

Physical Training (1.2)

Physical Training (1.2a): Components of fitness

Cardiovascular endurance: to exercise continuously without tiring.
Test: Multi-stage fitness
Example: Long distance running



Muscular endurance: muscles continuously contract without tiring.
Test: press up test
Example: kayaking



Speed: ability to move quickly.
Test: 30m sprint test.
Example: 100m sprint.



Strength: muscle exerting a force
Test: grip test dynamometer
Example: American football



Flexibility: range of movement
Test: sit and reach test.
Example: gymnastics.



Agility: changing direction quickly

Test: Illinois test.



Example: invasion games

Power: combination of strength/speed

Test: vertical jump test.



Example: javelin throw.

Balance: retain centre of mass above a base of support.



Test: standing stork

Example: Dance

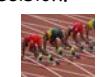
Co-ordination: moving two or more body parts, fluently.



Test: wall throw

Example: team games

Reaction time: time taken to make a decision.



Test: ruler drop test.

Example: sprint start reacting to gun.

Physical Training (1.2b): Principles of training

Specificity: training is relevant.

e.g. in marathon training aerobic training would improve stamina.



Progression: training gets gradually harder.

e.g. in marathon training an athlete would start with short distances and build them up.



Overload: training gets gradually harder.

e.g. train on different terrains to make the session harder than the race would be.



Reversibility: Performance can deteriorate if training stops or decreases in intensity.

e.g. injury



Frequency: how often training takes place.

Intensity: how hard the athlete works.

Time: how long training takes place for.

Type: the kind of training used e.g. circuit

Physical Training (1.2b): Types of training

Continuous: low intensity, aerobic, long periods of time.
e.g. long distance running.



Fartlek: variation of speed, high and low intensity, aerobic and anaerobic.
e.g. training for iron man.



Interval: intervals of work followed by intervals of rest.
e.g. invasion games.



Circuit: set of repeated exercises of differing muscle groups using body resistance.
e.g. boxing.



Weight: a number of repetition and sets using body resistance or weights.
e.g. a rugby player.



Plyometric: to improve strength and power, involves bounding and hopping.
e.g. footballer increasing leg power.



High intensity interval: high overload intensity with short rest.

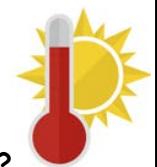


e.g. gym equipment

Physical Training: (2.1c): Warming up

What does a warm up involve?

Pulse raiser: slowly increasing heart e.g. jogging.



Why is it important?

- Prepare for exercise.
- Decreases chance of injury.
- Adrenalin is released which starts up the process of delivering oxygen.
- Muscle temperature increases, which helps them to become more flexible.

Mobility: joints through their full range of movement e.g. arm swings

Stretching: static/dynamic e.g. open the gate.

Dynamic movement: movements that show a change of speed and direction e.g. shuttle runs.

Skill rehearsal: practicing skills that will be used in the activity e.g. football passing.

Physical Training: (2.1c): Cooling down

What does a cool down involve?

Low intensity exercise: gradually lower the pulse rate and the heart rate, reduce the body temperature e.g. light jogging.

Stretching: steady and static stretching e.g. hamstring stretch.



Why is it important?

- To remove lactic acid
- Decrease risk of injury.
- Decreases DOMS (muscle soreness)
- Prevent blood pooling
- Prevent feeling tired or fatigued
- **Gradually** decrease heart rate/blood pressure/maintain blood pressure
- **Gradually** decrease body temperature
- **Gradually** decrease breathing rate



Physical Training: (2.1c): Risk and Injury

Risk: something that has the potential to cause harm

Hazard: anything that can cause harm.

How to reduce risk in sport...

- Personal protective equipment e.g. a scrum cap in rugby / shin pads in football
- Correct clothing / footwear e.g. football boots
- Appropriate level of competition e.g. playing in the correct age group.
- Use of warm up and cool down

Sports hall



Fitness centre



Playing field



Outdoor artificial area



Swimming pool



Hazards in a...

Sports hall	<ul style="list-style-type: none">• Walls /doors / lighting• Hard Floor• Other Participants
Fitness centre	<ul style="list-style-type: none">• Equipment• Flooring
Playing field	<ul style="list-style-type: none">• Litter, goal posts• Dog excrement• Other participants
Outdoor artificial area	<ul style="list-style-type: none">• Litter/ fencing• Surface
Swimming pool	<ul style="list-style-type: none">• Chemicals / water• Equipment / weather