

BODY CONDITIONING

This involves warm up and cool down activities. Warm up and cool down are some of the key principles of injury prevention especially when it comes to engagement in physical education activities.

SEXUAL DIMORPHISM

This is the physical difference between male and female species. It determines the type of physical one engages in.

The body is very important in the performance of physical activities. It is made up of cells, tissues, organs and has a casing called the skin, different systems each playing a particular role during physical activities.

ACTIVITY:

Move to the compound and perform the following physical activities for 10 minutes each.

(a) Jogging.

(b) Skipping of ropes.

(c) Pushups.

1. Note down the body parts that you have used in the performance of the physical activities above.

2. What similarities have you noted between girls and boys during conducting of physical activities?

3. Identify the body parts that need protection during physical activities.

As adolescents grow, there are physical changes that happen for their bodies and some affect their performance both negatively and positively in physical activities.

ACTIVITY:

1. Identify the body changes that take place among boys and girls during adolescence.

2. How do the body changes above affect performance in physical activities?

Ans. No.2

- Increase in body size and hormones can improve athletic performance.

- Temporary decline in balance skills and body control.
- Increase in height and weight affect the body's center of gravity.
- Girls have to become more conscious of their breasts not to be hit by the ball for example in football.
- Boys have to become more conscious of their testicles and private area not to be hit by the ball for example in football, basketball etc.
- Longer arms and legs can affect throwing any type of ball hitting with a bat, catching with glove swimming and jumping.
- Increase in muscle strength and hormones can improve athletic performance.

ACTIVITY:

1. Choose any four physical activities you know.
2. Mention the possible injuries you may encounter in such activities listed above.

POSSIBLE WAYS TO PREVENT OCCURRENCE OF INJURIES

- Wear protective gear such as helmets, protective pads etc.
- Know and follow the rules of the game.
- Perform a warm up exercise before an activity.
- Perform a cool down exercise after an activity.

WARM UP

This is a series of exercises that are done before the main physical activity.

A warm up exercise is performed before a performance or practice.

PHASES OF WARM UP ACTIVITIES:

Warm up activities involve three phases.

Joint mobilization:

This prepares the body for a mobility session. It is used to raise the heart or heart beat rate.

This is also called pulse raiser.

Examples include;

- Jogging exercise
- Walking exercise
- Skipping and cycling
- Knee and shoulder exercise
- Stationary and side jumps

Dynamic stretching exercises:

Static stretches at activities done without rhythm on one position and last about 10 minutes.

Dynamic stretches are activities are done with a rhythm while moving

Examples include;

- Hamstring exercises
- Quads exercises
- Calves exercise
- Groin exercise
- Shoulder exercise
- Achilles exercise
- Back exercise
- Arm exercise.

Sport specific exercises: These are activities performed in relation to a particular sports.

They improve coordination, reaction time and accuracy during sports performance.

Examples include;

Squat thrust e.g., in soccer, volley ball and weight lifting.

Plyometric exercises. These aim at increasing the ability to carry on a sport for extended period of time, speed and ability to move quickly and easily during sports.

Examples include;

- Squat thrust
- Reverse lunge
- Knee ups
- Stair way hoops
- Clapping push ups
- Sprints.

BENEFITS OF WARM UP EXERCISE.

- Increases body and muscle temperature
- Increases blood and oxygen flow to the working muscles.
- Lubricates the joints which later improve range of motion in joints.
- Dilates blood vessels ensuring proper supply of oxygen in muscles.
- Improves flexibility and coordination.

- Improves on the load distribution in the joints.
- Minimises stress on the heart.

COOL DOWN EXERCISE:

This is an exercise done after a more intense activity in order to allow the body to gradually transition to a resting or a near resting state.

Cooling down brings back the body to its original state. It gradually lowers the heart rate and removes waste materials from the body.

STAGES OF COOL DOWN EXERCISE

Immediate phase.

This occurs right after the vigorous physical activity when the heart is still fast. Under this phase, you engage in light and easy exercises.

Examples include;

- Walk slowly for 1 minute
- Jog slowly for 1 minute

Intermediate phase: This occurs when the heart rate has decreased.

Examples include;

- High knee skips
- Simple lunges
- Side to side jumps

Late phase:

This occurs once the heart has nearly returned to the resting place. This involves total body stretching exercises.

Examples include;

- Groin exercise
- Back exercise.

Benefits of cool down exercise.

- Cools the body and muscle temperature gradually.
- Reduces heart and breathing rate back to normal.
- Allows for gradual recovery of pre exercise heart rate and blood pressures.
- Helps to regulate blood flow.
- Prevents venous pooling of blood in the lower parts of the body which may cause dizziness and possible fainting.

ACTIVITY:

1. What happens if you do not cool down after an exercise?
2. How important is a cool down after an exercise