



PROCEDURE CHECKLIST

Thomas splint application

A fixed traction splint that reduces pain, bleeding and muscle spasm in a femoral shaft fracture by applying longitudinal traction against the ischial tuberosity.



Patient reference

Date

Time

Completed by

Equipment ready

- ☐ Thomas splint of the correct ring size and length
- ☐ Adhesive skin-traction kit with cords and spreader
- ☐ Slings or bandages to support the leg on the splint (commonly five or six)
- ☐ Padding (wool roll, gamgee) for the ring, behind the knee and under the thigh
- ☐ Crepe bandages
- ☐ Tongue depressor or rod to make a windlass
- ☐ Tape measure
- ☐ Assistants: at least two

Before · Assessment

- ☐ Assess the patient in line with a structured primary survey
- ☐ Confirm the fracture level and exclude a hip or pelvic injury
- ☐ Check and document distal neurovascular status
- ☐ Inspect for wounds that would make it an open fracture
- ☐ Give analgesia before handling
- ☐ Explain the procedure and obtain consent

Before · Sizing and preparation

- ☐ Measure the thigh circumference at the groin on the uninjured side
- ☐ Measure the length from the groin to the heel on the uninjured leg
- ☐ Pad the ring, especially its posterior part
- ☐ Place the support slings on the splint and pad them
- ☐ Check the skin where the traction strips will lie

During · Skin traction

- ☐ Ask an assistant to apply gentle manual in-line traction at the ankle and maintain it throughout
- ☐ Apply the adhesive traction strips to the medial and lateral sides of the leg
- ☐ Pad over the malleoli and the fibular head
- ☐ Secure the strips with a crepe bandage from ankle upwards, firmly but not tightly

☐ Do not bandage over the fibular head tightly

Pressure here can injure the common peroneal nerve.

During · Applying the splint

- ☐ With a second assistant lifting the leg as a unit, slide the splint over the foot and up the leg
- ☐ Seat the ring firmly against the ischial tuberosity
- ☐ Do not let the ring press on the perineum, genitals or femoral vessels
- ☐ Lower the leg onto the slings and adjust them so the thigh and calf are supported and the heel is free
- ☐ Place a pad behind the distal thigh to restore the normal anterior bow of the femur and keep the knee slightly flexed
- ☐ Tie the traction cords to the end of the splint
- ☐ Insert a windlass between the cords and twist to apply traction until the leg is at the length of the other leg
- ☐ Secure the leg to the splint with crepe bandages, leaving the foot visible

After · Checks

- ☐ Reassess and document distal pulses, capillary refill, sensation and movement
- ☐ If distal pulses are lost or reduced after applying traction, release the traction and reassess immediately; escalate to orthopaedics and vascular
- ☐ Obtain a check X-ray in the splint
- ☐ Reassess pain; top up analgesia as needed
- ☐ Continue haemodynamic monitoring

After · Ongoing care and documentation

- ☐ Check pressure areas regularly
- ☐ Monitor for compartment syndrome of the thigh and leg
- ☐ Consider venous thromboembolism prophylaxis per local protocol and orthopaedic advice
- ☐ Refer to orthopaedics for definitive management
- ☐ Document splint size, neurovascular status before and after, and the time of application



A drafted procedure checklist, awaiting senior review. Perform procedures only within your training, competence and local policy. It does not replace your clinical judgement.

EM Orbit · Emergency medicine, in one orbit · proc-thomas-splint · red rows are the steps that must not be missed