

Should You Work Out When You're Sick?

By **DR. JOHN BERARDI**

It's sick season. When you have a cold or flu, should you "sweat it out" at the gym or sit out a few sessions? In other words, should you exercise when sick? Let's clear the confusion once and for all.

You know the scene. You stand up from the water fountain at the gym -- just in time to catch a profuse spraying from Mr. Sneezzy. Gross.

You think, *Doesn't this coughing, sneezing, mouth-breathing dude belong at home resting, not here at the gym infecting all the equipment?* Not so fast. You could be next, and you'll want to know if it's OK to hit the gym. (After all, exercise does build immunity, right?) Let's see if Mr. Sneezzy is on to something.



The immune system: A quick-and-dirty intro

First things first: It's a germy jungle out there. Every single day, bacteria, viruses, fungi and parasites try to take us down. The most common assailants are upper respiratory tract invaders, or URIs. Their greatest hits: colds, coughs, flu, sinusitis, tonsillitis, throat infections and middle-ear infections.

Thankfully, your immune system has a plan. When faced with foreign attack, it works hard to defend you. Immune cells that originate in your bone marrow and thymus gland work their way through your lymph nodes, spleen and mucus membranes to fight bugs in your mouth, gut, lungs and urinary tract. Your innate (natural) immune system is your first line of defense. It includes:

- * physical/structural barriers (like the mucus lining in nasal passages)
- * chemical barriers (like stomach acids)
- * protective cells (like NK cells -- white blood cells that destroy invaders)

Your adaptive (acquired) immune system is a more sophisticated system of highly specialized cells and processes that kicks in when the innate immune system is overcome, destroying the invading microorganisms and preventing them from colonizing your body.

Amazingly, these white blood cells have a kind of "memory" that allows them to recognize specific pathogens over time, developing a targeted approach for each immune response. That's what we mean when we say "building immunity." It's the science behind vaccination and, frankly, much of modern medicine. Genius.

Should you exercise while sick?

If you're tempted at first snuffle to eschew the treadmill in favor of the couch, hold the phone. Unless you're truly feeling like a train wreck, I recommend low-intensity, low-heart-rate cardio during the first few days of sickness. (Should that happen at the gym, however? Keep reading.)

First, let's get one thing clear: There's a difference between "working out" and "physically moving the body." A structured workout routine -- one in which you're breathing heavily, sweating, working hard and feeling some discomfort -- awakens a stress response in the body.

When we're healthy, our bodies can easily adapt to that stress. Actually, this progressive adaptation is precisely what makes us fitter and stronger over time.

But when we're sick, the stress of a tough workout can be more than our immune systems can handle.

Still, there's no reason to dive for the couch the minute you feel the sniffles coming on. Unless you're severely out of shape, non-strenuous movement shouldn't hurt you. I'm talking about:

- * Walking
- * Low-intensity biking
- * Gardening
- * Tai chi
- * Jogging
- * Swimming
- * Qi gong
- * Yoga

These activities aren't intense enough to impose serious immune-compromising stress on the body. Actually, they've been shown to boost the body's ability to fight illness. Research shows that regular resistance training may stimulate your innate immunity, while even a single session of moderate exercise seems to strengthen the adaptive immune system -- even better if you do it regularly.

What about "working out"?

Prolonged vigorous exercise, on the other hand, can make us more susceptible to infection. For example, running a marathon can depress your adaptive immune system for up to 72 hours. (Ever notice how endurance athletes get sick right after races?)

In other words, a high-intensity workout delivers an ass-kicking. It makes sense to avoid that when you're sick (i.e., already dealing with physical stress). Of course, exercise isn't the only factor affecting the immune system. Other types of stress play big roles too. On any given day, you might deal with:

- * Physical stress: exercise, sports, physical labor, infection, etc.
- * Psychological stress: relationships, career, finances
- * Environmental stress: heat, cold, light/dark exposure, pollution, altitude
- * Lifestyle stress: drugs, diet, hygiene

Stress can trigger an entire cascade of hormonal shifts resulting in chronic immune changes. Research shows that acute stress (minutes to hours) can be beneficial to immune health, while chronic stress (days to years) can be a big problem.

Other factors affecting immunity: There's a host of permanent and temporary factors that, especially when combined with exercise and other stressors, may jeopardize immunity and affect your decision as to how much exercise to strive for when sick.

Age: Your innate immune response can break down as you get older. The good news? Staying physically active and eating a nutritious diet can offset these changes.

Gender: While the female estrogen hormone generally enhances immunity, men's androgen can suppress it. (Could this be evidence that the "man cold" is real?)

Sleep: Short-duration or poor-quality sleep can jeopardize immune function.

Obesity: Research indicates that obese people may have a harder time fighting infection, perhaps because of metabolic abnormalities.

IL-6: There is a theory that the post-exercise release of IL-6, a compound that prompts immune response, may be abnormal in some people, leading to fatigue, flu-like symptoms and depressed mood.

Air temperature: The jury is still out, but some scientists hold to the theory (backed by some evidence) that cold air depresses immunity, perhaps by causing a vasoconstriction response in the nose and upper airways.

Training age: The less in shape you are, the bigger a stressor exercise is on your body and immune function.

Exercising-while-sick calendar: So you're going to get moving -- cold and all. Go, you! What, exactly, should your plan be? For starters, avoid exercising in a [cold environment](#), which can exacerbate upper respiratory symptoms. Then:

Day 1

- * With symptoms like sore throat, coughing, runny nose or congestion: low-intensity exercise.
- * With muscle/joint pain, headache, fever, malaise, diarrhea or vomiting: no exercise.

Day 2

- * With no fever and no worsening of above-the-neck symptoms: light exercise (pulse <120 bpm) for 30 to 45 minutes.
- * With body temp over 99.5° F, increased coughing, diarrhea or vomiting: no exercise.

Day 3

- * With no fever or malaise and no worsening of initial symptoms: moderate exercise (pulse <150 bpm) for 45 to 60 minutes.
- * With fever and symptoms still present: no exercise; consult a doctor.

Day 4

- * With fever and other symptoms improved: wait 24 hours, and then return to normal exercise routine.
- * With appearance of new symptoms: no exercise; go to your doctor.

In essence: "Let your symptoms be your guide," says [Dr. Bryan Walsh](#), a naturopathic physician in Ellicott City, Maryland. "If you're up for a walk or some light cardio, go for it. If you want to do some lighter-weight, higher-rep stuff just to keep things moving, that's probably OK too. But if you want to sit around watching reruns of *Married With Children*, laughter is great medicine as well."

Also, it's important to return to your workout regimen gradually, in proportion to the length of your illness. (So if you were sick for three days, take three days to ease back in.)

One final note: It's not us, it's you

Congratulations for wanting to keep up some physical activity while you're ailing. Just remember that all it takes is a single cough, sneeze or touch -- and bam! --you've just spread your virus to the whole gym. (Thanks, Mr. Sneezy.)

So it's with the utmost sympathy that I suggest, for the sake of the rest of us, that you exercise at the park or at home while you're sick. Oh, and (if you didn't assume this by now) please avoid team sports. We all thank you.

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