

Spinal injuries

Lesson 10

By Dorcas Mwangi

Most Probable causes

- Motor Vehicle Crashes
- Motorcycle crashes
- Pedestrian-Vehicle collisions
- Unconscious trauma victims
- Falls
- Hangings
- Diving Accidents
- Blunt Trauma
- Penetrating trauma to the head, neck or torso

Signs and symptoms

- Tenderness in the area of injury
- Pain associated with moving
- Loss of sensation or paralysis
- Breathing problems
- Loss of bladder or bowel control

Cont;

- Soft tissue injuries associated with trauma
 - Head neck and cervical spine
 - Shoulder, back or abdomen
 - Lower extremities
- Numbness, weakness or tingling in the extremities

Special consideration

Absence of pain or presence of normal limb function does not necessarily mean that the injury is not significant injured.

Checking for Spinal Injuries

- Head injuries may indicate that there are possible spinal injuries
- It may have been moved suddenly in one or more directions, damaging the spine.

Spine injury management

- Danger
- Response
- Airway (using jaw thrust maneuver)
- Breathing
- Avoid unnecessary movement
- Maintain manual stabilization of head and neck

Checking for Spinal Injuries

What to Do:

- Stabilize the victim against any movement.
- Check ABCs. (**A**irway **B**reathing **C**irculation)
- Unresponsive Victim:
- Look for cuts, bruise, and deformities.
- Test response by pinching the victim's hand, and bare foot.
- If no reaction, assume the victim may have spinal damage.

Checking for Spinal Injuries

Responsive Victim

- Upper Extremity Checks:
 - Victim wiggles fingers.
 - Victim feels rescuer squeeze fingers.
 - Victim squeeze rescuer's hand.
- Lower Extremity Checks:
 - Victim wiggles toes.
 - Victim feels rescuer squeezes toes.
 - Victim pushes foot against rescuer's hand.

Types of Fractures

- Open: bone protrudes through the skin
- Closed: broken bones hidden inside flesh
- Greenstick: broken bendable bone
- Complicated: causes injury to internal organ/major nerve/blood vessel

Maintain
constant
in-line
immobilization
until medical
help arrives



Cont;

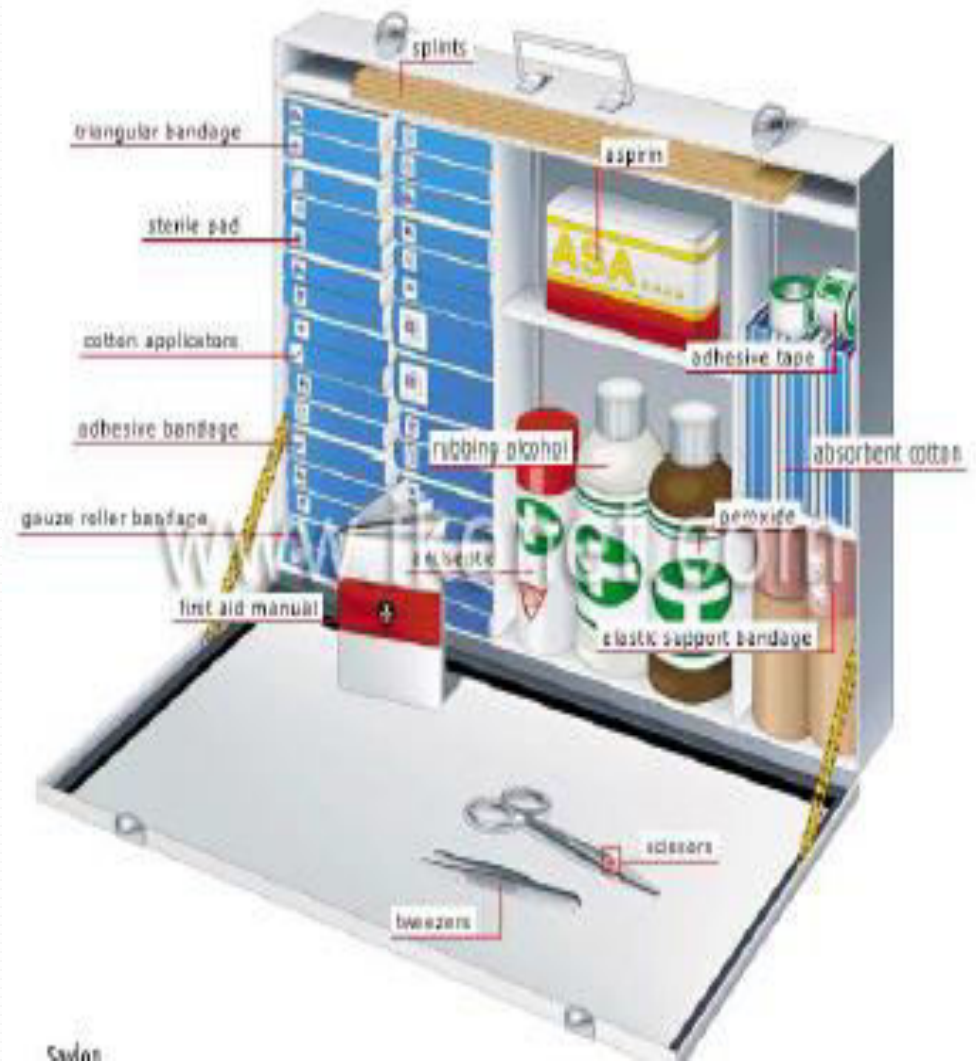
- A single First Aider may stabilize head and neck manually in the position found until EMS arrive if possible
- If additional First Aiders are available they may perform physical and ongoing assessments

FIRST AID KIT

- CONTENTS; Identification, description and knowledge.
- USAGE: How each item in the First aid Kit is applied and utilized by you.
- Storage and Replacement: Ensure all items are in order and replaced once used.

First Aid Box

A first aid box is a collection of supplies and equipment for use in giving first aid



Contents

Trauma injuries, such as bleeding, bone fractures or burns, are usually the main focus of most first aid kits, with items such as bandages and dressings being found in the vast majority of all kits.

Adhesive bandages (band-aids, sticking plasters) - can include ones shaped for particular body parts, such as knuckles

Dressings

- Sterile eye pads

- Sterile gauze pads

- Sterile non-adherent pads, containing a non-stick Teflon layer

Bandages

Butterfly closure strips -

Saline- used for cleaning wounds or washing out foreign bodies from eyes

soap - used with water to clean superficial wounds once bleeding is stopped

Antiseptic

Adhesive tape,

Instruments and equipment

- Trauma shears for cutting clothing and general use
- Scissors are less useful but often included
- Tweezers, for removing splinters amongst others.
- Lighter for sanitizing tweezers or pliers etc.
- Irrigation syringe - with catheter tip for cleaning wounds with sterile

water, saline solution, or a weak iodine solution. The stream of liquid

flushes out particles of dirt and debris.

- Instant-acting chemical cold packs
- Alcohol rub (hand sanitizer) or antiseptic hand wipes
- Thermometer
- Cotton swab
- Cotton wool, for applying antiseptic lotions.
- Safety pins, for pinning bandages.

Medication

Pain killers

- Paracetamol (also known as Acetaminophen) is one of the most common pain killing medication, as either tablet or syrup
- Anti-inflammatory painkillers such as Ibuprofen, Naproxen or other NSAIDs can be used as part of treating sprains and strains
- Codeine which is both a painkiller and anti-diarrheal

Symptomatic relief

- Anti diarrhoea medication such as Loperamide - especially important in remote or third world locations where dehydration caused by diarrhea is a leading killer of children
- Oral rehydration salts
- Antihistamine, such as diphenhydramine
- Poison treatments
- Absorption, such as activated charcoal
- Emetics to induce vomiting, such as syrup of ipecac although first aid manuals now advise against inducing vomiting.
- Smelling Salts (ammonium carbonate)

• Topical medications

- Antiseptics / Disinfectants
- Antiseptic fluid,
- Povidone iodine is an antiseptic in the form of liquid, swabstick, or towelette. Can be used in a weak dilution of clean water to prepare an irrigation solution for cleaning a wound.
- Hydrogen peroxide is often included in home first aid kits, but is a poor choice
for disinfecting wounds- it kills cells and delays healing.
- Medicated antiseptic ointments- Ointments typically contain one, two, or
all three of the following antibacterial ingredients (those containing all 3
are typically called 'triple-antibiotic ointment') Neomycin, Polymyxin
B Sulphate or Bacitracin Zinc.

Personal protective equipment

- The use of personal protective equipment or PPE will vary by kit, depending on its use and anticipated risk of infection. The adjuncts to artificial respiration are covered above, but other common infection control PPE includes:
 - Gloves which are single use and disposable to prevent cross infection
 - Goggles or other eye protection
 - Surgical mask or N95 mask to reduce possibility of airborne infection transmission (sometimes placed on patient instead of caregivers. For this purpose the mask should not have an exhale valve)
 - Apron

Precaution

Precautions to be taken at the time of giving First aid

- Keeping yourself protected is the first priority of any first aider
- There are certain tools that must have wear/taken by first aider:-
 - First & important tool is **Gloves**
 - **CPR** Protect mask

GLOVES

- **Medical gloves** are disposable gloves used during medical examinations and procedures that help prevent cross-contamination between caregivers and patients.
- Medical gloves are made of different polymers including latex, nitrile rubber, vinyl and neoprene; they come unpowdered, or powdered with cornstarch to lubricate the gloves, making them easier to put on the hands

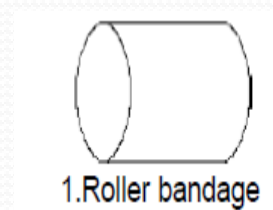
Mask

- Mask help first aider to be not directly contact with patient, if first aider will directly contact with him like breathing or etc. It may harm first aider.

BANDAGES

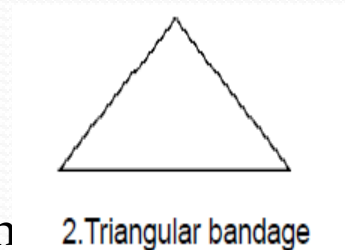
FUNCTIONS OF A BANDAGE

1. Maintain direct pressure over a dressing to control a bleeding.
 2. Hold dressing and splints in position.
 3. Prevent or reduce swelling
 4. Provide support and stability for an extremity or joint
 5. Restrict movement
 6. Assistance in carrying /lifting the causality
- Hold a dressing in place over an open wound
Bandage should be clean but need not be sterile.



TYPES OF BANDAGES

1. Roller bandage or crepe
2. Triangular bandage/universal (It's called universal because many bandages can be made from it.)
, adhesive plaster,



Precautions for Administering First Aid

- When administering first aid, the following standards of practice should be followed:
- Wash hands with antiseptic towelettes if there is any possibility of contact with blood, body fluids or human tissues from an injured worker. Wash hands with soap and water as soon as possible.
- Wear gloves when anticipating contact with blood, body fluids, tissues, mucous membranes or contaminated surfaces, or if breaks in the skin are present.
- Wear an impervious gown or apron if splattering of clothes is likely.
- Wear a mask if there is to be contact with an infectious disease spread by splatter droplets.

points to note

- ✓ Wear appropriate protective equipment at all times including a mask and eye protection if aerosolization or splattering is likely to occur when attending to an injured person.
- ✓ Make mouthpieces, resuscitation bags and other resuscitation devices readily available for use in areas where the need for resuscitation is likely and carry appropriate devices in emergency response kits.
- ✓ Handle sharp objects carefully.
- ✓ - Do not cut, bend, break or reinsert used needles into original sheath by hand.
- ✓ - Discard sharp objects intact, immediately after use into an impervious sharps disposal box which should be carried whenever needles are in the emergency response kit.
- ✓ - Report immediately all needle stick accidents, mucosal splashes or contamination of open wounds with blood or body fluids.
- ✓ Dispose of all spills which contain or may contain biological contaminants in accordance with policies for hazardous waste disposal. Until clean up is complete, the accident area should be roped off to other workers.
- ✓ Post Universal Precaution signs in all areas designated for first aid and on emergency response boxes and first aid kits.



Thank You
For Your
Attention