



## Ask the Expert with Dr. Darrell Menard

Find Answers to your Sport Medicine Questions!

### Exercise pills – is this real?

**Q:** *I've never been an enthusiastic exerciser but I've been physically active throughout my adult life because of the many benefits it offers me. Yesterday, I heard someone on the radio discussing research on drugs that provide the benefits of exercise without having to move a muscle. Is this possible and if so are these products safe? ...Intrigued.*

**A:** Dear Intrigued, bravo on staying physically active. Scientists have been working hard to understand the molecular basis by which we benefit from exercise. In doing so, they have discovered that exercise triggers the production of substances that cause the body to build muscle, improve circulation and enhance muscle biochemistry. They have also discovered they can synthesize these substances and when people take these, they may experience the same benefits as with exercise, without losing one drop of sweat.

Currently there are at least 10 so called "exercise pills" being developed and they work by a variety of mechanisms. None of these products are currently approved for human use but they are being sold on the internet to people hoping to benefit from them. It's important to note that these pills are designed to mimic one or more of the effects of exercise but none of them comes even close to providing the extensive number of benefits that physical exercise offers the body. While "exercise pills" sound like a dream come true, they are far from it. The following are some of the concerns about using these products:

1. These substances have not been thoroughly tested to ensure they are safe for human use and at least one of them has caused cancer in rats;
2. There is no reliable dosing advice available to people buying these products off the internet – so people have no idea how much is too much;
3. Physical activity is proven to be an effective way to prevent and treat many chronic medical problems such as diabetes, depression and osteoarthritis. No exercise pill provides all of these benefits and they likely never will;
4. These pills are currently aimed at affecting muscle function and cardiovascular performance. They do not address other important things such as the mental health and the bone strengthening benefits of exercise;
5. Using these substances may encourage people to be less physically active, possibly leading to an increase in the incidence of the chronic diseases that real exercise can prevent and treat, but which these pills do not protect against;
6. These pills may deprive people of the social interaction and fun associated with physical activity. I doubt they will ever design a pill that is as much fun as a game of ultimate Frisbee!

The bottom line: in the future, exercise pills may offer some benefits to people who are unable to exercise because of disease or disability but for others, using these pills will be a giant step backwards. The reality is that if you want to safely enjoy the enormous number of benefits exercise has to offer, you need to stay physically active. While medication isn't exercise - exercise continues to be medicine!

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Dr. Darrell Menard is the Surgeon General's specialist advisor in sport medicine. He has worked extensively with athletes from multiple sports and has covered Canadian teams competing at multiple games including the 2012 Olympics and the 2016 Paralympic games. These articles were originally published in the Canadian Forces Journal, the Maple Leaf.

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