

RECOVERY  
*Special*

## COOL DOWNTIME

*Prioritizing your recovery will help you get the most from your training.*

By Cindy Kuzma

**REGARDLESS** of what you hope to gain from your running—speed, endurance, better health—the training you do makes up only half the equation. The time you spend *not* running serves a crucial role in your progress toward any goal. “We can train all we want, but if we don’t pay respect to recovery, it won’t matter,” says Robyn LaLonde, Nike+ Run Club coach and owner of Edge Athlete Lounge, a recovery studio in Chicago. “It’s during the period *after* a run that your body adapts. Without adequate recovery, your body will break down.” LaLonde is referring to the process by which your body rebuilds itself to return to its starting state—or even stronger. And there are an increasing array of tools and techniques that enhance downtime so runners can train harder and longer, without getting hurt. We’ve rounded up some of the most promising methods on the next few pages. To optimize your recovery, keep a training log with notes about how much you’re sleeping, how much you’re resting, what you’re eating—and how you feel—so you know what works best to restore your body and mind. →

### Worth It?

Some runners swear by **ICE BATHS** following hard workouts to reduce muscle soreness and inflammation. Should you? Lance Dalleck, Ph.D., assistant professor of exercise and sports science at Western State Colorado University in Gunnison, says that if used too early in training or too often, tools that reduce inflammation (ice, ibuprofen) might interfere with the process by which your body adapts and grows stronger. To strike the right balance, prioritize simple, no-brainer recovery techniques, such as sleep and good nutrition, every day. And reserve more aggressive anti-inflammatory methods for your taper and after your race.





## REPAIR KIT

In the field of recovery science, evidence supports the use of both cutting-edge gadgets and old-fashioned chestnuts. Choose from this menu of options to develop your own personalized R&R recipe. Consider not only what you have access to but also what fits into your lifestyle and sounds fun—for instance, yoga won't calm your muscles or your mind if you feel anxious about getting on the mat. Some options are free and easy, while others set you back a bit; but thanks to facilities like Edge Athlete Lounge in Chicago, more runners have access to advanced therapies (see runners.world.com/recovery centers for locations of walk-in recovery studios, where many of these treatments are available).

### Track It!

Check your heart rate immediately after you stop moving, and then two minutes later. Subtract the second number from the first and write it down. You want this number to stay stable or increase over time. If it decreases, it's a sign you are overtraining—and under-recovering.

### THE TOOL

### HOW IT WORKS

### WHEN TO USE IT

### WHO DOES IT

#### Compression clothing

Proponents say it helps push bloodflow and extra fluids from your feet and legs back to the heart, flushing out fatigue- and soreness-causing metabolic waste products.

Wear while running or right afterward for up to 48 hours. Also try it the night before a race or during travel to boost circulation and avoid swelling.



Elite marathoner Shalane Flanagan first pulled on a pair of compression calf sleeves in 2005 after an Achilles injury. Now, she says she wears Nike calf sleeves (from \$25 at store.nike.com) during hard workouts and while racing because “they help me feel supported and like I’m preventing injury.”

#### Massage

May decrease tension, release adhesions between tissues, increase range of motion, realign muscle fibers, and prevent and treat minor soft-tissue injuries—plus, it just feels good.

As needed—some runners find that regular massages or other manual therapies keep them feeling recovered, while others are treated when they feel an ache or other early warning sign of injury.



Elite marathoner Kara Goucher has had the same therapist (Allan Kupczak) for 15 years; at some points in her training, she might have two two-hour sessions each week.

#### Cold therapy

Ice baths, ice packs, or cryotherapy chambers may reduce pain and swelling by constricting blood vessels and mitigating inflammatory processes in the muscles.

Soak for 10 to 20 minutes, within 30 minutes of a hard workout. Or, try a contrast bath that alternates cold and warm for 10 minutes each, ending on cold.



Olympic marathoner Dathan Ritzenhein soaks in ice baths to bounce back from the final workouts before a big race or if there's a short period of time between competitions—such as two cross-country races he tackled four days apart last winter.

#### Electric muscle stimulation

Activates muscles passively to decrease inflammation and increase bloodflow without stressing your tendons or joints.

Place on sore, fatigued, or weak muscles for 30 to 60 minutes once or twice per day, three or more days per week.



Canadian runner Natasha LaBeaud regularly logs 120 to 140 miles per week. She straps on the Marc Pro device (\$650 to purchase, but available at athlete recovery centers) during long plane rides—such as the 30-hour trek to China for the IAAF World Cross Country Championships in March—to get off the plane fresh and ready to race.

PHOTOGRAPHS BY VICTOR SALLER/PHOTORUN (GOUCHER); ANDREW MCCLANAHAN/PHOTORUN (FLANAGAN, RITZENHEIN, LABEAUD)

## OFF THE CLOCK



1 minute

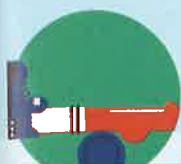
How far and fast you ran plus your age will factor into your individual recovery rate, says Colorado Springs exercise scientist Carwyn Sharp, Ph.D. But this is generally what occurs after you finish a workout.

Your heart rate and body temperature drop and your breathing slows as you transition from exercise to recovery.



30 minutes

Your body begins pumping out proteins that repair muscular damage and form new mitochondria, tiny energy factories inside your muscles.



## Foam roller self-massage

May increase bloodflow, relax tension in muscles, and release painful trigger points; most travel well, too.

Daily or even multiple times per day, following the instructions on the particular product.



Chelsea Reilly, 10K and 3K U.S. national champion, uses the stick-like Addaday Pro Massage Roller (\$45 at addaday.com) on her lower legs daily—its different-sized mini-rollers help her hit sensitive spots like her ankles, Achilles, and shins.



## Downtime with friends, family

Making time for nonrunning activities you enjoy boosts psychological recovery. Social interaction lowers levels of the stress hormone cortisol—high readings can hamper recovery.

Join a running group so you can decompress together—or put a date on your calendar with nonrunning friends when you're really feeling the pressure of training.



Despite Tyler McCandless's packed schedule (he aims to earn his Ph.D. in meteorology before running the 2016 Olympic Trials Marathon in February), he makes time to go to baseball games with nonrunning pals. "I love my training group, but finding a group of friends who are not competitive is important to have a healthy and fun balance in your life."



## Active recovery

Cross-training (cycling, swimming, strength-training) boosts bloodflow and prevents muscles and joints from stiffening up without the impact of running. (See "Restoration Project," page 60.)

Schedule an active-recovery day after a particularly long or intense run, or swap one in for an easy run on your training schedule if you're feeling sore, fatigued, or injured.



American road 5K record holder Ben True uses the ElliptiGo outdoor elliptical (from \$1,799 at elliptigo.com); his wife, Sarah, used it while injured last year and finished 2014 as the second-ranked ITU female triathlete in the world.



## Stretching and yoga

Postrun stretching may reduce risk of hamstring and other injuries; yoga may reduce back pain, lower heart rate and blood pressure, and ease anxiety and depression.

Immediately postrun, spend a few minutes stretching dynamically. Schedule yoga or more extended sessions for recovery days.



2014 Boston Marathon champion Meb Keflezighi took a 10-week yoga class in college at UCLA and now incorporates yoga and Pilates moves into his stretching and strengthening routines, he notes in his book *Meb for Mortals*.



## Sleep

During sleep, your body repairs minor damage to your tissues, releases muscle-building human growth hormone, and replenishes energy stores, among other vital tasks.

Most adults require between seven and nine hours (if you can go into a dark room at 3 p.m. and fall asleep instantly, you're not getting enough).



Elite runner Alia Gray—who placed 16th in the 2014 NYC Marathon—says she prioritizes sleep by viewing it as productive and essential to her training; she sometimes catches Zs during the workday with the head-enveloping Ostrich Pillow (\$99 at ostrichpillow.com). "I sneak into a quiet side room, slip it on, and go into my own dark little cave."

## TAKE A BREAK

When doing too much leaves you sick, injured, or stalled in your progress, you may be overtraining, a syndrome that might more accurately be called under-recovery, says Carwyn Sharp, Ph.D. Step up your rest if you notice any of these red flags.

- Your legs feel heavy, all the time.
- You're excessively sore.
- Your race or workout times slow for no apparent reason.
- You feel on the brink of injury.
- Your sleep suffers.
- You dread running.

## FOOD FIX

Carwyn Sharp, Ph.D., tells how to eat your way stronger.

**EAT PROTEIN**  
Amino acids in protein provide the raw materials for new muscle.

**ADD FATS**  
Healthy fats (nuts, salmon, avocado) repair damage to muscle cells.

**HYDRATE**  
Water keeps nutrient-rich blood flowing through your body.

**UPGRADE POST-RUN CARBS**  
Instead of replenishing with refined carbs, opt for a snack that combines protein with high-quality carbs (fruits and veggies).



## A few hours

Immune and inflammatory compounds move to microtrauma sites in muscles. White blood cells fight injury. Lysosomal enzymes break down damaged tissue.



## 2 to 3 days

Your body has largely adapted to the stress of training, and you're ready to run hard again.



## 6 weeks

Your mitochondrial count can as much as double in this time frame, so your muscles grow stronger and sustain less damage each time you lace up.