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Moderate-Intensity Exercise Boosts Immune System: Fight COVID-19

Like many of you, I've been listening to the experts and trying to absorb the reality of the COVID-19 virus and its impact on the safety of ourselves, our friends, families, and the world. It's easy to crawl into a deep black hole and only come out when we think the air is safe to breathe. However, I've also been listening to the experts on physical activity and health... *'hey I thought you were an expert...'* you might be thinking, I am, but I've come to find out I'm not the only one!

In a recent article released by Richard J. Simpson, Ph.D., FACSM, he reminds us that moderate-intensity physical activity can boost the immune system. Moderate-intensity exercise can be described as an activity that would burn off 3 to 6 more times more energy than if you were watching Netflix from your deep black hole we mentioned above. An example might be a brisk walk at about 3 to 4 miles per hour. Any activity that raises your heart rate a little, causes you to breathe a little harder but enough to have a conversation. If you can't finish a sentence then you're walking too fast or too hard. Or, you're walking with someone who talks too much.

The immune system is designed to help keep us free from infection and disease. Having a higher cardiorespiratory fitness level and performing *regular* exercise of moderate to vigorous-intensity that fall within ACSM guidelines has been shown to *improve* immune responses. Some of those immune responses include improving various immune markers in several disease states like cancer, HIV, cardiovascular disease, diabetes, cognitive impairment and obesity.

- Exercise can boost our immune system.
- By boosting our immune system, exercise can help protect us from infection.
- COVID-19 is an infection.

Another unfortunate consequence of the COVID-19 virus is the negative effects of social isolation and confinement on the immune system. Stress. The hormone cortisol is also referred to as the 'stress hormone' and can be elevated during this time of isolation. I know it well because it's the cause of my belly fat right now. I know it's not the pizza! When we are stressed our body's ability to respond to infectious agents is reduced. It's also important to minimize the impact of the COVID-19 virus and to speed up recovery should we become infected.

Here's why we talk about the importance of *regular* exercise. Each time we exercise, especially cardiorespiratory exercise (walking, cycling, running...) we instantaneously mobilize billions of immune cells that are capable of carrying out functions such as the recognition and killing of virus-infected cells. The immune cells that are mobilized with exercise are 'looking for a fight.' These cells are frequently recirculating between the blood and tissue functions to increase immune surveillance. This in turn is thought to make us more resistant to infection and better 'armed' to deal with any infectious agent that has gained a foothold on our immune system.

Young or old, the virus does not discriminate. Nor does the impact of exercise.

"Exercise is especially beneficial for older adults who are more susceptible to infection in general and have also been identified as a particularly vulnerable population during this COVID-19 outbreak." Richard J. Simpson, Ph.D., FACSM.

Exercise may not prevent us from becoming infected if exposed, but it is likely that *staying active* will boost our immune system. Boosting our immune system can help minimize the effects of the virus, improve our symptoms, speed up recovery times, and lower the likelihood that we can infect others.

Right now we have restricted access to fitness facilities and gyms and no one really knows for how long. Perhaps this is a time to rethink how we live, work, play, and exercise. Walking can be done in an open area or neighborhood and making sure that you stay clear of others. If you are walking and come across another walker simply keep your distance at 6 feet or greater. The MyFitScript prescriptive exercise programs are ACSM guideline-driven and the strength-training component is designed for home use. The exercises can be performed with weights, even using your body for resistance, or items of weight like books, soup cans, water-jugs. Yeah I know, it sounds silly but it works! Weight is weight. Just lift it, push it, and pull it.

Keep yourself safe, and fit, and let's fight this COVID-19 together.

