



Warm-up and cool-down.

Warm up

What is it?

Warm up is known as the sequential and progressive exercises done before the main activity to prepare the body for the physical activity the person is going to do. These exercises should be done before beginning any physical activity like training, a P.E. class, a match, etc.

Effects in the body of the warm-up

- Activates the cardiovascular system: increase heart rate (pulse), heart beats are more powerful, which means that more blood is circulating, and more oxygen can be taken to muscles
- Regarding the breath system: it makes your breath faster and deeper (higher breathing frequency), therefore there is more oxygen for the body.
- Activates the muscular system: raises the temperature which allows the muscle to work faster and more effectively.
- Activates the neural system: there is better coordination, so it prepares the body for a specific movements and sport techniques.
- Psychologically: it helps with a better disposition and improves concentration

Interesting

To warm up is not only used in sport. Actors, singers and musicians warm up before a performance.

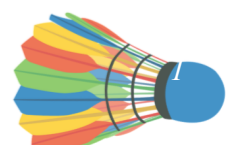


Warm up phases:

To warm up, a **general** and a **specific** phase are distinguished. The purpose of the first phase is to mobilize all parts of the body for subsequent activity, achieving ease and speed without causing excessive fatigue.

The **general warm-up** usually includes the following parts:

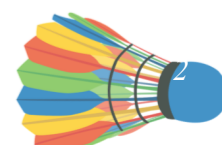
1. **Joint Mobility**, in which the most important joints of the body will move. We must remember that a joint is the point of union of two or more bones. This part of the warm-up is dynamic, that is, all exercises require constant movement of the joint that we are working on.





2. **General dynamic activity**, consists of doing aerobic activities that progressively increase the heart rate, respiratory rate and body temperature. You can smooth and progressive continuous running, some dynamic play, skipping rope, cycling, etc.
3. Finally, we do the **Stretches**. In this last part of the general warm-up, we work the main muscles of the body, which are usually large muscles and are involved in most of the movements that we are going to perform in physical education class. It consists of stretching the muscles to prepare them for the activity to be carried out in class. The stretch must be maintained between 15 and 25 seconds, therefore this part is static, that is, there is no movement of the muscle during the stretch.

Check those stretches:





Both in the joint mobility part and in the stretching we can mobilize the joints and muscles respectively, in ascending order, that is, from the bottom up (for example, in joint mobility we will start with the ankles, then knees and so on until finishing with the neck).

Any warm-up should not be less than 5 minutes, and 10-15 minutes is sufficient. For high intensity activities, this duration can be extended.

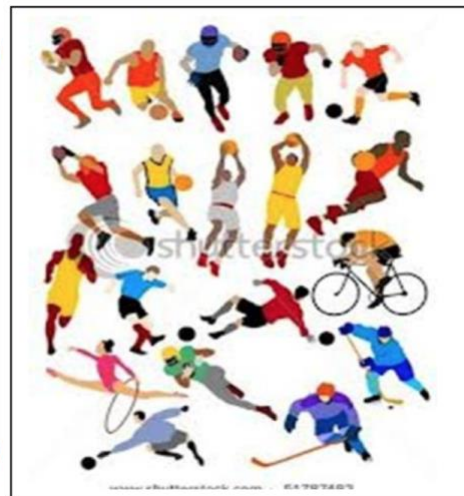
Make sure that no more than 6-8 minutes pass between the end of the warm-up and the start of the next activity.

In relation to the **specific** part it depends exclusively on the main part of the session or the physical activity that we are going to practice. This specific part should include:

- a) Exercises of mobility and stretching of the joints and specific muscles, involved in the subsequent work.
- b) Exercise of adaptation to the execution technique required later.
- c) For example:
 - to. For ball sports, passing exercises with the ball
 - b. For martial arts, hitting and known techniques with less intensity
 - c. For sprinting, progressive sprints, running technique, ballistic stretching.

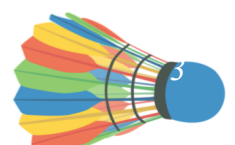
Specific warm up examples

- Shooting, passing, fast races... for a football player.
- Games, relay races, sprints in a physical education class.
- Short and fast races, bouncing and passing the ball, shooting baskets...for a basketball player.
- Pedaling for a cyclist.



Methodology

- Always **start** with a continuous slow race, to prepare the body and increase temperature.
- It should be **varied**. It should **involve** all the main muscles, joints and variety of movements.
- Do not get tired, don't make too many repetitions of each movement and alternate the parts of the body you are moving.
- It should **last** between ten and twenty minutes.
- The rhythm should be **progressive** (from low to high intensity exercises)
- It should be **adapted** to the sport or activity that is going to follow, but also to the age and physical condition.
- After warming up try to begin with the sport practice in no more than 6-10 minutes. **Avoid getting cold.**





Cool down

After physical activity, your heart is still beating faster than normal, your body temperature is higher and your blood vessels are dilated. This means if you stop too fast, you could pass out or feel sick. A cool-down after physical activity allows a gradual decrease at the end of the episode. **Cooling down** (also known as limbering down or warming down) is an easy exercise, done after a more intense activity, to allow the body to gradually transition to a resting or near-resting state.

Tips:

- Walk for about 5 minutes or perform other similar and easy activity, until your heart rate gets below 120 beats per minute.
- Stretching:
 - Hold each stretch 10 to 30 seconds. If you feel you need more, stretch the other side and return for another set of stretching.
 - The stretch should be strong, but not painful.
 - Do not bounce.
 - Breathe while you're stretching. Exhale as you stretch, inhale while holding the stretch.

So do your body a favor. Take time to gradually progress into your workout and cool down when you're done being physically active.

