



First Aid Response

Injury Management & Shock





Learning Outcomes

Knowledge Objectives (by the end of this Unit, you will be able to...)

1. State the main types of serious bleeding injuries and causes using CLIPS
2. State the main types of musculoskeletal injuries (fracture, sprains, strains and dislocation) and causes
3. Explain hypovolaemic shock, causes and progression
4. Describe the care management of bleeding injuries – external and internal
5. Describe the care management of a nose bleed
6. Describe the care management of musculoskeletal injuries
7. Describe the care management of suspected spinal injuries
8. Describe the care management of shock



Learning Outcomes

Attitudinal Objectives (by the end of this Unit, you will be able to...)

1. Demonstrate an ability to empathise with patients, their friends and families when managing traumatic injury in a non-judgemental and compassionate manner

Skills Objectives (by the end of this Unit, you will be able to...)

1. Demonstrate how to control external blood loss at various wound sites
2. Demonstrate how to manage a patient with internal blood loss
3. Demonstrate how to manage soft tissue injuries
4. Demonstrate how to immobilise a limb injury – any painful, swollen or deformed limb
5. Demonstrate how to manage hypovolaemic shock
6. Demonstrate how to maintain active spinal motion restriction



Topics

***Warning* – Some graphic pictures!**

- Wounds & Bleeding
- Musculoskeletal Injuries
- Spinal Injuries
- Shock





1.Wounds & Bleeding

Section includes....

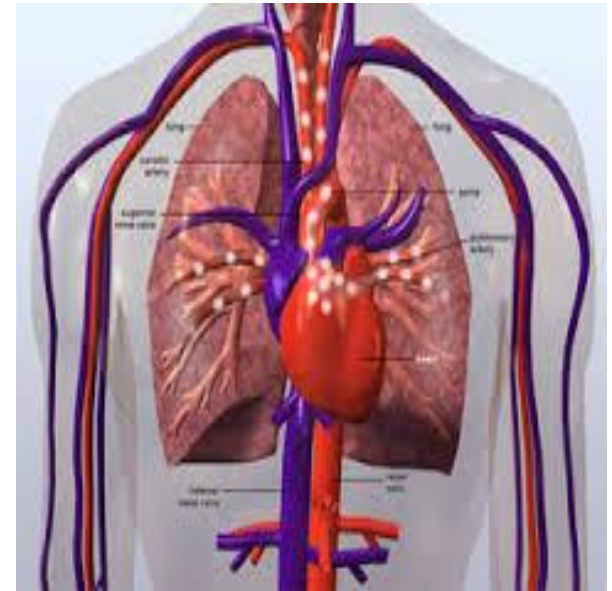
- Circulatory System
- Heart & Blood Vessels
- Functions of Blood
- Types of Bleeding
- Internal & External Bleeding



Circulatory System

Contains....?

- ❖ Heart
- ❖ Arteries
- ❖ Veins
- ❖ Capillaries
- ❖ Blood



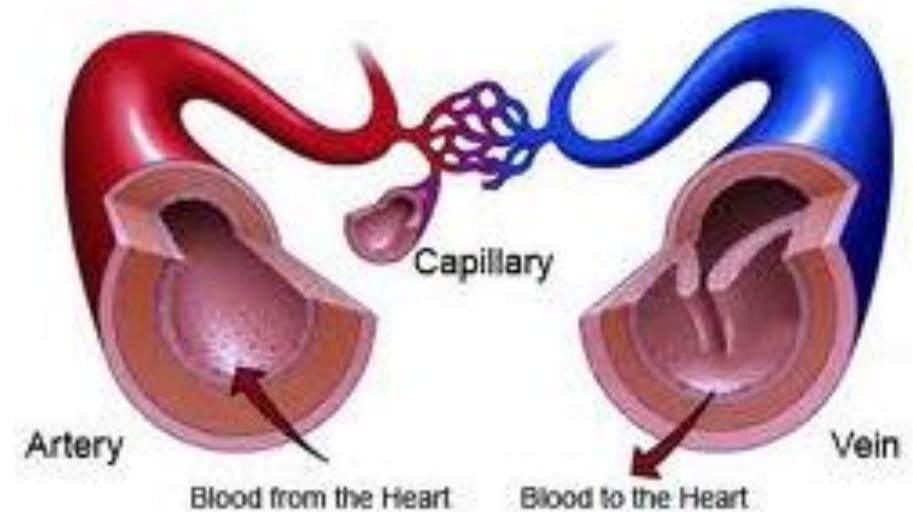
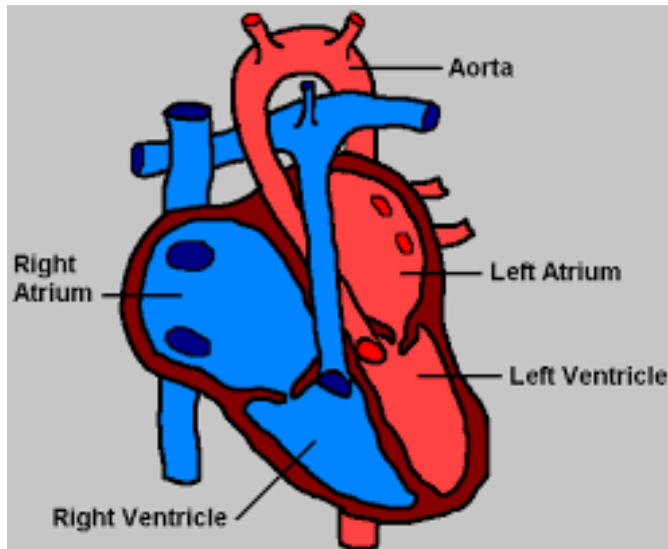


Heart & Blood Vessels

4 Chambers

Top – Atria (2)

Bottom – Ventricles (2)



Arteries

Veins

Capillaries



Functions of Blood?

- What is the function of our blood?





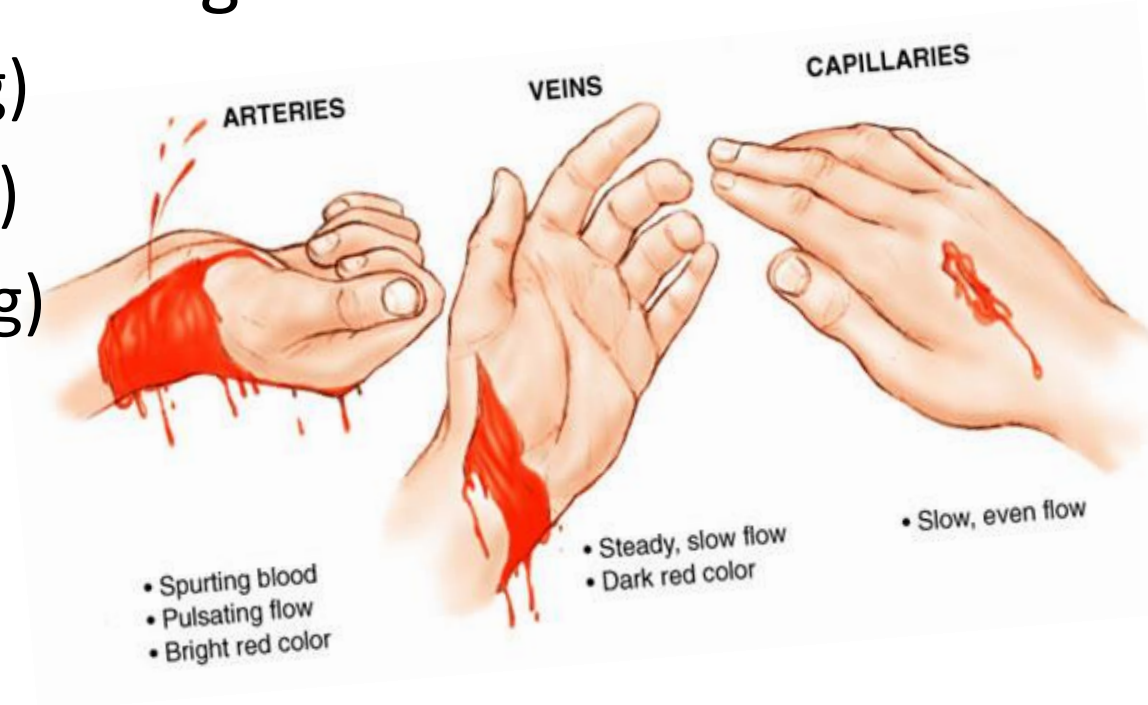
Functions of Blood

- Maintain Body Temperature
- Transport:
 - Oxygen to cells
 - Nutrients to cells
 - Waste Products away from cells
 - Disease Fighting Cells
 - Platelets for clotting

External Bleeding

- Three types of bleeding?

- Capillary (oozing)
- Venous (flowing)
- Arterial (spurting)





Effect of Bleeding

- What effect does bleeding have on the body?



- Pulse? **Weak**
- Skin? **Pale**
- Body Temperature? **Reduced**





Warning – Graphic Content



Wounds – Types

- CLIPS!

- Contusions
- Lacerations
- Incisions
- Penetrations
- Special (i.e. gunshot wounds)

Causes of each?





Bleeding Control

- P – Posture
- E – Elevation
- E – Examination
- P – Pressure
- S – Shock

**Remember:
Scene Safety
& PPE!**

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Care for Serious External Bleeding

- Wear gloves if available
- Expose wound
- Cover with clean cloth or gauze
- Apply direct pressure





Care for Serious External Bleeding

- Apply a pressure bandage
- DO NOT remove any blood-soaked dressings

Why Not??





Internal Bleeding

- Skin is not broken and blood is not seen.
- Recognising internal bleeding
 - Bruising
 - Painful, tender area
 - Vomiting or coughing up blood
 - Black or bright red stool



Care for Internal Bleeding

- Care for minor internal bleeding

Follow the steps of the RICE procedure.

- Rest the injured area
- Use an Ice pack
- Compress the injured area
- Elevate an injured arm or leg if not broken

R.I.C.E.

- Care for serious internal bleeding

- Call 112 (or 999)
- Care for shock by raising the casualty's legs
- If vomiting occurs, roll the casualty onto his or her side
- Monitor breathing

**Shock covered
later**



Special Wounds

- Amputations
 - Call 112 (or 999)
 - Control bleeding
 - Care for shock
 - Recover the amputated part and place it in a clean plastic bag or cling film
 - Lightly wrap the bagged amputated part in gauze
 - Keep the part cool, but do not freeze





Warning – Graphic Content



Special Wounds

- Embedded (Impaled) Objects
 - Expose area
 - Do NOT remove the object
 - Control bleeding around the object
 - Stabilise the object
 - Shorten the object only if necessary



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Dressings and Bandages

Dressings



Bandages



Difference??

Dressings

- Functions

- Absorb blood
- Prevent infection
- Protect the wound

- Types

- Gauze pads
- Adhesive strips
- Trauma dressings
- Improvised dressings





Bandages

- Functions

- Hold dressing in place
- Apply pressure to control bleeding
- Prevent or reduce swelling
- Support and stabilize an extremity or joint

- Types

- Gauze roller bandages
- Elastic roller bandages
- Triangular bandages



Triangular Bandages





2. Musculoskeletal Injuries

How many bones?

206!

Largest Bone?

Femur (thigh)



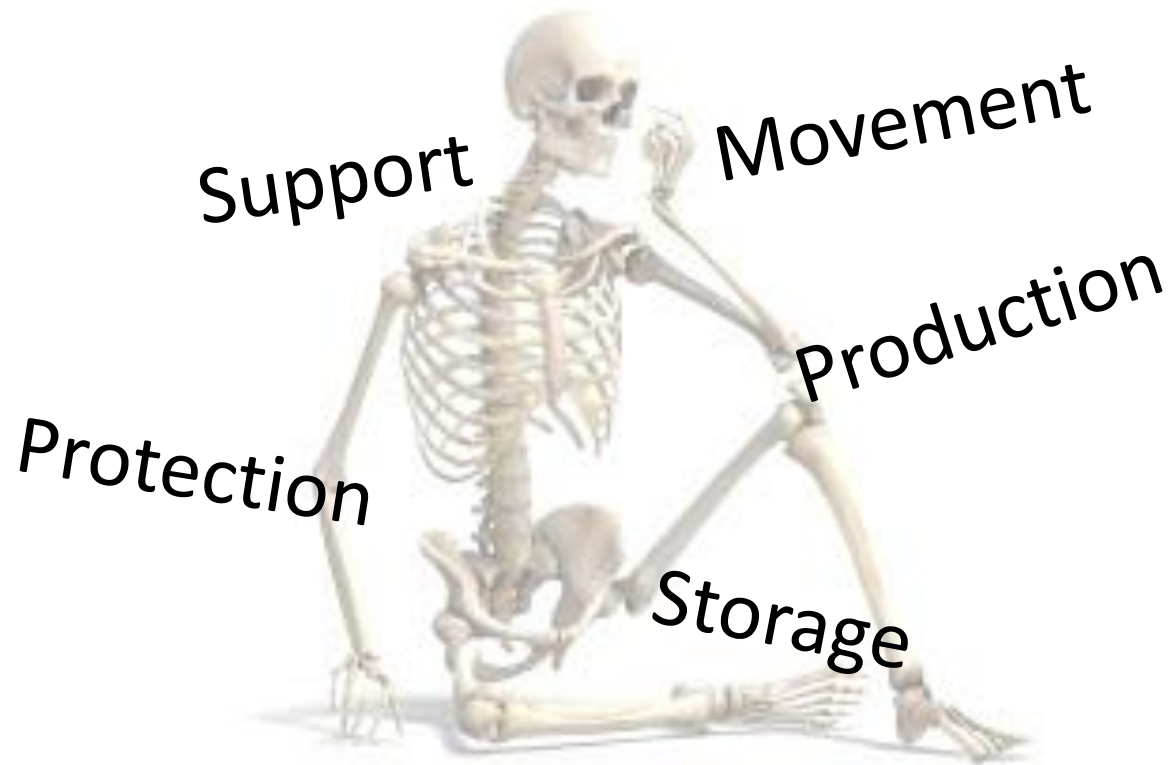
Bones supported by?

**Muscles
Tendons
Ligaments
Cartilage**





Functions of Skeleton?



Fracture



- Break or crack in a bone

**Has anyone ever
fractured a bone in
their body?**





Types of Fracture

Closed Fracture



Open Fracture



Complicated fracture



Cause of Fracture?

- Slip, Trip, Fall
- Assault
- Bone disease
- Motor Accident
- Sports Injury





Signs & Symptoms – Fracture

Sign

- Swelling or Bruising
- Deformity
- Protruding bone
- Loss of function/movement

Symptom

- Pain
- Tenderness

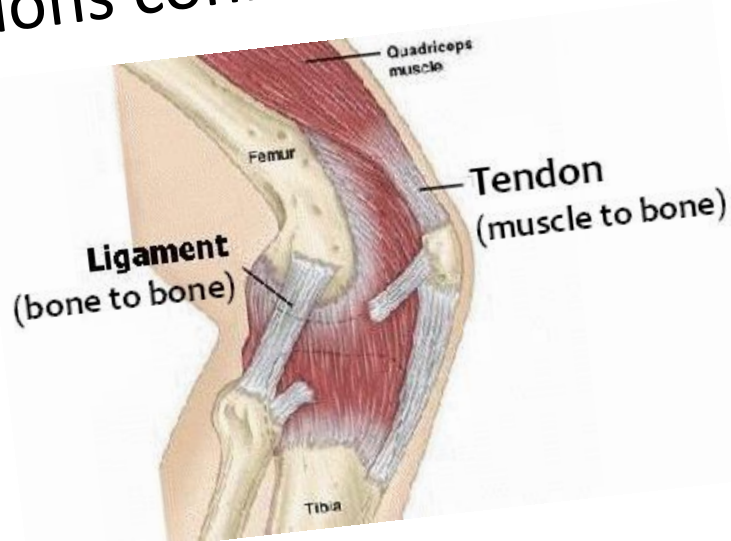
Sprain v Strain?



What is a Sprain & what is a Strain?



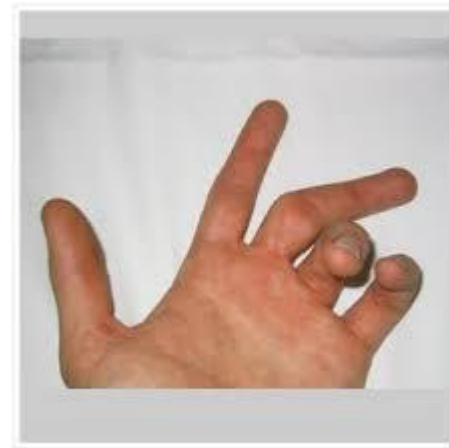
Strain
Injury to muscle or tendon
Tendons connect Muscle to Bone



Sprain

- Injury to Ligament
- Ligament connect Bone to Bone

Dislocation





Treatment

- Scene Safety
- Call for help
- Do not move patient – unless necessary
- All patient get into a position of comfort
- Deal with bleeding
- Immobilise bone or joint as presented
- Check CSM both sides of injury
- Reassure and keep patient warm

How do we treat a patient with a dislocation?





R.I.C.E



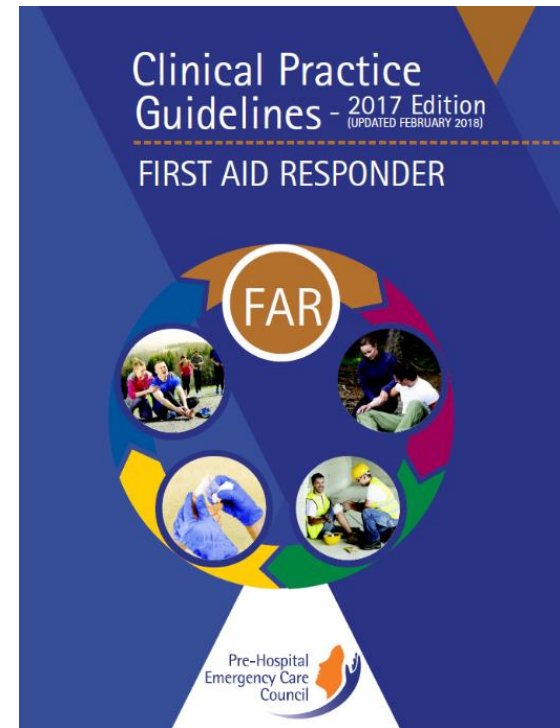


PHECC CPGs

- FAR CPGs (2017)

Limb Injury

CPGs
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Moving Patients with Fractures

- How or why do you think you'd move a patient with a fracture?

Risks?

- **Internal damage**
(organs, blood vessels)
- **Pain**





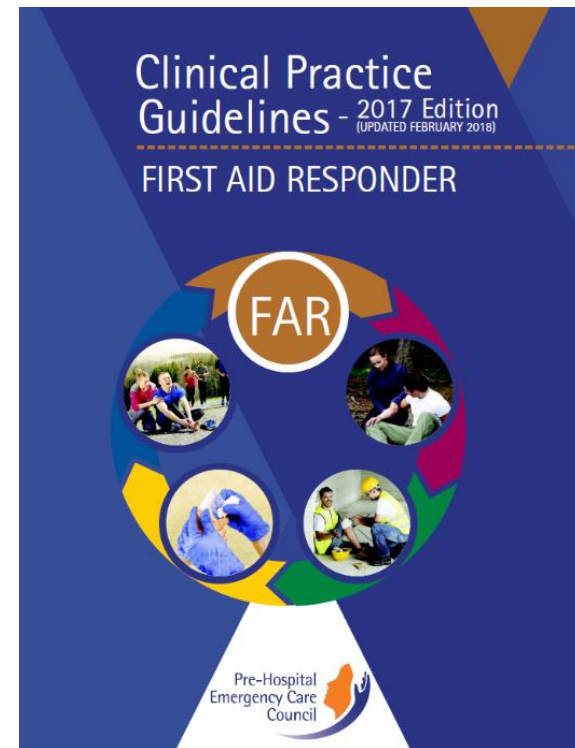
3. Suspected Spinal Injury

Spinal Injury Management

- FAR CPGs (2017)

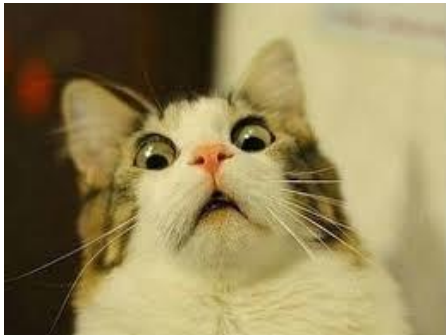
Spinal Injury Management

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4. Shock

- What is Shock?





Shock....

“An acute medical condition associated with a fall in blood pressure, caused by such events as loss of blood, severe burns, allergic reaction, or sudden emotional stress, and marked by cold, pallid skin, irregular breathing, rapid pulse, and dilated pupils” (Oxford English Dictionary)

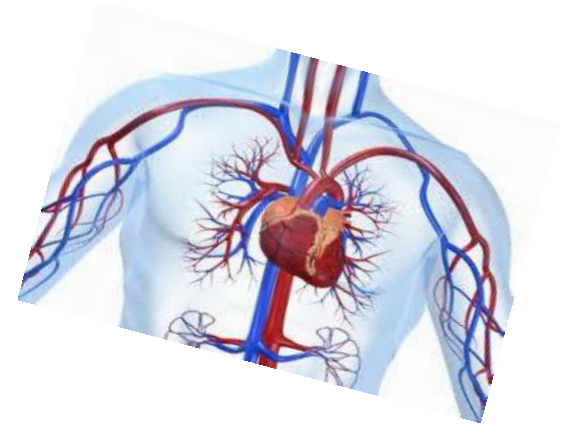
“Shock is a life-threatening condition that occurs when an insufficient supply of blood throughout the body causes the cells of the body to be deprived of oxygen. Shock can occur following a serious accident, illness or injury” (First Aid Manual)

Shock

Problem with any one or more of...



1. Heart
2. Blood vessels
3. Blood



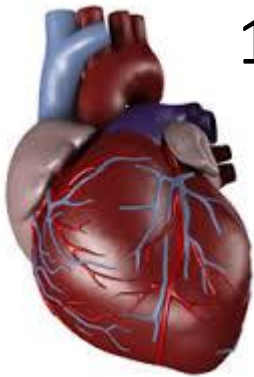
Lack of



reaching body cells = **SHOCK!**



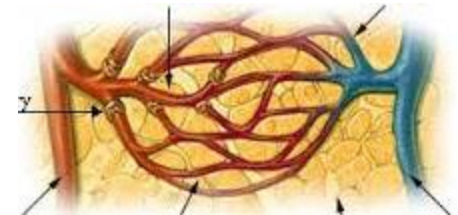
How might the....



1. Heart



2. Blood



3. Blood Vessels

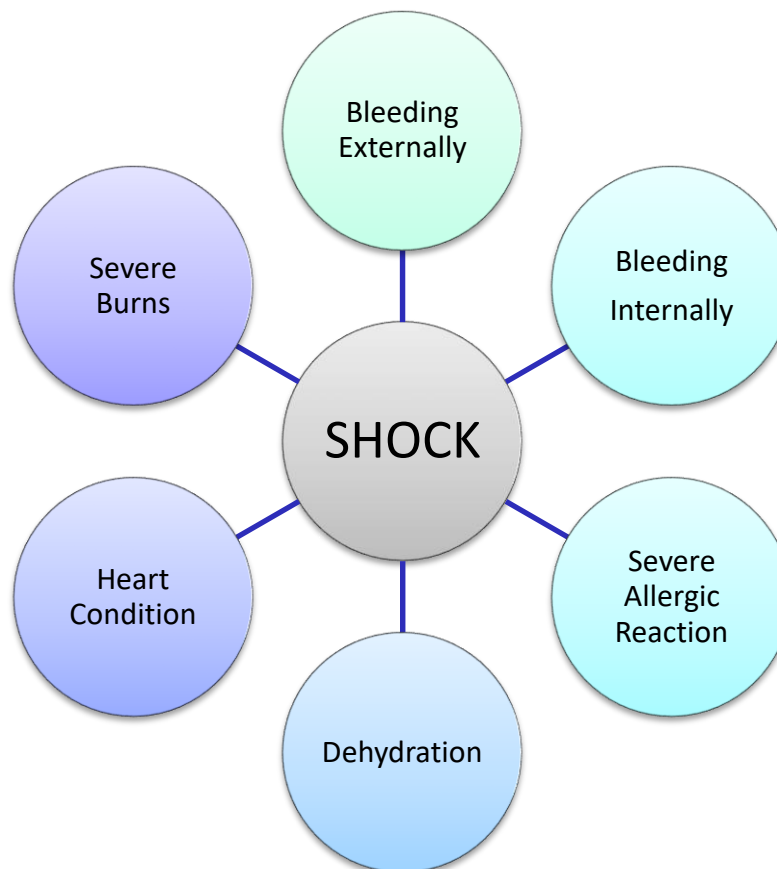
...be damaged in the first place?

Group Work





Causes of Shock.....





Shock

This Module is focused on Internal and External Bleeding as well as Injury Management



...therefore, we speak about Shock in terms of Blood Loss

Hypovolaemic Shock!



Types of Shock

Hypovolemic Shock – Loss of Blood Circulation

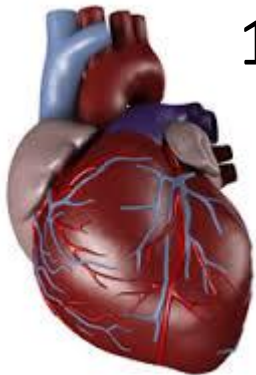
Cardiogenic Shock – Heart not 'working' properly

Obstructive Shock- blood obstructed – Heart not working

Distributive Shock – Septic – Anaphylactic - Neurogenic



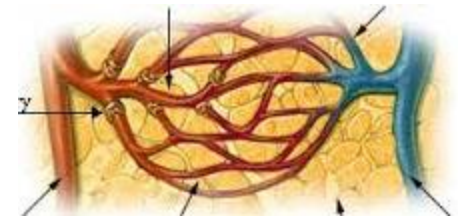
What Signs or Symptoms might you note on a patient with a damaged.....



1. Heart



2. Blood



3. Blood Vessels



Signs & Symptoms of Shock

- Pale Face
- Rapid Shallow Breathing
- Fast, Weak Pulse
- Clammy Skin
- Agitation
- Confusion
- Anxiety
- Disorientation
- Unconsciousness
- Weakness
- Dizziness





Treatment for Shock?

- A – Open Airway
- B – Check Breathing
- C – Check Circulation
- Deal with External Bleeding
- Raise Limbs (if possible)
- Keep Patient warm
- Loosen tight clothing
- Observe Vital Signs
- Reassure patient

**Life Threatening Conditions –
call 112 (or 999) immediately**





Assessment

-
- State the main types of serious bleeding injuries and causes using CLIPS
 - State the main types of musculoskeletal injuries and their causes
 - Explain hypovolaemic shock and its cause
 - Describe the care management of internal & external bleeding
 - Describe the care management of a nose bleed
 - Describe the care management of a musculoskeletal injury
 - Describe the care management of a suspected spinal injury
 - Describe the care management of shock



Summary

- Serious Bleeding – Internal & External
 - CLIPS
- Musculoskeletal Injuries
 - RICE
- Spinal Injuries
- Shock
 - Hypovolaemic