

# IMPROVING RECOVERY FOR TACTICAL ATHLETES

Recovery is arguably one of the most important topics tactical facilitators need to be aware of in order to keep tactical personnel ready for duty and minimize fatigue. Not just the physical aspects regarding fatigue, but overall recovery of the mind and body. The demands of training, daily stress of the job or life events, and lack of sleep are all factors that impact the recovery of tactical athletes. The purpose of this article is to help provide recommendations of overall recovery modalities for tactical athletes.

## ESSENTIAL RECOVERY METHODS

Most former athletes may remember a high school strength coach encouraging them to drink chocolate milk after their workouts or the gallon-sized milk jug of water that everyone carried around the day of a game or big match up. Likewise, there were the dreaded ice baths in the training center that were obligatory, rain or shine. Recovery methods for athletes have progressed over the last 5 – 10 years, but it is important for tactical athletes to remember some of the simpler modalities for recovery.

## NUTRITION

Diet and exercise interrelate regardless of training purpose, be it developing strength, building lean muscle mass, losing weight, or weight management. Nutrition is also a key factor in muscle recovery. Eating more protein is one suggestion most trainers and coaches will initially make. There has been an extensive amount of evidence supporting that increasing the intake of protein and amino acids will help restore muscle fibers and aid in recovery (2,13).

Protein plays a significant role in increasing muscle glycogen re-synthetization during recovery (1). One common form of consuming additional protein intake is through supplementation. Today, there are protein supplements sold in just about every grocery store and gas station. While these are convenient, they can be filled with unwanted sugars and other additives (11). Protein powder supplements are typically available in bulk at vitamin shops or other fitness-focused nutrition stores and can also be purchased online (8).

Some things to consider before purchasing from one of these sources is the credibility of the company, if the products are certified (e.g., National Sanitation Foundation [NSF], United States Pharmacopeia [USP], and Good Manufacturing Practice [GMP]), and the overall reviews of the products. Product consumers are more likely to share views, experiences, and side effects that are relatable. A common question associated with protein supplementation is which kind or brand is best and most effective. Inherently it is typically thought that the more expensive the protein is, the better the quality of the supplement. However, according to Rindom et al., the recovery and regain of muscle strength, as well as anaerobic or aerobic performance,

is not influenced by the quality of the protein supplement that is consumed (7).

There are other ways to increase protein consumption other than through supplementation. Protein is found in a variety of foods, such as meats, fish, eggs, and other dairy products. Some plant-based protein sources, like legumes and nuts, lack important amino acids. Although when paired with other foods they become complete proteins (11). An example of this would be black beans and rice or peanut butter on whole-grain bread, which will make a complete protein.

It is important to remember that protein is just one small component when it comes to supplementation for recovery. Omegas, anti-inflammatories, and hydration supplements can also aid in different aspects of recovery. Though there are numerous varieties of protein powders and drinks, and now gel capsules, these supplements are just an alternative for increasing protein intake rather than through eating high-protein foods.

## REST

Sleep is an essential part of the recovery process, as it provides several important psychological and physiological functions. Sleep deprivation can be detrimental to the muscle recovery process, resulting in reduced muscle glycogen repletion, decreased muscle damage repair, alterations in cognitive function, and an increase in mental fatigue (4).

Human bodies detect environmental and internal changes through the central and peripheral nervous systems. The autonomic nervous system, forming part of the peripheral nervous system, is comprised of two divisions: sympathetic and parasympathetic systems. The sympathetic response term which many may be familiar with is the “fight-or-flight” reaction to a situation or stimulus. When at rest, the parasympathetic nervous system should take precedence, initiating a state of recovery for the body; many may recognize this as a “rest-and-digest” response. This phase is crucial for restoring muscle fibers and energy sources through digesting and synthesizing glycogen. Without this rest component, the body may have a difficult time recovering. Prolonged periods of increased stress or stimulation, whether from overtraining or lack of sleep, may lead to the body switching priority from overall recovery to sustainment under extreme levels of fatigue. This potentially leads to a physical breakdown and may see the body work against positive changes in training or performance.

As tactical facilitators, providing tactical athletes with recommendations to improve their quality of sleep is imperative. Tactical athletes may experience prolonged periods of stress or stimulation that are not always avoidable. One relatively easy way

to improve sleep is by creating a conducive sleeping environment (10). The ideal room would be dark, cool, and comfortable, and while that may be unfeasible at times, it is a good goal to aim for. Also, consideration should be given to taking short naps in order to make-up for any loss of sleep (10). Guidance on avoiding the use of electronics or personal devices while laying down may also be of use. General advice would be to cease electronic device use at least one hour prior to bedtime, in order to allow for 30 – 60 min of a relaxing wind-down period (10). Other recommendations would be to avoid caffeine after lunch and limit alcohol use in the late evening.

Rest for the body is important, regardless of the form of training or sport that is being participated in. Even the best athletes can only function at a percentage of their highest potential if they have been deprived of adequate rest or sleep (10). The concept behind overtraining stems from the notion that athletes only progress to a certain point before they start tapering off due to a lack of recovery generated during periods of rest. The risk of overtraining can also be heightened for tactical athletes as well due to the lack of rest and inadequate sleep that they commonly experience (13).

## RESTORING

Changes to nutrition and rest regimens are more common practices that typically can be easily implemented with little or no additional cost or burden. This third grouping of recovery combines all aspects of restoring mind, body, and soul. It encompasses methods, such as holistic practices, which approach recovery from a different perspective. Common forms of this recovery method use body and mind techniques, such as performing yoga or tai chi, movement therapy, and even chiropractic or acupuncture care. For some, this may include electromagnetic therapy, meditation, or listening to music.

Regardless of which modality of recovery is chosen, it is important to take into consideration the individual responses that can occur depending on the individual. Tactical athletes especially, may deviate from the norm due to the elevated stress and stimuli they are exposed to daily. It should be remembered that, just because one method of recovery may work for some, it does not mean that it would have the same effect on others.

## THE QUICK FIX

Changes to habits do not come rapidly. In reality, it takes time and discipline to adopt new routines. Training programs, diet changes, and overall availability of resources can all hinder efforts in changing recovery practices. Different jobs, mission tasks, locations, and day-to-day responsibilities will all play a part in how a tactical athlete will recover. Each day is different, but the importance of being adequately recuperated and fit for duty will not change. These three simple adjustments can help speed up the process of recovery, improve the feeling of wellbeing, and increase readiness for action.

1. **Drink Water:** Water is necessary in order to metabolize food. Generally, a healthy person needs 100 ml of water to be able to metabolize 100 calories (6). Water intake requirements depend upon the environment and physical activity level of the individual. Typical adequate intake of water per day for males is 2.5 liters, and for females is two liters (14). Proper hydration helps to rid the body of toxins, aid in digestion, and prevent dehydration (9). Be aware, however, that excessive water intake can have a deleterious effect and can lead to hyponatremia, or the diluting of body electrolytes (5).
2. **Make Sleep a Priority:** The importance of adequate rest should not be underestimated. Eight hours of sleep should be the target, even if that may be difficult to meet due to job or lifestyle demands (10). Insufficient rest limits the body's opportunity to recover, which in turn may increase the risk of injury.
3. **More Protein, More Power:** Research supports the supposition that increased amounts of dietary protein aides in muscle recovery (1,8,10,11,12). Whether it is through supplementation or other food sources, ensuring sufficient protein dietary intake may aid in recovery.

## KEY POINTS

There are numerous ways to optimize recovery. In essence, identifying the approach that works best for the specific individual is the key. A lot of time and money can be spent on trying the newest and greatest supplements, but there is no guarantee that they will work. Simple changes to daily habits may be what is missing. Sufficient sleep and protein intake through foods or supplements may aid in optimizing recovery and may help improve overall quality of life.

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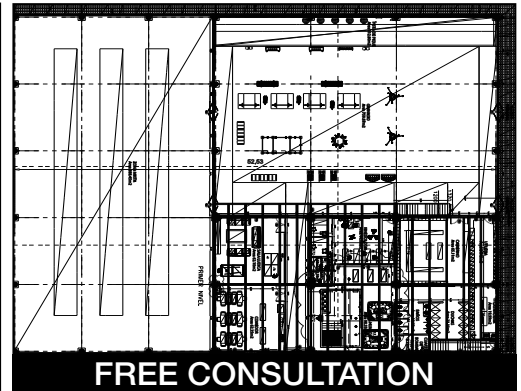
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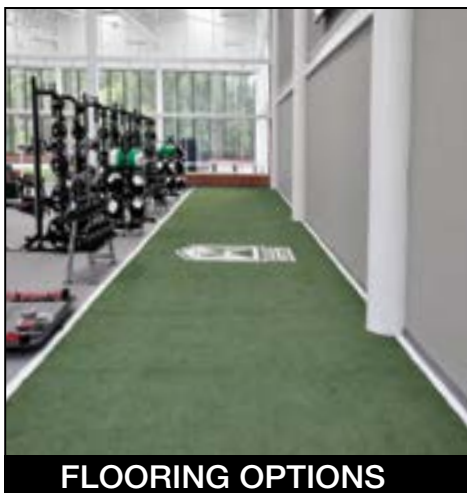


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