

YOUR BODY'S NATURAL HEALING POWER

It's inflammation. Yes, that notorious health villain. Groundbreaking new research shows that if you practice a few simple strategies after your workout, it will actually *help* you build muscle, boost immunity, and fight stress. Learn to harness the benefits. By HOLLACE SCHMIDT

INFLAMMATION IS ONE of the hottest health topics of the year. But until now, the focus has solely been on the damage it causes. As it turns out, that's not the whole story. Researchers have recently discovered that inflammation can actually make us healthier. It has powerful healing effects and is a critical component of the immune system, says Joanne Donoghue, Ph.D., an exercise physiologist at the New York Institute of Technology College of Osteopathic Medicine. You need it to generate muscle, heal from injuries, and even power through a tough day. The way it works is this: "Whenever you strength-train or do cardiovascular exercises, you're creating

mini-traumas in your muscles," Donoghue explains. That triggers inflammation, which prompts the release of chemicals and hormones to repair the affected tissue and leads to stronger muscle fibers. Your bones also benefit, says Maria Urso, Ph.D., a human performance consultant with O₂X, a wellness education company. The load placed on your bones during strength training creates tiny divots in their weak areas, and inflammation kicks off a process that fills in those spots with new, stronger bone.

Inflammation is also crucial to recovering from an injury. Say you roll your ankle while running. "Within minutes, white blood cells rush to the

injury site,” says Wajahat Zafar Mehal, M.D., an associate professor at the Yale School of Medicine. They assess the damage and fire up clusters of molecules known as inflammasomes, which activate small proteins that make your ankle turn red and swell. These inflammatory symptoms draw immune cells to the area to begin the healing process, Dr. Mehal explains.

Preliminary animal studies show that workout-induced inflammation may even cause the immune system to operate more efficiently. That means that inflammation created by exercise could potentially help to fight off colds.

But, like most health issues, the process is complicated. Inflammation is healthy only in moderation. “When inflammation is at high levels all the time, it creates chronic wear and tear on healthy tissues and organs,” says Charles Raison, M.D., a professor of psychiatry at the University of Wisconsin–Madison School of Medicine and Public Health who studies the condition. Carrying excess weight, not getting enough rest, or exercising too much all can cause the good-for-you inflammatory response to veer into the danger zone.

The key to reaping the benefits of postexercise inflammation then is to keep it at a balanced level. The following three techniques will help you use its power without allowing it spiral out of control.

Stretch it out

Rather than collapsing on the couch after a tough workout, take a walk, do some light yoga, or use a foam roller. Postexercise, your muscles leak out a protein called creatine kinase, which your kidneys need to filter from the blood. If you sit still, the damaged proteins accumulate, and this may result in more inflammatory-control cells coming into the area and delaying recovery. “By moving your muscles, you increase blood flow to those areas,” Urso explains. “This helps flush out the waste products so your body can repair itself.”

Embrace the ache

When the soreness from your boot camp class is intense, you may be tempted to pop ibuprofen. Don't. These nonsteroidal anti-inflammatory drugs (NSAIDs) prevent normal postexercise inflammation from occurring, which could keep your body from building and strengthening your muscles, Urso says. Translation: Your workout is a lot less effective. Taking ibuprofen might even increase your risk of injury, Chinese researchers report. In studies, they found that NSAIDs interfere with bone rebuilding, leaving

you vulnerable to stress fractures and osteoporosis. Save the medications for more severe injuries like muscle tears. For regular soreness, try menthol gels like **Biofreeze Cold Therapy Pain Relief** (\$12, drugstore.com), which have proven analgesic properties but won't interfere with inflammation.

Take a break

Follow every superintense workout with an easy or rest day, suggests Chad Asplund, M.D., the medical director of athletics sports medicine at Georgia Southern University. Exercise creates free radicals, unstable molecules that damage cells. Normally, the body releases antioxidants to neutralize those molecules, but if you keep pushing yourself to the limit day after day, the free radicals overwhelm your body's defenses, creating a condition known as oxidative stress. This causes harmful chronic inflammation, which tears down muscles rather than building them up, Donoghue says. Watch out for symptoms like plummeting endurance, strength, energy, or motivation, or irritability, frequent illness, or trouble sleeping. These are all signs that you should take at least two full days off, Donoghue says, then dial back your exercise schedule by 30 to 40 percent for the next two or three weeks in order to recover. ★

PUT STRESS TO WORK FOR YOU

Mental stress, like trying to meet a crazy deadline at work, triggers inflammation the same way workout stress does. “When the brain perceives anxiety or danger, it kicks on inflammation,” says Charles Raison, M.D., a professor of psychiatry at the University of Wisconsin–Madison. In small doses, your stress response can be good for you, according to Firdaus S. Dhabhar, Ph.D., an associate professor of psychiatry and behavioral sciences at Stanford University. It prompts the release of cortisol and other chemicals, which deliver a jolt of energy and alertness, and enhance the immune function to help you deal with the situation at hand. To keep stress short term and beneficial, and to prevent it from becoming chronic and harmful, try these expert-backed tactics.

Go green. Getting outside can help you decompress. After taking a walk through nature, study participants were significantly less likely to dwell on negative thoughts than those who strolled through a cityscape, research at Stanford University found.

Use the conveyor belt method. “For a few seconds several times a day, imagine that your stressful thoughts are boxes on a conveyor belt, passing through your awareness,” suggests Bruce Hubbard, Ph.D., the director of the Cognitive Health Group in New York City. “This teaches you to let go of the things that worry you.”

Eat more yogurt. Random, but true: Women who received a four-week course of probiotics, which are found in yogurt, ruminated less when they were sad than those who received a placebo, according to a study in *Brain, Behavior, and Immunity*. That's because probiotics increase your level of tryptophan, which helps produce serotonin, a hormone that boosts mood. Eat at least one serving of yogurt a day for the best results.