

## Can exercise boost your immunity?

Being active is one way to stay healthy during coronavirus pandemic

by: Jill Barker

Of the many benefits associated with exercise, enhanced immunity has never been a headline-grabber. Until now. With the COVID-19 pandemic upon us, even a small gain in immunity is worthy of mention. To be clear, there's no data suggesting exercise can boost immunity against the coronavirus. But physical activity has been proven to offer a measure of protection against other upper respiratory illnesses.

Statistically, fit individuals are less likely to get the flu and other viral infections. And with an opinion piece published in the journal *Brain, Behaviour, and Immunity* urging the population to stay active during the COVID-19 crisis, it's clear there's enough data to support exercise as a preventive measure.

"The available scientific evidence from other viral infections would indicate that physically active people will have less severe symptoms, shorter recovery times, and may be less likely to infect others they come into contact with," write the piece's authors, who hail from the department of immunobiology at the University of Arizona, Tucson.

The good news is that even a single workout improves our ability to fight off a virus, and the better news is that the best results come from moderate to vigorous aerobic workouts of less than 60 minutes.

That means all the walking you've been doing since the country was put on pause has been slowly but steadily strengthening your immune system.

It's not just the flood of immunity-boosting cells circulating through the bloodstream post-exercise that is significant. Exercise also decreases stress, which is known to compromise the immune system. With job security in question and kids and spouses all stuck at home together trying to work and maintain their studies, stress levels are increased. Hence the need to develop and maintain the exercise habits of everyone in the household.

Exercise also boosts the immunity of our older population, considered to be at the highest risk for COVID-19. So opportunities for those in seniors' residences and long-term care facilities to be more physically active should be routine.

Still, while there's a tendency to believe that more exercise will lead to better results, the science suggests that dedicated exercisers who have further ramped up their volume during the directive to stay at home may be jeopardizing the immunity benefits garnered through years of being active.

The idea that a training schedule packed with intense workouts could have a detrimental effect on immunity started with a notable uptick in upper respiratory infections in long-distance runners in the weeks leading up to and after competing in a marathon. Studies also suggest that runners putting in the most training miles are twice as likely to get sick as those putting in fewer training miles.

A similar phenomenon has been recorded among elite athletes, especially around the time they are peaking for international events. Combine high training loads with increased stress, interruptions to sleep and international travel, and it's the perfect storm for picking up a bug. Of course, there's also the possibility that virus transmission is enhanced by large competitive events that bring together groups of people exercising in proximity, but the fact that endurance athletes are among those most likely to pick up a virus suggests that exercise volume is a risk factor when it comes to compromised immunity. So while pushing the body's limits is how we become stronger and more physically resilient, there's a point where too much volume may reduce the body's ability to fight off a virus.

What's the best exercise prescription for boosting immunity? Focus on moderate to vigorous workouts under 60 minutes, most if not all days of the week. If you choose to go for an extralong run or bike ride, enhance recovery by following your workout with a day of active rest. Also important to recovery is a healthy diet and getting a good night's sleep. If that feels like too much activity, the immunology experts at the University of Arizona suggest less structured bouts of exercise can play just as big a role in maintaining health while COVID-19 is circulating.

"Keeping active indoors or outdoors through brisk walking, stair climbing, yard/house work and/or playing active games with the family can be just as effective," Richard J. Simpson and Emmanuel Katsanis write. "What is important is that we avoid prolonged periods (over 60 minutes) of time sitting and try to implement even a few minutes of activity at regular intervals throughout the day."

So while the country is slowly ramping up to reopen, and to a new normal, don't give up those daily brisk walks. Public health experts say the coronavirus will be with us for many months, which means your exercise habit should be, too.