



DVT & PE
DEEP VEIN THROMBOSIS
& PULMONARY EMBOLISM

WHAT IS DEEP VEIN THROMBOSIS (DVT)?

Deep Vein Thrombosis (DVT) occurs when a blood clot (thrombus) forms in one or more of the deep veins in your body, usually in your legs.

DVTs may dislodge and travel through the venous system and heart to become lodged in the pulmonary arteries causing a Pulmonary Embolism (PE). A PE can be a life-threatening condition.

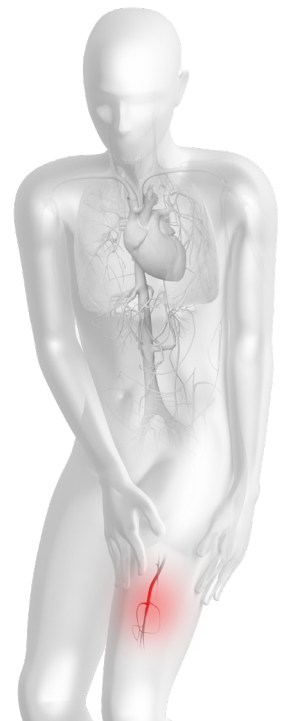
WHAT ARE THE SYMPTOMS OF DVT?

- Leg pain, cramps or swelling
- Skin discoloration
- A feeling of warmth in the affected leg

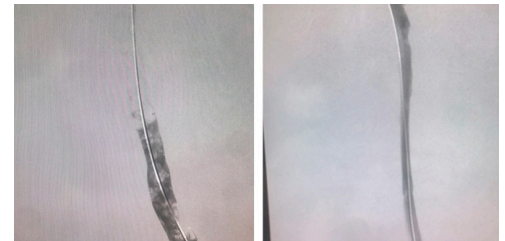
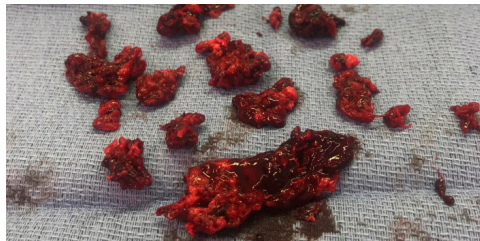
TREATING DVT

Treatment options for acute DVT are based on the size of the clot and how long it has been present:

- **Medication:** Anticoagulants to thin the blood allowing blood flow around a trapped clot while preventing the clot from travelling to the lungs.
- **DVT Intervention:** Minimally-invasive procedure using “clot-busters” to break up the clot (thrombolysis) or even removing the clot itself from deep veins (thrombectomy) to rapidly reduce the symptoms.



DVT/PE affects up to 900,000 Americans every year.¹



Clots Removed by DVT Thrombectomy. Mouawad N. J. (2020). Effective single-session percutaneous nonpharmacologic mechanical thrombectomy for phlegmasia cerulea dolens. *Journal of Vascular Surgery Cases and Innovative Techniques*, 6(2), 212–215. <https://doi.org/10.1016/j.jvscit.2020.02.008>

MEET YOUR DVT & PE TEAM

The vascular surgery team, under the direction of **Nicolas Mouawad, MD, MPH, MBA, FSVS, FACS, FRCS, RPVI** is proud to perform procedures on both Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE) at McLaren Bay Region. Matthew Haffner, MD joined the practice in 2025.

To learn more about DVT & PE or to make a referral, contact McLaren Bay Heart & Vascular at (989) 894-3278.



**Nicolas
Mouawad, MD**
Vascular Surgeon



**Matthew
Haffner, MD**
Vascular Surgeon

WHAT ARE THE SYMPTOMS OF PE?

- Shortness of breath
- Chest pain
- Irregular heartbeat

TREATING PE

Treatment of PE focuses on keeping a blood clot from getting larger and preventing new clots from forming.

- **Medication:** These drugs prevent clot growth and new clot formation.
- **IVC Filter:** Used when anticoagulants are ineffective or contraindicated, this device traps clots in the inferior vena cava, preventing them from reaching the lungs.
- **Thrombectomy Device:** A medical instrument designed to physically remove or break up blood clots in the pulmonary arteries, which are responsible for carrying blood to the lungs.



Clots Removed by Thrombectomy Device.

Sudden death is the first symptom in about one quarter (25%) of people who have a PE.²

WHAT IS A PULMONARY EMBOLISM (PE)?

A Pulmonary Embolism (PE)

is a blood clot in your lungs that can obstruct blood flow leading to an increase in stress to the right side of your heart and a decrease in your body's oxygen levels.

Residual clot left in the pulmonary arteries have been shown to increase risk of death, heart failure, pulmonary hypertension and decreased quality of life.

^{1, 2} U.S. Centers for Disease Control and Prevention (CDC) website, "Data and Statistics on Venous Thromboembolism." (2025). Accessed 12/16/2025 at www.cdc.gov/blood-clots/data-research/facts-stats/index

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