

**FLEXIBILITY** *Want to reach for the stars? Then stretch!*

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Many high school track and field athletes do not stretch properly because in the past it has not helped to improve their flexibility. Improving flexibility is a slow but worthwhile process. It can have a favorable impact on speed, reduce the risk of injury and help with reduction of post workout soreness if performed correctly. This article will help you understand why and how to stretch

Stretching should be done before and after each practice and competition. Good flexibility means there is sufficient muscle length to allow full range of motion. Studies have indicated that an increase in the flexibility of stiff regions decreases the risk of injuries and contributes to improved athletic performance. Flexibility in sports has two basic components, static and dynamic flexibility.

Static flexibility can be described as the range of motion of a joint or body segment; this is the most common type of stretching. It is a hold and relax sequence repeated several times.

Dynamic flexibility is the resistance to motion around a particular joint or body segment while performing the sport activity in practice or competition. An example would be the speed at which a runner, thrower or jumper can move the legs, arms or rotate the trunk during their specific event. Performance can be improved if a segment moves faster through the optimal range of motion. If an athlete has poor dynamic flexibility, it means they have a greater resistance for movement in a given segment and therefore, may move a little slower. So, if you are a thrower, jumper or runner, dynamic flexibility exercises can decrease resistance of movement in a given segment.

There are three types of stretching described: static stretching, dynamic stretching, and PNF (contract and relax) stretching.

**1.Static stretching:** These are the familiar stretches we all performed at one time or another. Static stretching places joints and muscles near their limitations of motion, then the position of 'stretch' is held for a period of time. Benefits of this type of stretching include, injury reduction, less energy requirements than performing #2 or #3 stretches, and muscle soreness is less likely and may actually be relieved when static stretching is completed after a workout.

**2.Dynamic stretching:** It involves sport specific movements and it is very common among track and field athletes. An example would be a sprinter who is not focused on speed down the track, but instead concentrates on performing high knee lifts with matching arm motion, moving slowly forward while running.

**3.PNF stretching:** Stretches that your coach, athletic trainer, physical or occupational therapist may do with you that combine some type of muscular contraction or push while stretching.

A program to increase flexibility needs to be performed on a regular basis, before and after practice and competition. Most texts indicate a need to perform stretching activities 7 days a week to increase flexibility.

The most efficient stretching routine for any vigorous activity or sport participation will include the 5 steps below:

- A general warm-up of 10-15 minutes to increase core body temperature;
- Pre-participation "static" stretching producing a mild stretch sensation and holding the stretch for 15-20 seconds. Repeat the stretch 3-5 times. This produces a mild muscle tension and will help to relax and elongate the muscle. Gradually increase the tension of the stretch focusing on producing a moderate stretch with a hold time recommendation of anywhere from 15 seconds to 2 minutes;

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- "Dynamic" stretching – some examples are high knees, run ups to the high jump bar with a "pop up", practicing a pole vault run through, pop ups for long jumpers and upper body rotations for javelin throwers;
- PNF stretching – contract and relax stretching best performed with the help of your athletic trainer and;
- Post-participation static stretching.

While stretching, do not hold your breath and avoid severe or painful stretching. A sound flexibility program will help the muscles and tendons remove fatigue metabolites, reduce muscle tension, maintain or improve flexibility and neuromuscular coordination, assist in preventing injuries, assist in performance enhancement, and help decrease post-exercise soreness.

**Send questions and comments to: [PaulR@PainRelief-PT.com](mailto:PaulR@PainRelief-PT.com)**

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