



# University Hospital Galway

EMERGENCY DEPARTMENT  
GalwayEM.ie

## DVT (Deep Vein Thrombosis)

(<https://galwayem.ie/guidelines/medical-emergencies/dvt-deep-vein-thrombosis>)

Category

Medical Emergencies (<https://galwayem.ie/guidelines/medical-emergencies>)

### **DVT forms and leaflets used in University Hospital Galway ED:**

- [Patient information leaflet: Possible DVT](https://galwayem.ie/sites/default/files/docs/possible%20DVT%20pt%20info%20sheet.doc)  
(<https://galwayem.ie/sites/default/files/docs/possible%20DVT%20pt%20info%20sheet.doc>)
- [Patient information leaflet: DVT not diagnosed](https://galwayem.ie/sites/default/files/docs/Patient_Info_DVT_not_diagnosed%20%25281%2529.pdf)  
([https://galwayem.ie/sites/default/files/docs/Patient\\_Info\\_DVT\\_not\\_diagnosed%20%25281%2529.pdf](https://galwayem.ie/sites/default/files/docs/Patient_Info_DVT_not_diagnosed%20%25281%2529.pdf))
- [Wells Criteria for Pretest Probability of DVT](https://galwayem.ie/sites/default/files/docs/Wells%20DVT%20pdf_0.pdf)  
([https://galwayem.ie/sites/default/files/docs/Wells%20DVT%20pdf\\_0.pdf](https://galwayem.ie/sites/default/files/docs/Wells%20DVT%20pdf_0.pdf))
- [Duplex Ultrasound Referral Flow Chart](https://galwayem.ie/sites/default/files/docs/Ultrasound_Flow_Chart.pdf)  
([https://galwayem.ie/sites/default/files/docs/Ultrasound\\_Flow\\_Chart.pdf](https://galwayem.ie/sites/default/files/docs/Ultrasound_Flow_Chart.pdf))

### **Patients with suspected DVT. Key Points:**

- All patients with suspected DVT must be scored using the Wells criteria for pre-test probability. See [here](http://test.galwayem.ie/sites/default/files/docs/Wells%20DVT%20pdf_0.pdf) ([http://test.galwayem.ie/sites/default/files/docs/Wells%20DVT%20pdf\\_0.pdf](http://test.galwayem.ie/sites/default/files/docs/Wells%20DVT%20pdf_0.pdf)) for chart. Copy for notes can be printed from the computer
- A D-dimer is only used to exclude DVT in patients with a low pre-test probability according to the Wells criteria. Only a negative (<200ng/mL) test in this group is of any use. All other patients will need to have a duplex ultrasound scan performed by Radiology or the Vascular Laboratory.
- Patients who cannot cope at home, or for whom it is impossible to organize low molecular weight heparin (LMWH) over the weekend will need to be admitted prior to having their ultrasound. All other patients can be discharged home.
- Blood tests other than the D-dimer are of no use in the diagnosis of DVT. This includes SMAC, FBC, coagulation profile and Thrombophilia screen. Once a DVT is confirmed, the treating unit may decide to do some or all of these tests for their own purposes.
- Patients presenting after-hours, who cannot have a DVT excluded by virtue of a low probability Wells score and a negative D-dimer (<200ng/mL), should have treatment commenced by giving them an injection of LMWH and organizing an outpatient duplex ultrasound. This can be done by faxing a vascular request form to the Vascular Laboratory (see below). In very low risk patients with positive D-dimer the risks assoc with LMWH may outweigh the benefits. Discuss with senior.
- Note that the D-dimer cut-off is 200ng/mL. **Please note that age adjusted D-dimer has not**

**been validated for the assay used in UHG and should not be used.**

### **Referral for Duplex Ultrasound**

#### In hours (M-F 9-5)

- Discuss with senior Doctor
- Call Vascular Laboratory on ext 2346/7
- If same day service, review in ED with result
- If not same day appointment, start LMWH daily until test done

#### Out of Hours

- Discuss whether to commence LMWH with senior ED doctor
- Give patient written advice form 'Suspected DVT'
- Give appointment for next ED Review Clinic

In cases of confirmed DVTs refer patient to MAU.

### **Administration of Low Molecular Weight Heparin (LMWH)**

- Tinzaparin (Innohep®) 175 units/kg sc daily unless already therapeutically anticoagulated. (Precautions include very obese and those with chronic renal failure. Age > 90 and heparin-induced thrombocytopenia is a contraindication. See product information)
- For those requiring multiple doses – usually those who present early in the weekend – the patient can either present daily to the ED if more convenient may take home sufficient doses and have it administered by their GP
- Patients who return to the ED for doses of LMWH should present to reception, which will have their card, and be fast-tracked to quickly see a doctor and have their medication written up. This should take only a few minutes
- Pregnant women with confirmed DVTs constitute a high risk pregnancy. All such patients should be referred to Obstetrics on call.

### **The following patients should not be sent home whilst awaiting their ultrasound:**

- Those with symptoms/signs of PE
- Those for whom daily injections of LMWH cannot be organized
- Those who cannot cope at home
- Those with severely swollen thighs suggestive of occlusive proximal thrombus

These patients should be referred to the medical team on take for admission and an inpatient ultrasound

### **Follow-up**

- As there is no perfect diagnostic algorithm, all patients will need follow-up organised.
- Those with high pre-test probabilities for DVT and a normal ultrasound should be followed up in the ED Review Clinic in 1 week.

### **Alternative Diagnoses**

- Once you've excluded DVT, you should consider alternate diagnoses.
- Write an alternative diagnosis and management plan (if possible) for the reviewing doctor to follow if the ultrasound is normal (avoids them having to perform a repeat examination)

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