

STRETCHING TO WIN

Are your players just going through the motions when it comes to stretching? Do they know how stretching can improve performance, and that it can help prevent injuries? Understanding why, when and how to stretch will motivate them to do it regularly and correctly.

Stretching vs. Warm-up

Warm-up and stretching are not the same thing. Warm-up is an activity that raises the total body temperature, as well as the temperature of the muscles, to prepare the body for vigorous activity. It can be (1) passive, which raises the body temperature by some external means, such as a hot shower or heating pads; (2) general, which involves active movement of the major muscle groups, such as brisk walking, slow jogging, callisthenics and other low-intensity activities; or (3) specific, which concentrates on the muscles that will be used in the anticipated exercise. Specific warm-up exercises are usually the best, as they not only increase the temperature of the body parts involved in the activity, but also provide a slight rehearsal of the event that is to take place. If muscles are stretched when they are cold, they are more prone to injuries, such as tears and strains. Thus, stretching should always follow warm-up.

How does stretching help?

INJURY PREVENTION. Placing a heavy load on a short, tight muscle often causes muscle tears and ruptures. The increased flexibility that results from proper stretching helps to prevent injury by allowing the body parts to move more freely. Warm, elastic muscles also are able to respond more quickly to external stimuli, such as direct blows or sudden movements. This is an important factor in injury prevention. Your athlete's joints must be flexible enough to absorb the shock of a direct blow, but must also have the appropriate muscle strength to guard against injury.

IMPROVED PERFORMANCE. A flexible joint requires less energy to move and can move further in its range. Greater range of motion has been directly linked to improvements in sprinting, throwing and jumping. There's also evidence that muscles can build elastic energy during a stretch and then release it during contraction, similar to the way a stretched rubber band provides more snapping power. Thus, the better your athlete can stretch, the greater his potential for powerful muscular contraction.

REDUCED MUSCLE SORENESS. Stretching, especially after exercise, can help reduce the next-day muscle soreness that often results from a strenuous workout.

What's the best way?

You most likely know the answer to this question, and you know that "bouncing" isn't it.

One of the best ways for an individual athlete to stretch is with static stretching, in which he or she stretches each muscle slowly and gently, until a mild amount of tightness (not pain) is felt in the belly of the muscle. The athlete then maintains this position for about 30 seconds, or until the muscle begins to relax: repeating this process a few times for each muscle will give the best results.

Also, bouncing may cause tiny tears in the muscle, leaving scar tissue behind, which can make the muscles less flexible than they were before.

There are times when stretching can do more harm than good, so **DON'T STRETCH WHEN...**

- Muscles are cold. A cold muscle can be compared to a dry sponge-trying to stretch it is usually ineffective and can even result in small tears in muscle fibres. A warm muscle, full of freshly pumped blood, can be compared to a wet sponge, providing more flexibility and suppleness.
- Injury is present. Stretching is dangerous for torn muscles or tendons. What they need is rest, not forceful stretching exercises, to heal properly.

... 2

- Muscles are chronically tense. Many factors, including poor posture, extreme overuse and emotional stress, can cause this condition, in which the muscles become unnaturally hard and inflexible. Trying to stretch these muscles can lead to tearing or excessive stress on the tendons.
- Joints are extremely loose. Some athletes have a condition called “ligamentous laxity”, an extreme looseness in the joints. But, loose joints aren’t always accompanied by loose muscles; and when these athletes stretch, often their joints become too loose and their muscles too tight, resulting in a greater injury risk.

It may seem that stretching takes up too much valuable pre-game and practice time. But, spending a few extra minutes stretching just may make a difference in how many injuries your team records this season.

PERSONAL TRAINING AWAY FROM THE FLOOR

There is more to lacrosse than practices and games. Emphasize the importance of training away from the floor to improve basic skills, flexibility, strength and endurance to optimize performance on the floor.

BASIC LACROSSE SKILLS. Players should spend time with their sticks every day prior to and during the season. Recommended personal practice is cradling the ball both right and left-handed for a few minutes, scooping up balls from the floor, and shooting against a hard surface (plywood, concrete wall) - catching the ball on the first bounce off the floor – 100 repetitions each shooting right-handed and left-handed.

SIMPLE STRETCHING AND STRENGTH EXERCISES. Players should try to do these exercises 1-2 times a day (when one gets up in the morning and before going to bed):

- Warm-up stretching: roll neck, shoulders, waist in circles in both directions.
- Leg stretches: with legs straight, feet shoulder width apart and hands together, touch the tip of toes, then outside of left foot, then heel, then inside, then repeat to right foot; repeat with feet further apart.
- Push-ups (arm strength): start with 5 push-ups increasing by one each day to 15.
- Sit-ups (upper body strength): knees bent with feet held down, start with 3 full, 3 half-way up, 3 with elbows to right knee, 3 to left knee.
- Wrist rolls (wrist strength): tie one end of a rope to a short piece of an old lacrosse stick shaft and a weight tied to the other end; hold the stick with hands with arms straight out and slowly roll the weight up and down 3 times.

ENDURANCE TRAINING. Running is a good way to build up leg strength and endurance (meaning one won’t get tired or slow down before the end of the shift). Try running the equivalent of 1.6 km 3-5 times per week, either around a soccer field (4-5 times around), along the side of a road (1.6 km = 8 street numbers in Surrey, i.e. from 154 Street along 84 Avenue to 156 Street, then along 156 Street to 82 Avenue, then along 82 Avenue to 154 Street, then back to 84 Avenue = 1.6 km), or on a treadmill. Try running slowly for the first 200m, then a fast as you can go for the next 200m, then slowly again, etc. Running up and down stairs is also a good workout for leg strength and endurance. Many teams lose games in the third period due to lack of endurance...