Flexibility for young athletes

By Dr. Keith Overland

Stretching or flexibility training is used by most athletes and teams in varying forms. However, the support for stretching in the scientific literature is mixed. Opinions on flexibility exercises on the field, is full of myths and half truths. As a result, questions abound from many coaches, and parents as to the type of flexibility training the young athlete should perform, when they should perform it, and for how long. However what most experts seem to agree upon is that for preventing injuries a normal range of movement in the major muscle groups is important. This article is intended to shed some light on a few key points.

The degree of flexibility a joint exhibits is not entirely determined by the tightness of the muscles. While elasticity of the muscle is a key component to flexibility, so is the elasticity of the corresponding ligaments. Also the physical length of a muscle can play a very large role in determining the flexibility or Range of Motion of a joint. Muscle length is largely determined by genetics, but can also be positively influenced with appropriate conditioning. In general a basic program that focuses on the key large muscle groups is sufficient. However for certain position players in certain sports extra range of motion could be beneficial.

HOW TO STRETCH

First warm up your body, this can be done by doing a fast walk, by running in place or even doing jumping jacks. This warm up helps raise the body temperature and heart rate thus bringing blood to the muscles in preparation for activity.

Over the past few years many experts have determined that utilizing dynamic stretching (combining stretching with movements of the muscles) is the best approach prior to your sporting activity. A focused routine of warming down using static stretches (stretching without movement) aimed at the major muscle groups may be beneficial after the sport. Static stretching prior to a sport which has been often recommended in the past, may in fact adversely affect optimum performance.

When doing stretching exercises it is important to avoid bouncing and any sudden jerky movements. A good standard time is between 20 and 60 seconds for each muscle group.

If you feel any pain stop the exercise or stretch and, if necessary, seek medical attention.

In terms of young athletes, flexibility develops in correspondence with growth. In terms of training, type, frequency and duration also change with age -

Ages 6 - 10:

The flexibility we see in young children begins to decline. We begin to see a decline in hip and shoulder mobility. This is a good time to begin the habit of dynamic ROM exercises within these two joints (hip circles and forward and back slow kicks and shoulder rotations). Maximum flexibility of the spine is reached by the age of 8 or 9. At this age only stretches up to the normal ROM should be performed. Otherwise there is a potential concern about unnecessarily increasing joint laxity.

Within this age group, STATIC STRETCHING SHOULD BE AVOIDED. They really are not suited to understand the inhibition reaction the body has to stretching and as such kids this age cannot truly execute a held stretch. Coordination and movement must be the focus of this age bracket

Ages 10 - 13:

Body mass increases at a quicker rate than gains in height at this age, which leads to increasing strength. Flexibility training should intensify in this age category. Increases in strength and changes in body mass can combine and lead to poor biomechanical habits. Often children at this age will try to short change any conditioning for a sport and just go out and play. This is a critical time in educating them in how to use their full ROM during activities.. Routines should be used that ensure kids incorporate full ROM and dynamic exercises into their training. These are often motions that mimic the activities of the sport.

Ages 13 - 15:

This is the age where children's body types and maturity are all over the map. Height can increase as much as one inch per month during the growth spurt. Muscles and supporting connective tissue do not grow as quickly as bone. This can sometimes result in discomfort pretty much anywhere in the body, Flexibility training can and should target the areas most prone to pain – this often would include quadriceps (front thigh), hamstrings (back of thigh) and muscles of the lower back. Poor posture from awkward growth patterns can cause reduced movement skill and injuries. However these can be limited with appropriate flexibility habits and postural habits.

Ages 15+:

At this age it is good to start adding sport-specific flexibility training. Sports will often have players who focus on different skills (i.e. sprinting versus longer distance running or short burst strength versus endurance.) Dynamic flexibility training should closely mimic movements and actions of the sport. It should encompass all major muscle groups but focus on the muscle groups most commonly used in the specific activity. This routine should be done after warm up exercises and for about 5 -6 minutes. Post sport stretching and warming down are key to minimizing delayed onset muscle soreness and will help in preparation for the next practice or game.

Flexibility, especially with young athletes, has taken on an important role in conditioning. It has progresses a long way from a quick 3 or 4 bounces of the hands to the ground between the car and the field!

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