



# Rehabilitation after high tibial osteotomy

## High tibial osteotomy (HTO)

A high tibial osteotomy realigns the shin bone to take pressure off the worn part of the knee. The bone is held with a plate while it heals. This guide explains the usual recovery. Your team will confirm your programme after surgery.

### At a glance

|                       |                                                                         |
|-----------------------|-------------------------------------------------------------------------|
| Weight bearing        | Full weight bearing with crutches from the start, unless told otherwise |
| Walking aids          | Crutches for about 4-6 weeks, then gradually reduced                    |
| Brace                 | Not usually needed                                                      |
| Bone healing check    | An X-ray at follow-up, usually around 6 weeks                           |
| Normal daily function | Around 3 months                                                         |

## Your recovery, stage by stage

### Early recovery **Weeks 0-6**

- Walk with crutches, putting full weight through the leg unless you are told otherwise.
- Do your exercises 3-4 times a day to regain knee movement and thigh strength.
- Elevate the leg and use ice to control swelling.
- Avoid smoking, which slows bone healing.

### Progressing **Weeks 6-12**

- After your follow-up and X-ray, crutches are usually reduced and then stopped.
- Strengthening, exercise bike and balance work progress with your physiotherapist.

### Return to normal function **Around 3 months**

- Most people return to normal daily activities by about 3 months.
- Further strengthening continues, and return to sport or heavy work is discussed at follow-up.

## Early exercises

### Ankle pumps

Point your feet up and down briskly, 10-20 times every hour while awake. This helps circulation and reduces the risk of blood clots.

### Static quads

Lying or sitting with the leg straight, tighten the muscle on the front of the thigh to push the back of the knee down. Hold 5 seconds, relax. Repeat 10 times.

### Straight leg raise

Tighten the thigh muscle, then lift the straight leg about 15 cm off the bed. Hold 5 seconds, lower slowly. Repeat 10 times.

### Knee straightening stretch

Rest your heel on a rolled towel so the knee is unsupported, and let it straighten for 5-10 minutes. Do not place a pillow under the knee.

## Looking after yourself

### Wound care

Keep the dressing clean and dry. Stitches or clips are usually removed at around 10-14 days. Do not soak the wound in a bath, pool or hot tub until it has fully healed.

### Pain relief

Take your pain relief regularly in the early weeks, as prescribed, particularly before exercising. Reduce it gradually as the pain settles.

### Heel slides

Lying on your back, slide your heel towards your bottom to bend the knee, then straighten it again. Repeat 10 times.

### Swelling

Rest with the leg raised, and use an ice pack wrapped in a towel for 15-20 minutes several times a day. Swelling can last for weeks or months and is common.

### Blood clot prevention

Follow the hospital's advice on blood-thinning medicine and stockings. Keep moving, do your ankle exercises, and drink plenty of fluids.

**Sources.** This guide is based on Mr Umar's practice and is guided by NICE and British Orthopaedic Association (BOA) guidance: NICE NG226: Osteoarthritis in over 16s - diagnosis and management; NICE NG89: Venous thromboembolism in over 16s - reducing the risk; British Orthopaedic Association (BOA) - guidance and patient information.

## When to seek urgent help

**Call 999 or go to A&E if you have chest pain, sudden breathlessness or cough up blood.**

Contact the hospital where you had your operation straight away (or NHS 111 out of hours) if you have:

- Pain, swelling or tenderness in the calf
- The wound becomes red, hot or increasingly painful, or leaks fluid after the first few days
- A temperature above 38°C, shivering or feeling generally unwell
- A sudden increase in pain or swelling, or you cannot put weight on the leg as advised
- New numbness, tingling, coldness or weakness in the leg or foot



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### Questions about your recovery?

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*This is general guidance. Always follow the specific instructions from your own surgical and physiotherapy team, as your programme may differ.*

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