

Warm Up Activities and Stretching Exercises

Learn how to Warm Up Properly and reduce the risk of sports injury.

The warm up activities are a crucial part of any exercise regime or sports training.

An effective warm up has a number of very important key elements. These elements, or parts, should all be working together to minimize the likelihood of sports injury from physical activity.

Why Warm Up?

Warming up prior to any physical activity does a number of beneficial things, but primarily its main purpose is to prepare the body and mind for more strenuous activity. One of the ways it achieves this is by helping to increase the body's core temperature, while also increasing the body's muscle temperature. By increasing muscle temperature you're helping to make the muscles loose, supple and pliable.

How to Structure Your Warm Up?

Obviously, it's important to start with the easiest and most gentle activity first. This is the state in which the body is most prepared for the physical activity to come.

There are four parts, which should be included to ensure an effective and complete warm up. They are:

1. The general warm up;
2. Static stretching;
3. The sports specific warm up; and
4. Dynamic stretching.

All four parts are equally important and any one part should not be neglected or thought of as not necessary. All four elements work together to bring the body and mind to a physical peak, ensuring the athlete is prepared for the activity to come.

The Greatest Misconception

Confusion about what stretching accomplishes, as part of the warm up, is causing many to abandon stretching altogether. The key to understanding the role stretching plays can be found in the previous sentence. But, you have to read it carefully.

Stretching, as part of the warm up!

Here's the key: Stretching is a critical part of the warm up, but stretching is NOT the warm up.

The Four Key Elements of the Warm Up

Identifying the components of an effective and safe warm up, and executing them in the correct order is critical. Remember, stretching is only one part of an effective warm up and its' place in the warm up routine is specific and dependant on the other components.

The four key elements that should be included to ensure an effective and complete warm up are:

1.) General warm up

The general warm up should consist of a light physical activity, like walking, jogging, easy

swimming, stationary bike, skipping or easy aerobics. Both the intensity and duration of the general warm up (or how hard and how long), should be governed by the fitness level of the participating athlete. Although a correct general warm up for the average person should take **about five to ten minutes** and result in a light sweat.

The aim of the general warm up is simply to elevate the heart rate and respiratory rate. This in turn increases the blood flow and helps with the transportation of oxygen and nutrients to the working muscles. This also helps to increase the muscle temperature, allowing for a more effective static stretch. Which bring us to part two.

2.) Static stretching

Yes, Static stretching! This is a very safe and effective form of basic stretching. There is a limited threat of injury and it is extremely beneficial for overall flexibility. During this part of the warm up, static stretching should include all the major muscle groups, and this entire part should last for about five to ten minutes.

The next part of an effective warm up is extremely important, as it helps to lengthen both the muscles and tendons, which in turn allows your limbs a greater range of movement. This is very important in the prevention of muscle and tendon injuries.

3.) Sport specific warm up

With the first two parts of the warm up carried out thoroughly and correctly, it is now safe to move onto the third part of an effective warm up. In this part, the athlete is specifically preparing their body for the demands of their particular sport. Activities should reflect the type of movements and actions which will be required during the sporting event.

4.) Dynamic stretching

Finally, a correct warm up should finish with a series of dynamic stretches. However, this form of stretching carries with it a high risk of injury if used incorrectly. It should really only be used under the supervision of a professional sports coach or trainer. Dynamic stretching should only be used after a high level of general flexibility has been established.

How long to Warm Up?

For instance, the time you commit to your warm up should be relative to your level of involvement in your particular sport. So, for people just looking to increase their general level of health and fitness, a minimum of five to ten minutes would be enough. However, if you are involved in high level competitive sport you need to dedicate adequate time and effort to a complete warm up.

Benefits

A warm-up will improve the effectiveness of training and should be done before every training session. This is fundamental to a safe practice.

- Direct physical effects:

1. Release of adrenaline

- Increased heart rate

- Enables oxygen in the blood to travel with greater speed

- Increased production of synovial fluid located between the joints to reduce friction

- Allows joints to move more efficiently

- Dilation of capillaries

- Enables oxygen in the blood to travel at a higher volume

2. Increase of temperature in the muscles

- Decreased viscosity of blood

- Enables oxygen in the blood to travel with greater speed
- Facilitates enzyme activity
- Encourages the dissociation of oxygen from haemoglobin
- Decreased viscosity within the muscle
 - Greater extensibility and elasticity of muscle fibres
 - Increased force and speed of contraction

3. Increase of muscle metabolism

- Supply of energy through breakdown of glycogen
4. Increase in speed of nerve impulse conduction.

A comprehensive warm-up programme has been found to decrease injuries in soccer.