

UNIT 1: WARMING UP AND COOLING DOWN

➤ What do we understand by “Warming up”?

Warming up is one of the most important things that people should do before they start doing any sport activity. It's the way that we, as people who practice and love sports, have to prepare for activities which require a bigger effort from our body.

➤ Main objectives of warming up:

- Improve the performance of the sport or activity that we are going to do after : it prepares ourselves physically, psychologically and physiologically.
- Reduce injuries: more temperature in our body means less chances of getting injured.
- Improve muscular coordination and joint mobility.

➤ Main benefits of a proper warming up:

- You increase your body temperature.
- Oxygen in blood travels faster.
- Your muscles extend more and are more elastic.
- You react faster and your joints move more efficiently
- Muscles move faster and with more strength
- Better performance
- Protection against injuries
- Increases respiratory rate.

➤ Main things we should consider when warming up:

- It should last 10-15´ and your heart rate should increase up to 120-140 p/m.
- Progression is the key. Don't start with high intensity exercises.
- Move all your body, joint by joint and be aware of the large muscle groups.
- Start with some cardio activity (usually a slow pace) so your body increases slowly his or her temperature.

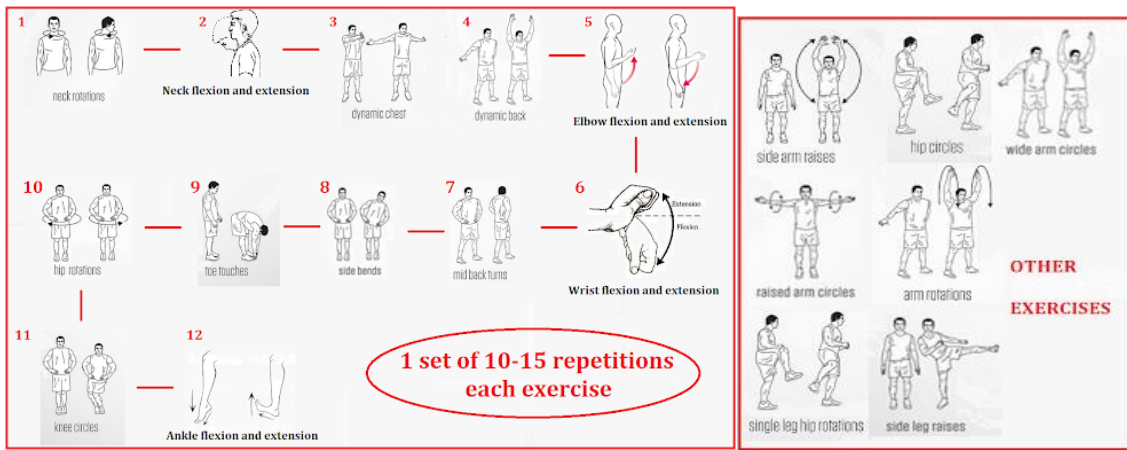
➤ General Warm up phases:

As said before, our warm up must be organized and usually similar each time we practice sport. We can distinguish 3 main phases.

Phase 1: Smooth run and varied movements in different ways



Phase 2: mobility and stretching



Example video: [WARM UP JOINT MOBILITY](#)



Example video: [TOTAL BODY STRETCHING WARM UP](#)

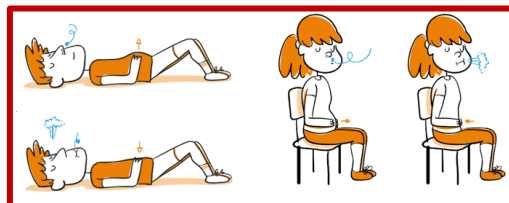
Phase 3: games, exercises and activities related to the main activity of the sesión (specific warm up)

- Example for badminton: [badminton](#)
- Example for running: [running](#)
- Example for football: [football](#)

➤ Cool down

Cool down is the part of a training sesión where we have to take back our bodies to the same stage that we had before the warm up.

Usually it takes 5-7' and we should try to relax our organism by descending our pulse, our respiration with breathing exercises, massage, doing some stretching...).



UNIT 1: Wich is my healthy activity zone?

1º step: Calculate your máximo heart rate (MHR).

You can calculate your maximum heart rate by subtracting your age from 220. For example, if you're 12 years old, subtract 12 from 220 to get a maximum heart rate of 108. This is the average maximum number of times your heart should beat per minute during exercise.

$$\text{MHR} = 220 - \text{AGE} = \dots\dots\dots\text{PP/MIN}$$

2º step: Know your resting pulse (RP.)

To know our resting pulse we must count first thing in the morning our pulse. It's important to do it lying in our bed.

You can choose between two options:

- Option 1: count your pulse during 15 seconds and multiply by 4
- Option 2: count your pulse during 30 seconds and multiply by 2.

3º step: Calculate your healthy activity zone.

To work our aerobic capacity (and healthy activity zone) we must work in a range between our 60% and 80% máximo heart rate (MHR).

If we work at a higher level we would work our anaerobic capacity, wich is NOT our main objective now.

$$\text{Superior range: } \text{RP} + 0.8 (\text{MHR} - \text{RP}) = \dots\dots\dots\text{pp/min.}$$

$$\text{Inferior range: } \text{RP} + 0.6 (\text{MHR} - \text{RP}) = \dots\dots\dots\text{pp/min.}$$

So, as a result, your healthy activity zone is between

$$: \dots\dots\dots - \dots\dots\dots\text{pp/min}$$

UNIT 2 and 3: Physical capacities and tests

This are the 4 main capacities we´ve worked during the term and the main information that you need to study:

Strength

- Definition: "It is the ability to exert a force against a resistance made by a muscle or group of muscles, it allows us to move or raise heavy things."
- It improves the performance of our muscles, bones and joints.
- Related test: Medicine ball throw, long jump and sit up test.

Flexibility

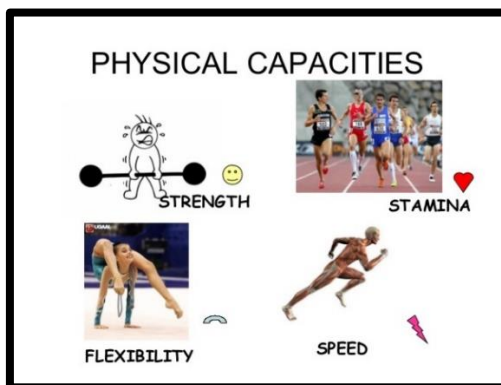
- Definition: "It is the ability to achieve an extended range of motion without damage,
- Thanks to joint mobility and elasticity of the tissues.
- It improves the range of motion of our joints.
- Related test: posterior chain flexibility test.

Endurance

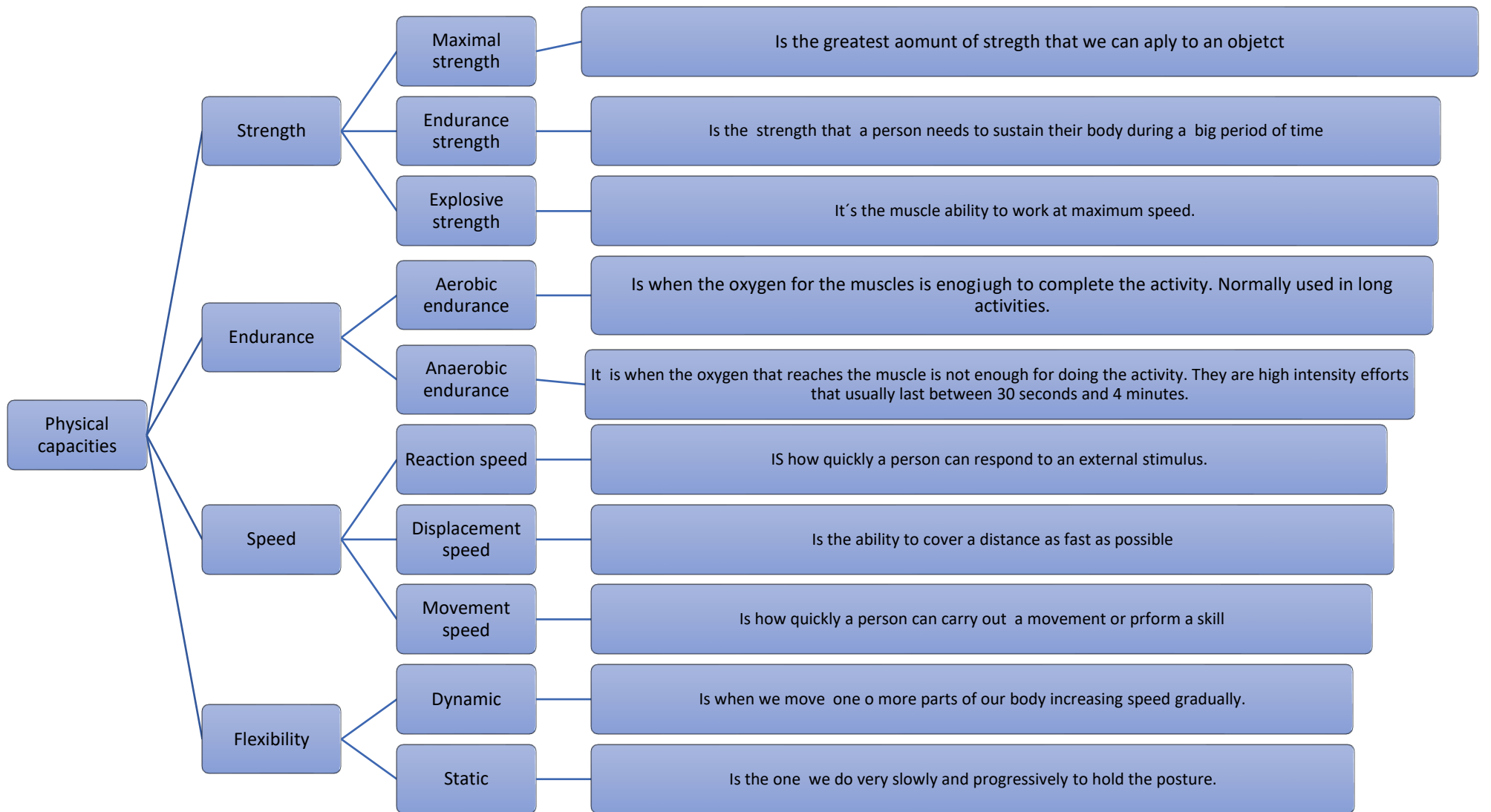
- Definition: "It´s the capacity that allows us to maintain an effort for a relatively long time and it´s also related to the capacity of recovering after an effort."
- It improves our cardiovascular, respiratory and muscular performance.
- Related test: 1 km test

Speed

- Definition: "It´s the capacity of performing a movement or covering a distance as fast as possible."
- It improves the performance of our nervous system.
- Related test: 30 m test



In the diagram below you can see the different types of capacities in detail:



Unit 4: TRACK AND FIELD

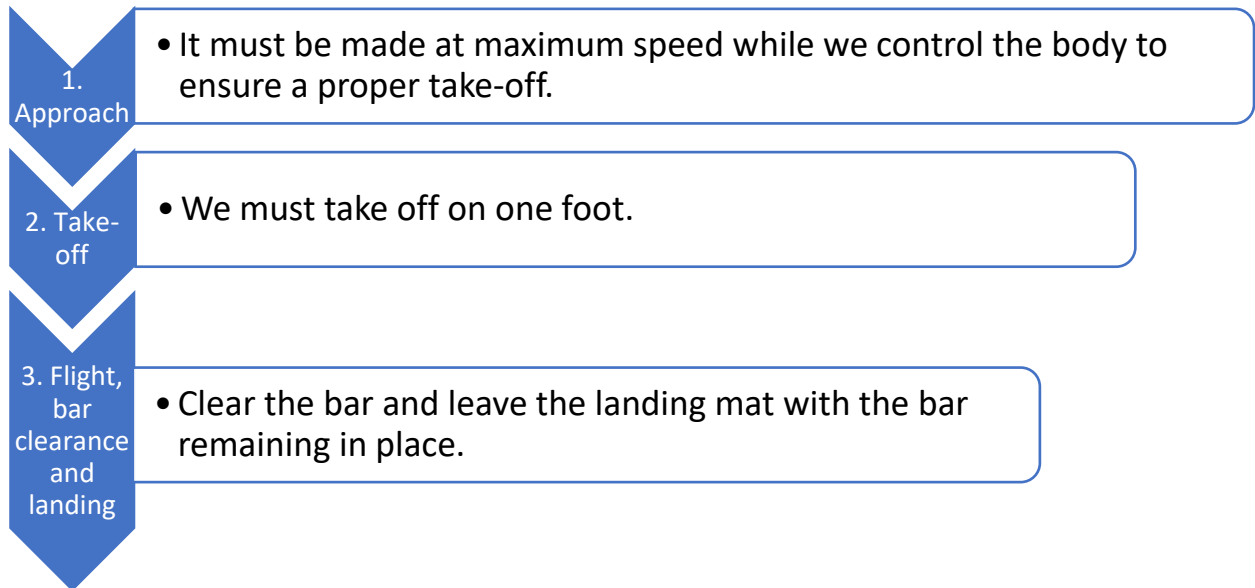
The origin of track and field events is related to the origin of the human being due to the fact that it's based on natural movements (walking, running, jumping and throwing). This reason justifies the track and field events as one of the oldest sports that exist and it includes events such as competitive running, jumping, throwing, and walking.

During this term we've gone through two main activities:

1. High jump

High jumpers must leap over a long bar without knocking the bar off of its supports.

The jump has 3 main phases:



As we have seen in class, there are 2 recommended techniques: the Forsbury flop and the Scissors technique.



FORSBURY FLOP

SCISSORS TECHNIQUE

2. Shot put

The shot put is a track and field event involving "putting" (throwing in a pushing motion) a heavy metal ball—the shot—as far as possible.

There are 2 main ways of throwing; with a spin (we have not practice it) and with the glide technique (like in the picture below).

As we saw in class, the main phases are:

