Anatomy & Physiology

The arm and leg veins are either deep, below the fascia with a paired artery, or superficial, usually just beneath the surface of the skin, without an adjacent artery. Both deep and superficial veins are able to clot. Blood clots in the deep veins are called Deep Vein Thrombosis (DVT). Blood clots in the superficial veins are called Superficial Vein Thrombus (SVT). The veins in the legs return blood from the feet, to the calves to the thighs and into the IVC in the abdomen to the lungs. The veins in the arms bring blood from the hands to the wrists, forearm, upper arm and neck into the lungs. All veins go back to the lungs.

The Nussbaumer Method: (**Leg Veins**) A 60 second ultrasound screening that evaluates the Common Femoral Vein, Femoral Veins, Popliteal Vein, Gatrocnemius and Soleus Veins and Posterior Tibial Veins - taught in this free course.

ADOM

Introduction to Diagnosis with Ultrasound

Disclaimer: This guide is for ultrasound awareness and educational purposes only. It is not a substitute for medical diagnosis or advice. Consult a licensed medical professional for evaluation and treatment.

DVT

ADOM CRITERIA

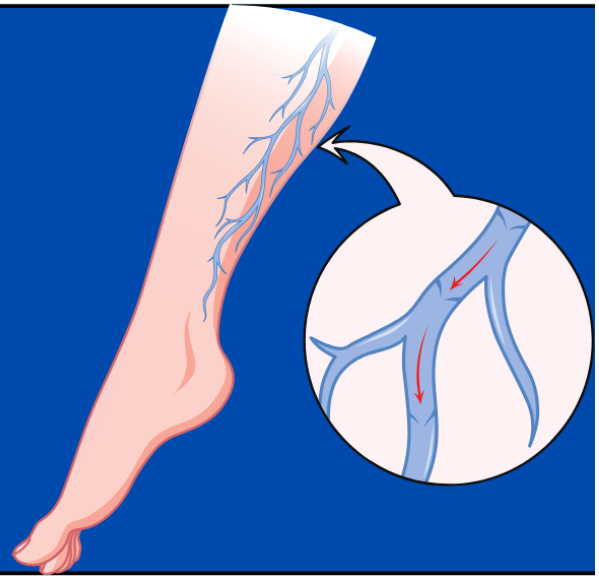
Lower Extremity Veins

- Common Femoral
- Femoral (Superficial) & Deep Femoral
- Popliteal
- Greater & Lesser Saphenous
- Gastrocnemius & Soleus
- Posterior Tibial & Peroneal

Why ADOM Criteria Makes a Difference

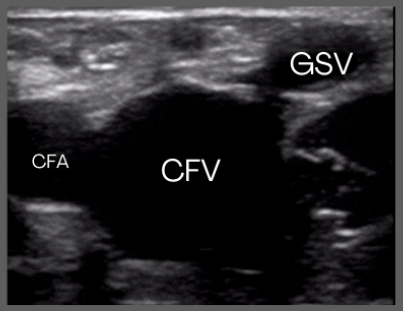
In many medical facilities, the protocol for venous ultrasound exams does NOT include any veins in the calf. The problem with this is that an estimated 80% of blood clots occur in the calf and, if not found or treated, will propagate (spread) to the thigh and then to the lungs and can cause a Pulmonary Embolus (PE). This is life threatening and can be prevented if the calf vein is included in ultrasound protocols of veins. **ADOM includes calf veins.**

Venous



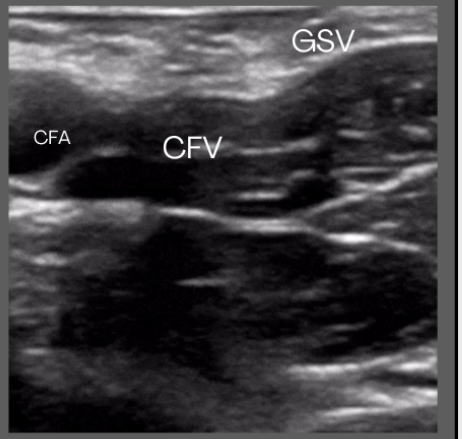
Venous Ultrasound

The Nussbaumer Method - Venous



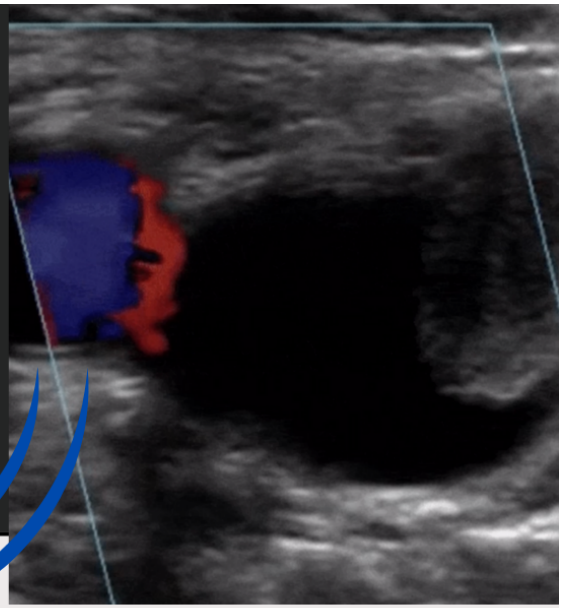
In a transverse plane, at the crease of the groin, find this picture. This is the common femoral vein (deep vein) in the center, with the common femoral artery (CFA) and the greater saphenous vein (GSV) (superficial vein) diving into it.

The goal is to make sure the CFV has WALL to WALL compression. It's a bit tricky at first, but when we put pressure on the probe going into the leg, we can see the CFV become flat, like this image. The CFA (the artery) is NOT supposed to compress. If the CFV compresses, there's no clot.



Learn more about the veins

#adomacademy



Pathology

Before we pick up the ultrasound probe, we have to know what what we might see.

In the veins we look for:

- **Deep Vein Thrombosis** - A blood clot that forms in a deep vein, sometimes caused by being idle, other times by blood clotting disorders and even at times by radiation. These veins are located below the muscle, and the clots can block blood flow.
- **Superficial Thrombus** - A blood clot that forms in a superficial vein, which is closer to the surface of the skin. These aren't life threatening, but can cause discomfort.

Valve Incompetency (**Reflux**) This happens when the valves inside a vein don't close properly, causing blood to flow backward instead of moving up toward the heart.