

Ten tools to speed workout recovery and gain performance

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Spring is the time of year when many athletes ramp up their training in order to prepare for racing. Athletes should also ramp up their recovery habits to stay in balance.

Overreaching is required to stimulate your body to adapt. Full recovery is required to allow that adaptation to take place. Partial or no recovery leads to partial adaptation, lack of performance gains and eventually, overtraining.

The quicker and more complete your recovery from a workout, the faster you can move on to your next quality training session. The more total sessions you have the energy for, the faster you will ultimately be.

Top secret ergogenic = full recovery

No matter what you do, when you extend yourself, your body requires a specific amount of time to refuel and repair. Full recovery takes time.

USA Triathlon Level II coach Steve Seide says: "Quality training time is extremely valuable. By quality, I mean when you are fully recovered and able to put in complete effort and focus. These sessions should be spent wisely."

Plan adequate rest into your weekly routine and schedule a rest week every third or fourth week. Manipulate volume and intensity during rest weeks to unload accumulated fatigue, maintain fitness and sharpen performance.

Recently, I did a big volume, three-day block of training. (For the gory details, you can read my [training log on my Web site](#).) As an athlete, it was thrilling to put down some huge training. As a coach, I know it should take a week to recover and produce benefits from this type of training.

10 tools to speed recovery

1. Daily nutrition habits

Daily nutrition dictates the health status of your body, plus the amount of training you can withstand and adapt to. What you eat and drink every day sets your athletic potential. If you eat poorly on a daily basis, your athletic potential ceiling will be low.

"You can wear yourself out with bad nutrition even faster than by exercise without discipline," advises Ultrafit coach Tom Rodgers.

Maintaining daily optimal health through a nutritious diet will do more to speed your recovery from workouts than any other factor.

2. Sleep habits

Sleep is vital for recovery. Sleep is when your body does its best repairing and rebuilding. Skimp on sleep and you will delay recovery. Through the course of a night's sleep, you cycle through several phases. During the slow-wave stage, growth hormone is released by the pituitary gland, stimulating tissue repair.

3. During-exercise nutrition habits

Fueling and hydrating properly during exercise will put you, at the end of a session, in the best possible shape, needing the least total recovery. For easy workouts of less than an hour, water will suffice. For workouts lasting longer than one hour you should consume a sport drink containing carbohydrates, electrolytes and possibly protein (if your GI system is receptive to this).

Hydration and electrolyte replacement: Your body's thirst drive depends on two things: an increase in blood salt concentration and a decrease in blood volume. Both of these occur when you sweat. Research has shown your body will absorb and retain more fluid when electrolytes such as sodium are added to whatever you are drinking. Drinking plain water dilutes the sodium in your blood and shuts off your thirst mechanism, so you drink less and tend not to hydrate fully.

Refueling: An athlete can burn more than 900 calories per hour during exercise. However, research contends the maximum rate at which carbohydrate can be absorbed from the stomach and processed by the liver is 1 gram per minute. This is a measly 240 calories per hour, so replacing every calorie burned is an impossible task. Focus on replenishing as much carbohydrate as your body can process. Consuming more than this will leave you bloated.

Food choices: Exactly the right solid, semi-solid (gels) and liquid food combination to consume during exercise is highly personal. One athlete may thrive on bananas and Gatorade. This menu may send another athlete sprinting for the port-a-potty. Use trial and error to figure out what works for you. It is vital to practice in training many times what you plan to consume in a race.

4. Post-exercise nutrition habits

The job of post-exercise nutrition is to regain hydration status, replenish electrolytes, replace carbohydrate and provide protein for muscle repair and antioxidants to reduce cellular damage.

During exercise your muscle cells take up glycogen at a higher rate than when at rest. At the end of an exercise bout, this effect lasts up to 30 minutes. Glut-4 molecules hang out on the muscle cell membrane and grab glucose from the blood. Glut-4 molecules are super-activated by high intracellular calcium and insulin levels produced during exercise.

Refueling within 30 minutes of the end of an exercise bout enables you to take advantage of the Glut-4s while they are still ramped-up. This will quickly replenish your muscle glycogen.

If you miss this window it can take up to 48 hours to fully replenish your muscle glycogen fuel stores. Also, immediately consuming protein may reduce post-exercise muscle breakdown.

5. Remove heat stress

In hot climates, immediately after a race or workout, remove heat stress from your body. At most

triathlons you finish near the swim start. Walk waist deep into the water and stay there for five minutes or until your body temperature feels down to normal.

6. Time management

A day spent running all over town, doing a month's worth of errands in a day, does not equal a recovery day. Poor time management can also eat into sleep hours.

7. Stress management

Chronic stress causes illness, injury and burnout -- not good things for athletic performance.

8. Pre-exercise nutrition

Ensure you begin a workout with your carbohydrate tanks full, and fully hydrated. If you work out first thing in the morning, consume some "low glycemic index" carbohydrates with water to replenish stores after your overnight fast. (Visit GlycemicIndex.com for more info on this concept.)

9. Yoga

Stretching, relaxation and meditation have been shown to speed recovery.

10. Massage

Massage increases circulation, flushes away waste products and brings in fresh nutrients while promoting relaxation.

Make these recovery tools a part of your daily routine. For recommendations on how to implement each recovery tool, read the full article at [Lynda's Web site](#).

Lynda Wallenfels is a USA Triathlon, USA Cycling and Ultrafit certified coach. Her new book "The Triathlete's Guide to Bike Training" will be published in the spring. For more information about Lynda and her coaching services go to her Web site at www.lwcoaching.com or contact her at lwallenfels@ultrafit.com.