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Chair

Mr. Neil Ellis

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● (1550)

[*English*]

The Chair (Mr. Neil Ellis (Bay of Quinte, Lib.)): I'd like to start the meeting. Pursuant to Standing Order 108(2), we are conducting a study on medical cannabis and veterans' well-being.

Today, as individuals, we have Dr. Zach Walsh, associate professor, University of British Columbia; Dr. Marcel Bonn-Miller, Perelman School of Medicine, University of Pennsylvania; Max Gaboriault from Courtney, British Columbia; and Dr. Celeste Thirlwell, director, Sleep Wake Awareness Program.

We'll start with Dr. Marcel Bonn-Miller.

Doctor, the floor is open to you. Thank you.

Dr. Marcel Bonn-Miller (Perelman School of Medicine, University of Pennsylvania, As an Individual):

Just so I understand the parameters here, do I make a 10-minute statement?

The Chair: You have up to 10 minutes for an opening statement, and everybody will have up to 10 minutes. Then we'll open the floor to questions.

You have to leave around 5 p.m., don't you?

Dr. Marcel Bonn-Miller: Yes, that's why I was hoping to be at the earlier end of things. Thank you for accommodating me.

The Chair: I'll tell the committee that, if they have any questions for you, we'll get them to you before 5 p.m.

Thank you. The floor is yours.

Dr. Marcel Bonn-Miller: Thank you.

In terms of background, I've been a cannabinoid researcher for over 15 years: at the Department of Veterans Affairs in Palo Alto in the United States for almost 10 years, and at Stanford University as well as the University of Pennsylvania. I have pioneered a lot of the clinical research on PTSD and cannabinoids in this space. I've seen it evolve quite a bit over time.

I think that where we are in the literature right now and in our understanding has evolved a bit over the past five years or so. We're getting emerging findings and a number of reviews that have come out over the past two to three years and that really lay out where our knowledge base is.

Still, the majority of work that has been done on cannabinoids and PTSD has focused on specific symptoms or specific mechanisms, and primarily from a preclinical side in looking at research on rats and things like that. That's been on one side in terms of the administration of cannabinoids. On the other side, it's been observational work: asking veterans with PTSD what they use and what symptoms it helps with.

The middle part in this space, those clinical trials where we're actually administering cannabinoids to humans or veterans with PTSD and trying to understand if there are certain cannabinoids that may be more or less beneficial for individuals, is only recently coming to a head. We are just finishing and will be soon publishing the results of the first large-scale phase two randomized controlled trial of cannabinoids for veterans with PTSD.

In that trial, we looked at both THC and CBD, as well as a one-to-one combination of both relative to placebos. That's at the forefront of what has gone on and what's going on in the clinical space from a trial administration. A few studies have gone on over the past few years with very small samples, some placebo controlled, which have shown that THC or nabilone, an analog of THC, can be helpful for nightmares for veterans with PTSD. Aside from those few studies, really—and again, small samples—there hasn't been a whole lot of human work in this area in the form of clinical trials, which is really our gold standard in terms of understanding the benefits and harms associated with cannabinoids.

I think what we really do know is that THC.... I'll step back and say that as we talk about cannabinoids in this space and try to ask if cannabis is good or bad for veterans with PTSD or individuals with PTSD more broadly, it's really important to understand that cannabis is such a heterogeneous drug that it varies a lot depending on what you get in terms of what we're talking about. A lot of the research is really focused on trying to understand the individual effects of certain cannabinoids within the plant so that it can help for recommendations in certain areas. Saying that cannabis in and of itself is helpful or harmful is a kind of misnomer and is really difficult in terms of actual pragmatic medical advice.

Really, we know that THC, like I said, can be helpful for nightmares. It appears to be helpful at only low doses for anxiety. At higher doses, it can actually increase anxiety. It doesn't seem to be that helpful for depression. In fact, it may exacerbate depression over time. Most importantly, on a consequences standpoint, THC has been associated with withdrawal, tolerance and craving. This is a substance that, particularly at high doses, can lead to addiction, and that's an important caveat when we start talking about THC.

On the flip side, CBD, or cannabidiol, doesn't have that addiction potential and can be administered at high doses, and we're only really starting to understand its benefits. It appears to have help for sleep. Preclinical and animal models show that it may be helpful for depression, though we really need to scratch the surface a little bit more on that, and it can help with inflammation, which really ties into traumatic brain injury and other things that co-occur and may be causal for PTSD in some forms.

Then there are combinations of those, too, and that's really where the literature is at this point. I couldn't stress enough how important it is to dig beyond cannabis—because in the field right now it's relatively meaningless—and talk about what compositions of cannabis and cannabinoids we're talking about, because they can have very different effects. Like I said, THC and CBD are an example of complete opposite effects for anxiety.

● (1555)

Broadly speaking, high doses of THC can cause panic and theoretically can lead to worsening of PTSD symptoms. CBD has an opposite effect. Really understanding its composition is helpful. From a clinical trial perspective, we're also going to know a lot more over the coming months with the results from our trial and from other studies that are out there. We're also doing a prospective, 12-month study where we're looking at what individuals are choosing to use at dispensaries and the impact of that over time on PTSD symptoms.

Then there's a U.S. study that's about to start up in San Diego, which is going to look at CBD as an adjunct to prolonged exposure, really looking at our existing behavioural treatments—prolonged exposure being one of the top treatments for PTSD from a behavioural standpoint—and at whether CBD could help increase the efficacy of that treatment. A bunch of work has shown that it may actually speed up recovery—in animal models and early clinical models at least—for extinction, which is one of the bases of treatment for PTSD.

That's the broad sketch. That study's going to be starting up within the Department of Veterans Affairs in San Diego, probably this spring. That's the forefront. There are a lot of other things that are going on. Tilray is conducting a study. Zach's there and will speak to that a bit. It's an extension of the study we're just finishing up in the United States.

There are other folks who are using early human models and experimental models to test different components of cannabinoids and how they interact with different aspects of PTSD. What we really need to move for though, and what we're starting to see with our trial and other trials coming up, are those phase two and phase three clinical trials where we randomize individuals to certain cannabinoid preparations and placebos and look at the impact of symptoms over time. We're starting to get that. We'll have results, as I said, in the early half of this year, and as other studies are completed we'll have more data in that area.

That's the general overview. I know Canada has been looking at funding or potentially funding other areas in this space, and I think that's important. Right now a lot of the funding is coming from state grants within the United States. The Colorado Department of Public Health and Environment has funded some of these studies. From a corporation standpoint, Tilray is funding some of these studies. Also, the one in San Diego is the first study that the United States Department of Veterans Affairs has ever funded on cannabinoid administration, so applaud them and applaud the State of Colorado and Tilray for pursuing this. Really, the costs of these studies are great. Aside from granting mechanisms, it's pharmaceutical companies and cannabinoid companies that really need to be funding this work.

We need more government resources to do more phase two and phase three trials. That's really the crux of this, because right now I think we can say that certain take-home cannabinoids seem to have a decent likelihood of helping individuals with PTSD, but we have to be aware of the consequences associated with some, like THC. Whether it's CBD, whether it's a combination of THC and CBD or whether it's THC at low doses needs to get figured out, as does the concurrent use of prescription medications like opioids in this population and how those interact with cannabinoids and could potentially be used from a therapeutic standpoint.

That may leave you with more questions than answers, but that's the lay of the land in terms of the research in this space and what's been published. Again, I'd be happy to pass along or send citations for a lot of the reviews that lay this out and have been published in the past few years.

● (1600)

The Chair: Great, thank you.

Next is Mr. Gaboriault.

Max, the floor is yours.

Mr. Max Gaboriault (As an Individual): I'm not as eloquent as the previous speaker. I'll just give you a quick history about me.

By the way, I have a speech impairment, so I might stop talking at any time.

I'm a 13-year veteran of the Canadian Armed Forces. I was in the signal corps. I was deployed in 2006 in Afghanistan for the first rotation of nine months. I was working for General Fraser. It was a very hard tour, as you guys already know. We lost a lot of people. I lost three friends at once.

My main role while I was in Afghanistan was as a bodyguard for journalists, and also electronic countermeasures, ECM, in G-wagons. For people who don't know what ECM means, essentially I jam the signals for bombs that I don't see, and hopefully never will, and protect in a magnetic field everybody who's within that cordon. It's a lot of stress, and obviously, I had many other roles.

I think I did send a story about that for you guys to review. I have no memory anymore.

Having said that, when I came back, six months later I started showing signs of extreme aggressiveness. When I say extreme, I mean extreme. At first I tossed it off as being a war-hardened veteran, and the young troops weren't just cutting it. By the way, I trained most of the following rotations out of Edmonton, with combat first aid, first aid and all the drills to keep you alive overseas.

Having said that, after a while I dodged many insubordinations and things like that, and I took it upon myself to start looking into it. There was really nothing in 2006, so I was not really guided properly. Meanwhile, to make a long story short, I got posted to Comox, B.C., in a non-traditional war role, because that's all I know. I sought help at the mental health clinic and got diagnosed with a generalized anxiety disorder or PTSD or whatever you want to call it. Essentially, it's just a big umbrella; it depends on the doctor and what they think is right.

In PTSD the D is wrong. It should be an I. It's an injury; it is not a disorder. You can progress to function at a certain level. I'm far beyond that, but I don't want to advance any claims on that right now, as I'm getting medical support.

I was put on a regimen of pills by the army, because with all that I was still serving, which affected my ability to work and remember. Anything that had to do with my personal life was completely destroyed. At some point I approached the doctor and said that I couldn't remember anything. I couldn't function properly. I couldn't take care of my kids. My wife was beyond frustrated with me. I needed something else. They put me on this anti-psychotic pill called quetiapine. I took half of the lowest dose for a week and I started stuttering really heavily. That's why I have a speech impairment. The other uncommon side effect was death. My wife and I made the decision that I would quit pretty much all pharmaceuticals right then and there, because they were killing me.

● (1605)

I managed about three years with teas and the best wishes from my wife to support me in any way, shape or form, until I was introduced by other veterans to cannabis. That was three years ago.

Since then, I haven't taken any pharmaceuticals. As you can imagine, my opinion of pharmaceuticals is pretty darn low. Obviously, the normal pills that we take every day are all right, but anything else, for what I'm dealing with, is completely and utterly useless.

I started using cannabis. It's a steep learning curve. There is no real guidance. I obtain it from a licensed producer. The implementation was pretty painless. I've been on a regimen of seven grams a day for the last three years.

I don't smoke; I ingest oil, as it is the healthiest alternative, through the body. I also learned how to make my own medication and play with the THC and the CBD, the combinations and the different strengths. Some are better than others for different effects. It's all trial and error. What works for me might not work for somebody else.

Right now I use sativa during the day and I use indica at night. But it's not how I started. I started with CBD, until the CBD wasn't working. I'm categorized as a severe case. I have 66% awarded from Veterans Affairs.

Having said that, I have a lot of benefits from it. I'm actually more patient with my kids. I actually can function and remember what I have to do within my arcs. I have immense support from my wife, because I can't remember anything due to my brain. It changed my life completely. I can actually go out in public.

I cannot work; I'm fully retired. I did try, but at the time I was not medicated. That was in those buffering years, just after I retired. I see tremendous.... I have joint pain. I have ligament pain. Name a pain and I probably have it. Just like guys who have been blown up and things like that....

Other than that, that's pretty much.... For me, I don't know what I'm walking into in this committee. I was told absolutely nothing, other than that it was on cannabis. I'm willing to answer any of your questions.

So, that's me.

● (1610)

The Chair: Thank you.

Mr. Walsh.

Dr. Zach Walsh (Associate Professor, University of British Columbia, As an Individual): Good afternoon, and thank you for inviting me to present. It's a real privilege.

In terms of background, I'm a researcher in cannabis and mental health and a tenured psychology professor at the University of British Columbia where I study issues related to the use of substances. My focus for the past several years has been on cannabis use, both medical and non-medical, and its effects on mental health. I am currently funded by the Canadian Institutes of Health Research and the Social Sciences and Humanities Research Council of Canada to examine the consequences of cannabis use and legalization on the health and well-being of adults. My past work has included some of the largest surveys of medical cannabis users in Canada and an extensive review of the impact of medical cannabis use on mental health. I also lead an ongoing randomized control trial of cannabis for PTSD, which together with a parallel study in the U. S. will be the first to evaluate this treatment. Dr. Bonn-Miller has talked about the parallel study in the U.S.

I'm also a clinical psychologist. As a clinician I've had the opportunity to work with individuals who struggle with the aftermath of trauma. I've worked in the VA hospital in the U.S. and I currently supervise graduate student trainees in the assessment of PTSD. My testimony today is going to draw primarily on my own research and knowledge of the empirical literature on cannabis and PTSD, but is also going to be informed by my first-hand experience in working with individuals who use cannabis to treat PTSD. I want to focus my comments on the stated aims of the committee.

To start off, with regard to the experience and opinions of veterans who have used cannabis for medical purposes, and their family members, I think the reports that we just heard in the previous testimony really speak volumes and I hear many reports in a similar vein. Also consistent with what Dr. Bonn-Miller was saying, the evidence for the effectiveness of cannabis for PTSD is sometimes characterized as not strong, primarily in referring to the lack of randomized controlled trials, RCTs, testing cannabis for PTSD. I agree that such trials will add to our confidence in how best to use, or not use, cannabis for PTSD, and that's why we're currently undertaking that type of research.

However, despite the lack of RCT evidence I do think there is reason to be hopeful regarding the potential for cannabis medicines to help improve the lives of individuals with PTSD. Human studies that are not RCTs deserve attention and Dr. Bonn-Miller's testimony pointed to some of the key features in those studies showing differences in the naturally occurring cannabis system, the endocannabinoid system, of individuals with PTSD, suggesting that alterations in that system might explain the high rates of cannabis use among PTSD patients and certainly point to an important role of that system in the pathology of PTSD. There's converging research that has confirmed an important role for the endocannabinoid system in an emotional response, learning and memory, all of which point to the potential of cannabinoid medicines that interact with those systems.

In addition to advancing brain science, we can learn a lot from patient behaviours, particularly in areas where other evidence, such as RCTs, is currently lacking. Surveys of medical cannabis users identify high levels of use to treat PTSD, and retrospective studies, although methodologically limited, have found that medical cannabis patients report substantial reductions in PTSD symptoms after the uptake of medical cannabis use. Studies also highlight cannabis use helping with sleep and coping with the anxiety that is part of PTSD. Sleep disturbance often emerges as one of the most debilitating PTSD symptoms, and it's one for which there's evidence it may respond to cannabis therapies. Restorative sleep is, of course, key to health and well-being and when it's disrupted, other aspects of health, mental and physical, rapidly deteriorate.

I have spoken with many individuals who use cannabis for PTSD who report going from sleeping in only brief stretches interrupted by terrible nightmares to having their first restful sleep in years after initiating cannabis therapies. As Dr. Bonn-Miller reported, among the benefits of cannabis in PTSD related to sleep disturbance, synthetic cannabinoids have demonstrated good effects in reducing nightmares and improving sleep amongst PTSD patients. I think our experience in Canada and also in the U.S. over the past few years also speaks to the therapeutic potential of cannabis for PTSD. The dramatic increase in enrolment by veterans in the ACMPR and in the preceding programs has caused concern in some quarters, but it's also what we might expect to see from the introduction of an effective treatment: slow and steady increases at first and then a tipping point caused by positive word of mouth leading to exponential growth in uptake.

● (1615)

Of course, patient self-reported efficacy and treatment uptake are not the gold standard for determining the effectiveness of a medication. However, the devastating consequences of untreated PTSD and the limitations of existing treatments make it essential that all promising avenues are explored. Cannabis must be compared to existing options, not to a hypothetical gold standard. With regard to exceptions from the three grams a day maximum, it is true that the quantities of cannabis being used by some veterans may appear excessive, but perhaps no more so than the combinations of prescription medications that are also used to address PTSD as an alternative. For many, the side effects of cannabis are well tolerated compared to those of the antidepressants, sedatives, antipsychotics and other medications, which have side effects such as weight gain, impotence, memory loss and lethargy, all of which dramatically decrease quality of life. In contrast, even at high doses, cannabis is a relatively gentle medication with low toxicity. Perhaps the greatest concern is the development of cannabis dependence. However, effective use of a medication to treat symptoms of a chronic condition need not be considered disordered, and the cannabis withdrawal symptom is short-lived and relatively mild compared to the problems in withdrawing from a number of other medications that may be used for PTSD.

With regard to current research and knowledge about cannabis use for the treatment of medical conditions common among veterans, such as PTSD and pain, one benefit of cannabis therapies is the potential to treat co-occurring conditions and replace several medications. Specifically, a recent comprehensive review from the National Academies of Sciences, Engineering, and Medicine concluded that cannabis was effective for treating chronic pain in adults, which is particularly important given the high rate of opioid use disorder among individuals with PTSD—opioids often started to treat pain. Indeed, growing evidence indicates that cannabis is increasingly being used as an opioid substitute that may reduce fatal opioid overdoses. Reporting from the Globe and Mail that focused specifically on Canadian veterans supports the conclusion that cannabis is being used instead of, rather than in addition to, other medicines.

I think that's so important for understanding the potential benefits of cannabis, whether it's being used on top of or as a substitute for other medications. Research from our group found that cannabis reduced pain, but also helped patients in some cases to be more active, despite chronic pain. Given the negative effects of the isolation that plagues too many veterans with chronic pain and PTSD, the potential of cannabis to facilitate activity and social integration is important, and I look forward to therapeutic interventions that highlight that in combination with cannabis therapy.

Our review of medical cannabis and mental health found that medical cannabis patients overwhelmingly report using cannabis to reduce anxiety in addition to primary complaints of pain. The potential of cannabis to address both pain and anxiety is particularly important in the context of PTSD, given the potential lethality of combining benzodiazepine sedatives and opioid painkillers, both of which are widely used among veterans with PTSD. Cannabis also has the potential to substitute for alcohol, and cannabis may protect against domestic violence, which is also a heightened risk among people who suffer from PTSD.

With regard to the potential effects of cannabis legalization on veterans, I believe that Canada's public health approach will have a positive effect on the lives of veterans. Our research identified fear of negative judgment as an impediment to open communication with caregivers regarding cannabis use. Veterans of mental health conditions who use cannabis bear the burden of a double stigma that could be a substantial barrier to accessing medical care and engaging in frank conversation with their providers. To the extent that legalization reduces stigma, it will have a positive effect on the health of veterans. Legalization will also have a positive effect by fostering research on the development of best practices for the therapeutic use of cannabis.

I certainly agree with Dr. Bonn-Miller that we need to go beyond simply talking about cannabis to talking about how cannabis can work and how it can be integrated with other approaches.

One concern that I do have with regard to legalization involves the per se limits for driving. Veterans who use cannabis therapeutically are likely to consistently exceed the proposed nanogram limits irrespective of acute intoxication. No one should be impaired on the roads, but veterans who use their medication responsibly should not be forced to abandon driving entirely.

Finally, there are the considerations associated with access to health care practitioners to obtain medical cannabis authorization. In our study of medical cannabis users under the MMAR—that was around 2011-12—we examined the extent to which physician communication represented a barrier to access. We found evidence of substantial concern related to perceived stigmatization associated with discussing medical cannabis with a physician. Over half of respondents reported that they wanted to discuss medical cannabis with their physician, but did not feel comfortable doing so. Similarly, over 60% reported worrying about discrimination from physicians related to cannabis use. In general, many patients reported a fear that discussing cannabis with their physician might negatively impact the relationship.

● (1620)

This study also produced evidence that accessing information related to the use of cannabis as a medicine may have been problematic due to limitations with physician communication. Half of respondents reported being relatively dissatisfied with their communications with physicians related to cannabis.

We did a subsequent study under the MMPR and found that many of the obstacles under the MMAR appeared to have persisted under the MMPR at least until 2015; namely, it continued to be difficult for Canadians to find a physician to support their application, and many were charged a fee. In this study we further concluded that affordability and cost of physician evaluations may be a barrier to access for lower-income individuals.

My personal experience as a research scientist who has interacted extensively with medical cannabis patients highlights the importance of access to specific strains of cannabis. Again, this is not one medicine but perhaps many, and we still have a lot of research to do to figure out the distinctions amongst types of cannabis and constituents of cannabis. However, this experience highlights the barriers to accessing specific strains from a specific licensed producer based on substantial variability and product availability. Access to licensed producers is limited by physician communication, and as such, many patients will have access to only a single licensed producer who may not have the desired strain that may be most effective at a given time.

Thank you.

The Chair: Thank you.

Ms. Thirlwell, the floor is yours.

Dr. Celeste Thirlwell (Director, Sleep Wake Awareness Program): Thank you.

I have worked with veterans intensely for over two years now with the change of the policy from the 10 grams approved down to three grams being approved for veterans. I'm going to speak to you today from a perspective of the veterans' well-being and my mandate as a doctor following the Hippocratic oath to do no harm.

The first part of the presentation will be some of the neuroscience behind PTSD and what the veterans are dealing with so that you have a better understanding of what we're dealing with. I don't think anybody has spoken about this directly. Second, we will launch into the trenches, into the battleground.

With PTSD, what is happening is that the on system of the brain is in flight. Their brains are going 900 kilometres an hour. There are no brakes, which causes a problem at night as well. You have a daytime hyper-arousal, and then you have the nighttime hyper-arousal. With that hyper-arousal at night, you have fragmentation of sleep; you have nightmares and you have acting out. Because of the lack of good quality sleep, you then have more cognitive issues during the day, problems with memory and concentration and problems with impulse control.

As background, this is a study done by Dr. Moldofsky at the London OSI clinic. They followed veterans for 14 years. Irrespective of combat or not, veterans whose brains did not turn off, whose brains were set to fight and flight.... It could be from childhood or from other traumatic events even prior to entering the military. If they had a brain that was set to 900 or 800 kilometres an hour, they were more predisposed to develop PTSD than other servicemen, regardless of whether they saw combat or not.

We are dealing mainly with a problem, in terms of PTSD, with the brain not turning off. What I have found in our studies is objective data of before and after cannabis use of helping the brain to slow down, to boost the off system of the brain, which is the relax and restore system.

This is an example of a graph of the interference pattern that happens in the brain at night when the brain is trying to turn off. Those highlighted parts in grey are breakthrough sympathetic nervous system bursts, which means the fight and flight system is popping up. The brain is trying to turn on, but their PTSD brain is like a light switch that keeps flopping back on, on and on again.

With civilians, their brains might be set to 300 kilometres during the day, and at night they're going down to zero. If we're lucky, a veteran might go from 900 down to 600, but they're not getting down to zero and turning off properly.

With medical cannabis, we have been able, in our clinic, using low CBD microdose through the day and CBD with higher THC at night, to improve these objective measures in sleep. The reason I treat and microdose during the day is so that their nervous system doesn't ramp up to 900. With the CBD oil microdosed through the day, I can have their nervous system stay at 400 or 500 kilometres an hour and not be triggered into massive fight and flight. At night, we're going to sleep from 500 to zero rather than 900 to zero.

Many of my veterans, as Dr. Walsh said, will tell me, “The first time I smoked a spliff, I got the first good night's sleep in 15 years.” They've gone from fragmented sleep, waking up once every hour or two, to four to five hours straight, solid sleep.

You might not be aware that poor sleep quality makes pain worse in the body because, if you have extended periods of low quality sleep—you try it, deprive yourself three nights of sleep—the inflammatory factors in your body will get regulated up, and then you get aches and pains all over your body.

● (1625)

They might have an initial operational stress injury like a shoulder or knee injury, but then you layer on top the masked inflammatory effect throughout the body. You have a double-pain syndrome. You have someone who doesn't sleep. They have the initial pain from injury and then they have widespread musculoskeletal pain throughout their body.

My focus in dealing with PTSD and chronic pain, because the pain also exacerbates the fight and flight system, is to look at the parasympathetic nervous system. I see medical cannabis as the first step in decreasing parasympathetic nervous system tone. From our sleep studies we've been able to show that we are actually decreasing this increased sympathetic fight and flight drive to enhance the parasympathetic nervous system tone, the off system of the brain.

Once the veteran has decreased their brain process from 900 kilometres an hour, to 300 or 400 or maybe 500 kilometres an hour, then they can make it to the psychologist, to rehab programs, to other things that will be helpful, and they will remember them. When they are in a PTSD brain, they do not encode memories. Once they are able to do that, then their healing process moves further along. I see medical cannabis as a step in the multimodal approach towards healing.

We have an opportunity in Canada to be world leaders in this. We really need to have the same fighting noble integrity that our service people have in dealing with this. There are cutting-edge neuroscience techniques like neurofeedback that can be used very effectively once their brain has been stabilized on the medical cannabis first.

On pulse electromagnetic field therapy, I'm one of the first doctors in North America to have a pulse electromagnetic field machine that is used in rehab hospitals in Italy with great effect. The American military is extremely interested in this technology for their veterans. As well, there are other techniques like yoga, tai chi, swimming, all of which enhance the off system of the brain.

As was referred to earlier cannabis decreases inflammation. When you have inflammatory factors circulating throughout the body and within the blood, they go to the brain. The brain says, “Oh, my, there's inflammation. There's some danger. I cannot turn off. I must remain in a fight and flight state.” Not only is the cannabis helping regulate the on-off system of the brain, it's also decreasing the inflammatory factors that were previously sending the signals to the brain that it must stay on high alert.

A very important book that you must read to understand PTSD is *The Polyvagal Theory* by Porges. Basically, what we're talking about in the PTSD brain is that you are staying in the reptile part of the brain. You do not have access to the emotional part of your brain, which is the centre brain, nor do you have access to the social part of your brain, which is social conditioning. When you talk about unbridled anger after being in military combat, you're talking about being stuck in the fight or flight reptile brain. What cannabis does—and I've had personnel tell me this—is it slows down your reaction time long enough so you can start to reset the connections between the reptile brain, the emotions and socialization.

I'll never forget the story that one veteran told me. He said that when he was going down an escalator he thought for sure there was someone standing with an AK-47 at the bottom. He was ready to go. His cannabis allowed him to slow down his reaction time long enough to realize it was a mother holding a baby.

These are the brains we're dealing with—900 kilometres an hour. They are trained that way because if they don't react fast enough, someone is dead, or they're dead.

The other piece of military training that I want to share with you, which no one's talking about from a scientific perspective, is that they are trained to disconnect from their hearts so that they can kill. What they are then set to is the military compass. They belong to the military. The military says, “Jump” and they say, “How high?”

When you are released from the military you are ripped away from that compass, and then you are lost. You're not even connected with your own heart. Part of connecting with your heart is being a socialized member of society.

● (1630)

First, we must calm down their brain and bring them to a point where they are not in the fight or flight mode of PTSD, so they can start to reset the connections between the emotional and socialized brain to rehabilitate and return to civilian society. There needs to be just as much retraining once they come back as there was upfront to train them to go.

This is an issue, in terms of policy within the government and within medicine. They are looking at it ass-backwards. Instead of having the veterans going directly to rehab when they come back, the veteran has to prove that something is wrong with them. It should be assumed that something is wrong from combat immediately and then looked at and addressed. Don't play catch-up afterwards. We're wasting too much taxpayers' money playing catch-up years and years later. Veterans have lost five to 10 years of their lives.

Yes, there is a place for the pharmaceuticals, but I see them as a cast that you put on when you have a broken leg. What happens if you leave a cast on a broken leg? You lose the function of the joint. That's what has happened to my veterans. They've lost five to 10 years of their lives drooling on the couch, losing wives and losing children because they've been zombified. There is a place for those medications acutely, but the next transition phase could be a brace that moves, like cannabis. Then once we have them doing the rehab, through the underlying psychological and physical work and the cutting-edge neuroscience techniques that are available globally, we can have them functioning and rehabilitated.

I have never met a veteran who didn't want to get up and work and do something. Their drive is to serve and protect and help mankind. They don't want to be sitting there drooling on the couch, but at every turn, they're foiled over and over again by a system that is backlogged with paperwork.

The Chair: I have to apologize, but we're down to about 30 seconds.

Dr. Celeste Thirlwell: Yes.

I would like to finish off by highlighting the fact that the lengthy approval process times have been detrimental, for both their injury conditions and for medical cannabis. If we did not have cancer medication available at the proper dose, there would be a hue and cry. These are people who got stabilized on six to 10 grams of cannabis a day. Suddenly, overnight, it's down to three and they're isolated again in their basements and losing their families. This is a social justice cause and we need to work together. Canada could be a leader in this globally.

Thank you.

● (1635)

The Chair: Thank you.

We'll start the questioning with Ms. Wagantall. You have six minutes.

Mrs. Cathay Wagantall (Yorkton—Melville, CPC): Thank you very much.

Thank you to all of you for being here today. What we're hearing is so helpful.

Max, I very much appreciate your straightforward presentation on your scenario. I'd like to ask one quick question. First of all, when you decided you needed to get off the pharmaceuticals, did you have the help you needed to go through that process?

Mr. Max Gaboriault: Absolutely not.

Mrs. Cathay Wagantall: Absolutely not. Thank you. I actually have heard that often. I've heard your whole story often. I have the story of an individual who was bedridden for years and his wife used a cannabis suppository and had him back for a half hour, but she couldn't find anyone to help her. He was on a thousand pills a month, three of them stronger than opioids, but she could not find anyone who would help her with that. As we move forward, number one, I think that's a huge issue.

I also want to bring up an issue around mefloquine. We're going to be doing a study on it following this one. We did one two years ago.

Were you on mefloquine when you were serving?

Mr. Max Gaboriault: Yes. Actually, the object of my upcoming MRI is to support the damage of mefloquine on my brain. I took it for literally nine months straight, which is twice as long as the recommended use. Essentially, I have every single symptom. Yes, I've seen some shit and I've done some stuff that nobody should ever do, but regardless, besides the psychological issues, there are also physiological issues that I'm dealing with that cannabis actually helps alleviate.

Mrs. Cathay Wagantall: Right.

Can I just mention—

Mr. Max Gaboriault: Yes. Sorry. Go ahead.

Mrs. Cathay Wagantall: I appreciate that.

I would just mention as well that this is what I'm hearing over and over again. There has been a simple assumption of PTSD, which may be there as well, but the treatment needed for mefloquine toxicity.... It is a brain stem physical injury, and the pharmaceuticals actually cause more duress. That's why so many I speak to who are dealing with mefloquine toxicity really have found cannabis to be a better source of treatment.

Mr. Max Gaboriault: Yes.

I would like to point out that from my perspective—I'm no doctor, but I've been dealing with it for 12 or 13 years now and studying as much as I can—the big difference between what I would call the classical PTSD—and, by the way, I can't hear the "D" anymore, because it is not a disorder; it's an injury.

Mrs. Cathay Wagantall: [*Inaudible—Editor*]

Mr. Max Gaboriault: The big difference between the classic PTS and the chemical PTS coming from the mefloquine is that with PTSD classic, through treatment, help, and medication, or whatever you want to call it, you can reach a certain normalcy, if I can use that word—you can have somewhat normal living—whereas, a guy like me can reach only so far because the brain has been damaged and there's no room for more improvement. I can reach only so far. My functioning and whatnot and my short-term memory are destroyed, not to the point that I can't function, but if you ask me tomorrow what we talked about today, I probably won't remember. Using cannabis stabilizes my moods, because I'm really high on the aggressivity scale. It allows me to interact with my kids and be more patient.

I have a seven-year-old and an almost 10-year-old who have been going through hell since they've been born. I was diagnosed after their birth. Even for my wife.... For the surges of whatever or aggression of any kind, the pills didn't do anything.

● (1640)

Mrs. Cathay Wagantall: Thank you.

I really do appreciate your testimony.

I would also like to ask Dr. Thirlwell, in regard to that, if she's had any interaction with veterans who have identified this. I also know of individuals for whom the neurofeedback has been phenomenal in assisting them to deal with that condition.

Dr. Celeste Thirlwell: I think when we talk about randomized control trials and second- and third-level trials that doctors have to be very aware of—and for some reason medicine doesn't realize this—and know the state of the brain that they're dealing with.

Many of my patients have not just straight PTSI; they also have multiple concussions from being near IEDs. Definitely the mefloquine means another layer of sophistication is needed in terms of regimen protocols. The more complicated the trauma to the brain, the more levels that have been traumatized, the more precise and varied the regimens need to be and the more they need to have a wide breadth.

Many of my veterans with mefloquine toxicity will use three to four grams per day, three to four grams at night, and then have three grams available of many different strains that they've come to know and learn about.

Ultimately, cannabis medicine is personalized medicine. We need a different approach for practising medicine. The old paradigms are not going to work with cannabis.

The Chair: Thank you.

Mr. Eyolfson.

Mr. Doug Eyolfson (Charleswood—St. James—Assiniboia—Headingley, Lib.): Thank you, Mr. Chair.

Thank you to all of you for coming.

It's very interesting and valuable testimony.

We've heard from a number of witnesses about the amounts that are either beneficial or harmful.

Dr. Thirlwell, you were saying that on four to six grams a day.... What is the equivalent? Are you talking about the equivalent of dried cannabis? How is that four to six grams a day quantified?

Dr. Celeste Thirlwell: We're talking about grams of dry flower. What I am referring to is what I was trying to make a point about at the beginning of my talk. A civilian brain runs at most at 400 or 500 kilometres an hour, let's say.

Three grams a day is fine for that, but not a military service brain or a traumatized brain. They need between five grams to eight grams at least, once they've been stabilized. The same way you have a lot of morphine post-surgery and then you wean down, in the initial stabilization phase, they need to be able to access eight grams to 10 grams regularly so they don't go into PTSD or anxiety about running out of medication and treatment.

Mr. Doug Eyolfson: Thank you.

We've had different testimony about the harms versus the benefits.

Dr. Walsh and Dr. Bonn-Miller, are you aware of any data on the risks versus benefits of the higher doses of more than three grams a day? We've heard some previous testimony which claimed that when you look at these higher doses in large numbers of patients, the risk of harm was higher than the benefit.

Dr. Celeste Thirlwell: Were they military patients?

Mr. Doug Eyolfson: It was overall. Many of them were military patients.

Dr. Marcel Bonn-Miller: Zach, do you want me to jump in first?

Dr. Zach Walsh: Go ahead.

Dr. Marcel Bonn-Miller: I think it's interesting to talk about eight grams to 10 grams a day, or even three grams a day because there's really no science—truthfully, there's zero science—to back up eight grams to 10 grams a day being more beneficial than three grams a day.

How THC works is it's stored in the fat, so you're talking about pretty high amounts that build up in your body over time. All of the data right now are speaking to doses that are even lower than three grams a day being addictive. In our clinical trials, we're actually limiting it to 1.8 grams a day and seeing clinical benefit. I understand the [*Technical difficulty—Editor*] of using high doses, but that's a heck of a lot. That is not to say there's not individual viability here but that's an extreme amount of cannabis, honestly. It's much higher than what we're looking at in clinical trials in any of these studies. At levels that high, it's been associated with cannabis addiction and dependence, etc. It's worth throwing that out there.

● (1645)

Dr. Zach Walsh: In our trial, we're looking at about two grams of herbal cannabis a day. We do find that it's not uncommon for people to return that. We ask them to return whatever they don't use in a given day and sometimes they will bring some back. It's not like everyone is using all of their two grams per day.

Having said that, I do hear of cases where people do respond well to larger doses, as Dr. Thirlwell was discussing. I think the science is still unclear about what a maximum dose is. One thing we do know about cannabis and the endocannabinoid system is that it's what we call allostatic, which means it kind of regulates itself, so as you use more cannabis, you develop a tolerance and you need more cannabis to get some of the same effects.

That can lead to the tolerance and withdrawal that some people characterize as addiction. I want to use some caution about using the term “addiction” when we talk about medical cannabis users. There is a tolerance and withdrawal. It resolves itself more quickly than withdrawal from things like SSRIs, benzodiazepines and a number of widely used medications.

I want to caution the use of the term “addiction” in a medical context. The cannabis withdrawal syndrome is pronounced. There's no doubt that it exists, but it's also pretty mild in terms of the consequences and the difficulty people have giving it up. It's addictive, perhaps, the way that coffee is addictive, rather than the way that opioids or alcohol are addictive. There is a habit-forming aspect of it, but when we use the term “addiction”, it carries a lot of baggage. I just want to caution the use of that term when we talk about cannabis. There's a withdrawal and tolerance and I think one of the concerns about higher doses is that it can exacerbate that withdrawal and tolerance. That doesn't mean it's necessarily unmanageable. There are ways of titrating people down if the dose gets too high.

I do think it's worthwhile to consider those lower doses and see if people can't get the best effect at a lower dose. Perhaps, as we ramp it up, that can interfere with the optimal lowest possible dosing.

Mr. Doug Eyolfson: Thank you.

Dr. Walsh, you briefly touched on some of the patients, of course many with PTSD, PTSI, who will develop alcohol dependence or alcoholism.

Have you seen any correlation on the use of medical cannabis and the likelihood that someone will develop an alcohol dependence problem?

Will it give a protective effect and make them less likely to have alcohol dependence problems?

Dr. Zach Walsh: It's a very hard thing to tease apart in a prohibition framework. Some people talk about the gateway hypothesis where people start with cannabis and then they develop other problems. That's been largely debunked.

I think there is certainly a potential for cannabis to serve as a substitute for alcohol. I don't see it as a clear path where cannabis use is going to lead to an alcohol problem. I think it's more likely to lead as a pathway out of an alcohol problem.

Mr. Doug Eyolfson: Yes, that's what I was getting at. I wasn't suggesting it might make it more likely that it would. I was asking from the other direction. Would it make it less likely that you would develop an alcohol dependence problem if you were using cannabis therapeutically?

Dr. Zach Walsh: I think there is a possibility, if it's controlling the symptoms and if it's providing some of the effects that someone would want from alcohol. We're currently studying that in our lab.

With young adults anyway we've found they report that cannabis reduces their cravings for alcohol and their binge drinking. But that's research that really needs to be done. I think, in the context of young adults but also in the context of veterans it would be very important.

Mr. Doug Eyolfson: Okay, thank you.

Mr. Max Gaboriault: How about asking me? I'm right here.

The Chair: Mr. Johns.

Mr. Gord Johns (Courtenay—Alberni, NDP): Thank you, all, for your testimony. It's very important.

Thank you for joining us from my office, Max. I really appreciate your making the effort today.

Max, you talked about your personal experience, moving away from pharmaceuticals to cannabis. Can you talk about some of the challenges and barriers you may have faced when dealing with Veterans Affairs Canada in getting cannabis and access to cannabis?

Mr. Max Gaboriault: It's nice to hear you, Gord.

I had zero issues whatsoever; however, I was guided through other veterans who weren't so lucky.

The way it works, from what I remember, is that you contact a middle company that deals between you and a licensed provider and they take care of all the paperwork. As you know, I can't read. It's not because I can't read; it's just that I can't focus long enough to read. I submitted all the paperwork required by Veterans Affairs. They handled all the paperwork through the licensed provider. The licensed provider contacts VA. In my case it was fairly painless.

I had a prescription for seven grams a day for the last three years, and when it got shot down to three grams, obviously it affected me, but not as much as the people who use the flower directly. I use an oil. I can use the flower to make the oil, which lasts longer because I don't need to use as much flower as oil. They are two completely different processes that go through the system.

To explain it a little—and the doctors might be able to explain it better than what I am saying—because it is processed through the liver, one dose lasts six to eight hours on average. That doesn't mean I won't need more in between, but on average, that's how I manage. I take a dose when I get up in the morning, at 7:30 or eight o'clock, and then it brings me to almost late afternoon. Then I manage usually during dinnertime for two or three hours and I'm still coasting, and then around 7:30—because it takes an hour to an hour and a half to process—I get into my nighttime schedule, which allows me to fall asleep.

I don't know for you guys, but for me a restful night's sleep is about six hours. That's the longest night's sleep I have ever had, and now we are talking medicated.

● (1650)

Mr. Gord Johns: Max, can you talk about how the 10 grams to three grams has affected some of your veteran colleagues?

Dr. Thirlwell spoke heavily about the five to eight grams—I believe that's what she said—and its importance.

Mr. Max Gaboriault: I do have one of my friends whose brain is going to research. They don't even understand how he's alive, because of the damage. He got blown up twice. He uses, on average, 10 to 15 grams a day. However, I use a completely different method. He smokes; I don't. It works for him; it doesn't work for me.

That's the big thing to also understand. I've tried 12 to 15 different strains over the last three years. Another big thing to understand is that I actually have complete control over my medication. I know exactly how much I take at any given time. When I make my oil, I calculate my dosage. I regulate myself and control my intake. Some days I might need a little bit more. Some days I might need a little bit less. Dr. Walsh mentioned that over time you need more and more. It's absolutely true.

The big thing to understand with the seven grams a day is that it's not so much based on facts. In my instance, I need that to make my own oils. In order to make a normal batch for myself, I use about 60 grams to 90 grams of flower. That's three ounces. I have a 210 gram prescription, so that puts it in perspective. Out of those 60 grams, or 60,000 milligrams, I do about two cups, which is 500 millilitres. It's a ratio of how many milligrams per millilitre I can reach. With the sativa—I use an Alaskan strain because it works for me—I'm averaging about 25 milligrams to 30 milligrams, which is three times higher than people use for recreation.

I'm medicated right now, since this morning.

● (1655)

Mr. Gord Johns: Max, I have a question. If you could flip a switch to change one thing at Veterans Affairs about their policy towards cannabis, what would that be?

Mr. Max Gaboriault: Go with what the need is. From what I understand from the doctors, I'm at the somewhat low end of use. For the guys who need the 10 grams, well, give them the 10 grams.

We're not just talking psychological. I have arthritis in every single joint in my body. I have back issues, knee issues. The big thing to understand about cannabis is that it does not get rid of the pain. It dulls it to a point where you can function, but you still know you are in pain, so you don't go past what you should be doing. That's where opioids fail completely, because they take the pain away. Then the member gets hurt, and so on. It's more of a management system versus a complete "zombification" of the member.

The Chair: Ms. Ludwig.

Ms. Karen Ludwig (New Brunswick Southwest, Lib.): Thank you.

Thank you all for your testimonies this afternoon.

One of the things we have consistently heard before this committee regarding cannabis and veterans has been about the challenge regarding research. Someone came in to testify a while ago and said the first case of authorized cannabis for medical use was in 1999. We saw at Veterans Affairs Canada a whole-of-government approach from 2008 to 2014.

I'm going to start with Dr. Walsh.

Where are we with the research? We've been authorizing medical cannabis for a significant amount of time. Are we anywhere close to having the research catch up, when we're talking about strands or dosages?

Dr. Zach Walsh: You know, when it comes to strands and dosages, we're still quite a way off. The ultimate answer is going to be a lot of variability. As much as we'd like it to conform to sort of a single molecule medicine, where we can say we're going to give you this pill and that's the dose, I'm not sure that's where we're going to get with cannabis.

Cannabis may in some ways require us to reconsider how we approach medicine. The challenge in research is not only going to be determining if cannabis is effective, because there are so many people with PTSD—veterans and other—who are reporting that it's effective that, if we were to come out with a study and say it's not effective, they would continue to trust their own experience over the study.

Unlike many medications that start in research and then move into the clinic and then to patients, this is something that's starting with patients and moving backwards to the research, which makes it almost unique. When we try to squeeze it into that pharmaceutical model, we come up with some of these problems.

You've asked where the research is. I am hopeful that, as we complete our study and as we learn more about what the study that Dr. Bonn-Miller was talking about finds out, we'll start to get some signal. But we also need to look at cannabis in a more naturalistic environment and find stories like those we're hearing from veterans and follow them up. How are veterans who are using cannabis therapeutically doing, compared to those who are not, and what works for whom? If cannabis is not effective for some veterans, which ones is it going to be effective for?

Rather than a blanket statement that it's good or it's bad, I don't know if we're going to get to that point. I think what we're going to find is that it's going to be effective for some people in some conditions; certain types of cannabis perhaps combined with other types of interventions are going to be maximally effective, and we'll start to look at fine-tuning it and looking at it more naturalistically. I don't think we shouldn't be doing the RCTs. Those are going to tell us something, but if we rely exclusively on those, we're missing the boat and we may miss some important information and we won't have the impact we'd like to see on the lives of veterans.

I'd like to see research focused on how we can combine cannabis with some of the behavioural interventions. What Dr. Bonn-Miller was talking about with CBD and behavioural exposure for PTSD is very interesting. Those kinds of studies are where I'd like to see it go rather than sort of a yes or no, thumbs up or thumbs down approach.

● (1700)

Ms. Karen Ludwig: Thank you for that.

I'll go to Dr. Bonn-Miller on this as well.

Certainly the medical model is maybe one of our challenges here, trying to fit a round peg into a square hole. When we look at the level of training within medical schools, where are we with that? With the expertise I'm hearing today from you as witnesses and certainly as veterans advocates and from those who are using this in terms of medication, where are we with regard to the training?

Ultimately, who are the specialists who could be authorizing or eventually prescribing medical cannabis?

Dr. Zach Walsh: If you don't mind, I think I could respond.

I was actually just reviewing a paper that we're submitting in a week that was the first survey of medical students on their training in medical cannabis. Right now in the Canadian medical school curricula that we surveyed—hopefully this will be coming out in about three to six months—we found that they're getting about a quarter of what they want. The average amount of cannabis education they are getting is about 1.5 hours, and they'd like to get up six hours. So across the board, across different categories, the trainees are not getting—

Ms. Karen Ludwig: Is that in the entire medical training?

Dr. Zach Walsh: That is in the entire medical training, yes.

Dr. Celeste Thirlwell: There is no training. It's not only here but in countries around the world. Doctors are very resistant to incorporating it.

Dr. Zach Walsh: What we found in that study is that it coincides with what we found—

I think Dr. Bonn-Miller has to go.

Dr. Marcel Bonn-Miller: Yes, my apologies, but I have a hard stop that I'm already over and somebody else needs to be in this room, apparently, so I do have to jump. I'm sorry.

I will just say really quickly, not to interrupt, that what was said on the training side is right. The fact that you're having a whole bunch of scientists here who don't know the answer means that it's not being taught, because we don't know the answer. That's what needs to get figured out.

We've done numbers of studies that have looked at physicians' attitudes and what's currently available, and there is just really nothing out there from a training perspective, for anything, let alone PTSD.

There are courses that are starting up right now that are going to help resolve this, and there are initiatives from universities like the Thomas Jefferson University in Philadelphia, but the reality is that we have a lot of catching up to do.

Thank you so much for having me. I'm sorry for having to jump a little bit early.

The Chair: Thank you, Doctor Bonn-Miller, for attending.

Ms. Karen Ludwig: How much time do I have, Chair?

The Chair: You have 30 seconds.

Ms. Karen Ludwig: Thank you.

Dr. Thirlwell, I live in New Brunswick. If we had a veteran in need of neuroscience help, for example, what's the closest location for them to get that level of expertise?

Dr. Celeste Thirlwell: To even begin to have access to that level of expertise, you would have to go through some of the clinics that are helping veterans. It's not through the OSI clinics. It's not through the VAC workers. The expertise is sorely lacking. I've given up three nights a week for two years of my life now to help the veterans who are just trying to find a specialist, let alone a specialist who will do medical cannabis.

The Chair: Thank you.

Mr. Eyolfson.

Mr. Doug Eyolfson: Thank you, Chair.

Thanks to all of you again.

I have a question that I wanted to present to Dr. Bonn-Miller. He couldn't stay, but perhaps Dr. Thirlwell and Dr. Walsh can also shed some light on this.

I want to contrast the fact that in Canada we now have legalized cannabis and in the States they don't. From what Dr. Bonn-Miller was saying, it sounds as though there are significant challenges.

I was actually very impressed when I heard Dr. Bonn-Miller mention that there is now funding from the U.S. Department of Veterans Affairs. We were down in Washington, D.C., on a delegation a couple of years ago. When we mentioned medical cannabis to some VA doctors, they wouldn't even talk about it. They looked very uncomfortable. They changed the subject. So that's a very good development.

Cannabis has actually only been legalized for a very few months now. Are either of you seeing any indications that it will be easier to find funding for research now that it's legalized?

Dr. Zach Walsh: Certainly, as an academic researcher, I've seen notices from CIHR and other funding bodies. I think there is an increased interest from the tri-council agencies in funding cannabis research. I'm always going to say that we need more, and I think we need broader research, but I think there is increasing interest. As well, the development of licensed producers provides someone other than the government who's interested in funding this research.

So yes, I am hopeful that we're going to see more research on how best to use cannabis in PTSD and other conditions.

● (1705)

Mr. Doug Eyolfson: Great.

Dr. Thirlwell.

Dr. Celeste Thirlwell: Legalization has not helped consistency of treatment for our veterans; it has hindered it. Since legalization in October, many veterans have not been able to access the oils and the strains they need. The Canadian government did not put in place protective measures to ensure that our veterans got the medication they needed to optimize their functioning. They did not put in money or policy toward mandating that doctors learn about medical cannabis.

Mr. Doug Eyolfson: What changed? You said that things got worse after legalization.

Dr. Celeste Thirlwell: Yes, absolutely; it was because of supply. Suddenly licensed producers had an opportunity to make money with recreational, and you're looking at the same pot of cannabis. Not only that; in terms of governmental people who look at the standard of cannabis, the government didn't hire enough people to go through the cannabis supply. Cannabis was left in warehouses, waiting for inspectors to come in and make sure it met medical grade.

As well, the day before it was legalized, licensed producers found out that they had to change their labelling overnight for medical cannabis. They couldn't have any colour on their labelling. It had to be black and white. They couldn't ship out the medication to the veterans until they changed that labelling.

Mr. Doug Eyolfson: Okay. Thank you.

Mr. Gaboriault, I'm glad I have the chance to address you again. When I was talking about whether cannabis could make it less likely that a person would develop a problem with alcohol, you were waving. I think you were trying to speak. Did you want to speak to that?

Mr. Max Gaboriault: Yes. Actually, I don't drink—no more than you would, let's say. I'll have maybe a beer. I have no interest in it. A big thing to understand is that this is medication. This isn't for fun.

Mr. Doug Eyolfson: Absolutely.

Mr. Max Gaboriault: I'm a walking psychopath, technically, so —

Mr. Doug Eyolfson: Before you started on cannabis, had you had any problems with alcohol?

Mr. Max Gaboriault: No. I have a good wife.

Voices: Oh, oh!

Mr. Doug Eyolfson: All right. Thank you.

Dr. Celeste Thirlwell: On the alcohol issue, it's back to basic neuroscience. A lot of the veterans were self-medicating with alcohol. Alcohol is a depressant that allows you to sleep. My veterans who overnight were taken from seven, eight or 10 grams down to three had to revert to alcohol at times, because they didn't have access to the cannabis they needed for sleep.

Mr. Doug Eyolfson: That's very useful. Thank you.

Dr. Thirlwell, you said that the regimen you're using is high THC at night to help with sleep.

Dr. Celeste Thirlwell: It really depends on where the brain is at and if there has been brain trauma on top of the PTSD or mefloquine on board. Some brains will do very well with sativa at night because it reorganizes their brain. That's a frontal lobe injury aspect. Whereas sativa is traditionally to be used during the day, it seems that higher THC does help most veterans at night, but that's not across the board. It's very individualized and non-homogenized.

As well, we have to talk about the entourage effect from all the terpenes that are in the marijuana, which no one is speaking about.

Mr. Doug Eyolfson: Thank you.

Dr. Walsh, what was your take? You talked about restorative sleep. Do you have any data as to whether the higher CBD strains or the higher THC strains are helping with that?

Dr. Zach Walsh: If we were to look one area where we need more research, it's in comparing different strains of cannabis. A lot of what we know comes from talking to people who are using cannabis rather than administering the cannabis ourselves, so it's very hard for us to characterize what kind of cannabis people are using. There is some evidence that CBD can be helpful for sleep. THC can also be helpful for sleep. Also, the combination may be helpful. THC, to the extent that it dulls pain, can help with sleep. CBD is more directly tranquillizing.

Mr. Doug Eyolfson: All right. Thank you.

The Chair: Mr. Kitchen.

● (1710)

Mr. Robert Kitchen (Souris—Moose Mountain, CPC): Thank you, Mr. Chair.

Thanks to all of you for being here today. We greatly appreciate it.

I was hoping that Dr. Bonn-Miller would still be here. I had a couple of questions for him, but perhaps some of you might be able to answer them as we go through this.

Obviously, without research, we end up having no guidelines and no standards. We don't know the prescription levels to be used. We don't know the strengths—or the strains, as we've just heard—as to what's to be used along those lines. One of Dr. Bonn-Miller's comments was that he believed the pharmaceutical companies need to be funding a lot of this research. To me, that type of study design has a huge bias. With that bias, you lose validity and you lose all sorts of intrinsic issues.

I'll start with you, Dr. Walsh, and then maybe Dr. Thirlwell can comment on that, as well as Max.

Dr. Zach Walsh: I think we're right to be somewhat concerned with the influence of money on the research process. That goes across the board; it's not special for cannabis. A lot of what we know about medicine today has been funded by pharmaceutical companies, and people have noticed the same problems you're talking about.

There are safeguards in place. I'm doing a study that's funded by Tilray. They're a licensed producer of cannabis. I don't get any money directly from Tilray. They don't impact my salary. My salary is paid by UBC.

I think that's typical for a lot of clinical trials. There are firewalls in place to maintain the integrity of the research and the integrity of the scientists who are conducting these trials. I think we need to be careful with that, but I don't think we can take that potential off the table, because we need so much research and the industry is one of the interests that's going to be able to fund that without dipping into, as you guys know, the already heavily taxed public coffers.

I don't think we could have a special case for cannabis whereby industry is not allowed to fund research. That's how so many of our medicines come to market. We do need to be careful about bias and ensure that the protections are in place.

Mr. Robert Kitchen: Dr. Thirlwell.

Dr. Celeste Thirlwell: I agree with what you're saying about bias. My approach to medical cannabis from the beginning has been the old approach of medicine: sit down and listen to your patient. There's no reason why doctors can't start with that and monitor patients closely. The veterans have taught me how to do medical cannabis by sitting and taking the time to listen to their journey though this catch-22 quagmire.

The paradigms are changing and shifting. There are new rules of engagement across the board, both in marijuana medicine and in all areas of our society. Why can't the licensed producer companies be mandated by the government to put a percentage of their profits into one pot for research?

Mr. Robert Kitchen: Max?

Mr. Max Gaboriault: Yes, sir?

Mr. Robert Kitchen: Do you have any comments on my question on the biases?

Mr. Max Gaboriault: All I'm going to say—because obviously, I'm no professional—is that, from my perspective, the pharmaceutical industry needs to be kept away from the natural state of the plant. There were studies showing that there was a synthetic version of THC which was created that cannot compete with the natural product. There's always a way to make a pill into a buck. This isn't one of those cases. In order to have effectiveness in treatment, the vegetal state or natural state of cannabis has to remain intact.

I do agree with the last doctor; I'm sorry, I forgot your name. I do agree that the licensed producers could help fund research, but having said that, it all comes down to the training of the doctors, which is influenced by the pharmaceutical industry that also funds the different faculties that train those doctors.

I had a personal issue with my GP, who was a new graduate and had no willingness. He wanted me to be on pills. I had to fire him and find a doctor who was willing to work with what I'm working with.

● (1715)

Mr. Robert Kitchen: Thank you.

Throughout our study so far, we've had Dr. MacKillop here, and he talked a little bit about chronic use disorders.

I'm particularly interested in some of the research that looks at suicidal behaviours with these chronic use disorders. I'm wondering if you would comment on that, Dr. Walsh.

Dr. Zach Walsh: There isn't evidence linking cannabis to suicide or self-harm. There have been some reviews of it, and the conclusions of the reviews are that there is no way to make that causal association. People who suffer with PTSD and anxiety are at high risk of self-harm and suicide, and they're also more likely to use cannabis, but there is not a link with cannabis causing suicidality.

Mr. Robert Kitchen: Dr. Thirlwell, do you have any comments?

Dr. Celeste Thirlwell: I agree with what you were saying, and I remember looking at the data of that. From the veterans perspectives and from what I'm hearing from the mouth of the veterans is that, since they have started cannabis, many of them no longer think about suicide. When they were on the pills and the multiple medications, drooling like zombies and not being able to put a thought together, suicide was very, very close.

The Chair: Ms. Ludwig, you have six minutes.

Ms. Karen Ludwig: Thank you.

Max, I was remiss to not thank you for your service. Thank you for your service.

Mr. Max Gaboriault: Oh, don't worry about it, that's just what I do.

Ms. Karen Ludwig: You're very fortunate. You have a loving wife who seems to be there for you, a seven-year-old—

Mr. Max Gaboriault: Yes, I'm very, very lucky.

Ms. Karen Ludwig: —and a 10-year-old. Do you access, or are you able to access, any of the services through Veterans Affairs for family supports?

Mr. Max Gaboriault: I have never had to. I did apply for different programs, like the caregiver one, but because of policy.... Sorry, that one is actually striking a big, deep chord, because it has been designed for physical injury, the caregiver allowance and things like that. My wife can't work; I cannot be left unsupervised, and I have two kids, so imagine. Because I have a mental injury, and in my case maybe more so with the mefloquine, I do not qualify for any caregiver allowance because I can dress and bathe myself and do the.... There's a third thing, but I forget.

However, what is being left out is that nowhere does it mention that my wife reminds me to shower. She says, "Hey, maybe you should get dressed; it's getting late," because I don't think of those things naturally. All the input that she has, the extra work put on her.... All I'm trying to say is that there is a deficiency for mental injury or disorder, whatever you want to call it. There's no support in that sense within VA.

Ms. Karen Ludwig: Thank you.

If I may ask, did you receive a lifetime pension or a lump sum?

Mr. Max Gaboriault: Oh, God. That's another sore point.

To put it in context, I was deployed when the Pension Act was trashed, and the veterans charter. I met the Prime Minister and the CDS twice, and nobody mentioned that while we were deployed; otherwise, I would have probably packed my bags and gone home.

I did get a lump sum payment, which is gone already.

Ms. Karen Ludwig: If I may ask then, Max, if you were able to go back to that day when you agreed to the lump sum payment, would you have preferred a lifetime—

Mr. Max Gaboriault: I didn't agree to it.

I just got a letter for that lifetime pension, which is literally the money.... Oh, yes, that's going to be a kicker for you guys. Because I'm over 100%, I've never received the full amount of the total award. As soon as you hit 100%, by law—you can look that up—the government doesn't have to pay me any further amount. I'm about 120% disabled. That covers my ears and all kinds of other parts. But I've never received the full amount.

Now, with that new scheme, they've deducted the full amount with what I didn't receive by law and divided that in monthly payments, tax-free, which was already tax-free to begin with. I'm fortunate. I should be getting a decent amount every month for...I don't know how long. I'm fortunate that way. But it's not nearly.... I did the math, and it does not compensate with the Pension Act.

● (1720)

Ms. Karen Ludwig: Thank you. I would ask one quick question.

Dr. Thirlwell mentioned the recommendation that in the transition from being an active member to civilian they go directly to rehab.

Is that a direction you would recommend as well, based on your own experience?

Mr. Max Gaboriault: I completely disagree in the rehab aspect of things. I completely agree with the idea, but not the way it's going. What needs to be done first is a better education of the member prior to release.

My integration to civilian life was a disaster—in the best case. I tried. I really tried, and it didn't work out. That was over two years....

I was offered retraining and whatnot, but I personally can't function in public. I have started my own business as a hobby, not a business, just to give me some drive and to do something that is not stressful per se, although we all know that business is as stressful as hell.

I believe that they need better support when they release, but not necessarily—I forgot the word. I'm sorry.

Ms. Karen Ludwig: Rehab.

Mr. Max Gaboriault: None of that nonsense.

Ms. Karen Ludwig: Thank you.

You've been very articulate and very helpful.

Mr. Max Gaboriault: I try.

The Chair: Mr. Viersen, you have five minutes.

Mr. Arnold Viersen (Peace River—Westlock, CPC): Thank you, Mr. Chair.

Thank you to our guests for being here.

Max, thank you for your service.

One of the things that's come to our attention about the VAC treatment centres is that they won't admit somebody if they are using cannabis.

Max, do you know if that continues?

Mr. Max Gaboriault: I have never been in any VA facility.

Mr. Arnold Viersen: Okay.

Dr. Thirlwell.

Dr. Celeste Thirlwell: I have a veteran here behind me, Scott Atkinson, who wanted me to bring that up. When he went to Bellwood treatment centre, he was not allowed to have cannabis. He wanted to go back at a later point to just... You know, you can relapse and you need to hone your skills.

He was going to go back for a weekend, but he was told that he would have to be on opiates for the weekend and completely off cannabis or he would not be allowed to go to the program.

Mr. Arnold Viersen: We've legalized marijuana in this country for recreational use—

Dr. Celeste Thirlwell: Yes, and still....

Mr. Arnold Viersen: —but you still can't go to the VAC and say —

Dr. Celeste Thirlwell: Worse than that, there are veterans being discharged by their OSI doctors for not taking pharmaceutical medications, and they are not able to access...other doctors will refuse to treat them.

Mr. Arnold Viersen: One thing for me that's interesting is there are powerful drugs and there are safe drugs, but they usually aren't together. Safe drugs typically aren't powerful, and powerful drugs typically aren't safe. We get a lot of anecdotal evidence from the marijuana community. It seems to be a powerful drug. How safe is it? Each strain affects people differently. Even with the same strain, there's a whole range of how it affects people. How safe is it? We talk about higher dosages, lower dosages. I just know from my own community, young children.... The oils or the edibles have been a problem.

Can you speak to that a little bit?

Dr. Zach Walsh: In the 1980s the DEA in the U.S. went to court to have the scheduling changed. The judge was overruled ultimately, but he characterized cannabis as being the safest pharmaceutically active substance known.

In terms of toxicity, the toxicity is nil. There is a risk of acute discomfort that can come from too much. If you have a high dose, it can be a really unpleasant event and that could disorient you so that you might do something; you might get in an accident. In terms of harm to you, it's remarkably safe.

I would say the most substantial risk would be for people who are at risk of psychotic disorders and schizophrenia, and perhaps a psychotic bipolar. In those cases it can exacerbate symptoms and could even trigger a break, but only in people who have that predisposition, and that's a very small amount of the population.

For others I think the biggest risk is some irritation to the throat, a bronchial irritation, not long-term irritation. It's not associated with lung cancers the way tobacco is, so it's very safe.

● (1725)

Mr. Arnold Viersen: You're talking entirely about consuming it by smoking it. Is there a difference if you're consuming—

Dr. Zach Walsh: It's orally safe as well, with the same risks.

Dr. Celeste Thirlwell: Some of my patients will actually have reactions to the carrier oils or the process by which it's been made into oil. Different companies have different carrier oils. Sometimes they're actually reacting to the carrier oil that the cannabis oil is in, not the cannabis itself.

It doesn't suppress respiration the same way an opioid does. If we were talking about opioid medications and the opioid crisis, you are not going to die from respiratory failure if you take a higher amount of cannabis. Yes, it may be disconcerting. Yes, you might be temporarily in an altered state, but it's not something that's necessarily going to be permanent unless, of course, there is an underlying predisposition to a psychotic disorder or some underlying cardiac issues. It's really where the patient is at, like I said, where their brain is at, where they are at physically, by which you decide and you can judge clinically how safe you are.

Really, it's about careful monitoring, and following up and being a true doctor.

Mr. Arnold Viersen: In the VAC treatment centres, I assume there are doctors there. Do most of our vets have prescriptions for medical marijuana? Is that true or is that not true? Would most of them have prescriptions for it?

Dr. Celeste Thirlwell: You have to remember that just until recently, not too far back you would be court-martialled for using cannabis within the military. That ethos still remains in the higher-ups who have been there—

Mr. Arnold Viersen: Yes, but our veterans are not in the military any longer, so they could go to the civilian hospitals, a civilian doctor, and get a....

Dr. Celeste Thirlwell: Civilian doctors aren't prescribing. Most of them will punt to a doctor, “Go see a clinic that will prescribe for you.” Those doctors are in short supply.

The Chair: Thank you.

We'll end with Mr. Johns, for three minutes.

Mr. Gord Johns: I was going to talk about the risks associated with opioids and cannabis and dive in a little deeper, but I think you've started to cover most of that. Maybe I'll open it a little bit. I asked Max about this, but what would be the one thing you would change in terms of their policies towards cannabis?

I'll start with you, Dr. Thirlwell, and then I'll go to Dr. Walsh.

Dr. Celeste Thirlwell: I'm telling you what I'm facing right now. I'm doing the two-year renewal letters for my veterans who are on six, eight or 10 grams. The thing that I have them on the phone right now is, “Am I going to get approved? If I'm not approved, how long am I going to have to wait between being punted back down to three grams to getting back up to where I need to be so that I can continue to function and be there for my family?”

Mr. Gord Johns: Thank you.

Dr. Walsh.

Dr. Zach Walsh: As one of the few countries where we do cover cannabis for veterans, we should be proud of that compassionate approach. I would hope that we would refrain from trying to roll it back. I think there's an important relationship between physicians and their patients. The VAC should be respecting what the physician and the patient decide is best, and not set those rules, similar to other medications.

There's one thing I would say broadly: Treat it like other medicines.

Mr. Gord Johns: Right.

Max, perhaps you could you close on this, the importance of the veteran having that freedom to choose, on their healing journey, the dosage, and the different terms of healing, whether it be cannabis or pharmaceuticals. Can you talk about the significance of that?

Mr. Max Gaboriault: Okay, I'm going to try. I already forget half of your question.

What I can tell you is that cannabis saved my life, for one. All the other opioids destroyed either my brain or some function, like speech. I had to learn to talk again, actually, after I was put on quetiapine, which is an anti-psychotic. Obviously, there's a place and a time for everything. Western medicine has its chance. I don't see cannabis as a western thing. It's been around for thousands of years. Nobody ever died from it. It even supplies its own antidote. If you take too much THC, take some CBD and it will bring you back to a normal level.

If people want to learn and listen, that would make my life a lot easier. I have no problem educating people, but I had to learn on my own how to manage everything, within the cannabis community, with people who have been doing it for even longer. I make my own oil. I can order it, but the big thing is, I'm being responsible in the way I use it.

When I came back from Afghanistan, all the pills and all that destroyed my liver. My thyroid was shot. It took years to get everything back up. It saved my life in that respect. I can be a dad, not a zombie on the couch who doesn't want to do anything—even leave the house. I think it allows me to function better. Is it perfect? No, it's not perfect, but that's my reality. It will never be perfect. Nobody would say it is perfect, but you know what I'm saying. If I didn't have it, I would be on cocktails of pills, which create suicidal thoughts. I did try in the past, you know. How can I live like this for the rest of my life? It's not a life. Cannabis gave me that option of functioning. I'm medicated right now. I can talk to you without stuttering too much, because it inhibits my stuttering. In that sense.... I don't know, I can function as a normal person.

I do want to mention Dr. Walsh's point on combining with treatment. I completely agree with that. It should be combined with some treatment. I went to Camp My Way in B.C., which we talked about. It changed my life completely. Stop looking at it as a medication, but maybe more as a holistic approach, as with horses, dogs and this and that. It's a tool. If you look at it as a medication or drug, you need to get educated.

● (1730)

Mr. Gord Johns: The chair's looking at us to close, but, Max, we're glad you're here. Your testimony has taught not just me a lot, but all of us a lot.

Mr. Max Gaboriault: I hope so.

Mr. Gord Johns: We're really grateful to all of you. Thank you so much.

I'll pass it to the chair.

The Chair: On behalf of the committee, I thank all the witnesses for the excellent testimony today.

If there's anything you'd like to add to it, you can send it to the clerk and he'll get it to us.

That ends our time for today's meeting.

Mr. Sheehan is moving a motion to adjourn.

(Motion agreed to)

The Chair: The meeting is adjourned.