

Compression for Venous and Lymphatic Disorders

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On behalf of: United States Compression Alliance



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For adults with varicose veins and/or other clinical symptoms or signs of chronic venous insufficiency, how confident are you that there is sufficient evidence for an intervention that improves:

1. Immediate/near-term health outcomes in patients presenting with symptoms? In patients presenting without symptoms but with physical signs?

Compression as an alternative/adjunct to minimally-invasive venous intervention and lymphedema therapy

Types of Compression:

Graduated Compression Stockings

- Circular knit – typically used for venous disorders

- Flat knit – typically used for lymphatic disorders

Compression Multilayer Bandaging

Inelastic devices

Compression Therapy in Venous/Lymphatic Disease

Compression is the cornerstone of treatment for venous and lymphatic disorders and remains an important intervention in the management of venous and lymphatic disease – even in this time of high-tech innovation

There is an evidence-basis for benefits of compression for some of the commonly accepted indications

Indications for compression therapy in venous and lymphatic disease: Consensus based on experimental data and scientific evidence (Under the auspices of the IUP)

Edema prevention

Edema reduction

Increase venous flow velocity

Reduction of venous diameter

Reduction of venous reflux

Improvement of venous pump

Reduction of ambulatory venous hypertension

Increase of arterial flow

Improvement of microcirculation

Improvement of lymph-drainage

Compression Therapy for Chronic Venous Insufficiency

Wound Care Clinic, Mayo Clinic, Rochester, Minn.

Table 1 Recommended Compression of Elastic Garments and Associated Indications

Class	Compression (mm Hg)	Indications
I	20-30	Prophylactic use during pregnancy Mild venous disease Combined arterial and venous disease
II	30-40	Postsclerotherapy Stasis dermatitis Chronic venous insufficiency Venous ulcers Moderate varicosities Postphlebitic syndrome
III	40-50	Severe varicosities Severe edema Recurrent venous ulceration Chronic lymphedema
—	50-60	Primary lymphedema

Compression Therapy for Occupational Leg Symptoms and Chronic Venous Disorders - a Meta-analysis of Randomised Controlled Trials

Leg discomfort and oedema are commonly attributed to a venous disorder (CVD) or chronic venous insufficiency (CVI) and treated with compression hosiery

Meta-analysis of randomised controlled trials (RCT) comparing 10-20mmHg stockings with placebo

RCT retrieved and analysed with Cochrane Collaboration

Eleven RCTs - 1453 subjects, 552 patients with a chronic venous disorder or chronic venous insufficiency

Compression with 10-20 mmHg a clear effect on oedema and symptoms as compared with placebo stockings ($p < .0001$)

Meta-analysis suggests that leg compression with 10-20 mmHg is an effective treatment for CVD

Excerpt from Bonn vein study showing the impact of compression therapy (stockings) on symptomatic patients with CVD. Of the 450 logged symptoms, 316 experienced some type of improvement with compression stockings

Symptoms	All n = 450 (100 %)	Improvement in n (%)
Edema	85 (18,9)	65 (76,5)
Swelling sensation	66 (14,7)	64 (84,2)
Heavy feeling	47 (10,4)	42 (89,4)
Pain while standing	46 (10,2)	28 (60,9)
Sensation of tension	19 (4,2)	15 (78,9)
Restless legs	8 (1,8)	7 (87,5)
Cramps	7 (1,6)	4 (57,1)
Pruritus	5 (1,1)	4 (80,0)
Eczema	2 (0,4)	2 (100,0)
Other	94 (20,9)	58 (61,7)
No information	55 (12,2)	27 (47,6)

A systematic review of compression hosiery for uncomplicated varicose veins

Compression hosiery is widely used in the prevention and management of symptoms related to varicose veins

However, there are still gaps and questions in relation to its benefit

What is the current evidence regarding the effectiveness of compression hosiery in the treatment of varicose veins?

Prospective, randomized controlled trials (RCTs) evaluating compression hosiery in the treatment of varicose veins

Where RCTs were unavailable other evidence was included

25 studies identified – 11 RCTs or systematic reviews, 12 non-randomized studies and two guidelines

A systematic review of compression hosiery for uncomplicated varicose veins

Wearing compression improved symptom management

No consensus was found regarding the class of compression needed for the effective management of varicose veins

The evidence for the benefit of compression hosiery for varicose veins is equivocal because the published literature is often contradictory and has methodological flaws

Wearing compression to slow the progression or prevent the re-occurrence of varicose veins could not be supported by the current published evidence

Compression for C1,C2 patients
– Bonn Vein Study I, II clearly
shows progression

However, no data that
compression retards, so registry
could answer some of these
questions.

For adults with varicose veins and/or other clinical symptoms or signs of chronic venous insufficiency, how confident are you that there is sufficient evidence for an intervention that improves:

2. Long-term health outcomes in patients presenting with symptoms? In patients presenting without symptoms but with signs?

Discuss any mechanisms that might be supported by CMS that would more quickly generate an improved evidence base that would underpin improved care for the Medicare population affected by lower extremity chronic venous diseases.

ACP PRO Vein Registry

Data Points of Importance

Health Related Quality of Life (HRQL) Benefits for patients with...

Varicose veins, Deep vein thrombosis, & Lymphedema

Compression Variables

Dose (strength of garment)

Style (Height)

Knit (Flat knit vs. Circular)

Brand/Manufacturer

Registry Benefits

Monitoring HRQL over time allows for economic assessment of a device/drug;

Manual data entry eliminated;

Establishing best practices by coupling the patient's voice with compression response

Which compression garments work best for which indications (venous leg ulcers, varicose veins, deep vein thrombosis & lymphedema)

Already a CMS recognize scientific registry

>10,000 Patients in first 18 months

84 participating sites

>39,000 encounters

https://atlas.liaisonhealthcare.com/domo/dashboards/ACP_PRO_Venous_Registry/main.dashxml#cordaDash=1013

04/08/2015

Pt 42 y/o Nicaraguan female with left lower leg ulcer > 20yrs

Diagnostic study:

Duplex exam

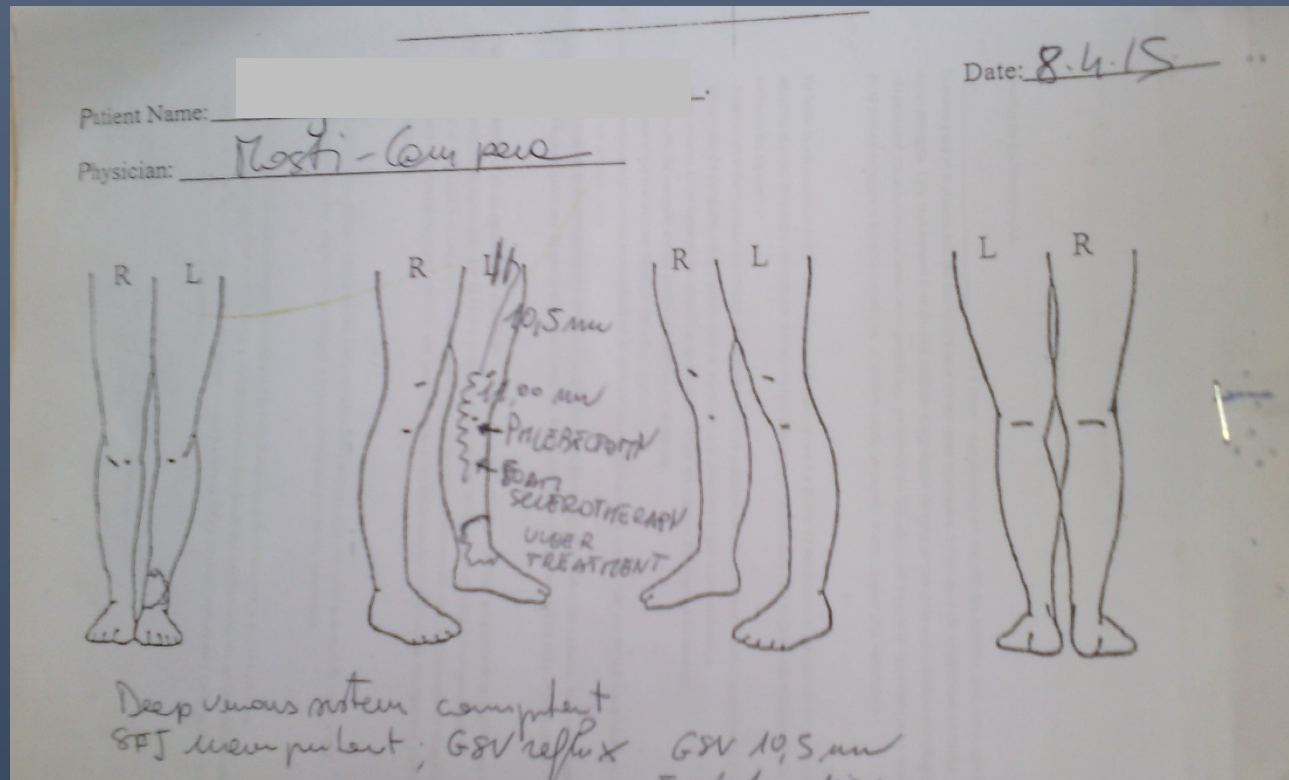
Entire deep venous system normal

Superficial venous system:

Left GSV reflux from SFJ to distal thigh, then
into tributaries



Treatment plan



Sharp Debridement
Phlebectomy
Foam Sclerotherapy
Compression Bandaging
Compression Hose





