**INJURIES AND ACCIDENTS**

**Accident:**

Accidents are defined as an undesirable and unfortunate happening that occurs unintentionally and usually results in harm, injury and damage or loss.

It is a happening that is not intended, foreseen, or expected that can cause an injury and sometimes death.

WHO Advisory Group in 1956 defined accident as an unpremeditated event resulting in recognizable damage.

**Injury:**

Injury also known as physical trauma is damage to the body caused by an external force.

This may be caused by accident, falls, hits, weapons, and other cause.

**Epidemiology: (WHO)**

* Approximately 1.19 million people die each year as result of road traffic crashes.
* Road Traffic Injuries are the leading cause of death for children and young adults aged 5-29 years.
* 92% of the world’s fatalities on the roads occur in low- and middle-income countries.
* Injuries (both unintentional and violence related) take the lives of 4.4 million people around the world each year and constitute nearly 8% of all deaths.

**Causes of Accidents and Injuries:**

1. Human factors:

* Age: 15-45 years
* Sex: More in male
* Medical condition:
* Impaired vision
* Presbyopia (loss of near vision), Presbycusis (age related hearing loss)
* Orthostatic hypotension, Dizziness
* Osteoporosis (metabolic changes include decalcification, decrease density of bone).
* Seizure disorder
* Poor neuromuscular (e.g. gait, speed, and balance) which is common among person with arthritis.
* Mental illness such as depression, schizophrenia can cause self-inflected injuries.
* Substance abuse such as alcohol.

1. Environmental factors:

* Bad weather such as heavy rainfall, storm.
* Poor road construction and poor implementation of traffic rules.
* Unmanaged home environment such as slippery floor, no railing in stairs, no proper storage of medicine & pesticides.
* Natural Disasters such as landslides, floods, earthquake.

1. Psychosocial factors:

* Risk taking behavior such as high speed while riding bikes and vehicles or racing.
* Aggressiveness
* Poor perception, Defective judgement
* Family dysfunction, conflicts

**Types of Accidents and Injury:**

1. **Within home environment:**
2. Poisoning:

* Poisoning is injury or death due to swallowing inhaling, touching, or injecting various drugs, chemical, venoms or gases.
* Many substances such as drug and carbon monoxide are poisonous only in higher concentration or dosages.
* Types of poisoning:
* Household products (Paraffin and Detergents).
* Poisonous fruits, leaves, or roots.
* Insecticides/ pesticides poisoning (Parathion, Malathion).
* Alcohol poisoning.
* Inhalation (aspiration of foreign bodies).
* Prescribed medicines overdose.

1. Burns And Scalds:

* Burns are injuries on the body caused due to radiation, dry heat while scalds are injuries on the body by moist heat.
* Burning house, fire or hot objects or exposure to sun.
* Contact with an electric current or by lighting.
* Moist heat: tea, porridge, or steam.
* Burns and scalds are common among middle adults.

1. Animal bits:

* Animal bits usually result in a break in the skin but also includes contusions from the excessive pressure on the body tissue from the bite from cat, dog rat and insect are common in every age group causing infection, wound and allergies.

1. Fall or Slip Accidents/ Injuries:

* Injuries from uneven or broken paving.
* Risk factors for falling is poor neuromuscular and vision changes.
* Use of certain medications, especially use of multiple medication simultaneously and use of psychotropic drugs increases fall risk.
* Injuries from slippery flooring, defective flooring, spillages in floor in household setting.
* Consequences of fall include hip fractures, brain injury, decline in functional activities and reduction in social and physical activities.

1. **Outside home environment:**
2. Road Traffic Accidents:

* Road accidents are the most common cause of accidental deaths in the later years, especially for male.
* Motor vehicle accident is common because of high speed, negligent driving.
* Driving under the influence of alcohol or drugs.
* Because of changing physical abilities due to aging.
* Roads without traffic signal or if signals present inability to see because of Presbyopia, inability to hear because of Presbycusis. This condition also causes pedestrian hazards in roads.
* Uneven or broken paving of roads also cause accidents.

1. Industrial/ Occupational Accidents and Injuries:

* An occupational injury is bodily damage resulting from working.
* Falls in constructions, extraction, transportation, building cleaning and maintenance.
* Machines are common in place in industries manufacturing, mining, construction, and agriculture.
* Machines involve moving parts, sharp ages, hot surfaces which are risk for crush, burn, cut, shear, stab, strike or wound.
* Prick injuries is common in health personal.

1. Sports and recreational Accidents and Injuries:

* There are many factors that lead to sports injury in adulthood. The main one is that adults may not be as agile (able to move quickly and easily) as they were when they were younger.
* Sporting and recreational activities such as:
* Basketball, soccer, skiing, volleyball, gymnastic, bungee jumping, paragliding, sky driving, hiking etc.
* Common types of sports injury:
* Strains (injury to muscle or tendon)
* Sprain (injury to ligament usually caused by twist).
* Tear ligament.
* Dislocation joint
* Fractures
* Shin splint (pain and tenderness due to overusing of the lower legs causes stress on muscles and connective tissues around the tibia).
* Knee injury

**Nursing Responsibilities**:

1. **Teach safety education on road traffic accidents:**

* Prohibit people from driving under the influence of alcohol and drugs.
* Proper repair of vehicles.
* Avoid over speeding and overtaking.
* Reinforce traffic laws, include the use of seat belts.

1. **Teach about safety which relates to remolding a home, maintaining a yard, or establishing a work Centre:**

* Handrails for stairways and handgrip in the shower or in the bathtub.
* Place electric outlets in convenient locations.
* Keep tools, equipment and home or yard machines in proper condition.
* Remove or secure anything that would predispose to fall, such as electrical cords or small objects.
* Clean up spills on the floor promptly and avoid slippery waxes.
* Keep medications in safe place and ensure the label is readable.

1. **Initiate or strengthen a safety program in an occupational or educational settings or teach about occupational safety:**

* Use of available safety equipment.
* Encourage to wear mask, goggles, apron while working.
* Proper disposal of wastes such as syringe, broke glasses, razor blades, etc.
* Encourage to deal carefully while handling machines or equipment’s in workplace.
* Keep the weight to be lifted as close to the body as possible, bend at knees while moving a client/ patient.
* Health insurance should be done.

1. **Teach about Sport injuries safety:**

* Encourage to wear properly fitting shoes that provide shock absorption and stability.
* Use the softest exercise surface available and avoid running on hard surfaces like asphalt or concrete.
* Do not walk or run on bare foot.

1. **Encourage reinforce to seek medical health care in case of any physical problems such as.**

* Osteoporosis, diabetes mellitus, hearing, and vision impairment etc.

**Safety and accident Prevention:**

**I. Safety education:**

* Use of protective equipment.
* Provide proper training to employees.
* Use of new equipment, machines, and precautions.
* Evacuation from fire, natural disaster, or any accidents.
* Denger signs and exit sign.
* First aid training.
* Driver needs to be trained in proper maintenance of vehicles, safe driving and first aid.
* Discourage consumption of alcohol and other drugs while driving.
* Factors which tend to cause accidents must be reduced or eliminated:
* Improvement of roads.
* Use of safety equipment’s in industries.
* Safe storage of drugs, chemicals, and weapons or provision of fire guards in the home and workplace.
* Ensure proper lighting and visibility in the workplace as well as in home environment.
* Regular maintain equipment and perform inspection.
* Encourage open communication and reporting of safety concern.
* Provide awareness and information about where and how to inform the accidents/ injuries in emergency including **hot line number of ambulance (102), fire brigade (101), police (emergency 100 and traffic police 103), etc.**

**II. Enforcement of laws:**

* Driving test
* Medical fitness to drive.
* Speed limits.
* Compulsory wearing helmets and seat belt.
* Regular inspections of vehicles.
* Eyes of old aged driving license holders should be tested periodically.
* License of drunkard drivers/riders should be cancelled immediately.
* Footpaths and medians should be made mandatory for important roads.
* Zebra crossing should be provided for pedestrians for safe road crossing at appropriate places.
* Signal for road crossing at important busy places where many people must cross every day.
* Road should be properly marked. proper sign board should be installed.
* School buses should be painted with bright yellow color.
* There should be factory and industrial laws to ensure safety of employee.