

WARMING UP AND COOL DOWN:

WARMING UP

Warming up is a set of exercises previously conducted before any physical activity or sports.

First some general exercises targeting to the whole body and after them more specific ones in terms of later activity. The objective of these exercises is to start every organic system of the athlete.

WARMING UP TARGETS

The aims of warming up performance are mainly to prevent injuries and to prepare the athlete physically, psychologically and physiologically for the beginning of a physical activity, as would be a training or higher effort if competition.

WHY DO WE WARMING UP?

1. From a physiological viewpoint (body function)

- a) Body temperature elevation: the correct warm up produces an increase in body temperature, this results in increased muscle elasticity, decrease joint stiffness and increase oxygen uptake by muscle fibers. This predisposes to injury prevention: it helps all body parts prepare for further effort, so the risk of injury decreases.
- b) Heart rate increase: the heart accelerates with increasing frequency, and cardiac output in proportion to exercise intensity (it will cause a smaller deficit of oxygen to start the activity with a previous supply).
- c) Increased blood pressure.
- d) Increased blood volume: Heart rate increase sends more blood to the organs and systems that involve driving more substrates and oxygen to the muscle metabolism and greater removal of waste products.
 - e) Respiratory rate increase: Due to an increase in demand for oxygen by the muscles, the body accelerates the breathing rate, increasing the uptake of air, and therefore oxygen.
- f) Neuromuscular processes improvement: Warming up prepares the nerve endings to function properly at the right time and the chains forming the transmission of sensations from the muscles to the brain. Warming up favors situations in advance in sports and facilitates neuromuscular coordination between agonist and antagonists.

2. From a psychologist viewpoint.

Warming up helps us to start the activity with motivation to achieve the aims. It induces to a state of mental alert an optimum excitation level of the nervous system. Among other benefits we highlight:

- a. It decreases anxiety exercise as it increases motivation and self-confidence in pursuing the goal.
- b. It promotes concentration and motivation: warming up introduces the person progressively in the exercise to be performed. All physical activity requires perfect coordination between the mind and the body of the person.

Which of these aspects do you think that are the most important? Justify your answer.

WARMING UP TYPES:

- **Dynamic:** the person who is doing the exercise is moving.
- **Static:** the person doing the exercises is kept in a particular place, there is no scroll
- **Mixed:** both combined

May you put examples about it? It might be possible that you will have to answer this question in the exam.

WARMING UP PARTS:

a. General warming up: With general warming up we are looking for the involvement of large muscle groups. In General warming will plan general activities aimed at medium intensity to revolve so that large muscles and joints can be properly prepared for their function; its goal is the launching of the whole organism.

1ª Activation: exercises and / or games involving the whole body. Its aim is the overall stimulation of the body with moderate intensity exercise, involving as many muscle groups as possible.

2ª Joint and muscular mobility: static and dynamic exercises and / or games aimed at the specific mobility of each body segment.

3ª Stretching aimed to muscular group is being used after.

4ª Explosive movements: high intensive exercise, it should be done progressively, for example increasing speed in a short race.

b. Specific Warming up: focus on muscle groups, fine coordination and specific skills for further activities. In the specific warming up we will plan exercises and movements directly related to the principal activity of the session, for example, if we are going to play basketball, make entries to the basket or play ten passes game in small groups.

1ª Environmental setting: specific exercises and / or games similar to later activities.

2ª Setting up: exercises that help the subject into a state of high concentration to allow proper regulation of the practice of physical and sporting activities.

Select a sport and design a warming up to practice it. You should include general and specific activities.

You can describe the exercises and include pictures of them.

FACTORS AFFECTING ALL WARM UP

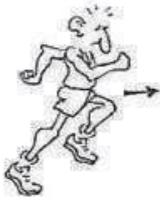
- **Age:** In children and adolescents, the body characteristics' require more gentle and prolonged warming up.
- **Time of day:** morning body stiffness product inactivity night recommend a warming up more detailed
- **Fitness level:** Better-prepared people need more intense and lasting warm up to reach that optimum. A warming up to athlete prepared may exhaust one unprepared.
- **Post injuries zones:** those body parts that have come out of an injury needs a more careful and intense specific treatment in order to facilitate its local metabolism.
- **Later activity:** it does not require the same warming up to a side wheel than swimming, but both must include a general heating
- **Weather:** if we want to make the athlete warm when the outside temperature is lower, the heating should be longer and more intense.
- **Time up to the activity start:** warming up profits disappear around 6-10 minutes after finish it. You should start the main activity within this period. If you want to maintain the warming up effects.

COOLING DOWN

Cooling down is a series of exercises that opposite to the warm up, try to soften the abrupt change from activity to rest. Like in the warming up, there are two phases:

1. **Active phase:** a more light activity, usually jog for two or three minutes is done, to help the body to complete remove waste products accumulated during the last phase of the exercise. They should be soft not to continue accumulating them.
2. **Passive phase:** mainly composed of stretching exercises. These are carried out to help the muscle to recover its resting length, due to after exercise the muscle is shortened. Thus help provide muscle injuries and contractures. Besides this passive phase may contain exercises and muscle relaxation massage or body discharge the major muscle groups, carried out independently or with the help of a partner.

THE GENERAL WARM UP



RUN FORWARDS



RUN BACKWARDS



RUN SIDWAYS



SWING THE ARMS
FORWARDS AND
BACKWARDS AT
SHOULDERS HEIGHT



SWING THE ARMS IN
CIRCLES



WALK AND TOUCH
THE INSIDE PART
OF YOUR FEET



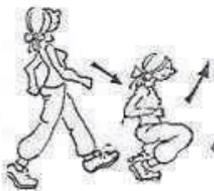
WALK AND TOUCH
THE OUTER PART
OF YOUR FEET



RUN RAISING THE
KNEES



RUN AND BRING THE
HEELS TO YOUR
BUTTOCKS



SQUAT EVERY
THREE STEPS



SQUAT AND JUMP EVERY THREE
STEPS



RUN ON YOUR
TIPTOES



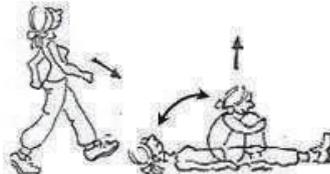
RUN ON YOUR HEELS



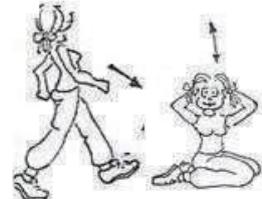
DO FIVE PUSH-UPS



LIE DOWN AND STAND UP EVERY
THREE STEPS



LIE DOWN WITH YOUR FACE
DOWN EVERY THREE STEPS



TOP ON ONE LEG



BEND YOUR TRUNK
FORWARDS



RUN INCREASING
SPEED



RUN DECREASING
SPEED

NOW DO THE STRETCHES FOR THE MUSCLES. NO MORE THAN 20" EACH