



Heart Murmurs

September 2019

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Heart Murmurs is the newsletter of CASE published in February, March, April, May, September, October, November and December each year. Suggested articles can be submitted to Barry Clark at kbclark1@telus.net Back issues of the newsletter are posted on the CASE website at: <http://www.edmontoncase.ca>

If you wish to unsubscribe from this newsletter, please e-mail stuart_e@telus.net with a subject line 'unsubscribe'.

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Support for CASE

As a recognized charitable institution, CASE makes a significant difference to people interested in maintaining their heart health. If you make a financial gift, either as a direct contribution, or in the memory of a member who has passed, we will issue a tax receipt.

SEPTEMBER EDUCATION EVENING



The CASE Education evening is scheduled for Mon. Sept 9,2019 at 7:00 pm at the Terwillegar Rec Centre Multi-Purpose Room. The topic is to be ALL ABOUT CANNABIS.

We have had some difficulty confirming with the speaker at this time so please stay tuned to emails for the updated information. In the meantime, you may find the articles in this issue of interest.

MARIJUANA AND YOUR HEART

Legalized marijuana is now a reality in Canada. This opening up of legal access will have a variety of health implications. In addition, marijuana is increasingly prescribed for much of what ails us, from the pain and inflammation of osteoarthritis to a host of other conditions, many of which affect seniors – the same people who are at greatest risk of heart disease. What the legal use of marijuana could mean for your heart, whether you've already had a cardiac event or are at risk of having one, is in many ways an open question.

Physician and researcher Andrew Pipe, MD, and behavioural scientist Robert Reid, PhD, both of the Ottawa Heart Institute's Division of Prevention and Rehabilitation, are widely published experts in the prevention of heart disease. As Dr. Pipe put it, "When we consider marijuana and issues relating to the heart, we really are steering into terra incognita."

The long-standing illegal status of marijuana has made it a lower priority for health researchers and posed a hurdle to conducting studies. What we do know about the drug's effects on the cardiovascular system is not a lot, said both men. "We'll see an increased interest in research as a result of the liberalized approach to marijuana," added Dr. Reid, Deputy Chief of the Division.

What the Research Tells Us: A 2014 review article in the *New England Journal of Medicine* summarized what is known about the effects of marijuana on all aspects of health. The authors found that marijuana use has been associated with vascular conditions that increase the risk of heart attack and stroke, although the mechanisms by which that happens aren't clear. The article also noted that the risk is mainly associated with immediate use of marijuana and isn't necessarily cumulative.

There is some epidemiological evidence that marijuana use in young men, in particular, is associated with an increased risk of heart attack within an hour of use, said Dr. Reid, whereas the risk in young women is not increased to the same degree.

Another article, from 2013 in the *American Heart Journal*, found that habitual marijuana use before a heart attack was associated with a higher mortality rate over the next 18 years, although the difference wasn't statistically significant.

Both Drs. Pipe and Reid expect increased interest in research around marijuana use. They also both said that, based on what evidence there is, as well as common sense, trying this newly legal drug should be approached with caution and that, if you must, then don't smoke it.

Physiological Effects of Smoking Marijuana: When you smoke marijuana, your heart rate and blood pressure increase. At the same time, smoking in general, whether tobacco, marijuana or a mixture of the two, reduces the capacity of the blood to deliver oxygen throughout the body – an effect of the products of combustion such as carbon monoxide. This combination adds up to increased risk for a cardiac event like a heart attack, particularly while a person is smoking and immediately afterward.

“There is a strong case for saying no one should ever smoke marijuana because of the products of combustion,” said Dr. Pipe. “We can say with absolute certainty that smoking marijuana will harm the ability to deliver oxygen, and that’s not good.” While Dr. Reid pointed out that the relationship between marijuana use and heart disease remains, at this point, “largely theoretical,” there is existing evidence that marijuana use may lead to quicker onset of exercise-induced angina during a stress test among people with heart disease. This suggests another reason why it is not a good idea to use marijuana, he noted. He also noted that marijuana use could be problematic for people with an irregular heartbeat, or arrhythmia, because it activates the sympathetic nervous system.

What Happens to Your Heart When You Use Marijuana?

- Your heart rate and blood pressure increase, forcing your heart to work harder.
- If you smoke the marijuana, the capacity of your blood to transport oxygen throughout your body, including to your heart, is reduced.
- The result is strain on your heart and a reduced ability to handle increased demands.

The Problem with Assessing Impact: In theory, it shouldn’t be that difficult to assess the impact of marijuana use. However, it is difficult to untangle. For one thing, marijuana is rarely used in isolation. Generally, tobacco, alcohol or both are involved. And while the amount smoked is less with marijuana, experience has shown that smoking marijuana can make it harder to quit smoking tobacco. Most people use the two together, thus, as Dr. Reid punned, “clouding the issue.”

“Significant numbers of individuals who smoke lots of marijuana daily come to us because they want to stop smoking,” said Dr. Pipe. “But for heavy marijuana smokers mixing it with tobacco, the likelihood of quitting is much less.” Another problem relates to dose control. There are no standards for the production of marijuana and the amount of THC (the ingredient that gives marijuana its “high”) it contains. The problem becomes more acute when marijuana is eaten, said Dr. Pipe. People who eat marijuana may not feel the effect as quickly as those who smoke it, leading them to use more.

Marijuana and Depression: One concern frequently raised is the link between marijuana and depression. Depression is a known risk factor for heart disease, in part because it interferes with a patient's ability to adopt healthier behaviours, and many believe that marijuana use can lead to depression.

But it's a chicken-and-egg kind of argument. We really don't know whether marijuana causes depression, said Dr. Pipe, or whether people who are depressed use marijuana at least in part as an effort to self-medicate. Either way, it underscores yet another area where more research is needed.

Edible Marijuana: Eating marijuana is an option to avoid the toxins associated with smoking it, but other risks are likely similar. "Edible forms would be different in terms of impacts on the oxygen carrying capacity of blood," said Dr. Reid, "But there would still be some [effects] in terms of heart rate and blood pressure."

This is also a rich area for future research, said Dr. Pipe, particularly isolating and purifying the chemical compounds in marijuana that have a therapeutic effect while eliminating the psychoactive ingredients. "We don't advise people in pain to chew willow bark [the source of the active ingredient in Aspirin], we tell them to take Aspirin," he said. "There's no reason marijuana should be any different."

What's a Patient to Do? With all this uncertainty, it's hard to know the wisest course for a patient. Dr. Reid advised that patients "start asking" their care providers about using marijuana just as they would about alcohol and to use caution, until something more definitive is known.

"Smoking marijuana probably wouldn't be a good idea for someone with ischemic heart disease," said Dr. Reid, because of the reduced oxygen transport through the body. "There's no reason to begin marijuana use, and there could be more risk associated with it." "Don't smoke it!" added Dr. Pipe. "Have a careful, considered conversation with the physician who is responsible for your care." "I'm pretty confident saying if you don't use it now, there's no reason to start," concluded Dr. Reid.

Source: The Beat <https://www.ottawaheart.ca/the-beat/2018/10/17/marijuana-and-your-heart> October 2018

MARIJUANA LINKED WITH BENEFITS FOR HEART FAILURE PATIENTS

Smoking marijuana has been linked with heart problems, but in a surprising new finding, researchers now say the drug may have benefits for people with heart failure.

However, the researchers stress that they do not currently recommend that heart failure patients use marijuana.

The researchers found that, among patients with heart failure (when the heart muscle can't pump enough blood to meet the body's normal demands) those who used marijuana were less likely to experience a complication called atrial fibrillation, or "A-fib," which is a type of irregular heartbeat that can worsen heart failure symptoms.

Heart failure patients who used marijuana were also less likely to die in the hospital than those who didn't use the drug, the study found. This finding was unexpected — the researchers had hypothesized that marijuana use would be linked with an increase in health complications for patients with heart failure.

"I was very surprised that it was actually a reduced association I found," said study lead author Dr. Oluwole Adegba, a medical resident at Englewood Hospital and Medical Center in New Jersey. Adegba presented the findings this month at the American Heart Association's Scientific Sessions meeting in Anaheim, California.

But the researchers say it's much too early to recommend marijuana for heart failure patients. Because the study is the first of its kind to find a link between marijuana use and a reduced likelihood of A-fib among heart failure patients, more studies are needed to confirm the results, Adegba said.

A-fib can be both a cause and a consequence of heart failure, and the two conditions often occur together, according to a 2015 review paper. Patients with both heart failure and A-fib have a poorer prognosis, and an increased risk of early death, than those with either of the conditions alone.

A few small studies (including individual case reports) have found a link between marijuana use and the development of A-fib. Adegba and colleagues decided to explore this link further by examining a large database of hospitalized patients in the United States. They analyzed information from more than 6 million patients admitted to the hospital with heart failure between 2007 and 2014. Of these, about 1,200 used marijuana and were dependent on the drug; about 23,000 used marijuana but were not dependent on it.

They found that nondependent marijuana users were 18 percent less likely, and dependent marijuana users 31 percent less likely, to experience A-fib, compared with patients who didn't use marijuana. In addition, nondependent marijuana users were 46 percent less likely, and dependent marijuana users were 58 percent less likely, to die in the hospital, compared with those who didn't use marijuana.

The findings held even after the researchers accounted for factors that could affect the results, such as people's age, socioeconomic status and use of other drugs. It's possible that previous studies found a link between marijuana use and an increased risk of A-fib

because these studies weren't able to take into account people's use of other drugs, such as alcohol, that could increase the risk of A-fib, Adegbala said.

It's not clear how marijuana might lead to a reduced risk of A-fib and mortality among patients with heart failure, Adegbala said. Studies in animals suggest that activation of cannabinoid receptors (which are found throughout the body and are activated by compounds in marijuana), may reduce high blood pressure and atherosclerosis, which are both risk factors for A-fib, Adegbala said. In addition, some studies have found that cannabidiol, a compound in marijuana, may reduce inflammation in the body, which is also a risk factor for A-fib, he said.

Still, more research is needed to explore how marijuana may reduce the risk of A-fib in heart failure patients, and exactly which components of marijuana are responsible for this effect, Adegbala said.

The new study has not yet been published in a peer-reviewed journal.

Source: Rachael Rettner November 20, 2017 Health News <https://www.livescience.com/60988-marijuana-heart-failure.html>

CASE Events Calendar - September 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Labour Day	3 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	4 Golf Weather Permitting Twin Willows Golf Club Noon Tee-Off	5 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	6	7
8	9 All about Cannabis 7:00 TFRC	10 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	11 Golf Weather Permitting Twin Willows Golf Club Noon Tee-Off	12 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	13	14
15	16	17 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	18 Golf Weather Permitting Twin Willows Golf Club Noon Tee-Off	19 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	20	21
22	23 Board Meeting Bonnie Doon 9 a.m.	24 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	25 Social Breakfast SEESA 9am Golf, Twin Willows Noon Tee-Off	26 Exercise Program Volleyball 3:45 Aerobic/Stretch 4:45	27	28
29	30					

