Reducing the Risk of Injury Content

Learning Outcome 1: Understand different factors which influence the risk of injury

Learners must be taught:
• **extrinsic factors** which can influence the risk of injury, i.e.
○ type of activity (e.g. contact sports present different injury risks from gymnastic activities)
○ coaching/supervision, i.e.
– poor/incorrect coaching techniques
– ineffective communication skills
– importance of adhering to rules and regulations
○ environmental factors, i.e.
– weather
– playing surface/performance area and surrounding area
– other participants
○ equipment, i.e.
– protective equipment (e.g. shin pads in football, gum shield in boxing, helmet in cycling, goggles in skiing)
– performance equipment (e.g. hockey stick, cricket ball, rock climbing harness)
– clothing/footwear suitable for playing surface/weather conditions/specific sport or activity
○ safety hazards, i.e.
– risk assessments
– safety checks
– emergency action plans

• **intrinsic factors** which can influence the risk of injury, i.e.
1 physical preparation, i.e.
– training
– warm up
– cool down
– fitness levels
– overuse
– muscle imbalances
2. individual variables, i.e.
– gender
– age
– flexibility
– nutrition
– sleep
– previous/recurring injuries
3. psychological factors, i.e.
– motivation
– aggression
– arousal/anxiety levels

4. posture and causes of poor posture, i.e.
– poor stance/gait (e.g. bending your knees or hunching your shoulders when standing)
– sitting positions (e.g. slumping/slouching on the sofa rather than sitting upright)
– physical defects (e.g. muscles weaken around an injured area)
– lack of exercise (e.g. lack of core muscle strength means less support, being overweight puts strain on posture)
– fatigue (e.g. tired muscles will be unable to support the skeleton properly)
– emotional factors (e.g. having low self-esteem/lack of confidence can influence posture)
– clothing/footwear (e.g. wearing shoes with high heels can affect posture)
5. sports injuries related to poor posture, i.e.
– pelvic tilt
– lordosis
– kyphosis
– round shoulder
– scoliosis.

Learning Outcome 2: Understand how appropriate warm up and cool down routines can help to prevent injury

Learners must be taught:
• the physical benefits of a warm up, i.e.
○ warming up muscles/preparing the body for physical activity
○ increase in body temperature
○ increase in heart rate
○ increase in flexibility of muscles and joints
○ increase in pliability of ligaments and tendons
○ increase in blood flow and oxygen to muscles
○ increase in the speed of muscle contraction
• the psychological benefits of a warm up, i.e.
○ heighten or control arousal levels (e.g. ‘get in the zone’ or settle nerves)
○ improve concentration/focus
○ increase motivation
○ mental rehearsal
• key components of a warm up, i.e.
○ pulse raising, i.e. exercises that slowly increase heart rate and body temperature (e.g. jogging, cycling, skipping)
○ mobility, i.e. exercises that take the joints through their full range of movement (ROM) (e.g. arm
swings, hip circles)
○ dynamic movements (e.g. change of speed and direction)
○ stretching (e.g. developmental stretches, dynamic stretches linked to sport – ‘open and close the gate’ groin walk)

○ skill rehearsal phase, i.e. rehearsing common movement patterns and skills which will be used in the activity (e.g. dribbling drills for football, passing drills for netball)
• physical benefits of a cool down, i.e.

○ helps the body's transition back to a resting state
○ gradually lowers heart rate
○ gradually lowers temperature
○ circulates blood and oxygen
○ reduces breathing rate
○ removes waste products such as lactic acid
○ reduces the risk of muscle soreness and stiffness
○ aids recovery by stretching muscles, i.e. lengthening and strengthening muscles for next work-out/use
• key components of a cool down, i.e.
○ pulse lowering, i.e. exercises which gradually lower heart rate and reduce temperature (e.g. easy movements, light running, stretching)
○ stretching, i.e. maintenance stretches, static stretches (e.g. hamstring stretches)
• specific needs which a warm up and cool down must consider, i.e.
○ characteristics of the individual/group, i.e.
– size of group
– age of participants
– experience of participants
– individual fitness levels
– any medical conditions participants may have
○ suitability as preparation for a particular activity/sport
○ environmental factors (e.g. weather/temperature if outdoors, available facilities).

Learning Outcome 3: Know how to respond to injuries within a sporting context

Learners must be taught about:
• acute and chronic injuries
○ acute injuries, i.e.
– caused as a result of a sudden trauma to the body (e.g. hard rugby tackle, being hit by a ball)
– result in immediate pain, and usually swelling with a loss of function
○ chronic injuries, i.e.
– also known as overuse injuries and are a result of continuous stress on an area (e.g. Achilles tendonitis, shin splints or tennis elbow)
– these injuries tend to develop gradually over a period of time
• types, causes and treatment of common sports injuries, i.e.
○ soft tissue injuries, i.e. sprains, strains
○ overuse injuries, i.e. tendonitis, tennis elbow, golfers elbow, shin splints
○ fractures, i.e. open, closed
○ concussion, i.e. signs and symptoms of concussion
○ abrasions, i.e. grazes and cuts
○ contusions, i.e. bruises
○ blisters (e.g. blisters on the foot due to poorly fitting footwear)
○ cramp, i.e. painful sensations caused by muscle contractions or over shortening
○ injuries related to children (e.g. severs diseases, Osgood Schlatter's disease)
• how to respond to injuries and medical conditions in a sporting context, i.e.

○ SALTAPS on-field assessment routine (See, Ask, Look, Touch, Active, Passive, Strength)
○ R.I.C.E. (Rest, Ice, Compress, Elevate)
○ stretching and massage
○ taping, bandaging, splints, slings
○ hot and cold treatments (e.g. heat pack, freeze spray)
○ action plan to respond to injuries and medical conditions in a sporting context i.e. emergency procedures
• Emergency Action Plans (EAP) in a sporting context:
○ emergency personnel, i.e. first responder, first aider, coach
○ emergency communication, i.e. telephone, emergency numbers, emergency services
○ emergency equipment, i.e. first aid kits, evacuation chair.

Learning Outcome 4: Know how to respond to common medical conditions
Learners must be taught:
• the symptoms of common medical conditions, i.e.
○ Asthma, i.e. coughing, wheezing, shortness of breath, tightness in the chest.
○ Diabetes, i.e. increased thirst, going to the toilet lots, extreme tiredness, and weight loss, differences between Type 1 (insulin-dependent) and Type 2 (non-insulin dependent)
○ Epilepsy, i.e. seizures
• how to respond to these common medical conditions, i.e.
○ ensure awareness of any participants' medical conditions prior to commencing physical activity
○ Asthma, i.e. reassurance, inhaler, emergency services (if needed)
○ Diabetes, i.e. insulin (or glucose) hypoglycemia (low blood sugar), give the individual sugar (e.g. fruit juice, sugary sweets)
○ Epilepsy, i.e. emergency care plans in place for the individual
○ when to refer the performer on to a professional and how to do so.