

TRAUMA

Tibial and long bone fractures

An overview of assessment, fixation and recovery for fractures through the shaft of the shinbone or other long bones.

Patient information, treatment choices, risks, recovery and a space to record your individual plan.

Understanding your injury

Long bone fractures include breaks through the tibia or femur shaft. The bone can be cracked, displaced or broken into several pieces. An open fracture has a wound communicating with the break and needs urgent treatment. Assessment includes other injuries, the skin, circulation, nerves and the joints above and below. X-rays define the break; CT may be needed if the fracture extends towards a joint or is complex.

Treatment and the procedure

Some stable tibial fractures can be managed in a cast or brace. Many unstable tibial fractures and most adult femoral shaft fractures need fixation. An intramedullary nail is a rod inside the bone secured with screws. Plates and screws or an external frame may be better for other patterns. Open injuries may require wound cleaning, antibiotics and soft-tissue reconstruction; treatment can involve several stages. The choice reflects the bone, wound and your overall condition.

Benefits, risks and expectations

If surgery is planned, discuss bleeding, anaesthetic risks and complex regional pain syndrome as well as the risks specific to your injury. Your general health and the extent of surgery affect your personal risk.

- Treatment aims to restore length, alignment and stability, allowing bone healing and progressive rehabilitation.
- Discuss infection, nerve or vessel damage, compartment syndrome, blood clots, delayed union, nonunion, malunion, metalwork irritation and further surgery. Joint stiffness and persistent pain can occur.
- Open wounds, bone loss and extensive muscle injury can prolong recovery. Healing on an X-ray does not immediately restore strength, endurance or confidence. Some patients need further reconstructive treatment.

RECOVERY AND YOUR CONSULTATION

Tibial and long bone fractures

Use this guidance to prepare your individual plan with the treating team.

Rehabilitation and aftercare

Weight bearing varies with the fracture and fixation; follow the surgeon's written plan. Physiotherapy teaches safe walking aids and permitted exercises for joint movement and strength. Attend wound, cast or frame reviews and follow any clot-prevention prescription. Keep casts dry. Support nutrition and discuss smoking cessation and bone health where relevant. Return to work, driving and sport depends on healing and function rather than a universal timetable.

When to get urgent help

- Sudden severe pain, especially with tight swelling or new weakness, needs A&E assessment for possible compartment syndrome. Seek urgent review for a cold foot, fever or discharge.
- New calf pain or swelling needs urgent advice. Call 999 for chest pain or breathlessness.

Your consultation

Ask about alignment, healing risks, the fixation proposed, soft-tissue treatment and your permitted loading. This overview supports personalised discussion and does not replace the consent record or discharge plan.

Sources and further reading

AAOS: Tibial shaft fractures

<https://www.orthoinfo.org/diseases--conditions/tibia-shinbone-shaft-fractures>

AAOS: Femur shaft fractures

<https://www.orthoinfo.org/diseases--conditions/femur-shaft-fractures-broken-thighbone>

NHS: Broken leg

<https://www.nhs.uk/conditions/broken-leg/>

NHS: Compartment syndrome

<https://www.nhs.uk/conditions/compartment-syndrome/>

NHS: Deep vein thrombosis

<https://www.nhs.uk/conditions/deep-vein-thrombosis-dvt/>

CLINICIAN-COMPLETED WORKSHEET

Your consent discussion

Tibial and long bone fractures

This blank worksheet is not an executed consent. Complete it after clinical assessment with the treating clinician. The hospital or clinic must also complete its required consent process before treatment.

Patient name / identifier, date of assessment and communication support needed

Diagnosis, affected side / site and the proposed procedure or treatment

Reasonable alternatives discussed, including the option of no treatment

Expected benefit for this patient, limits of treatment and uncertainties

Material risks and personal risk factors - record the risks that matter to this patient

Patient's priorities, questions, understanding and agreed decision / time to consider

Treating clinician name, role and signature / date

Patient / representative name, signature and date - acknowledgement of discussion only

A signature here records a discussion; it does not replace a completed treatment consent form. You may ask further questions or change your decision before treatment.

CLINICIAN-COMPLETED WORKSHEET

Your rehabilitation and aftercare plan

Tibial and long bone fractures

Complete this plan after assessment. The advice must match your injury or operation, imaging, wound and medical history. Do not start limb loading, remove protection or change medicines using an uncompleted worksheet.

Limb loading / weight bearing, walking aids, sling / cast / boot / brace and protection

Wound / dressing care, bathing, elevation and swelling advice

Medicines, pain relief, clot prevention and any treatment-specific restrictions

Exercises, physiotherapy, range of movement and progression criteria

Work, driving, sport and daily activities - individual restrictions / review points

Review date, imaging / tests, named clinician and routine / out-of-hours contact details

Clinician completing this plan, signature / date and patient questions

When to seek urgent help

Sudden severe pain, especially with tight swelling or new weakness, needs A&E assessment for possible compartment syndrome. Seek urgent review for a cold foot, fever or discharge. New calf pain or swelling needs urgent advice. Call 999 for chest pain or breathlessness.