



Stretching

Stretching has always been considered part of athletic training programs. Whether it was the 'touch your toes and then do a few high kicks' approach of some team coaches or a more rigorous routine as followed by a gymnast, stretching has played some role in the conditioning programs of athletes and training individuals.

Why do I stretch?

1. *Stretching improves flexibility*

The most important reason for stretching is to improve or maintain the range of motion (ROM) of a joint of the body. This becomes increasingly important during complex movements. If this motion is limited by tight muscles the ability to produce force will be impaired due to the fact the force will be applied over a shorter ROM. Efficiency of movement is also improved with the appropriate amount of joint motion. Flexibility allows the body to achieve positions that are most efficient in the production and receiving of force.

2. *Stretching aids in injury prevention*

The process of training involves a constant breakdown and repair of muscle tissue. During this process the muscle might tighten and stiffen. Stiffening of the muscle means more force is required to obtain the desired length of a more pliable muscle. This can mean that movement will occur elsewhere along the kinetic chain due to the stiff muscle's decreased relative flexibility. This is the precursor for reduced ROM and the associated problems caused through compensatory movements.

3. *Aesthetic improvements*

It has been noted in research articles how those individuals following a complete stretching regime, whilst performing weight training, have an aesthetically better look or build as all the muscles are in a lengthened position and complete definition can be viewed.

What are the different types of stretching?

Static Stretch – is slow and constant with the end position held for a duration of time. With this type of stretching the likelihood of injury is less and it is very easy to learn. Static stretches effectively improves ROM.

Ballistic Stretch - involves active muscular effort and uses a bouncing-type movement and is often used in warm up however, it may injure muscles or connective tissues, thus not normally being the preferred technique.

Dynamic Stretch – involves flexibility during sport-specific movements. It is similar to ballistic stretching but avoids bouncing and includes movements specific to a sport or movement pattern. It thus includes movements used to help prepare the athlete for competition or training allowing him/her to increase sport-specific flexibility

PNF (Proprioceptive Neuromuscular Facilitation) Stretch – originally developed as part of a neuromuscular rehabilitation program designed to relax muscles with increased tone or activity. It has since been expanded to the conditioning of athletes as a method of increasing muscular flexibility. PNF is usually performed with a partner and involve both passive and active muscle actions



When Should I Stretch?

Before Training / Competition:- Improves performance by increasing the available ROM and improving functional abilities. Ideally, should be done following a general warm up (3-5min light aerobic exercise). Stretching decreases the likelihood of injuries, particularly muscle strains, by increasing the elasticity of muscles and tendons. This stretch session should include both the dynamic stretches and then followed by the static stretches (holding each static stretch for about 30sec per stretch).

Following Training / Competition:- Post stretching facilitates ROM improvements because of increased muscle temperature and assists with the recovery process. It should be performed within 5 to 10 min afterwards. The main aim is to increase the muscle back to the length it was before you performed the activity. Post stretching may also decrease muscle soreness. During post stretching primarily static stretching should be performed (holding for 10-15sec per stretch). For optimal development of muscle length the training individual could do a developmental stretching session three times per week, performing static stretches, holding each stretch for between 45 and 60 seconds.

Stretching should form part of any individual's training program, optimising their performance potential. It should therefore be included into your training regime.

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