

Covering all the bases

Should you give your mask a workout indoors?

by: Jill Barker

Does the resilience of the coronavirus second wave mean gym rats will soon be sporting masks while on the treadmill? Not according to the World Health Organization, which says exercisers should avoid wearing masks while working out. They claim masks make it harder to breathe and the moisture generated from sweat and increased respiration will result in wet fabric that is host to a multitude of micro-organisms.

To date, most regional and national public health officials have sided with the WHO's stance that exercise and masks don't mix. But a small wave of dissenting views is changing the conversation. A team of researchers from the University of Saskatchewan and two sports medicine experts from the University of Pretoria in South Africa say masks can and should be worn while exercising indoors and in the company of others.

The Canadian researchers set out to discover just how much a mask affected exercise performance.

They tasked seven men and seven women with exercising on three days, alternating between wearing a three-layer cloth mask, a disposable threeepley surgical mask and no mask.

The exercisers warmed up on a stationary bike before increasing the resistance every two minutes, while cycling at 70 to 75 revolutions per minute, until they could no longer maintain the pedal rate. With the length of each exercise bout kept secret so as not to influence the outcome of the next workout, the exercisers reported no difference in perceived exertion regardless of the type of mask worn, including when exercising without a mask. Objective physiological findings concurred: Time to exhaustion, heart rate and delivery of oxygen to the working muscles remained consistent in all three exercise trials - mask or no mask.

"Our findings indicate that face masks can be worn during exercise without affecting exercise performance or blood and muscle oxygenation," said the University of Saskatchewan researchers.

The researchers acknowledged that their findings are contrary to previous studies reporting that exercising with a mask decreased oxygen uptake and facilitated the rebreathing of expired carbon dioxide, but noted that those studies used hospital-grade N95 masks similar to those worn by health-care workers on the front lines. The masks used in the University of Saskatchewan study were made of cloth similar to those worn by the general public, as well as disposable surgical masks also used in everyday settings.

Jessica Hamuy Blanco and Christa Janse van Rensburg, from the faculty of health sciences at the University of Pretoria, say wearing a mask while exercising at the gym is an important factor in reducing virus transmission.

In a British Journal of Sports Medicine blog post and an opinion piece published in the South African Journal of Sports Medicine, the two experts suggest that comfort, breathability and infection control are the hallmarks of a good mask for the gym and recommend two-layer cotton masks versus the three-layer models.

One layer less makes breathing feel easier, especially if wearing a mask initiates a sense of claustrophobia - a common early reaction to exercising with a piece of fabric over the mouth. The extra breathability will also reduce the buildup of heat around the mask that occurs as exercise intensity increases, while still maintaining a protective barrier against virus transmission.

Be aware, however, that some of the more lightweight, more breathable synthetic masks on the market aren't as effective in containing expired respiratory droplets, which is the main function of wearing a mask.

"There is unfortunately an inverse relationship between protection and breathability with regards to the wearing of masks while exercising," the South Africans said.

As for the accumulation of moisture and heat that occurs as breathing and exercise intensity increase, Hamuy Blanco and Janse van Rensburg suggest taking a second and even third mask with you to the gym so you can change to a dry mask as necessary.

A wet mask makes it harder to breathe and makes the cloth barrier less effective at mitigating the release of respiratory droplets into the air. Just be sure to keep your hands off the front of the mask, changing by pulling on and off the ear loops.

Put wet masks in a plastic bag until they can be placed in the washing machine when you return home.

It takes a bit of trial and error before finding a mask that works for you, and you may want to consider models designed specifically for exercise. Just be careful about believing claims of enhanced antiviral material, which may be overstated.

Another word to the wise: As exercise intensity increases, so does the need for oxygen, which can test the comfort and breathability of even the best mask. You may prefer limiting intense aerobic workouts to solo efforts done outdoors, instead of trying to breathe through a damp mask.

And remember, wearing a mask is only one of the recommended measures for staying safe.

Physical distancing, frequent handwashing and refraining from visiting the gym if you're sick (including with the common cold) are still best practices for reducing the risk of virus transmission.

© 2020 Postmedia Network Inc. All rights reserved.