The geko™ device is 30% better than IPC at augmenting venous flow (p<0.001). The geko™ device increases venous flow once every second, with each electrical pulse, while IPC devices increase venous flow only when the device inflates, which is typically once every 60 seconds. The peak velocity produced by the geko™ device is approximately equivalent to the peak velocity produced by IPC. The peak that although the geko™ device produces more venous flow than IPC over any given time period, the geko™ device does not produce velocities or shear stresses higher than those produced by IPC devices or by physiological norms such as walking.

Blood clots are responsible for a number of serious and often fatal conditions:

- Venous thromboembolism
- Stroke (from atrial fibrillation)
- Heart attack

There are three factors that contribute to thrombosis:

- **Venous stasis**: condition of slow blood flow in the veins, usually of the legs
- **Hypercoagulability**: abnormality of blood coagulation
- **Vessel wall injury**: caused by trauma such as surgery or an accident

Blood clots form in the vein deep inside the leg, condition known as DVT causes swelling and pain. Part of the clot breaks away and travels through the blood vessels... ...Up to the heart and into the lungs. There is no blood flow beyond the blockage, which results in no oxygen being collected from the region to the rest of the body. This is known as a Pulmonary Embolism. A serious and life threatening condition. Every year VTE causes more deaths than traffic accidents, prostate cancer, AIDS and breast cancer combined.