NO. 53 | DECEMBER 2018

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DECEMBER 2018

Quick Hits

cannabis news around the world

news

New Zealand legalizes medical cannabis for domestic, export markets

The law will come into force the day after it receives Royal Assent – a formality in most Commonwealth countries.

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Medical cannabis export law passes first vote in Israeli Parliament

The bill still faces votes in second and third readings before it can be presented to the prime minister for final approval to become law.

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U.S. Senate, House Approve 2018 Farm Bill, Which Includes Hemp Legalization Provision

After months of debate and preparation, the final 2018 Farm Bill landed on the Congressional floor this week.

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The Ever-Pending German Cultivation Bid

The cultivation bid has already been stalled in federal court once and Round II is shaping up to be just as fractious. Is there any end to the drama in sight?

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business

Is a Tobacco Giant Trying to Take Over the Vape Pen Market?

A $1.8 billion investment in a cannabis company was announced Friday, has over the past five years quietly patented dozens of devices that could be used to consume marijuana.

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How Water-Soluble Cannabinoids Could Change the Cannabis Beverage Market

As the cannabis-infused beverage market continues to take shape, many companies are turning to nanotechnology to more easily dissolve fat-soluble cannabinoids into liquids.

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A Busy 4th Quarter Heralds An Amazing Cannabis Year Globally

Canadian recreational legalization in late October may come to be seen as the highlight of the cannabis year, but in Europe, the fourth quarter tops off quite an amazing 2018 too.

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Why are so many countries now saying cannabis is OK?

Around the world attitudes towards the use of cannabis are shifting.

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culture

In Canada, you can study marijuana production for college credit

The country is facing a pot labor shortage, now that the sale and cultivation of cannabis is legal.

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Pot of gold: how the beauty industry fell for cannabis

CBD oil is cropping up in an increasing number of high-end creams, oils and even mascaras – but not all derivatives of the plant are created equally.

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How to Photograph Cannabis Flower

A two-part series will show you how to photograph cannabis, regardless of your experience level.

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Discussing Lab Accreditation: The New ISO 17025:2017 Standard

A panel at the Food Safety Consortium where they discussed the new ISO standard, the future of the cannabis lab industry and certifications for food safety and quality.

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Older Americans Are Flocking to Medical Marijuana

Oils, tinctures and salves — and sometimes old-fashioned buds — are increasingly common in seniors' homes. Doctors warn that popularity has outstripped scientific evidence.

REPOST: Paula Span / New York Times / December 7, 2018

Shari Horne broke her toes a decade ago, and after surgery, "I have plates and pins and screws in my feet, and they get achy at times," she said.

So Ms. Horne, 66, applies a salve containing cannabidiol, derived from the cannabis, or marijuana, plant. It eases the pain.

The salve didn't help when she developed bursitis in her shoulder, but a tincture of cannabidiol mixed with T.H.C., the psychoactive ingredient in cannabis, provided relief.

Using a pipe, she also smokes "a few hits" of a cannabis brand called Blue Dream after dinner, because "I think relaxing is healthy for you."

Many of her neighbors in Laguna Woods, Calif., a community of mostly older adults in Orange County, where she serves on the City Council, have developed similar routines.

"People in their 80s and 90s, even retired Air Force colonels, are finding such relief" with cannabis, said Ms. Horne.

"Almost everybody I know is using it in one form or another" — including her husband Hal, 68, a retired insurance broker, who says it helps him sleep.

In fact, so many Laguna Woods seniors use medical cannabis — for ailments ranging from arthritis and diabetes nerve pain to back injuries and insomnia — that the local dispensary, Bud and Bloom, charters a free bus to bring residents to its Santa Ana location to stock up on supplies. Along with a catered lunch, the bus riders get a seniors discount.

Physicians who treat older adults expect their cannabis use to increase as the number of states legalizing medical marijuana keeps growing. After the midterm elections, when Utah and Missouri voters approved medical use, 33 states and the District of Columbia have legalized medical marijuana, along with ten states that also have legalized recreational use.

Though the federal government still outlaws cannabis, classified as a Schedule I drug along with heroin (meaning that it has no therapeutic value), public support has swung sharply in favor of legalization, polls have found.

That support may rise as the baby boomers, often no strangers to marijuana, succeed their more leery parents as the oldest cohort. People aged 50 to 64 are more likely to report recent marijuana usethan their elders.

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Shari Horne, at home in Laguna Woods, Calif., with her cat, Lilah, takes medical marijuana products for pain relief.CreditCreditRozette Rago for The New York Times

"You might not like it," Dr. David Casarett, chief of palliative care at Duke University Medical Center, tells fellow physicians. "You might not believe in it. But your patients are using this stuff."

He and Dr. Joshua Briscoe, a psychiatrist at Duke also trained in palliative care, have mixed feelings about that.

Co-authors of a recent article on medical marijuana and older adults in the Journal of the American Geriatrics Society, they support legalization for medical use.

They hope the federal government will reclassify cannabis ("a huge undertaking," Dr. Briscoe admitted), reducing obstacles to much-needed research.

"We're always searching for a better medication that can treat pain and a host of other symptoms without burdensome side effects, and cannabis is promising" as a treatment for a number of conditions, Dr. Briscoe said.

Their overview — along with a major report last year from the National Academies of Sciences, Engineering and Medicine — points out disorders for which cannabis does appear to have therapeutic effects.

But the researchers are uneasy about the fact that older people essentially are undertaking self-treatment, with scant guidance from medical professionals.

Cannabis consumers face a confusing array of options, including various strains and brands and many methods of ingestion: smoking, vaping, tinctures, edibles, topical creams or patches. Users can also experience potentially harmful side effects.

When Joy Kavianian, 55, a Laguna Woods resident with Parkinson's disease, wanted to reduce her right-side tremors so that she could continue making ceramics, a cherished pursuit, she had lots of questions about cannabis.

"I didn't know how this would mix with my other meds," she said. "How would it affect my sleep? The only answer was to slowly introduce it and see."

She has learned that a tincture, placed under her tongue about 40 minutes before she heads to the art studio, gives her four hours in which to work effectively. But that discovery took weeks of trial and error.

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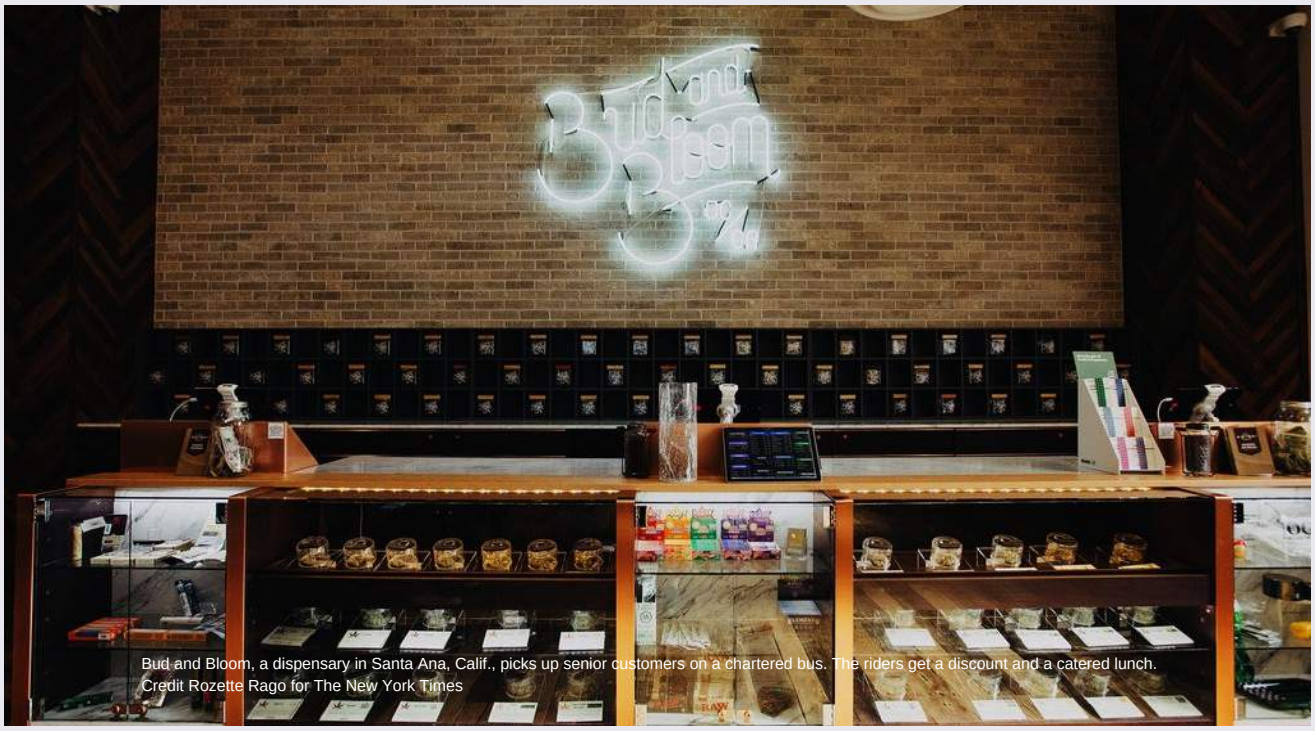

Bud and Bloom, a dispensary in Santa Ana, Calif., picks up senior customers on a chartered bus. The riders get a discount and a catered lunch. Credit Rozette Rago for The New York Times

"The social support and legislation is outpacing the research," Dr. Briscoe said. "If I want to say, 'Take this dose for this condition and that dose for that one' — the evidence just isn't there."

For older people, what does the still-limited evidence show?

The strongest case, Dr. Casarett said, is that cannabis can reduce neuropathic pain, sometimes caused by diabetes, shingles or chemotherapy, without the toxic effects of opioids.

Studies have also shown that cannabis alleviates the nausea and vomiting that often follows chemotherapy. In fact, the Food and Drug Administration has approved two synthetic T.H.C. drugs for that purpose, though some patients insist that smoking the real thing works better.

Cannabis appears to relieve muscle spasms in people with multiple sclerosis, though that research is less extensive, and to improve appetite for patients with cancer or AIDS, Dr. Briscoe said.

"Plenty of patients swear it's the only thing that helps them sleep," he added.

But while drowsiness often accompanies cannabis use, the evidence that it reliably improves sleep remains modest. Its effects on anxiety and depression are also unclear.

And like any drug, cannabis has side effects, some of particular concern for older users, who metabolize medications differently from younger adults. Dizziness, for instance, can lead to injurious falls.

Marijuana use is also associated with an increased risk of motor vehicle accidents, so Dr. Casarett and Dr. Briscoe advise counseling older patients not to drive for six to nine hours after use, depending on ingestion method.

Moreover, "the jury is very much out about long-term cognitive effects in adults," Dr. Casarett said. But there's no evidence that medical marijuana users are at increased risk of abusing the drug.

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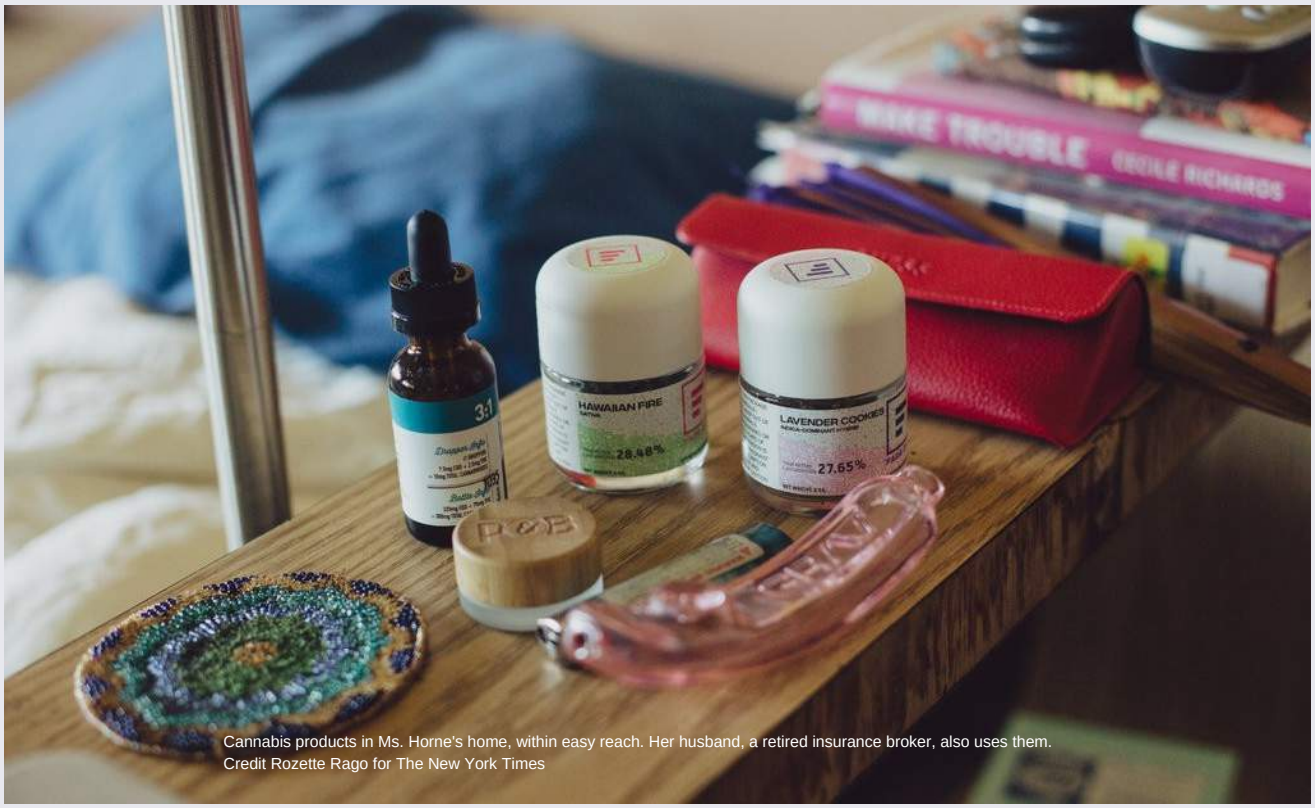

Cannabis products in Ms. Horne's home, within easy reach. Her husband, a retired insurance broker, also uses them.
Credit Rozette Rago for The New York Times

Y. Tony Yang, a health services and policy researcher at George Washington University, recently predicted in a JAMA Neurology editorial that a June decision by the F.D.A. will have far-reaching consequences.

The agency approved Epidiolex, the first C.B.D. prescription drug to be legally sold in the United States, for reducing seizures in rare adolescent forms of epilepsy.

"A doctor can now prescribe this off-label for other uses, which is legal and common," Dr. Yang said. "And on the research side, this could pave the way for controlled clinical trials for other purposes."

Insurers may balk at covering off-label use, he conceded. Medicare, for instance, doesn't cover medical cannabis, and it won't cover drugs used off-label.

The bus riders from Laguna Woods often pay $100 to $200 a month out of pocket for cannabis products, a financial struggle for some.

But riders like Catherine McCormick, who's 53, find it a worthwhile expenditure. To lessen pain after knee replacement surgery, she was relying on high doses of ibuprofen, "too much wine" and several prescription drugs, including oxycodone, benzodiazepines and an antidepressant.

She weaned herself from them all in a few months, she said, by smoking cannabis. That's made her a believer.

"I have more energy. I can walk," she said. "I'm not in pain. I feel so much better."

Exploring Cannabis and Women's Health With Dr. Mary Clifton

REPOST: Rae Lland / Leafly / December 12, 2018

A new study by a researcher at Harvard is tackling the subject of cannabis' medicinal properties for menstrual pain. The study is pairing with cannabis brand Foria, and will observe the effects of Foria's cannabis suppositories on 400 women over several months.

It is the first study of its kind, and researchers hope that it will pave the way to clinical trials in the future. To learn more about this fascinating topic, we caught up with researcher and author, Dr. Mary Clifton, an expert in cannabis and CBD medicine.

She's also a licensed New York State medical marijuana provider.Dr. Clifton was eager to discuss the topic of cannabis for menstrual pain and how the study ties into a broader understanding of research around women's health.

Leafly: What makes cannabis a suitable choice for treating menstrual pain?

Dr. Mary Clifton: Cannabis has been used for thousands of years for all kinds of chronic pain syndromes. We think that most of the pain coming from menstrual cramping is related to prostaglandin production, through the breakdown of unhealthy fats. When you take a Motrin, that's very effective at blocking the breakdown, but we know from endocannabinoid data that when there is an area of pain or cramping, the body is going to automatically ramp up the CB receptors in that area.

So, [the receptors are] waiting for endocannabinoids to modulate the inflammation and the pain response. For patients who are experiencing that localized pain, the supplemental THC or CBD cannabidiol and medical marijuana or CBD oil would be beneficial for helping to modulate the localized pain; either taken orally or internationally. A lot of my patients get nice results with intravaginal administration, with CBD.

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Speaking of such, the Harvard study says they are exclusively using suppositories. What are your thoughts on that?

DC: I think the Harvard study is using an intravaginal suppository. I think everybody's trying to come up with a novel mode of delivery or a special way that you can use the product. But I don't think we have to wait for a suppository that is specifically designed for intravaginal use. There really shouldn't be any limitations or any serious risks to just using CBD oil topically yourself; you should be able to get that local absorption.

Would smoking or vaporizing be as effective?

DC: The topical balms and ointments probably have some value in terms of reducing pain, reducing inflammation, but there's various issues with absorbing across the skin surface that are eliminated when you inhale or ingest something, so I think getting a more rapid onset of administration and having more reliable dosing using a tincture or a vape is going to give you a very reliable onset of action. The vape almost instantly [has an onset of action] and the tinctures—if they're held in your mouth—[have an onset] between around eight minutes and in some cases quite a bit shorter.

Do you think the results of this Harvard study will help normalize cannabis which will make more doctors feel open to talking about it?

DC: Well, I think it's a matter of comfort level and training. The reality is that our training is really solidly in western medicine. So, you know, asking a western medical doctor to give you recommendations about yoga or chiropractic work or even something as simple as dentistry—it's really out of our range.

You really do need to seek out a doctor who's taken the time to train themselves or have a coach; we designed a coaching program that allows doctors to get trained in cannabis, and have all of the data and research that I've reviewed as well as weekly access to me. As long as you have somebody who's been properly trained, I don't think they necessarily need to be a western medical doctor. There are all kinds of documentation in literature of a chronic kidney stone getting misdiagnosed as menstrual pain or endometriosis. So, before you self-diagnose and move to treatment, it's wise to have a medical doctor take a really good look and think really hard about chronic pelvic pain to make sure that we're not heading in the wrong direction with your care.

What would you say to people who are skeptical about whether menstrual pain is worthy of medical cannabis?

DC: There's definitely value. Prostaglandin are breakdown products of arachidonic acid. So, when you take a Mortin you block that breakdown of arachidonic acid to prostaglandin and so it isn't terribly responsive to narcotic pain management.

It's not a new receptor, a modifiable situation, it's not something where taking a narcotic is going to give a lot of relief. Motrin only goes so far for people. It's not as though we can escalate the treatment in the standard Western model of adding a narco, a Vicodin, or morphine because it just doesn't work.

A lot of people take a Motrin and they're still in a lot of pain, and a lot of people are alleviating the pain with CBD or cannabis which is really interesting.

Would you say CBD is more effective than THC when it comes to menstrual pain?

DC: I think that's individually variable. I think many of my patients start with a CBD product and then transitioned to THC products for pain management if they get a better result that way. Some patients really seem to appreciate that entourage effect of multiple cannabidiol.

This Harvard study seems pretty unique, would you say that, overall studies, concerning women's health tend to be less common?

DC: We practice OB and pediatrics kind of like an old wives' tale. It's hard to get informed consent from a child because they obviously can't provide informed consent. So we're operating from a lot of population-based data where we treated a thousand kids and here's what happened to them. And the same is true of women, because everybody is so afraid that the woman is going to become pregnant or that they're going to negatively impact an unborn baby—so there's super limited data.

But that's changing now. It is required to provide a broad range of people in studies instead of just men. I mean, there's a lot of racial profiling that also goes on in medical research where people are avoiding [certain ethnicities] to try to make the study cleaner. I think as we go forward, we'll have more data, and as cannabis used more recreationally, we will be able to see [results].

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I think as we go forward, we'll have more data, and as cannabis used more recreationally, we will be able to see [results]. For example, with thalidomide, we saw the flipper armsright away and people put the ideas together. I mean, we've been using this product for 1,000 years for various reasons, and really have not been able to see a trend of serious birth defects or other issues. I find that very reassuring.

Do you have any advice for women talking to their OBGYNs about cannabis?

DC: I think the risk is low and the benefit is substantial, so it's probably a reasonable thing to bring up with your OB and just let them know that you're trying [cannabis] as a supplement. I guess it would depend on the doctor that you're working with. Some doctors are going to be more sensitive to the use of non-prescribed medicines than others.

Would you say the benefits include not only being honest with your doctor, but also helping to normalize medicinal cannabis use?

DC: Yeah, that's great. I think that the more that we talk about it, the more it's taken seriously. I just don't think that anybody knows the research—we don't have it presented to us, then we don't learn about it, then we don't understand that there's pretty good research now.

Tons of preclinical research–like animal models and a good understanding of how the drug works exists, but there's also plenty of clinical research where patients have been studied and seeing reduction in pain and reduction in opioid use. So, it's time to move it into the mainstream.

Can Cannabis Treat, Or Even Prevent Diabetes?

Diabetes is one of the most prevalent, and hard to treat, diseases today.

REPOST: Andre Bourque / Forbes / December 5, 2018

Cannabis May Have a Lot to Offer Diabetes Sufferers. PIXABAY.COM

The legalization of recreational marijuana has dominated the news, recently, but medical marijuana research continues to advance apace. Earlier this year, the FDA approved the first prescription drug derived from cannabis to treat epilepsy.

This approval marks a watershed moment for legitimizing the active ingredients of medical marijuana as a viable treatment for diseases, even though marijuana advocates have been promoting myriad treatment possibilities for decades.

One of the most promising—and pressing—areas of research has to do with the effects of medical marijuana on people with diabetes.

Millions of people suffering from the disease are looking for relief from both the symptoms and the high costs healthcare associated with treating the disease.

Diabetes is one of the most prevalent, and hard to treat, diseases today. According to the Center for Disease Control (CDC), over 100 million U.S. adults are now living with diabetes or prediabetes. Worldwide, it is estimated that 8.5% of adults have diabetes, up from 4.7% in 1980.

Besides contributing to early deaths, diabetes is also a "major cause of blindness, kidney failure, heart attacks, stroke, and lower limb amputation."

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The disease not only has a profound effect on the people diagnosed with it. Increasingly, the costs of treating the disease are placing a strain on individuals and the U.S. healthcare system.

According to the American Diabetes Association, in 2017 the total estimated cost of diagnosed diabetes was $327 billion--$90 billion of which was attributed to reduced productivity.

A staggering 1 in 4 health care dollars in the U.S. were spent on people diagnosed with diabetes.

Diabetes is deadly, debilitating, and costly. There is a dire need for solutions to help prevent the disease and treat the myriad symptoms without the inflated costs associated with the U.S. healthcare and pharmaceutical industries.

Diabetes is a complicated disease, and the causes of both Type 1 and Type 2are not well understood. Though the causes are murky, how the disease affects the body is well known.

Both forms of the disease stem from irregularities with the body's ability to produce and regulate insulin—a hormone created by the pancreas that allows your body to process sugar. As the disease progresses, many people may need to supplement their insulin or go on expensive insulin replacement therapy.

For people with diabetes, it is critical to manage blood-glucose levels and manage the associated symptoms of the disease to avoid the worst outcomes, including vision loss, kidney damage, and limb amputations.

For the most part, research investigating the relationship between marijuana use and diabetes has shown promising results, but a lack of large-scale testing showing definitive correlations between diabetes treatment and marijuana still needs to be undertaken. Of the studies conducted, they fall into two categories: prevention and treatment. The correlation between marijuana and diabetes prevention is largely inconclusive.

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A 2012 study published in BMJ Open found a 58% reduced risk of developing diabetes associated with marijuana use. A larger 2016 study published in the Journal of Diabetes Research found no correlation between cannabis use and diabetes.

However, according to The Diabetes Council, the correlation between marijuana and the treatment of the symptoms of Type 1 and Type 2 diabetes, as well as pre-diabetes, may lie in anti-inflammatory capabilities of cannabinoids.

According to cannabisMD.com, research that has been conducted has implied that the use of cannabis may help with stabilizing blood sugars, preventing nerve inflammation, lowering blood pressure over time, keeping blood vessels opened and improving circulation.

Research has also found that cannabinoids may be more effective than existing diabetes medication. For people with Type 1 diabetes, The Diabetes Council research has found that CBD can reduce the occurrence and delay the onset of the disease.

Furthermore, the THC enzyme has been found to suppress the autoimmune response of the disease, reducing the amount of insulin needed during treatment. And, CBD may also help reduce insulin resistance, the crucial mechanism that causes the disease to progress.

More broadly, the anti-inflammatory properties of marijuana may be critical to helping treat the secondary symptoms of the disease, including heart problems, pain, and eye issues.

Research from the American Alliance for Medical Cannabis (AAMC) found other benefits from cannabis use on secondary symptoms, including:

- A “neuroprotective” effect that can reduce nerve pain
- “Anti-spasmodic agents” that can relieve GI cramping and pain
- A “vasodilator” effect that can improve circulation
- Calming of diabetic “restless leg syndrome” that can help people sleep better

Marijuana should not be seen as a cure-all, but it does offer a potentially safer—and less expensive—way to treat and manage the disease.

The anecdotal success of marijuana as a treatment for diabetes and the promising initial scientific findings certainly warrants further, and more serious study into the correlation.

The U.N.'s health agency recently announced that it was postponing its high-anticipated cannabis rescheduling reveal, as it has yet to complete a thorough review of all the evidence collected during its investigation.Zephyr18 / iStock / Getty Images Plus

World Health Organization Postpones International Scheduling of Cannabis

REPOST: MIKE ADAMS / THE FRESH TOAST / DECEMBER 12, 2018

There was hope that the World Health Organization (WHO) would come forward before the end of the year with a recommendation for amending the dangerous drug classification of the cannabis plant within the confines of the international drug treaties, but that seems unlikely at this juncture.

The U.N.'s health agency recently announced that it was postponing its high-anticipated cannabis rescheduling reveal, as it has yet to complete a thorough review of all the evidence collected during its investigation.

Earlier this year, WHO said it was compiling information on the cannabis plant, including scientific data, the thoughts of global governments and public testimony, in an attempt to reevaluate whether cannabis belongs the same ranks as other Schedule I drugs.

The agency was expected to have a report ready to go by sometime in early December – presenting it at the latest Commission on Narcotic Drugs in Vienna — but WHO now says it needs more time before it can appraise the situation.

The agency's indecision has cannabis advocates in a state of discontent. Many representatives of global governments showed up last week expecting to perhaps bear witness to a historic day in the realm of international cannabis reform. But little did they know the agency would brush off the issue until a later time.

This has many concerned because they say WHO's inaction could cause a dust-up in March 2019 when member states are expected to take up a vote on the marijuana issue. They feel countries need time to review the recommendations before making a final vote.

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"The fact that the recommendations weren't made today as expected could mean that when the time comes to decide what to do with the recommendations in March, it will be easier for certain countries to argue that they didn't have enough time to review the inputs to have a position, possibly delaying the process once again," Bruno Javier Faraone Machado, permanent representative of Uruguay to the United Nations told *Marijuana Business Daily*.

There is no doubt the U.N. is feeling pressure to make some changes to its drug policy. In October, the International Drug Consortium released a report calling the UN's drug war a "spectacular failure of policy." It found that marijuana is the leading drug of choice when it comes to illicit trafficking and use.

Many believed the IDPC report combined with the fact that countries like Uruguay and Canada, as well as a growing number of American states, have legalized cannabis for recreational consumption, would be a catalyst to downgrading cannabis within the boundaries of international law. And it still could.

Over the summer, WHO published a report saying that marijuana was a "relatively safe drug" that causes no significant health issues.

The agency has yet to say when it is expected to complete its review.

This Alcohol Industry Association Wants Cannabis Prohibition to End

REPOST: MEKITA RIVAS / HIGH TIMES / DECEMBER 13, 2018

A major player in the alcohol world is backing marijuana legalization, and it's not shying away from sharing its position with those in power. The Wine and Spirits Wholesalers of America (WSWA) recently participated in a briefing on Capitol Hill to reiterate its stance that the feds should allow states to make their own decisions when it comes to legalization.

According to Marijuana Moment, WSWA "became the first major alcohol association to call for the end of federal cannabis prohibition" last July. Now, five months later, the organization has reportedly suggested to lawmakers that regulations similar to those already in place within the alcohol industry could also be created and implemented for legal marijuana.

A photo of a handout from the meeting, which was provided to Marijuana Moment, presented an outline for the group's ideal "regulatory structure."

"When a state legalizes adult use of cannabis and establishes an acceptable level of regulation, the federal government should allow that market to function and give equitable treatment to businesses that operate within it," reads the handout. "The regulatory structure should ensure product safety, discourage underage access, create an effective tax collection regime, and encourage innovation and choice for consumers, while at the same time eliminating diversion of cannabis to other states."

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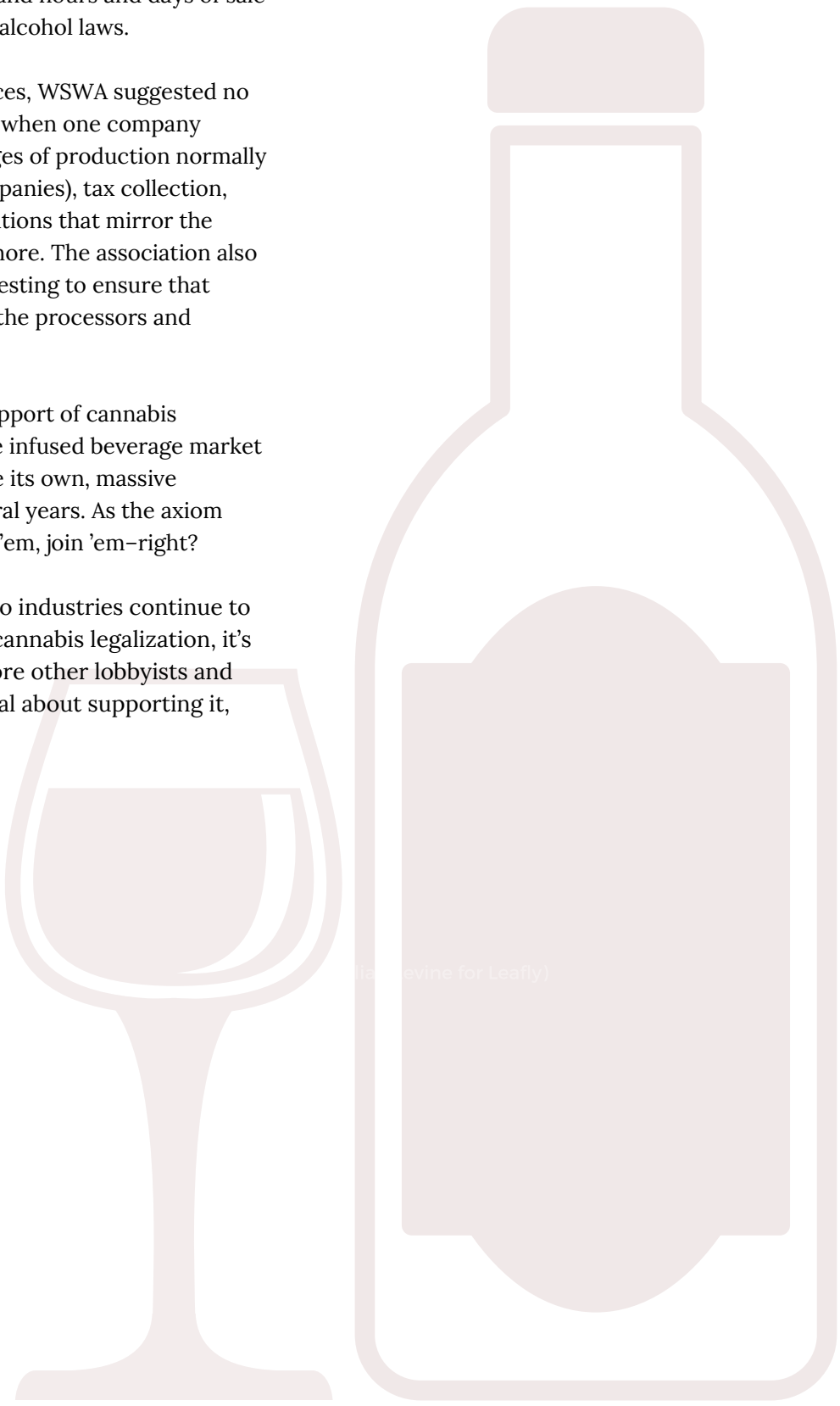
Among the group's list of recommended public safety regulations are an age requirement of 21-years, impaired driving standards, restrictions on common carrier delivery, and hours and days of sale that are the same as state alcohol laws.

Regarding industry practices, WSWA suggested no vertical integration (that's when one company oversees two or more stages of production normally operated by different companies), tax collection, penalties for licensee violations that mirror the state's alcohol code, and more. The association also called for quality control testing to ensure that products are traceable to the processors and producers.

Big Alcohol's newfound support of cannabis shouldn't be shocking. The infused beverage market is hypothesized to become its own, massive subgenre in the next several years. As the axiom goes: when you can't beat 'em, join 'em–right?

As the alcohol and tobacco industries continue to wake up to the reality of cannabis legalization, it's only a matter of time before other lobbyists and corporations become vocal about supporting it, too.



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