Delta-Cast[®]

Diagnosis of fractures

Factsheet





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Diagnosis of fractures is by a combination of:



Initial Examination

Symptoms such as pain and deformity



Trauma, osteoporosis or overuse



X-ray Confirmation

Shows the type and location of fracture

X-rays can sometimes fail to reveal the fracture, so the signs and symptoms of fractures are:

Pain:

Common feature; check for onset and patterns with movement.

Handle the injured limb carefully, supporting it, to avoid worsening the condition.

2 Swelling:

This does not indicate the type of fracture but is related to the extent of soft tissue damage and blood supply.

Keep injured limbs elevated to alleviate swelling both before and after applying a splint.

3 Deformity:

Displacement, angulation, or rotation of the bone caused by the direction of force producing the fracture.

Action of the muscles pulling on the bone fragments can cause deformation.

4 Loss of function:

Movement of digits should be encouraged once a splint supports the limb and pain is managed.

A lack of movement could indicate compartment syndrome, nerve injury or a loss of muscle attachment.

State of nerve supply should be noted initially and after treatment.

5 Abnormal mobility

Assessment of the bones by examination should only be carried out by a doctor to prevent further injury.

Observation of the patient throughout your examination could highlight unusual movements such as a bend in the leg which should be reported to the medical officer.

6 Crepitus

The grating sound of bone ends rubbing together, like rubbing hair between finger and thumb.

Painful to the patient and should not be looked for but reported if noticed.

Don't forget to check for vascular injury:

- Check blood circulation in the fingers or toes of the affected limb.
- Skin or nails should be pink and warm.
- Gently squeeze the hand or foot to blanch and note the time taken for colour to return.
- Pale, cold skin could be an obstructed artery.
- After splinting check again, an over tight splint can cause swelling leading to venous obstruction.
- Assess for venous thromboembolism risk before lower limb casts.





