

## TRAUMA

### LIMB TRAUMA

Neurovascular deficit is one of the most important complications of limb trauma. Penetrating injuries can sever arteries or nerves while blunt trauma can cause bleeding and swelling which leads to compartment syndrome.

When assessing injured limbs always check:

- Peripheral pulses
- Capillary refill time
- Temperature and colour of the skin
- Motor function
- Sensory function
- Tenseness and tenderness of muscle compartments

#### Compartment syndrome

Compartment syndrome occurs when pressure within an osteofascial compartment exceeds that of capillary pressure, impeding perfusion. Ischaemia ensues and if untreated necrosis of the muscle occurs.

The most common sites of compartment syndrome are the lower leg, forearm, hands and feet.



### Causes

- Crush injuries
- Circumferential burns
- Restrictive dressings, plaster or splints
- Fractures
- Revascularisation of an ischaemic extremity
- Prolonged exercise

### Clinical Features

- Pain out of proportion to the injury
- Tenseness and tenderness of the muscle compartment
- Swelling of the compartment
- Pain on passive muscle stretch
- Weakness or paralysis of the involved muscles (late sign)
- Altered sensation (late sign)
- Absent pulses (late sign)

### Management

Ultimately a fasciotomy and removal of dead muscle is required. In severe cases amputation may be required. In ED your role is to have a high index of suspicion and refer to the appropriate speciality:

- Remove restrictive dressings, casts or splints.
- Analgesia.
- Avoid nerve blocks which may mask symptoms.
- Urgent orthopaedic referral.
- Check CK and U&E to detect rhabdomyolysis

