

What is the risk of VTE with lower limb immobilisation?

VTE occurs in around 2 to 3% of people who require lower limb immobilisation after leg injury, and usually happens within the first few weeks.¹ Your personal risk is dependent on a combination of factors including your age, weight, past medical history or any family history of blood clots. Other factors are related to the severity and type of injury you have suffered and the type of immobilisation your injury requires. Your treating team will ask you questions and, based on published research, will rate your risk of VTE as high or low.

References:

1. Pandor A, Horner D, Davis S, Goodacre S, Stevens JW, Clowes M, et al. Different strategies for pharmacological thromboprophylaxis for lower-limb immobilisation after injury: systematic review and economic evaluation. *Health Technol Assess* 2019;23:1-190. <https://doi.org/10.3310/hta23630>
2. Douillet D, Chapelle C, Ollier E, Mismetti P, Roy PM, Laporte S. Prevention of venous thromboembolic events in patients with lower leg immobilization after trauma: Systematic review and network meta-analysis with meta-epidemiological approach. *PLoS Med* 2022;19:e1004059. <https://doi.org/10.1371/journal.pmed.1004059>
3. Horner D, Stevens JW, Pandor A, Nokes T, Keenan J, de Wit K, et al. Pharmacological thromboprophylaxis to prevent venous thromboembolism in patients with temporary lower limb immobilization after injury: systematic review and network meta-analysis. *J Thromb Haemost* 2020;18:422-38. <https://doi.org/10.1111/jth.14666>

PREVENTING BLOOD CLOTS during Lower Limb immobilisation

**If you have symptoms of DVT - Contact NHS
24 Tel: 111 or see your GP
Or for PE, please attend your local
emergency department.**

**Should you have any worries or concerns
following discharge from hospital, please
use the contact details;**

**Raigmore Hospital
Old Perth Road
Inverness
IV2 3UJ
Tel: 01463 704000**

**Fracture Clinic
Helpline:
Tel: 07779 422980
Monday - Friday
12-3 PM**

Treatment of a leg injury that requires immobilisation in a rigid plaster cast, removable boot or temporary splint increases the risk of developing blood clots in the deep veins of the leg. This condition is known as Deep Vein Thrombosis (DVT).

Is a DVT serious?

A DVT may cause local symptoms in the leg, such as pain and swelling, but can be serious if it results in a pulmonary embolism (PE). A PE occurs when some or all of the leg clots dislodge from the deep veins and travel up the larger veins to the heart and lungs. The symptoms of a PE commonly include chest pain and breathlessness. If a PE is very large, it can cause dizziness, collapse or even sudden death. The combination of DVT and/or PE is called **venous thromboembolism** or **VTE**. In the long-term, VTE can result in changes to the affected leg such as chronic swelling and ulceration and/or persistent shortness of breath.

How will you help me reduce my VTE risk?

Your treating team will manage your injury so that you can start walking on your injured leg as soon as it is safe to do so. This will help stimulate the calf muscles to pump blood actively through the leg veins, reducing the risk of blood clots. They may also suggest some regular exercises while your leg is immobilised, such as wiggling the toes or intermittently moving the ankle.

In addition, if your team think you are at high risk of blood clots, they may offer you medications to thin the blood, known as 'anticoagulants' or 'blood thinners'. If you take these regularly as prescribed while your leg is immobilised, it will help reduce your overall risk of blood clots by about 50%.^{2,3}

What things should I look out for while my leg is immobilised?

You should seek urgent medical advice from your treating team or attend your local emergency department if you develop any of the following symptoms during your period of lower limb immobilisation:

- New or increasing pain in the leg muscles that is getting worse or not settling with painkillers.
- Unexplained swelling of the injured leg or changes in skin colour.
- New chest pain, especially if the pain is worse on breathing in.
- New shortness of breath, either on mild exercise or at rest.
- New unexplained light-headedness or collapsing episodes, with or without loss of consciousness.
- Coughing up blood.

What can I do to help reduce my risk?

- Make sure you keep as mobile as possible during your period of immobilisation. If your calf muscles contract then they will squeeze the deep veins and help push blood up your leg, reducing your risk of blood clots forming. Talk to your clinical team about what leg exercises you can do and how often they should be performed.
- Since the risk of blood clots increases with dehydration, please drink plenty of fluids to keep well hydrated.
- Make sure you take any medication prescribed for the full duration to prevent VTE until you can walk without issue on your injured leg, or unless otherwise advised by your team.