# Cross Training for Injury Prevention

## What is Cross Training? And how does Cross Training prevent sports injury.

In keeping with a previous issue on [circuit training](http://www.thestretchinghandbook.com/archives/circuit-training-routines.php), I wanted to talk about another great form of athletic preparation and injury prevention called cross training.

Cross training, although it has been used for years, is relatively new as a training concept. Athletes have been forced to use exercises outside their sport for conditioning for many reasons, including: weather; seasonal change; facility and equipment availability; and injuries. These athletes were cross training whether they knew it or not. The benefits of cross training are beginning to get more press and one of those is injury prevention.

**What is Cross Training?**

Cross training is the use of various activities to achieve overall conditioning. Cross training uses activities outside the normal drills and exercises commonly associated with a sport. The exercises provide a break from the normal impact of training in a particular sport, thereby giving the muscles, tendons, bones, joints and ligaments a brief break. These exercises target the muscles from a different angle or resistance and work to balance an athlete. Cross training is an effective way of resting the body from the normal sport-specific activities while maintaining conditioning.

Any exercise or activity can be used for cross training if it is not a skill associated with that particular sport. Weight training is a commonly used cross training tool. Swimming, cycling, running, and even skiing are activities used for cross training. [Circuit training](http://www.thestretchinghandbook.com/archives/circuit-training-routines.php) and [plyometrics](http://www.thestretchinghandbook.com/archives/plyometrics.php) are becoming popular again as cross training tools.

**How does Cross Training prevent injury?**

Cross training is an important tool in the injury prevention program of athletes. Cross training allows coaches and athletes the opportunity to train hard all year round without running the risk of overtraining or overuse injuries. The simple process of changing the type of training changes the stress on the body.

* Cross training gives the muscles used in the primary sport a break from the normal stresses put on them each day. The muscles may still be worked, even intensely, but without the normal impact or from a different angle. This allows the muscles to recover from the wear and tear built up over a season. This active rest is a much better recovery tool than total rest and forces the body to adapt to different stimuli.
* Cross training also helps to reduce or reverse muscle imbalances in the body. A pitcher in baseball may develop an imbalance laterally between the two sides of the body as well as in the shoulder girdle of the throwing arm. Thousands of pitches over a season will cause the muscles directly involved in throwing to become stronger while supporting muscles and those unaffected by throwing will become weaker without training. Cross training can help balance the strength in the muscles on both sides as well as the stabilizing muscles. This balancing of strength and flexibility helps to prevent one muscle group, due to a strength imbalance, from pulling the body out of natural alignment. It also prevents muscle pulls and tears caused by one muscle exerting more force than the opposing group can counter.

**Critics of Cross Training**

Cross training does help achieve balance in the muscles due to working them from various angles and in different positions. Cross training does not, however, develop skills specific to the sport or sport-specific conditioning. A football player who jogs three to five miles all summer and lifts weights will still not be in football shape when the preseason starts. Cross training cannot be used as the sole conditioning tool. Sport specific conditioning and skill training is still required.

High impact sports such as basketball, gymnastics, football or running cause a lot of jarring on the skeletal system. Cross training can help limit the jarring but some sport-specific impact is necessary to condition athletes for their activity. A runner who runs in water as their only conditioning routine may develop shin splints and other injuries when they are required to run on hard surfaces for races or training. Their body is not conditioned to the forces it is subjected to and will react accordingly.

Jumping into an intense cross training schedule without progressing into it properly can also lead to problems. It is important to progressively increase the intensity, duration and frequency in small increments.

**Cross Training Precautions**

**Proper Technique**: Whenever starting a new activity it is important to get instruction in the proper techniques and safety measures. Ocean kayaking can be a great cross training activity for tennis players to develop and maintain upper body endurance but without instruction on proper techniques it can be dangerous.

**Equipment**: Equipment used for cross training activities should be fitted properly and designed for the activity. Unsafe or ill-fitted equipment can lead to injury.

**Overtraining**: Cross training is a great way to avoid overuse injuries and overtraining. Unfortunately, these same pitfalls can be an issue in a cross training program. Varying workouts, adequate rest between workouts, use of proper form and gradual increasing of resistance are important in any program. Many athletes simply add cross training to their current program rather than substituting. This leads to overtraining and the opposite of the injury prevention goal.

**Stretching and Flexibility**: Cross training, as with any new activity, places new and different demands on the body, so don't forget to incorporate regular stretching and flexibility training into your cross training routines.

**Cross Training Examples**

Cross training can take many forms. The key to a successful cross training program is that it must address the same energy systems used in the sport and must allow a break from sport specific activities. Training the same major muscle groups, but in a different way keeps the athlete conditioned but helps prevent overuse injuries.

* A cyclist may use swimming to build upper body strength and to maintain cardiovascular endurance. They may use cross-country skiing to maintain leg strength and endurance when snow and ice eliminate biking time.
* Swimmers may use free weight training to develop and maintain strength levels. They may incorporate rock climbing to keep upper body strength and endurance up.
* Runners may use mountain biking to target the legs from a slightly different approach. They can use deep water running to lessen the impact while still maintaining a conditioning schedule.
* A shot putter may use Olympic weightlifting exercises to build overall explosiveness. They may use plyometrics and sprinting to develop the needed explosiveness in the hips and legs.

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