

FACTSHEET

Types of stretching

The four recognised methods of flexibility (or stretching) training are:

- static stretching
- passive stretching
- dynamic and ballistic stretching
- proprioceptive neuromuscular facilitation (PNF) stretching.

Static stretching

Static stretching occurs when a person stretches the muscle to the furthest point possible and holds the stretch for 10 seconds or more. An example of this is the seated hamstring stretch. There has been considerable research into static stretching. Static stretching is appropriate at the end of a training session or as an independent training method performed in isolation. Evidence suggests that it should not be performed during a warm-up preceding other activities, because this may increase the risk of injury.

Passive stretching

Passive stretching is also a static stretch, but the individual remains relaxed and makes no contribution to the range of motion. Instead, the stretch is created by an outside force, such as a partner. Passive stretching is also referred to as relaxed stretching and static-passive stretching. In a passive stretch, the person assumes a position and holds it with some other part of their body, or with the assistance of a partner or apparatus. An example of a passive stretch is raising one leg and resting the ankle on a fence. In this situation, the fence is the apparatus used to maintain the extended position.

Dynamic and ballistic stretching

Dynamic stretching involves moving a joint through its range of motion with controlled momentum. This type of stretching is ideal as part of a warm-up and should mimic some of the movements about to be performed. A classic example of this is a footballer gently swinging their leg to simulate kicking a football, or a swimmer rotating their arms at the shoulders to loosen up the muscles and the joint.

Ballistic stretching involves performing the same movements as dynamic stretching, but with much greater force. Ballistic stretching uses the momentum of a moving body or a limb in an attempt to force it beyond its normal range of motion and can involve fast 'bouncing' movements where a double bounce is performed at the end range of movement. This can be dangerous for many individuals, because the increased momentum may lead to muscle strain. Ballistic stretching is appropriate only in very limited circumstances, usually when the individuals, such as ballet dancers or gymnasts, have spent years preparing their bodies for these types of movements.

Proprioceptive neuromuscular facilitation (PNF) stretching

When performed correctly, PNF stretching is very effective at improving flexibility. The muscle group to be stretched is positioned so that the muscle fibres are tensioned. A muscle is gently moved through its range of motion until the first sign of discomfort. At this point, the stretched muscle is contracted isometrically for 6 seconds (a set period of time) while a partner or immovable object applies sufficient resistance to inhibit movement. The person then slightly relaxes the contracted muscle before a controlled stretch (isometric contraction) is applied one more time for another 6 seconds (set period). This process is usually repeated 2–4 times. As with any conditioning training, the specific PNF activity undertaken needs to be tailored to the ability of the individual.