

3) What role do preventative actions play in enhancing the wellbeing of the athlete?

3.1 Physical Preparation:

- Pre-Screening
 - Skill and Technique
 - Physical Fitness
 - Warm-Up, Stretching and Cool-Down
- Physical preparation enables the body to better cope with the demands of the sport. Athletes train allowing them to adapt to the pressures required in competitive environments → through resistance training, interval training or general conditioning

Pre-Screening:

- Pre-Screening assesses the health status of a person before they become involved in a training program
- Age, gender, health status, previous experience are vital criteria in the screening process
- Very important for males >40, females >50, asthmatics, smokers, people with obesity or high blood pressure and people with a family history of heart conditions
- People at high risk of acute cardiovascular problems must first obtain medical clearance before commencing aerobic exercise → a personal training plan can then be made
- Pre-Screening encourages people to begin and maintain an exercise program using an exercise prescription (specifies what we need to do to achieve a desired level of fitness) → people can avoid muscle soreness/demotivation
- Exercise prescriptions specify the FITT principle → frequency, intensity, type, time
- Example of questions:
 1. Have you ever had a heart attack, surgery or a stroke?
 2. Do you ever suffer from chest pains, especially with exercise?
 3. Do you ever feel spells of dizziness/light-headed during exercise?
 4. Do you have diabetes?
 5. Do you have any liver or thyroid diseases?

Skill and Technique:

- Skill and Technique relate to the efficiency with which we perform the required activities
- Skilful players perform difficult movements with ease and precision → they display a high degree of temporal patterning (the smaller parts of the movement are executed in sequence), pacing (movements are precisely timed) and control. These are acquired through effort/practise
- Correct skill development is vital to prevent injury
- EXAMPLE → footballers must learn how to tackle with correct technique to avoid injury
- EXAMPLE → basketball players must learn how to correctly rebound to avoid knee injury when they land on the ground
- EXAMPLE → Wrestlers must learn correct technique of falling to avoid injury when they are thrown onto the canvas
- Correct skill execution and technique improves performance and avoids injury

Physical Fitness:

- A vital preventative action in enhancing an athlete's well-being is to ensure their level of fitness needed for the sport is attained before full competition begins
- **EXAMPLE** → Football requires superior cardiorespiratory fitness coupled with high levels of strength, power, speed, endurance, agility
- **EXAMPLE** → gymnastics requires more flexibility, coordination, balance, body composition
- Lack of fitness development leads to injury

Warm-Up, Stretching and Cool Down:

Warm-Up:

- Warm-ups need to be sport-specific, and duration varies according to activity
- Sports that require explosive movements (sprinting, discus, gymnastics) require a longer warm-up, as opposed to those that require endurance (cycling, cross-country)
- Warm-up redistributes blood flow around whole body → causes it to travel to skeletal muscles where oxygen/nutrients are needed by cells to enable muscle contraction. Higher muscle temperatures increase the ability of the muscle to stretch without tearing and improves reflexes (shortens response to stimuli)

Stretching:

- Everyone should perform 4-5hrs/week of stretching as muscles lose elasticity with age
- Athletes require unique/additional specific flexibility according to their demands
- **EXAMPLE** → a high jumper will stretch all major muscle groups in preparation for competition, but gives specific attention to the calf and thigh muscle groups
- Muscles need to be stretched beyond the range required for their sport prior to game → achieved through following types of stretches:
 - ❖ **Static Stretches** → a muscle/group of muscles is gradually stretched beyond normal range and held for 30seconds
 - ❖ **PNF** → a static stretch followed by an isometric contraction and a relaxation phase in the lengthened position

Cool-Down:

- Aim to return body-temperature, circulation and respiratory rates to pre-exercise state
- Maintains the stretch in muscle groups that may have shortened during exercise
- Disperse lactic acid that has built up during exercise
- Prevents blood pooling (gradual reduction in heart rate reduces vasodilation and the tendency of blood to "pool" in muscles that have been heavily worked)
- Involves 10mins of stretching, callisthenics then finishing with a gross motor activity e.g. swimming, jogging
- Doesn't need to be as intense and long as the warm-up → needs to emphasise stretching and not be game-specific