

## RECOVERY TIPS FOR SWIMMERS

Most of us associate increases in training load with increases in fitness level. What we often overlook is the fact that the *real* gains in exercise capacity occur when the body and muscles are at rest. While practice is where we see *times* improving, the *underlying* adaptations to this training actually occur while the body recovers from this workload. So, while workout is the all-important *stimulus* that *initiates* the adaptation process, the majority of the body's "metabolic rebuilding" occurs while the body is at rest (i.e. during recovery).

### *Cool Down – Eat – Stretch – Massage – Sleep*

These are the five key components to an optimal recovery that all swimmers should understand, believe in, and most importantly, *practice on a regular basis*. Here's why:

---

#### **Cool Down and Recovery**

Take the time to cool down correctly at the end of every single workout. Cool down will give your body a chance to process and break down the stress chemicals it produced during the harder parts of your workout. To understand why this is important, let's look at what happens if you skip your warm-down (not that you would ever do that, of course).

As soon as you stop swimming, your muscles' demand for oxygen is reduced and your heart rate slows because your heart does not need to circulate your blood as quickly. However, your body not only brings oxygen and nutrients to your muscles. It also transports the waste products leftover from the metabolic (energy conversion) process to your body's organs, where they can be broken down and purged from your system. If you skip your chance to get some active recovery at the end of your workout, it can take your body much longer to filter out the waste products and to replenish its energy stores.

Active recovery, then, keeps your blood moving – and transporting nutrients and waste products. The key is to keep your heart rate up, but not work so hard that your body creates more waste products than it can purge.

### **Nutrition and Recovery - Eat & Drink after Practice**

As soon as possible after your swim, eat a snack. During your workout, your body burned through a lot of fuel, which it stores in a variety of forms. After your workout, there is a small window of time– as few as 15 minutes or up to an hour, depending on the study – during which your body will very efficiently replenish your carbohydrate stores. Once that window closes, your body suddenly becomes very inefficient at replenishing those energy stores.

- Start the replenishment process *during* practice if workout is longer than 90 minutes. (Carb- electrolyte drink)
- Eat a substantial carbohydrate snack with some protein *immediately* after practice or within 20-30 min of finishing a workout.
- During *hard* training, add another post-workout snack 45 minutes to 1 hour later.
- Eat a main meal within 2 hours of finishing workout. This is critical to maximizing recovery!!!!
- Substantial means 1.2-1.5 g of carbohydrate and .25-.4 g of protein per kg of body weight.

During its time off, the body will adapt, but only if provided with the *right fuels at the right times*. For many swimmers, ensuring good nutrition is like a *full-time eating job!* Not only is the goal to replenish glycogen, but also to ensure a high level of circulating protein, vitamins and minerals to combat tissue breakdown during subsequent swims and recovery periods and maintain hydration to optimize metabolic efficiency (a fancy way of saying that water allows the body to access the nutrients it needs when it needs them).

---

## **Stretching and Recovery**

Stretching is a key component of the daily training plan for athletes. It plays an important role in the recovery process and in preparing for the next training session. Stretching increases blood flow to muscles, stimulates the passage of amino acids (building blocks of protein) into muscles, accelerates protein synthesis in cells, and inhibits protein breakdown. These processes help the muscle repair itself and improve the body's ability to recover in time for subsequent practices or competitions. Stretching as part of recovery can also reduce the chance of injury and enhance stroke technique during subsequent swims.

---

## **Massage and Recovery**

Many swimmers face chronic muscle soreness, fatigue and tightness around peak training times and during multiple-day swim meets. Sports massage, which involves the rhythmic compression of muscle tissue, stimulates blood circulation during recovery. Similar to active recovery, the blood circulation can help cleanse the tissue of metabolic wastes and reduce the delayed onset of muscle soreness. Massage during recovery can alleviate muscle tightness and induce mental relaxation. This can improve muscle length and therefore performance and injury prevention benefit

## **TRY COMPRESSION GARMENTS**

Some athletes opt for compression pants to help accelerate the recovery process. Recent research shows that these tight garments can accelerate lactate clearance from the muscle tissue and reduce heart rate following high-intensity exercise. These garments can be handy during competition season as well, when quick recovery between morning and evening sessions of a meet is critical.

## **GET ON THE FOAM ROLLER**

Your muscles may feel exceptionally tight after training. A lot of this tightness can be attributed to muscles fibres not releasing completely after the contractions caused in workout, rollers, balls, tiger tails all help lengthen muscle fibres and improve circulation and helping you get your range of motion back.

---

## **Sleep and Recovery**

As mentioned previously, the majority of the body's muscle rebuilding occurs while the body is at rest. Therefore, in order to benefit the most from the work done during practice and to perform optimally, it is important for athletes to get sufficient sleep during their time away from the pool.

---

### ***Cool Down – Eat – Stretch – Massage – Sleep***

Remember: Whether it's daily training or the biggest meet of the season, what you do with your recovery time can and *will* affect your next swimming performance. Incorporate recovery into your training plan. Understand it. Believe in it.

DO IT! Train smart...Swim Fast!

---