**TRACTION**

## Traction

is the application of a pulling force to an injured part of the body or extremity.

## Indications for skin traction

-temporary management of neck femur fracture
-femoral shaft fracture in children
-unplaced fracture of of acetabulum
-after reduction of dislocation of hip
-to correct minor fixed flexion of deformities of hip and knee

### The purpose of traction

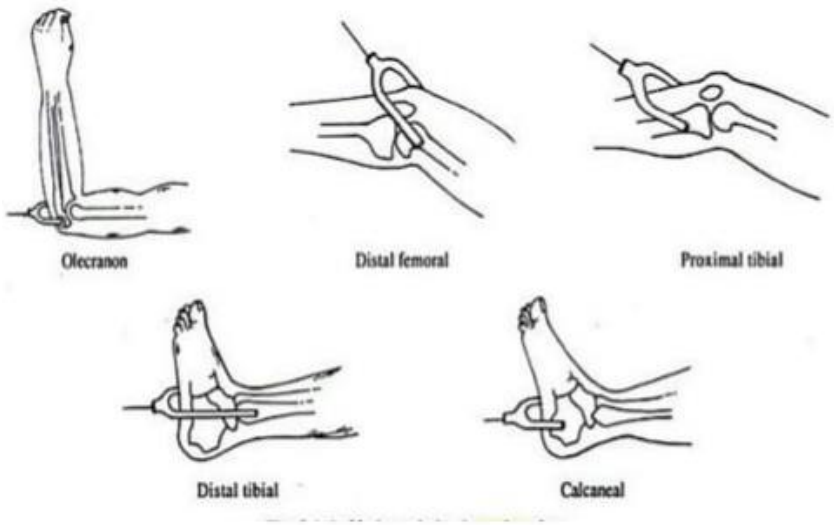
- stabilize and realign bone fractures, such as a broken arm or leg
- help reduce the pain of a fracture before surgery
- treat bone deformities caused by certain conditions, such as scoliosis
- correct stiff and constricted muscles, joints, tendons, or skin
- stretch the neck and prevent painful muscle spasms

## Principles of Effective Traction

- the patient's body weight and bed position adjustments supply the needed countertraction.
- The following are additional principles to follow when caring for the patient in traction:
  • Traction must be continuous to be effective in reducing and immobilizing fractures.
  • Skeletal traction is never interrupted.
  • Weights are not removed unless intermittent traction is prescribed.

## Types of Traction

- Manual traction
- Skin Traction.
- Skeletal Traction.
- Cervical traction



**Skeletal Traction**
placing a pin, wire, or screw in the fractured bone. After one of these devices has been
inserted, weights are attached to it so the bone can be pulled into the correct position. This type of surgery may be done using a general, spinal, or local anesthetic to keep you from feeling pain during the procedure.

## Complication of skeletal traction

-infection
-distraction at fracture site
-ligamentous damage
-depressed scar

**Skin Traction**
Skin traction is far less invasive than skeletal traction. It involves applying splints, bandages, or adhesive tapes to the skin directly below the fracture. Once the material has been applied, weights are fastened to it. The affected body part is then pulled into the right position using a pulley system attached to the hospital bed. Skin traction is used when the soft tissues, such as the muscles and tendons, need to be repaired. Less force is applied during skin traction to avoid irritating or damaging the skin and other soft tissues.

## Dangers Of Skin Traction

- Distal Oedema
- Vascular obstruction
- Peroneal nerve palsy
- Skin Necrosis over bony prominence's

**Maximum weight** for skin traction 6.7kg

**Cervical Traction**
During cervical traction, a metal brace is placed around your neck. The brace is

then attached to a body harness or weights, which are used to help correct the affected area. Cervical traction is performed using a general anesthetic, so you'll be asleep throughout the entire procedure.
Cervical traction might be used in two different situations. First, it may be done to gently stretch the neck muscles so muscle spasms can be relieved or prevented. It may also be performed to immobilize the spine after a neck injury.

## Management

### Observations

- Check the patient's neurovascular observations hourly and record in the medical record.
- If the bandage is too tight it can cause blood circulation to be slowed.
- Monitoring of swelling of the femur should also occur to monitor for compartment syndrome.
- If neurovascular compromise is detected remove the bandage and reapply bandage not as tight. If circulation does not improve notify the orthopaedic team.

### Maintain skin integrity

- Patient's legs, heels, elbows and buttocks may develop pressure areas due to remaining in the same position and the bandages.
- Position a rolled up towel/pillow under the heel to relieve potential pressure.
- Encourage the patient to reposition themselves or complete pressure area care four hourly.
- Remove the foam stirrup and bandage once per shift, to relieve potential pressure and observe condition patients skin.

### Minimizing the Effects of Immobility:

• Encourage active exercise of uninvolved muscles and joints to maintain strength and function.
Dorsiflex the feet hourly to avoid development of footdrop and aid in venous return.
• Encourage deep breathing hourly to facilitate expansion of lungs and movement of respiratory
Secretions.
• Auscultate lung fields twice per day.

• Encourage fluid intake of 2,000 to 2,500 mL daily.
• Provide a balanced high-fiber diet rich in protein; avoid excessive calcium intake.

## STRAIN

• Hemorrhage into the muscle.
• Swelling.
• Tenderness.
• Pain with isometric contraction.
• May be associated spasm.

## SPRAIN

• Rapid swelling, due to extravasation of blood within injured tissues.
• Pain on passive movement of the joint.
• Increasing pain during the first few hours due to continued swelling.

### Management (Strain & Sprain)

• X-ray may be done to rule out fracture.
• Immobilize with a splint, elastic wrap, or compression dressing to support painful structures and
control swelling.
• Apply ice while swelling is present.
Emergency Nursing Procedures
167
• Analgesics usually include nonsteroidal anti-inflammatory drugs (NSAIDs).
• Severe sprains may require surgical repair or cast immobilization.

## Potential complications of traction

- Skin breakdown/pressure areas
- Neurovascular impairment
- Compartment syndrome
- Joint contractures
- Constipation from immobility and analgesics