

Pelot Performance Coaching

Regeneration/Recovery/Recuperation/Restoration Strategies

Going full throttle for the duration of a game, tournament or even a practice generates a lot of wear and tear on the athlete's body. During intense activity there is a buildup of lactate AKA "Lactic Acid" within the blood stream. The buildup of lactic acid can cause the body to fatigue at a rapid rate and leave the body feeling heavy and slow. Additionally, the wear and tear over time causes the tissues of the body to breakdown.

Understanding Regeneration

Intensive or prolonged activity such as sprinting, decelerating and changing direction quickly causes damage to muscles and connective tissue in the body. Regeneration is the healing process that the body must undergo after excessive or intense physical activity. Regeneration typically does not last longer than 48 hours unless there was extensive damage done to the body during activity. This process is critical for performance. If an athlete does not allow his body the time to regenerate, his/her abilities will suffer. Practicing proper regeneration techniques following workouts, practices and games become a critical component when the athlete is expected to perform multiple times a day or on consecutive days. Practicing proper regeneration strategies can help speed up the healing rate of an athlete's body from the damage caused by the game or practice. Proper regeneration techniques can also help prevent injury during prolonged exercise. By implementing the following techniques, your athletes will be ready for the next big game.

1. Stay Active. Being active will help circulate blood flow which increases the delivery of oxygen and repairing nutrients to broken down tissues. Being active will also uplift the athlete's mood reducing drowsiness. If the activity level is too high, it will be detrimental to the athlete's recovery status. The activity should be low to moderate. An active recovery will also help the body eliminate some of the lactic acid that accumulates during intense exercise.
2. Static (holding muscles in a lengthened position for a prolonged period of time) stretching **AFTER** an event can alleviate muscle soreness and improve regeneration. Recent studies confirm that static stretching in the warm-up does not reduce the risk of local muscle injury, but static stretching after exercise (recovery stretching) has demonstrated benefits for injury reduction. Stretching and an active recovery will help prevent the athlete's muscles from staying in a contracted state.
3. Accelerate regeneration by performing self massage with a Stick, foam roller or even a rolling pin. Self massage of muscles is a great way to accelerate regeneration. One simple tool we use for self massage is "the Stick." The Stick is an instrument that uses rollers to compress and stretch muscles. The self message allows the athlete to spread out lactic acid allowing it to be eliminated from the body faster. This will dramatically improve recovery time. By using the Stick before athlete can prepare a muscle to contract more rapidly with greater force and after exercise the self massage can be used to loosen stiff muscles and reduce lactic acid build up. To use the Stick or other self massage device, roll the device for about 20 times over the muscle (about 30 seconds per area). The athlete should progressively roll harder with each pass over the muscle group. Sore muscles or areas may require attention multiply times a day to in order to facilitate a quick recovery.

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4. Treat inflammation (swelling) immediately after activity. The inflammation process can occur from exercise induced muscle damage. This damage can result from a number of things including very strenuous exercise, the overuse of a certain muscle, or even using a muscle that is seldom active. Swelling can also occur from a variety of athletic injuries. Inflammation caused by physical activity can cause pain and tenderness in a specific area. Along with the pain there is usually a reduction in the range of motion within joints and there may be some loss of strength and power. The swelling in the muscle or joint can slow down and lengthen the time needed to heal and repair the damaged tissue.

To start the recovery process, athletes can elevate the limbs used in the sport (usually legs). Elevation of the limbs promotes the removal components such as lactic acid. Additionally, the process of elevation reduces an inflammatory response that happens after vigorous activity. Reducing inflammation time will speed the recovery rate. Elevating the sore or used body part can further reduce inflammation, this is even more important in the lower extremities. When elevating a swollen area it is important to make sure that it is elevated above the heart. This limits the blood flow that can accumulate in the swollen area. The best way to incorporate elevation is to do it while icing.

All of these regeneration techniques can be very helpful in accelerating the recovery time of an athlete

Ice can be an important aid in reducing swelling and preventing further inflammation. Ice should be applied to the active or sore muscles and joints immediately following competition or practice. The sore or swollen area should be iced for no longer than 15 minutes. If possible the area should be iced 3-4 times a day. By icing the affected muscle or joint the athlete will be able to speed up the recovery time.

Icing is especially important for sports that require repetitive motion with the same limb for example: baseball players. The shoulder is a very sensitive area and can be injured very easily. It is imperative that baseball players ice down their throwing shoulder after a game or a practice starting at a young age.