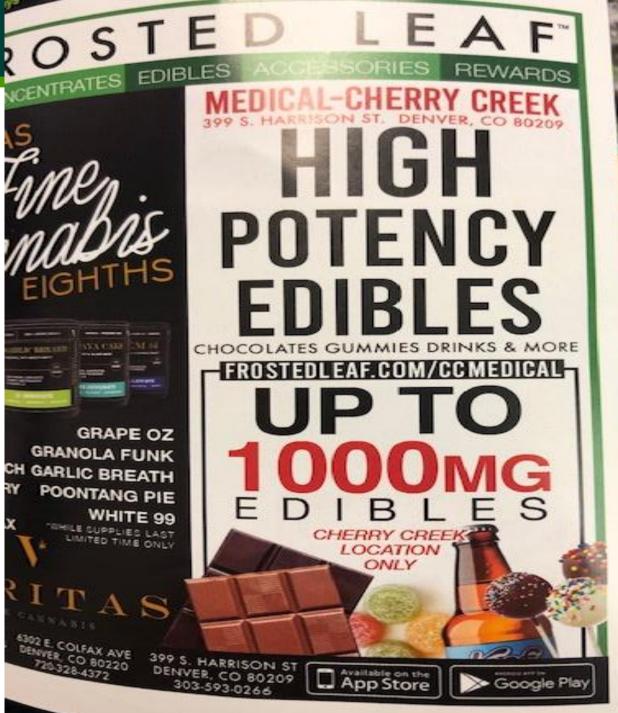
Korova Black Bar 1000mg \$35!

Description

Get \$10 off each Korova Black Bar while available!



3 mi Newport Beach, CA





"Infused Everything"

Infused everything: These cannabis products might surprise you

Coffee. Post-tattoo ointment. Toothpaste. Um, vaginal suppositories? The staggering variety begs the question, 'What can't we infuse?'



PUBLISHED: JUN 24, 2016, 7:27 PM • UPDATED: 7 DAYS AGO

ADD A COMMENT



By Katie Shapiro, The Cannabist Staff



Move over edibles, lotions and tincture potions — there's an entire new realm of cannabisinfused products hitting the shelves of dispensaries and recreational shops as marijuana moves even further into the mainstream.

7 COOL CANNABIS CONDIMENTS

By Elise McDonough June 24, 2016











Turn any dish into a medicated meal with versatile, cannabis-infused condiments. Using medicated sauces lends valuable flexibility to menu planning while making correct THC dosing very easy.



7 ENERGIZING CANNABIS COFFEES

By Elise McDonough January 27, 2017







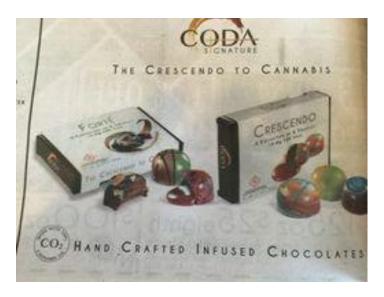


PHOTO BY DAMION LLOYD

Making a "hippie speedball" is easier than ever before with these blends of THC and caffeine.







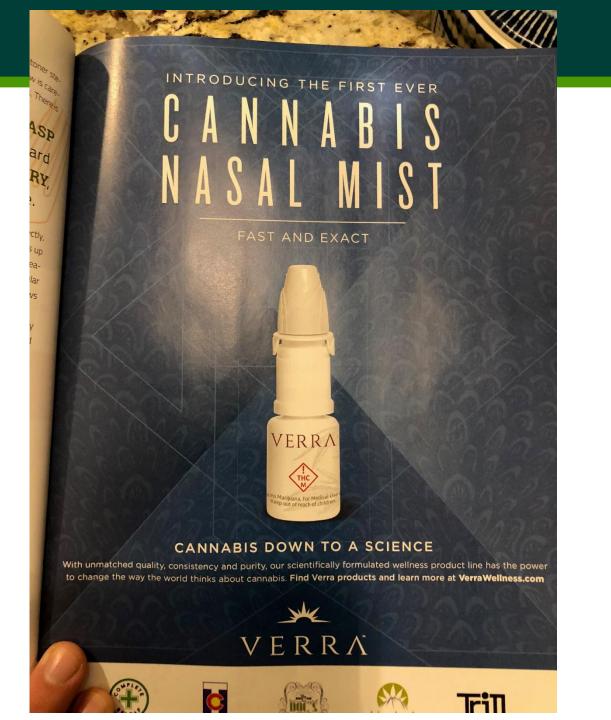




Marijuana Infused Ice Cream

Embark on a never ending munchies loop as you indulge in a sweet bowl of marijuana infused ice cream. This sugary treat comes laced with grade-A funk that'll leave you feeling like your brain and body have melted into a carefree nirvana.

\$15.00



Irio—but the Fabs, Bob Dylan, and their contemporaries kicked it into the stratosphere. I started buying albums and subscribed to *Rolling Stone*, *Creem*, and *Crawdaddy* magazines to keep up with all the activity.

It wasn't until 1975 that my first piece—a review of Bob Dylan's Blood on the Tracks—was published in a local Kansas City monthly. I soon applied to the Kansas City Times (back then, the Times was the morning paper, the Star the evening), and by 1979 I was working full-time—first as a





MEDICINAL CANNABIS CENTER

THIS AD IS INTENDED FOR COLOR

OCTOBER

ALL PRICES I

.





BUY 3 B'S TREATS 70MG LOLLIPOPS FOR THE PRICE OF 2!

\$15

DENVER GRADO OCTOBER 7 T



NOW AVAILABLE AT BOTH MEDICAL & RECREATIONAL STORES THROUGHOUT COLORADO FRUIT FLAVORS - ARTISAN TERPENES - CANNABIS TERPENES - SAUCE INFUSIONS

IXED FRUT & LIONING THE & LIONING THE & LIA MED - 250mg THE & LIA MED - 250mg THE & LIA MED - 250mg THE & LIA

BITE-SIZED GUMMIES INFUSED WITH THE & CBD NANOPARTICLES

What are THC/CBD nanoparticles?

Our NANO BITES provide more efficient absorption & a faster onset compared to traditional edibles. Made from our extensively refined distillate, NANO BITES contain cannabinoid nanoparticles which are utilized by the body much more efficiently than unrefined oils. Get more out of your dose...with far less waiting.

DUSD BLES

dosdedibles.com info@dosdedibles.com





WE INVENTED AHAPPY PILL



BLISS.

This peanut butter cup will make you very happy. Like, bubbly, euphoric, hot damn I'm fascinating and oh what a beautiful world and wait, did that barista just wink at me, yes they did. Introducing Bliss, thoughtfully engineered to give you a deep sense of wellbeing and enthusiasm for all the amazing things the day may bring.

Try it. You'll really, really like it.

AVAILABLE IN DARK AND MILK CHOCOLATE

5 MG THC / 5 MG CBD

20 MG THC / 20 MG CBD (FOR MEDICAL PATIENTS)

Edibles (Look-a-likes)





Have your pot and drink it too

o you ever come home after a long day at work and feel torn between which substance you want to use to escape reality? It's OK, you're not alone. It's a tough choice, especially in Colorado where thriving microbreweries and marijuana dispensaries both



the keg? Well, back in January, Keith Villa, the guy who created Blue Moon Brewing Company and worked as the head brewmaster for 35 years, announced his retirement from Molson Coors.

Fortunately for us, retirement must have
been hella boring for Keith 'cause he spent the
entire time experimenting with craft beer and
marijuana in preparation for his next venture.
Now, he's teaming up with his wife, Jodie, to
officially launch their new brand: Ceria
Beverages. Actually, now that I think about it,
three months of concocting drinks and researching how to get the masses lit sounds like the best
retirement ever. Sign me up.

Based in Arvada, Ceria's company goals this

six milligrams of THG beers will be in the 1 the full-bodied offer gram range. And in ever, the drinks will lar to ski slopes: a blue leaf for inter experienced user ultimate experie

> To be clear, exist, so this is Brewing previ IPA, but it on high, because active cannab things that II



8ths \$20 1/4 Oz \$40 Oz \$99 (First fime patients)

1st Gram \$20 \$25 After Oz \$600 & Up

Buy 5 **Get 1 Free** Or \$10 Each

2 FREE JOIN

Any Purchase

(First time patient

3 JOINTS \$ 10

ONTS \$ 25; 350 MG \$10

Keef Cola

225 MG \$8



Anesall OG

lability and LIGHTSHADE.COM

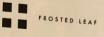
#WEMAKEWEEDLOOKGOOD info@indicacreative.com // 303.225.7317 WWW.INDICACREATIVE.COM















ee brand m/hi





SIMPLE SYRUP

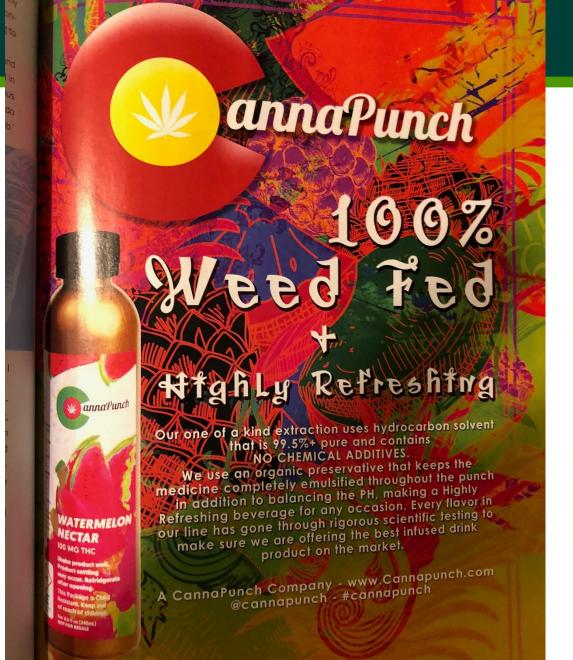
GRAPE SYRUP

WATERMELON

PINEAPPLE

CHERRY SYRUP

RADEBRANDS.COM



Keef - born in Boulder Colorado - is proud to announce the world's first cannabis infused sparkling water - Keef Sparkling.

With over 7 years of experience in creating cannabis infused beverages - Keef has become the market leader. In 2015, the Keef Cola Bubba Kush Root Beer was named "Best Edible" at the U.S. High Times Cannabis Cup. As the market leader - Keef has met the demand for a zero calorie cannabis infused beverage that is the go-to social option for people looking for an alternative to sugary cannabis-infused edibles.

Keef Sparkling is sugar free, has zero calories and is naturally flavored – providing a guilt free social beverage experience. Unlike other edibles that can take up to two hours to fully activate, cannabis infused beverages offer their full effects in as little as 15 minutes after drinking – leading to a more real-time and responsible consumption experience.

Keef Sparkling is available in two flavors: Lemon and Blood Orange. Each 12 oz. bottle contains 10mg of activated THC. Visit www.keefcola.com to find your nearest retailer.



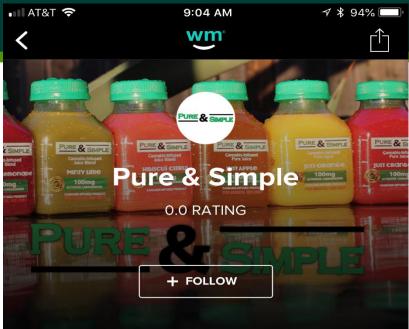


New from Keef - Oil leading technology extract.

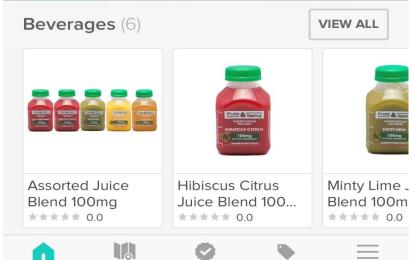
The rapid heating, gives the user a traconsistent perform finish. Oil Stix offer extract via superchighest quality stagents, no "plant that you are gettall flavor that nature."

The goal at Keel and all of the incommendation of cannatiselected to ensure potency. Expectivistic www.oilstib.





PRODUCTS NEAR ME REVIEWS VIDEOS INSTA



Brands

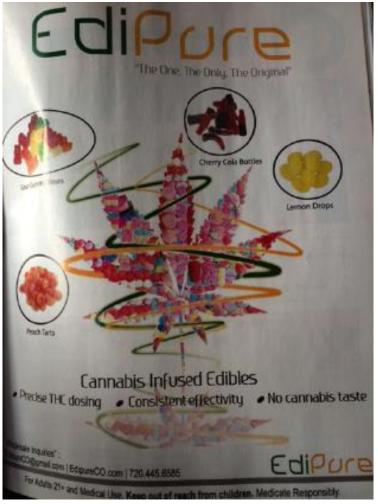
Deals

More

Home

Maps





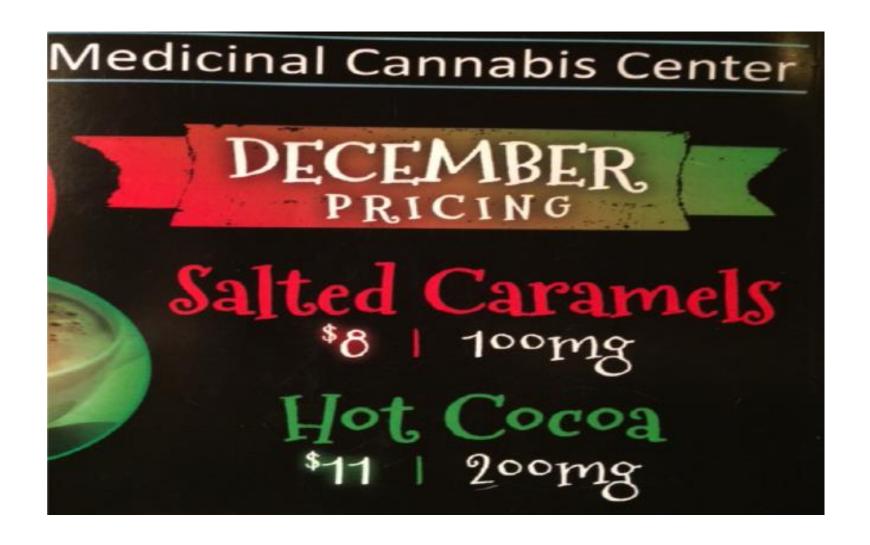
"Infused Everything"







Edibles















All-Natural
Easy To Apply
Mess-Free

Check out our full product line at www.patpenproducts.com.

For wholesale inquiries, contact sales@patpenproducts.com.





APOTHECANNA SEXY TIME

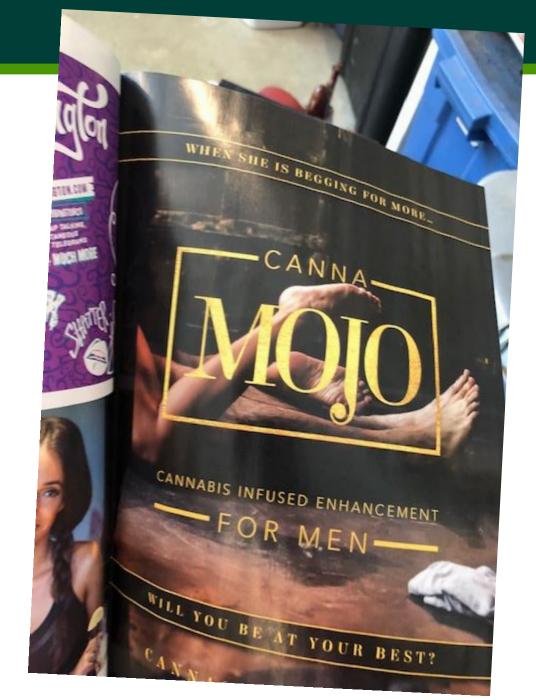
www.apothecanna.com

Plant-based glide for your pleasure plus a jasmine-cannabis-coconut combination to awaken your body, mind and spirit.

The ultimate aphrodisiac.

APC STREN

Extra poten you Our



EVERYTHING!



WARNING: THERE MAY BE HEALTH RISKS ASSOCIATED WITH THE CONSUMPTION OF THIS PRODUCT. THIS PRODUCT CONTAINS MARIJUANA AND ITS POTENCY WAS TESTED WITH AN ALLOWABLE PLUS OR MINUS 15% VARIANCE PURSUANT TO 12-43.4-202(3)(A)(IV)(E), C.R.S. THIS PRODUCT WAS PRODUCED WITHOUT REGULATORY OVERSIGHT FOR HEALTH, SAFETY, OR EFFICACY. THE INTOXICATING EFFECTS OF THIS PRODUCT MAY BE DELAYED BY TWO OR MORE HOURS. THERE MAY BE ADDITIONAL HEALTH RISKS ASSOCIATED WITH THE CONSUMPTION OF THIS PRODUCT FOR WOMEN WHO ARE PREGNANT, BREASTFEEDING, OR PLANNING ON BECOMING PREGNANT. DO NOT DRIVE A MOTOR VEHICLE OR OPERATE HEAVY MACHINERY WHILE USING MARIJUANA.

THE RETAIL MARIJUANA PRODUCT CONTAINED WITHIN THIS PACKAGE COMPLIES WITH THE MANDATORY CONTAMINANT TESTING REQUIRED BY RULE R 1501.

THE SERVING SIZE OF ACTIVE THC IN THIS PRODUCT IS 10 MG, THIS PRODUCT CONTAINS 10 SERVING OF MARIJUANA, AND THE TOTAL AMOUNT OF ACTIVE THC IN THIS PRODUCT IS 100 MG.

THIS PRODUCT MAY CONTAIN MILK, TREE NUTS, PEANUTS, AND SOY.

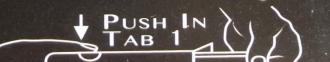
STORE THIS PRODUCT IN A COOL, DRY PLACE.

THIS PACKAGE IS CHILD RESISTANT.

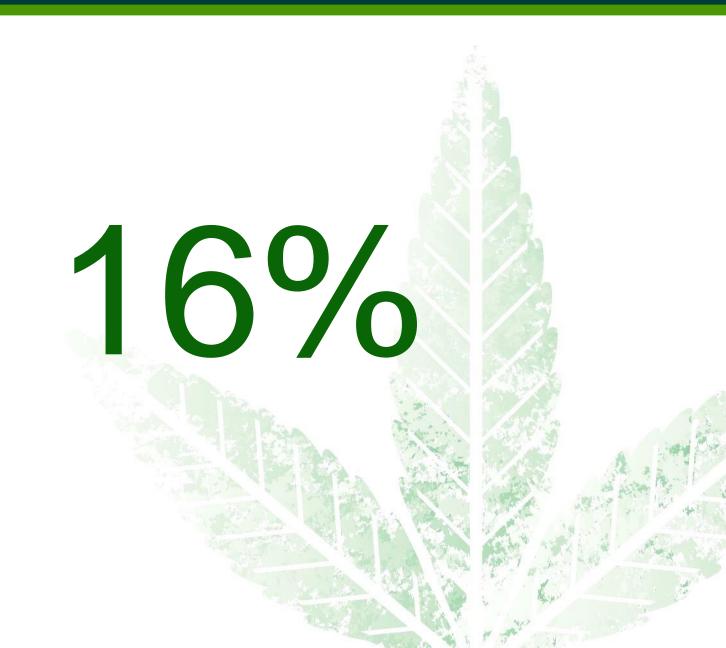
MANUFACTURED BY CODA SIGNATURE, TRINIDAD, CO RETAIL MIPS LICENSE # 404R-00134

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Why The Lancet Study Really Matters



Lancet Study of "Skunk Weed"

> Daily use sees a 5x increase in psychosis

> Weekend use sees a 3x increase

> 24% of psychosis cases in the study group caused by weed alone

Mental Health Consequences: Casual Use

- > Risk of depression: 1.4x (Casual?)
- Acute Anxiety
- Increased risk of anxiety disorders (Casual?)
- Worsened outcomes in bipolar disorder (Casual?)
- Risk of attempted suicide requiring hospitalization: 2x (Casual?)

Cannabis & Psychosis

- Use of cannabis associated with 1.4x increased risk of psychosis
- Regular associated with a 2x risk of psychosis
- ➤ High potency cannabis, more frequent use, and genetic susceptibility (slc, comt, akt1) can increase risk to 8x
- Use before age 18 has 2.4x risk of dx of schizophrenia (dose response)

Reviewed in Hall, 2014; Di Forti et al 2014, Giordano et al 2014

Radhakrishnan et al Gone to Pot – A review of the Association between Cannabis and Psychosis

Physical Health Consequences: Acute

- Impaired memory
- > Impaired motor coordination
- Slowed Reaction Time
- > Increased Singular Focus
- Reduction in Perceptual Accuracy
- Increased heart rate
- Increased risk of angina, heart attack and stroke in those with and without previous heart attack
- Electrolyte imbalances
- Respiratory issues (difficulty for individuals to intake oxygen)

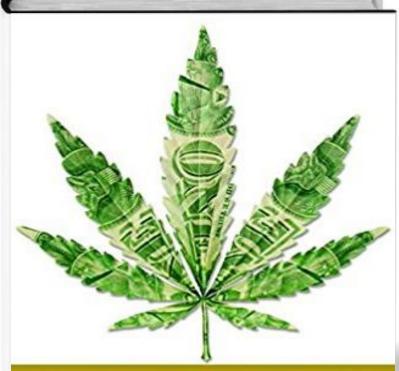
Physical Effects of Chronic Use

- > Changes in physical structure of the brain
- > Immune system decrease
- Reduced weight and height (adolescents)
- Increased risk of testicular cancer (dose response related)
- > Reduced Sperm Count

To Learn More...

- ➤ Project SAM (Smart Approaches to Marijuana)
- > NIDA
- > SAMSHA
- >SMART CO
- > Lots of others, but use a critical eye

(I subscribe to lots of pro-cannabis and commercial cannabis sites and newsletters)



WEED, INC.

The Truth About THC, the Pot Lobby, and the Commercial Marijuana Industry

- Ben Cort -