

Exercising Outdoors With a Face Mask

By Gretchen Reynolds, April 10, 2020, *New York Times*

Many of you had questions about running or cycling while wearing a face mask. Here's what the experts have to say.

When we asked readers what they still wished to know about exercising during the coronavirus crisis, one issue topped all others. People wondered about running or cycling in a face mask and how it would affect their breathing, performance, chances of spreading the virus and even vision.

To find out, I spoke with a number of physiologists and other scientists about what is known or at least suspected about wearing a facial covering while exercising and what types of masks and fabrics might work best during workouts.

The researchers cautioned that little is known about heavy breathing during aerobic exercise and how it affects viral spread. But they had plenty to say about fit, spit, perceived exertion, thermoregulation and facial saunas. What follows are their suggestions – and cautions – about masks and exercise.

Do I have to wear a mask during outdoor exercise?

This answer is more about policy and politeness than viral spread. In general, outdoor exercise, with or without a mask, seems to be safe, according to most experts.

“I think relatively little Covid-19 transmission would occur outdoors, except perhaps in large crowds,” says Benjamin Cowling, a professor of epidemiology and biostatistics at the University of Hong Kong and the senior author of a [study published in Nature this month](#) that looked at breathing, viral shedding and masks. “Running is good for health,” he says, “and transmission risk should be minimal, both for others, if a runner were infected, or for the runner, if they passed by infected people.”

Even so, most of us probably should cover our faces while we exercise outside. The Centers for Disease Control and Prevention recommends that everyone now wear a mask of some kind when they leave home, and some municipalities require a facial covering if you are outside. Masks also could reassure people with whom you share paths or sidewalks while running and who, in my experience, have started to shy away when we runners pant by.

Does wearing a mask make it harder to run or cycle?

It might, says Bryanne Bellovary, a doctoral student researching exercise in extreme environments at the University of New Mexico in Albuquerque. She has studied the effects in athletes of wearing specialized masks that restrict airflow and simulate altitude training.

“People exercising with a face mask may feel some resistance to breathing, depending on the thickness of the mask material,” she says.

Thijs Eijsvogels, an assistant professor at Radboud University in the Netherlands who studies heat regulation and breathing in athletes, agrees. “If the mouth and nose are fully covered,” he says, “there may be some limitation to the intake of air, which may raise discomfort and attenuate your running performance.”

Masks also “become quickly wet” and wadded as we huff into them heavily while exercising and the moisture in our breath collects there, says Dr. Louis-Philippe Boulet, a professor of cardiology and pulmonology at Laval University in Quebec City, who has studied asthma in athletes. Drawing in breaths through damp cloth tends to feel more strenuous than when it is dry. Worse, he says, wet masks “lose antimicrobial efficiency.”

And then there is the oozing. “Exercising in a face mask will create a warm and humid microclimate around your face” as the mask traps your exhaled breaths, says Dr. Grant Lipman, a clinical professor of emergency medicine at Stanford University who studies extreme athletes and wilderness medicine. In effect, the mask turns the bottom half of your face into a “mini-sauna,” he says, leading to a buildup of sweat under the mask and a related rise in nasal secretions.

The result can feel “unpleasant,” he says, if, like so many of us, “you find the sensation of mucus pouring down your face to be unpleasant.” When he and his colleagues [studied the effects of wearing a facial covering](#) at night to make breathing more difficult and feign being at altitude, almost half of the participants reported that they could barely sleep because of the “copious nasal secretions” produced under their masks, he says.

Taken as a whole, research and experience show that “running with a mask is clearly different compared to running without a mask,” Dr. Eijsvogels says.

Will my glasses fog up?

Probably, says Morten Hostrup, an associate professor of physiology at the University of Copenhagen. “It depends on the size of the mask, the intensity of the breathing, and the size of the glasses,” he says.

Facial coverings that are loose around the nose, allowing warm, wet air to flow upward, will probably cause the most fogging, especially if your glasses sport large lenses and frames that rest snugly against your cheeks. You might be able to reduce any misting by washing the lenses with soapy water before slipping on your mask, according to an advisory for bespectacled surgeons that was [published in 2011 in the Annals of the Royal College of Surgeons](#).

So, what kind of face covering is best for outdoor exercise?

That choice ultimately requires a difficult balancing of concerns about infection control and discomfort, the experts say.

For the greatest comfort during strenuous exercise, Dr. Lipman says, you might consider a buff, a type of tubular facial covering that doubles as a headband or neck gaiter and can be stretched over the nose and mouth. Buffs often are made from thin, synthetic fabrics designed to reduce heat buildup and, since they are open at the bottom, promote more airflow than standard surgical masks.

But, because of that open, let-in-the-air design, they also present less of a barrier to the outflow or influx of germs than surgical masks or their homemade equivalent.

Surgical masks, meanwhile, may block microbes more effectively. But they are hot and “get wet quickly” during workouts. Dr. Boulet says, which could tempt people to pull them down, undermining any anti-viral benefits.

So, in the end, you may need to consult your judgment and conscience and perhaps try a few different types of masks and fabrics. Whatever choice you land on, though, maintain your distance. “The most important precaution is social distancing,” Dr. Boulet says. Stay at least six feet away from anyone you pass. And disinfect your hands and your mask when you get home.