

Treadmill vs. Outdoor Running

By Dr. Jon DeGorter, DC, Cold Spring Chiropractic



Although it's not the same as running outdoors, training on a treadmill has benefits. It provides a controlled environment where you set the pace and incline, plus the cushioned belt surface is more forgiving than hard pavement. Also, the moving belt assists leg turnover, making it easier to run faster, which is why many runners find that their pace on the treadmill doesn't correlate to their road pace. Any type of running makes you susceptible to injury, although some injuries are specific to the treadmill.

When running outside, you push yourself forward using the back of your legs, whereas the belt pulls you forward on the treadmill. The belt propels you forward, requiring you to use your quads more and less of your hamstring muscles, so you're working them a bit harder than if you were outside. This change can be significant enough to alter your natural running gait. This extra stress on different muscles and tendons can lead to pain and injury.

If you run at a consistent speed, the treadmill keeps moving even as you tire, and you may over stride, landing with your foot too far ahead of your body, as you attempt to keep up with the speed of the belt. This can lead to knee, hip, and hamstring pain. When you get tired running on a track or on the road you'll naturally slow down a bit or shorten your stride.

Running at the same pace and incline mile after mile, day after day can cause problems because you are working your muscles and joints in a repetitive way. This leads to overuse injury. Things you'd encounter in an outdoor environment force your body to make adjustments. These micro-changes to your movement patterns help balance the workload, preventing muscles and joints from getting overtaxed. Any variability you add to your training program is protective to your body, helping it work more evenly.

Running outside activates more muscles because the body has to react to changing surfaces and surroundings. Because you're not running in a linear pattern you engage additional muscles as you encounter uneven terrain, hills, and obstacles like cars, dogs and people. Using the treadmill's preset programs, or adding hills and changing up the pace are good ways to add variety and help the miles pass more quickly than a tedious steady slog. Try a tempo workout as you watch TV: run at tempo pace during the show, then slow down and jog during the commercials, returning to tempo pace when the show resumes. You could also run with a friend side by side at the gym, which allows you to train with someone you wouldn't ordinarily hook up with if you run at different paces.

Common Injuries

Knee pain, patellofemoral pain and achilles tendon injuries are some of the most common injuries sustained from running on the treadmill. Patellofemoral pain is typically a result from an increased load between your femur and kneecap. Achilles tendon injuries are often a result of overuse and can be an ongoing issue for many runners that may be exacerbated by the treadmill. If left untreated, both injuries can result in instability and chronic pain.

You can take some precautionary measures to help prevent injury.

Preventing treadmill injury:

- Even starting in warmer indoor temps, cold muscles lack flexibility and blood flow, so warm up with dynamic stretches and range of motion exercises before starting your run.
- Cool down with two to five minutes at a slower speed after your run.
- Check your posture. Keep your shoulders down and arms relaxed. Try not to lean too far forward and don't hold on to the bars which can cause an irregular running gait.
- Increase your distance and intensity gradually, following the rule of upping your mileage by no more than 10 percent each week.
- Vary the speed and incline occasionally to reduce the chance of an overuse injury.
- Wear proper shoes designed for running and replace them after 300-500 miles.
- Listen to your body. If you have pain that persists more than a few days, have it checked out.

There may be a temptation to increase the speed and the incline to optimize training, mitigate boredom, and burn extra calories. However if you are pushing yourself too hard and find yourself struggling to keep up, you are putting too much strain on your joints, which leads to pain and injury.

Cold Spring Chiropractic

Active Release Technique® can relieve symptoms and repair muscles, tendons and fascia faster. **Active Release Technique®** involves intense active movement-based massage treatments, which sets it apart from passive massage techniques and physical therapy treatment. **ART®** promotes faster recovery, restoration of normal tissue function and helps prevent injury by reducing scar-tissue build-up and promoting ideal muscle length through the healing process. While other therapies can provide relief, **ART®** combined with specific stretching and exercise heals the tissue in the shortest time with the lowest incidence of re-injury.

Cold Spring Chiropractic specializes in treating all types of injury with a personal treatment plan to bring your body back into balance, relieving pain and restoring your range of motion so you can get back to what you love to do. The techniques and therapy provided by Cold Spring Chiropractic are natural and non-invasive and have successfully helped many athletes work through injury to get back to pain-free running. We are dedicated to keeping up with the most effective procedures that provide significant positive results. These can include stretching, strengthening, manipulation, cardiovascular exercise, and other modalities to thoroughly cover all bases. Our multidisciplinary approach leaves no stone unturned. Our approach is as unique as you are.

Dr. Jon DeGorter specializes in treating runners and triathletes, and is well versed in injury prevention and rehabilitation — keeping athletes doing what they like to do!