Chronic Venous Insufficiency

Understanding and Managing Leg Vein Problems

1 What Is Chronic Venous Insufficiency?

- The veins in your legs have one-way valves that push blood back up to the heart against gravity.
- CVI occurs when these valves stop working properly — blood pools in the lower legs.
- This is different from PVD (arterial disease) — CVI is about poor drainage, not reduced supply.
- Very common — affects around 1 in 3 adults to some degree.

Symptom	Why It Happens	What It Feels Like
Swelling (oedema)	Blood pooling raises pressure; fluid leaks into tissues	Ankles/feet swell during the day — better in the morning
Aching / heaviness	Raised venous pressure causes discomfort	Worse after standing or sitting; relieved by elevation and walking
Varicose veins	Weakened vein walls bulge under pressure	Visible twisted veins, may be tender
Skin changes	Chronic pressure causes haemosiderin staining	Brown discolouration above the ankle — not a bruise
Venous eczema	Inflammatory reaction to pooled blood products	Red, itchy, scaly skin around the ankle
Venous ulcers	Skin breakdown from long-term oxygen shortage	Above inner ankle — shallow, irregular, slow to heal

2 CVI vs PVD — Important Differences

Important: CVI and PVD both cause leg symptoms but need different management. Elevation helps CVI but worsens PVD. Compression helps CVI but can be dangerous in PVD. Always have a clinical assessment before using compression.

Feature	CVI (Venous)	PVD (Arterial)
Cause	Faulty vein valves — drainage problem	Narrowed arteries — supply problem
Pain	Aching, heaviness — worse with standing	Cramping on walking; rest pain in severe cases
Skin	Brown/purple staining, red eczema	Pale, mottled, cold
Elevation	Relieves symptoms	Worsens symptoms — do NOT elevate
Compression	Helpful and recommended	Potentially dangerous — needs ABPI check first
Exercise	Walking helps pump blood back	Walking is the main treatment for arterial claudication
Ulcer site	Above inner ankle (gaiter area)	Tips of toes, pressure points

3 Treatment Options

Treatment	How It Helps	What to Know
Compression (stockings / bandaging)	Supports vein walls, reduces pooling, improves pump	Needs ABPI >0.8; wear daytime, off at night; replace every 6 months
Leg elevation	Gravity helps drain pooled blood	Above hip level; 30 min, 3–4×/day; slightly raised at night
Exercise (walking, calf raises)	Calf muscle pump — the most powerful driver of venous return	30 min walking daily; calf raises throughout day are very effective
Wound / ulcer care	Venous ulcers need specialist dressings and compression	Refer to tissue viability or podiatry; do not self-manage
Skin care	Prevents venous eczema and skin breakdown	Bland emollient daily; avoid perfumed products
Weight management	Reduces intra-abdominal pressure on venous return	Even modest loss reduces symptoms significantly
Surgical / procedural	Removes or closes incompetent veins	For those who fail conservative management — refer to vascular team

4 Exercise and the Calf Muscle Pump

Your calf muscles act as a second heart for your legs. Every time you contract your calf, blood is squeezed back up through your veins. Regular movement is one of the most effective treatments for CVI — far more so than rest.

Exercise / Activity	Why It Helps	How to Do It
Walking	Activates calf pump continuously — most effective overall	30 min daily minimum; even 10-min walks help
Calf raises	Direct calf pump activation — can be done anywhere	3 × 20 reps, 3×/day; try them at the kettle or desk
Ankle circles	Maintains ankle mobility; activates pump when seated	10 circles each direction, every hour when sitting
Swimming / cycling	Full-body low-impact options; water pressure adds compression	Both are effective alternatives to walking
Avoid prolonged standing / sitting	Static postures switch off the calf pump	Move every 30–45 min; calf raises if you must stand

5 Skin and Foot Care

Area	What to Do	What to Avoid
Skin moisturising	Apply bland emollient (e.g. Diprobase, Epaderm) daily	Perfumed products and bubble baths — trigger eczema
Wound inspection	Check legs and feet daily for breakdown, redness or weeping	Ignoring small wounds — in CVI they can quickly become ulcers
Footwear	Well-fitting supportive shoes that accommodate swelling	Tight shoes, high heels, bare feet on at-risk skin
Compression hosiery	Apply first thing in the morning before swelling develops	Waiting until afternoon — swelling makes application harder
Nail care	Trim regularly; podiatry review if nails are thickened	Cutting too short — risk of injury in slow-healing skin

3 Key Takeaways

KEY TAKEAWAY 1

Movement is the most powerful treatment you have — your calf muscles pump blood back to your heart every time you walk or do a calf raise. Sitting or standing still makes CVI worse; moving regularly makes it better.

KEY TAKEAWAY 2

Compression only works if it fits correctly and is worn consistently. It must go on first thing in the morning before swelling develops, and should be replaced every 6 months. Always have an ABPI check before starting compression.

KEY TAKEAWAY 3

CVI and PVD need opposite management in some areas — elevation and compression help CVI but can worsen PVD. If you have concerns about your circulation, see your clinician before self-managing.

This resource is for general information only and does not replace professional medical advice. Always consult your healthcare provider.