

### A Patient Guide to Chronic Venous Insufficiency



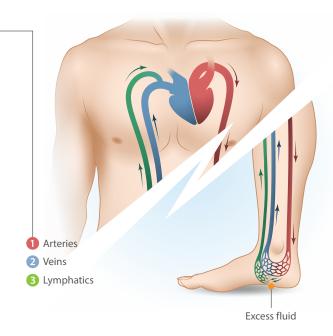


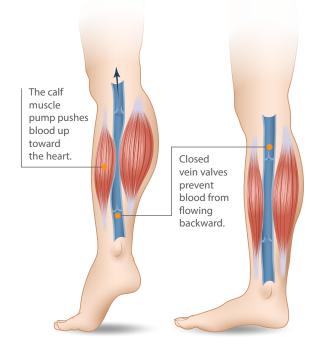
#### THE CIRCULATORY SYSTEM

The circulatory system includes your heart, 1 arteries, 2 veins, and 3 lymphatics. It circulates blood throughout the body to transport nutrients and oxygen to all of your cells and organs. The heart moves blood through the arteries to your capillaries, keeping all of your tissue healthy. This blood then returns to the heart from every part of your body through the veins.

Your heart is the pump that supports the circulation of blood. But the heart cannot do this without healthy legs, veins and lymphatics. Gravity is a powerful force that works against your circulatory system. When walking, the pumping of leg muscles is essential to move blood back to the heart. Every vein contains valves that help the blood to move one way toward the heart, rather than flowing backwards with gravity.

The circulatory system also includes millions of tiny **lymphatic vessels**. When blood is moving through the arteries and veins, some fluid and proteins are allowed to filter out of the blood vessels into surrounding tissue. The lymphatic system absorbs the fluid and proteins, and returns them to the heart for recirculation. These lymph vessels also permit molecules and white blood cells that fight infection to reach every cell in the body. Healthy lymphatics are essential to good health.





# WHAT IS CHRONIC VENOUS INSUFFICIENCY?

#### **Chronic venous insufficiency (CVI)**

occurs when veins are unable to overcome the force of gravity and return blood to the heart. This can happen due to a weak calf muscle pump, or when veins are either damaged or become less efficient as we age. In patients with CVI, blood collects in the lower legs, causing high pressure in the veins. This high pressure can force an increased amount of fluid and proteins to filter out of the blood vessels and into surrounding tissue. The lymphatics responsible for removing this fluid may not be able to keep up with the extra fluid, so swelling occurs.

OVER TIME, UNTREATED
SWELLING CAN CAUSE
PERMANENT DAMAGE TO
SURROUNDING TISSUE AND
LYMPH VESSELS.

#### SIGNS AND SYMPTOMS

CVI is progressive and should be actively managed. An accurate diagnosis from a physician is the first step. Tell your doctor if you experience any of the following symptoms:

- Swelling in the lower legs and ankles, especially after long periods of standing
- Aching or tiredness in the legs
- Varicose veins
- Leathery-looking skin on the legs
- Flaking or itching skin on the legs or feet
- Reddish-brown colored skin in the ankle area
- Leg wounds that won't heal (possible venous ulcers)



#### TREATMENT OPTIONS

A simple ultrasound test can provide an accurate diagnosis. Once diagnosed, all non-invasive treatments are designed to lower venous pressure and minimize leg swelling (edema). Compression will remain important even if minimally invasive surgical treatments are used.

#### Some things you can do to manage CVI include:

- Avoid sitting or standing for too long; move and exercise regularly
- Elevate your legs above your heart while sitting and lying down
- Lose weight if you are overweight
- Practice good skin hygiene

## Your doctor may also recommend any of the following:

- Compression therapy, which may include compression stockings, bandages or intermittent pneumatic compression pumps
- Surgical or non-surgical treatments to close or bypass specific problem veins
- Antibiotics to treat acute skin infections

#### TACTILE MEDICAL PRODUCTS

Tactile Medical offers intermittent pneumatic compression devices CVI patients can use to successfully manage lymphedema and venous ulcers at home and improve quality of life. Your doctor may prescribe one of the following products to support your treatment:



#### FLEXITOUCH® PLUS

Clinically proven to stimulate the lymphatic system<sup>1</sup> and backed by the most extensive body of clinical evidence of any therapy on the market.



#### **ENTRE**<sup>™</sup>

Offers three different pressures, simultaneous bilateral therapy, and easy-to-use controller and garments.

## SEE HOW WE'RE BRINGING THE FUTURE OF HEALING HOME AT TACTILEMEDICAL.COM

Tactile Medical is a leader in developing and marketing at-home therapy devices that treat chronic swelling conditions such as lymphedema and chronic venous insufficiency. Our Mission is to help people suffering from chronic diseases live better and care for themselves at home. Our unique offerings include advanced, clinically proven pneumatic compression devices and continuity of care services provided by a national network of product specialists and trainers, reimbursement experts, patient advocates and clinicians. Tactile Medical is proud that our solutions help increase clinical efficacy, reduce healthcare costs and improve quality of life for patients with chronic conditions.

#### Individual results may vary.

Indications/contraindications: Indications, contraindications, warnings, and instructions for use can be found in the product labeling supplied with each device.

**Caution:** Federal (USA) law restricts these devices to sale by or on the order of a licensed healthcare practitioner.

#### References:

 Adams KE, Rasmussen JC, Darne C, et al. Direct evidence of lymphatic function improvement after advanced pneumatic compression device treatment of lymphedema. *Biomed Opt Express*. 2010;1(1):114–125.

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