

Below Knee DVT

Calf vein thrombosis (Distal deep vein thrombosis; DVT)

Overview

A **below knee DVT** is a clot (thrombosis) in the veins of the calf. The other name for a below knee DVT is **calf vein thrombosis** or **distal DVT**.

What are veins and what is a clot (thrombosis)?

Veins are blood vessels that carry blood back to the heart from the muscles and other body organs (compared to arteries which carry blood from the heart to the muscles). A clot generally occurs in a vein when there is a slowing down or a blockage to the blood flow in the veins. A clot will develop when blood stops flowing normally.

Why have I got a below knee DVT?

A clot will develop in a veins for a number of reasons. The usual reasons involve a slowing down of blood traveling in the veins. Blood flow in the veins of the legs may slow down for a number of reasons.

- If there is a blockage in the veins above the calf (e.g. a swelling in the knee joint may block the veins above the calf and cause a clot in the veins of the calf).
- Prolonged periods of rest may also lead to blood flow in the veins of the legs slowing down (e.g. a prolonged period in bed or during a long flight)
- There are a number of other reasons why clots may develop in the veins; some people have abnormalities in the blood clotting system which may lead to a blood clot occurring more easily.

What are the symptoms of a below knee DVT?

Pain and swelling are usually the main symptoms of a below knee DVT. Sometimes the area around a blood clot can feel warmer than the surrounding tissues.

How is a blood clot detected?

A blood clot is usually detected by an ultrasound. Ultrasound machines use sound waves to detect blood flow in veins and arteries. A clot can be detected because of the decreased blood flow in the veins. An ultrasound is painless and does not have any major side effects. Sometimes blood tests are also used to help in the detection of blood clots.

What are the main problems with a below knee DVT?

There are three main problems with a blood clot in the veins of the calf.

1. The first problem is that blood clots in the calf are often painful and cause lots of swelling. A number of medications can be used to treat the pain and it is important to limit the swelling as much as possible. The best way to decrease swelling is to use tight (graduated compression) stockings. These stockings are very tight at the ankle and less tight in the calf and so they help the blood return "uphill" to the heart. (See information sheet on **Graduated Compression Stockings**). It is also important to keep your leg up (elevated) as much as possible.
2. The second problem is that blood clots can sometimes grow along the veins of the calf and enter the veins of the thigh. Blood clots can even break off and travel to the lungs. If a blood clot is big enough it can block the blood flow to the lungs causing problems with breathing. Only 1 in 5 blood below knee DVTs will grow (extend) along the veins, but once a blood clot reaches the veins in the thigh ("Above knee DVT") the risk of the blood clot traveling to the lungs is high. (See information on Above Knee DVT).

3. The third problem of blood clots in the calf is that once a vein is blocked with clot, other veins will need to take over the role of the blocked vein. Sometimes this can cause long term swelling of the leg which can be uncomfortable and lead to skin changes including ulcers (this is called **Post Thrombotic Syndrome; PTS**, See *information sheet on PTS*). Fortunately PTS is uncommon in clots that are limited to the veins of the calf.

What can be done about a below knee DVT?

The treatment of a clot involves thinning the blood, also called *anticoagulation*. [See information sheet on Anticoagulation].

Thinning the blood does two things:

1. Reduces the risk of the blood clot growing
2. Helps the body's own blood clot dissolving system to reduce the size of the blood clot and even absorb the clot completely.

Blood thinning medication may not always be necessary and will depend on the size of the clot, the symptoms associated with the clot and the risks of blood thinning medication

Resources used in producing this patient information

- Non-pharmaceutical measures for prevention of post-thrombotic syndrome. Cochrane Database of Systematic Reviews 2006(Issue 4).
- Antithrombotic therapy for venous thromboembolic disease: the Seventh ACCP Conference on Antithrombotic and Thrombolytic Therapy. Chest. :401S-428S, 2004;126(3 Suppl).

Page last updated: March 6, 2012

FURTHER QUESTIONS?

The information presented in this fact sheet is intended as a general guide only.

Patients should seek further advice and information about **below knee DVT** and their individual condition from their treating haematologist or doctor.

For additional information about blood disorders and their treatment, or to contact one of our specialist haematologists, visit the Melbourne Haematology website: www.melbournehaematology.com.au