

Leg DVT Ultrasound Scan



ARTERY AND VEIN DIAGNOSTICS



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Patient Information

1. Understanding Deep Vein Thrombosis (DVT)

Deep Vein Thrombosis (DVT) occurs when a blood clot forms in the deep veins of the leg. These veins lie beneath the muscles and are responsible for returning blood to the heart. When a clot develops, it can partially or completely block blood flow.

DVT most commonly affects the:

- Calf veins
- Popliteal vein (behind the knee)
- Femoral vein
- Iliac veins (in the pelvis)

A DVT is a **serious medical condition** because part of the clot can break off and travel to the lungs, causing a **pulmonary embolism (PE)** — a potentially life-threatening complication.

1.1 What Causes DVT?

DVT can occur for many reasons, including:

- Recent surgery or hospitalisation
- Prolonged immobility (long flights, bed rest, injury)
- Trauma to the leg
- Pregnancy or recent childbirth
- Hormonal therapy (e.g., oral contraceptives, HRT)
- Cancer or cancer treatment
- Smoking
- Obesity
- Previous DVT
- Family history of clotting disorders
- Inflammatory or autoimmune conditions

Sometimes, no clear cause is identified.

1.2 Common Symptoms of DVT

Symptoms may include:

- Calf or thigh pain
- Swelling of the leg
- Warmth or redness
- Tenderness along the vein
- A feeling of tightness or heaviness

However, **some DVTs cause no symptoms at all**, which is why ultrasound is essential for accurate diagnosis.

2. Why You Have Been Referred for This Scan

Your doctor may recommend a DVT ultrasound if you have:

- Sudden leg swelling
- Pain in the calf or thigh
- Redness or warmth in the leg
- A history of recent surgery, injury, or long travel
- A high D-dimer blood test
- Symptoms concerning for pulmonary embolism
- A previous DVT requiring follow-up
- Known risk factors for clotting

The scan helps confirm or exclude the presence of a clot and guides urgent treatment decisions.

3. What the Scan Examines

A DVT ultrasound (also called **venous duplex ultrasound**) uses sound waves to assess the deep veins of the leg.

Your scan will evaluate:

3.1 Deep Vein Compressibility

The sonographer gently presses the probe against the vein.

- A normal vein compresses fully.
- A clotted vein does not compress, indicating DVT.

This is the most reliable method for diagnosing DVT.

3.2 Blood Flow (Doppler Assessment)

Doppler ultrasound assesses:

- Direction of blood flow
- Flow augmentation with calf squeeze
- Respiratory variation
- Areas of reduced or absent flow

These findings help confirm the presence and extent of a clot.

3.3 Clot Characteristics

If a clot is present, the scan assesses:

- Location
- Size and extent
- Whether it is acute or chronic
- Whether it is partially or fully occlusive
- Whether it is free-floating (mobile)

These details are important for determining treatment urgency.

3.4 Iliac Vein Assessment

In some cases, the scan may be extended and include the pelvis to assess for:

- Iliac vein thrombosis
- May-Thurner syndrome (left iliac vein compression)
- Extension of clot above the groin

4. How to Prepare for Your Scan

Most patients do not need special preparation. However:

- Remove compression stockings and any tight clothing before the scan, as these can affect the assessment of your veins.
- Avoid applying moisturisers or oils to your legs on the day of the scan.
- If you have wound dressings or surgical sites, the sonographer will advise whether they should remain in place or be adjusted.
- If you have difficulty standing or lying flat, please inform the sonographer so we can adjust your positioning.
- Continue taking your usual medications unless your doctor advises otherwise.
- If you prefer a male or female sonographer, please let the practice know when booking.

If your doctor has requested an **urgent DVT scan**, please attend as soon as possible.

5. What to Expect During the Scan

A DVT ultrasound is safe, painless, and performed by a highly trained vascular sonographer with advanced expertise in venous assessment.

5.1 Duration

The scan typically takes **20–30 minutes**, depending on your symptoms and anatomy.

5.2 Positioning

You may be examined:

- Lying on your back
- Slightly turned to one side
- Occasionally standing for calf vein assessment

Your comfort is always prioritised.

5.3 The Procedure

- Warm gel is applied to your leg.
- The sonographer gently moves a handheld probe along the deep veins from the groin to the ankle.

- You may feel light pressure during vein compression, but it should not be painful.
- The sonographer may ask you to take a deep breath or flex your foot to assess blood flow.
- If you prefer a male or female sonographer, please let the practice know when booking.

5.4 Safety

Ultrasound uses sound waves — not radiation — making it safe for all patients, including those who are pregnant. If you feel discomfort or light-headed at any time, please let the sonographer know so we can pause the scan.

6. How the Scan Helps Guide Treatment

Your scan results help determine the most appropriate management, which may include:

6.1 Anticoagulation (Blood Thinners)

The most common treatment for DVT. These medications prevent the clot from growing and reduce the risk of pulmonary embolism.

6.2 Compression Therapy

Compression stockings may be recommended to:

- Reduce swelling
- Improve symptoms
- Lower the risk of post-thrombotic syndrome

6.3 Further Imaging or Specialist Review

If the clot extends into the pelvis or is associated with venous compression, your doctor may recommend:

- CT venography
- MR venography
- Vascular specialist or haematology review

6.4 Follow-Up Ultrasound

Some patients require repeat scans to:

- Monitor clot resolution
- Assess for extension
- Guide duration of anticoagulation

7. After the Scan

7.1 Review of Images

Your scan images and measurements are reviewed by a vascular specialist or reporting sonographer trained in venous thrombosis assessment.

7.2 Report Delivery

A detailed report is sent to your referring doctor, usually within **24 hours** for routine scans or **immediately** for urgent findings.

The report includes:

- Presence or absence of DVT
- Location and extent of clot
- Whether the clot is acute or chronic
- Degree of occlusion
- Iliac vein involvement (if assessed)
- Summary of clinical significance

7.3 Next Steps

Your doctor will discuss the results with you and outline treatment options tailored to your symptoms and medical history.

If a DVT is detected, your doctor may begin treatment immediately.

8. Frequently Asked Questions

Is the scan painful? No. You may feel mild pressure during compression, but the scan is not painful.

Can I drive afterward? Yes. Most patients can drive immediately after the scan. In rare cases, your sonographer may need to discuss the findings with a vascular specialist before confirming it is safe for you to drive.

Do I need to stop medications? No. Continue your usual medications unless your doctor advises otherwise.

Is ultrasound safe? Yes. Ultrasound is completely safe and does not use radiation.

Will this scan treat my condition? No. This scan is diagnostic only. It identifies whether a clot is present and guides treatment decisions.

Why do I need a DVT scan if my symptoms are mild? Some DVTs cause very few symptoms but still carry a risk of complications. Ultrasound is the most accurate way to confirm or exclude a clot.

9. Why Choose Our Vascular Lab

Australia's most experienced vascular sonographers, with advanced training in venous imaging and specialists with PhD-level expertise in vascular ultrasound and current research.

Examinations performed in accordance with international venous ultrasound standards, ensuring accuracy, consistency, and best-practice methodology.

State-of-the-art ultrasound technology for high-resolution imaging and precise haemodynamic assessment.

Comprehensive, clinically focused reporting to support accurate diagnosis and urgent treatment planning.

Patient-centred care, with an emphasis on comfort, clear communication, and a supportive experience throughout your visit.