



ACCADEMIA di  
ALTA FORMAZIONE CLINICA  
per MEDICI del TERRITORIO

# Accademia di Alta Formazione Clinica per Medici del Territorio

*In memoria del Maestro Alberto Zanchetti*

**TERZO PERCORSO FORMATIVO - ANNO 2024**

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# FOCUS ON : FLEBOLOGIA

Ruggiero CURCI

Direttore UOC di chirurgia vascolare ed endovascolare

ASST Lodi

Ospedale Maggiore

# Adult population

# 10 and 40%

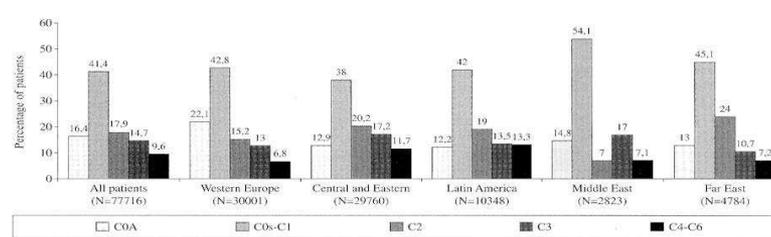


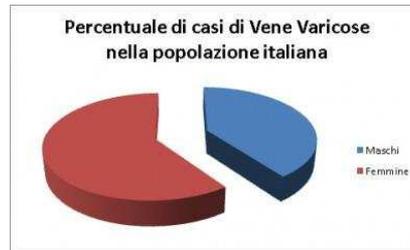
Figure 1.—Distribution of the CEAP clinical classes according to geographical areas.

Rabe et Al. Int Angiol 2012

# In Italy

# 40% female

# 25% male



# Impatto sulla Qualità di Vita

## Do varicose veins affect quality of life? Results of an international population-based study

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**Purpose:** This study assessed the impact of varicose veins (VV) on quality of life (QOL) and patient-reported symptoms. **Methods:** A cross-sectional population-based study was held in 166 general practices and 116 specialist clinics for venous disorders of the leg in Belgium, Canada (Quebec), France, and Italy. Study subjects included a sample of 259 reference patients without VV (CEAP class 0 or 1) and 1054 patients with VV who were classified as having VV alone (367; 34.8%), VV with edema (125; 11.9%), VV with skin changes (431; 40.9%), VV with healed ulcer (100; 9.5%), and VV with active ulcer (31; 2.9%). The main outcome measure was generic and disease-specific QOL, as measured by means of the Short-Form Health Survey-36 (SF-36) and the VEINES-QOL scale, and patient-reported symptoms as measured by the VEINES-SYM scale.

**Results:** In patients with VV, age-standardized mean SF-36 physical (PCS) and mental (MCS) scores were 45.6 and 46.1 in men and 44.2 and 43.2 in women, respectively, compared with population norms of 50. PCS scores decreased according to increasing severity of concomitant venous disease, with the lowest mean scores of 37.3 and 35.5 found in patients with VV and active ulcer. However, adjusted analyses showed no statistically significant differences between patients with VV alone and patients without VV for PCS (0.0), MCS (1.0), VEINES-QOL (-0.1), or VEINES-SYM (0.0) scores. In comparison with patients without VV, the largest differences were seen in patients with VV and edema (PCS, VEINES-QOL, and VEINES-SYM score differences of -1.8, -2.5, and -2.9, respectively) and in patients with VV and ulceration (differences of -3.3, -3.4, and -2.7, respectively). The high prevalence of major symptoms of venous disorders in patients in CEAP class 0 or 1 being treated for venous disorders (76.1% of patients had heaviness, aching legs, or swelling) might have contributed to the impairment of QOL in the reference group.

**Conclusion:** Results indicate that impairment in physical QOL in patients with VV is associated with concomitant venous disease, rather than the presence of VV per se. Findings concerning QOL in patients with VV can only be reliably interpreted when concomitant venous disease is taken into account. In patients with VV alone, the objectives of cosmetic improvement and the improvement of QOL should be considered separately. (J Vasc Surg 2001;34:641-8.)

- Edema
- discromie cutanee
- ulcere cutanee

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Quality of Life

**Sommatoria di  
componenti fisiche,  
e componenti psicoattitudinali**

**C1 → C5-C6.**

## Quality of life in chronic venous insufficiency

An Italian pilot study of the Triveneto Region

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<sup>2</sup>Psychologist-Office, Catania, Italy\*\*

**Aim.** Chronic venous insufficiency (CVI) is a chronic disease, whose disability has not been appreciated clearly, and several treatment costs are not covered by Public Health Services, probably because its any social impact is not well known. The aim of the study was to assess the impact of CVI on quality of life (QoL), and to compare the sensitivity of more diffused instruments for QoL assessment.

**Methods.** One hundred and four patients with CVI received the Italian version of four QoL assessment instruments (MOS SF-36; CIVIQ-2; Euro-QoL 5D and a visual analogical scale). The poorest QoL was adjusted as 0, the best as 100. After filling the questionnaires, patients underwent a clinical and instrumental examination to assess the diagnosis according to the CEAP classification.

**Results.** The QoL is progressively impaired from CEAP class C<sub>1</sub> to class C<sub>5-6</sub>. The SF-36 showed a normal QoL in patients of CEAP class C<sub>1</sub> and C<sub>2</sub>. Class C<sub>3</sub> showed a significant (P<0.0018) reduction of QoL (physical role and bodily pain), and the decline was more significant (P<0.0001) in class C<sub>4</sub>, involving all physical items and several mental ones. Class C<sub>5-6</sub> showed very low scores of physical and social functioning, general health and vitality. Physical and emotional scores were better than C<sub>4</sub> patients.

**Conclusion.** QoL is progressively impaired in CVI, involving primarily the physical items and the emotional role, with worsening of mental items only in advanced stages. This early involvement of physical items underlines how CVI is not an esthetic problem, but, a disease. Its impact on the lifestyle and QoL, is similar to that of other chronic diseases (diabetes, cancer, chronic pulmonary disease), reaching in the class C<sub>5-6</sub> the poorest level, similar to heart failure.

[Int Angiol 2005;24:272-7]

Key words: Venous insufficiency - Quality of life - CEAP classification - Vein disease.

\*Italian Society for Angiology and Vascular Medicine (www.sia-pav.it).

\*\*Statistical Analysis and Psychometric Measurement.

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Chronic venous insufficiency (CVI) is a chronic disabling disease, whose prognosis is not severe *quoad vitam*, but very bad *quoad valetudinem*, because venous hypertension and serious involvement of cutaneous and subcutaneous tissues with symptoms and signs (heaviness, pain, hypodermatitis, and ulcer) limit patients' lifestyle.

Its prevalence shows a very large variability, from 2.3% in males to 4% in females in the studied population in the San Paulo study,<sup>1</sup> and 3% male and 3.7% women in the Tecumseh community study<sup>2</sup> to 15% in the Basel III study.<sup>3</sup>

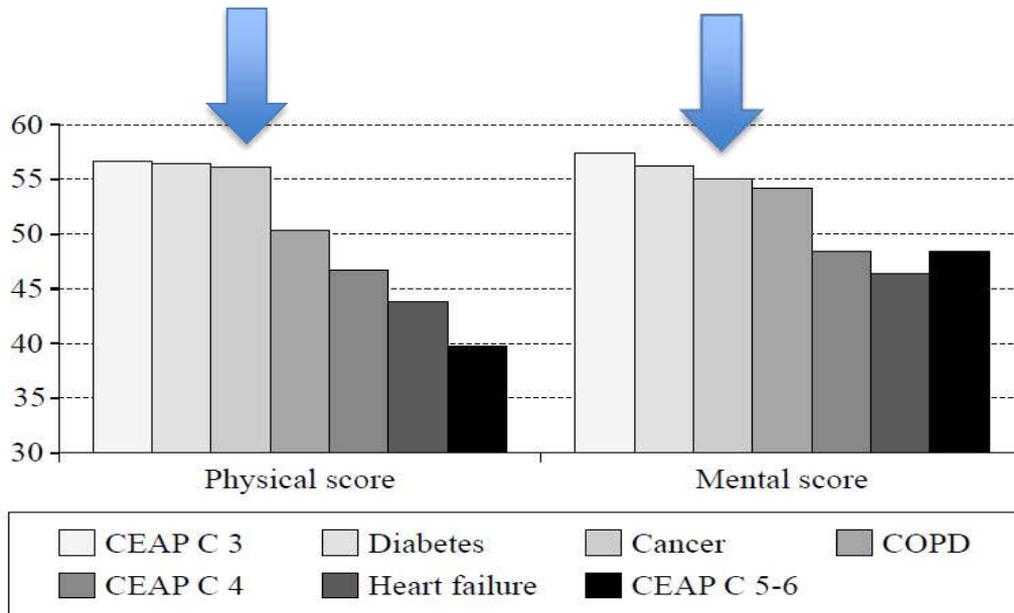
Active chronic leg ulceration has a prevalence of 0.1-0.2% of the adult population in developed countries.<sup>4</sup>

The natural history of CVI is characterized by chronicity and relapse, and it gives rise to massive health care expenditure, which is approximately 1-2% of the health care budget of European countries.<sup>5</sup>

However, CVI rarely appears in the tables of Insurance Companies, and most of the CVI costs (drugs, elastic stocking) are not covered by Public Health Services.

This gap is probably due to several uncertainties in the diagnosis and treatment of CVI. In a Swedish study, the medical staff responsible for the treatment of patients with venous ulcers was unsure about the etiological diagnosis in as many as 40% of the cases, because most symptoms and signs of venous disorders are not specific.<sup>6</sup> The Edinburgh Study reached the same conclusions, underlining the fact that the symptoms of CVI are not specific even if very closely related.<sup>7</sup>

With the wide dissemination of the CEAP classification<sup>8</sup> and with a better and uniform quality of diagnosis of CVI all these gaps are now improving.



# Venous disorders



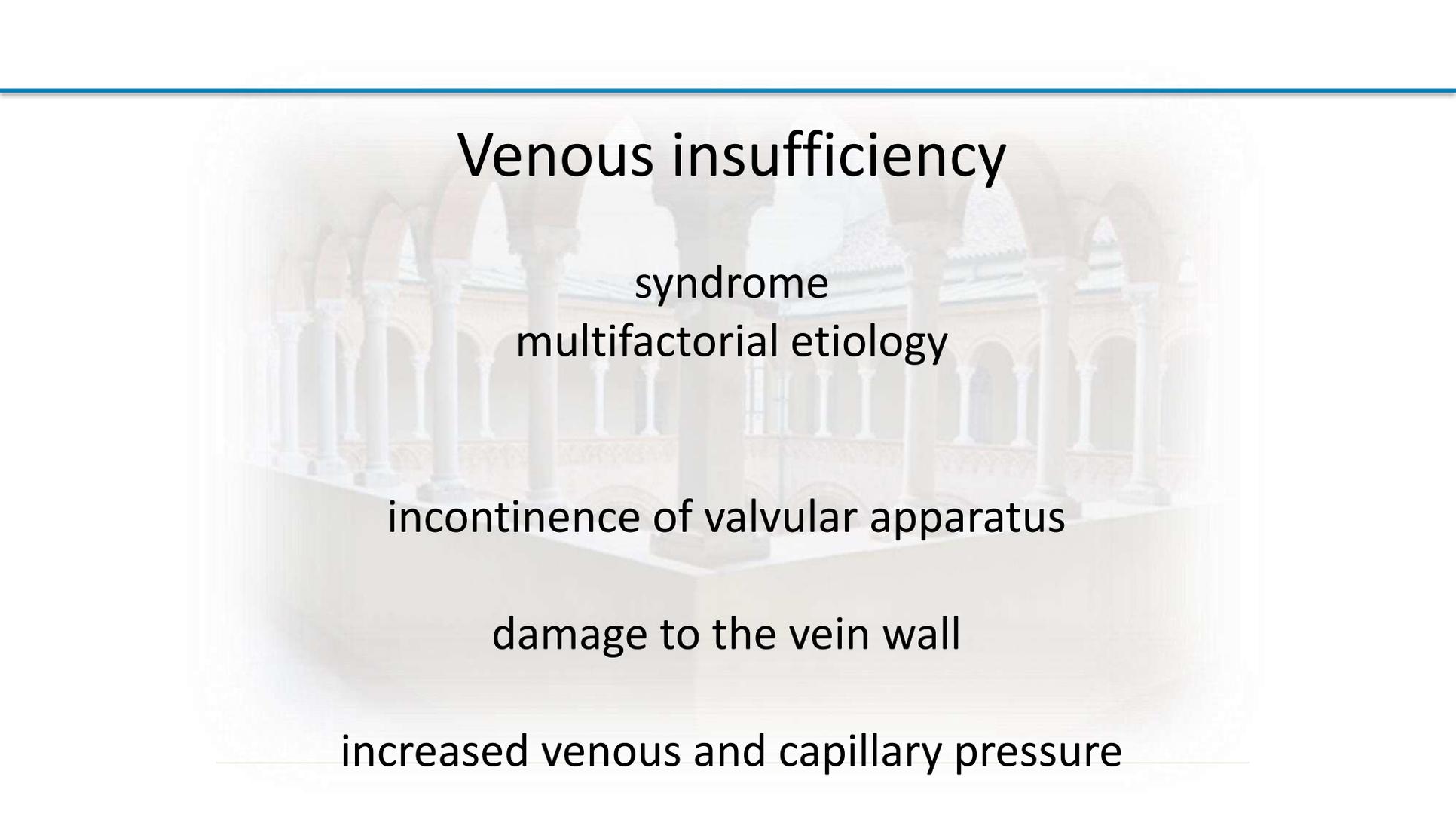
Teleangiectasies



Varicose v.



Phlebitis



# Venous insufficiency

syndrome

multifactorial etiology

incontinence of valvular apparatus

damage to the vein wall

increased venous and capillary pressure

# Complications



- Eczema
- Hypodermatitis and skin discolorations
- Venous ulcer
- Varicorrhagia
- Varicoflebitis

# Venous ulcer



## QUANTO COSTANO LE ULCERE CRONICHE?

COSTO UMANO

fino al 60% del tempo infermieri/territorio

COSTO MATERIALI

medicazione  
trasporto  
personale  
ricovero

COSTO SOCIALE

lavoro  
presidi

Dati 2002

In U.K.

550-1000 milioni di sterline

2-3% budget nazionale

In Svezia

200 milioni di euro

1% budget nazionale

In Italia

??

1% budget nazionale

ma non disponibili dati per complicitanze, recidive, ricoveri, lavoro....

Total  
Cost  
of the  
Week

$$TCW = (M \times L \times T) \times C$$

Farmaco o presidio sanitario	Costo unitario (a confezione)	Quantità utilizzata	Costo a medicazione	Frequenza di utilizzo nel trattamento delle lesioni	Accessi e tempi per l'applicazione
Idrocolloide: medicazione da 10x10	1,054 €	1 medicazione	1,054 €	40% dei casi	Tre volte a settimana con impegno di 5 minuti ogni accesso
Schiuma in poliuretano: medicazione da 10x10	4,089 €	1 medicazione	4,089 €	40% dei casi	Tre volte a settimana con impegno di 5 minuti ogni accesso
Idrofibre + Schiuma poliuretano: medicazioni da 10x10	5,82 € 4,089 €	1 unità 1 medicazione	5,82 € 4,089 €	5% dei casi	Una volta a settimana con impegno di 10 minuti ogni accesso
Medicazioni a base di argento da 10x20	19,41 €	1 medicazione	19,41 €	15% dei casi	Una volta a settimana con impegno di 5 minuti ogni accesso
			<b>Totale</b>	<b>100%</b>	
Idrogel in aggiunta nel 30% dei casi all'idrocolloide e alla schiuma di poliuretano	1,74 €	1 tubetto da 15g a medicazione	1,74 €	25,5% dei casi	Non prevediamo minuti aggiuntivi di assistenza

# Malattia Venosa Cronica Arti inferiori

## *Incidenza*

### Uomini

**7 - 35 %**

Età < 40 anni

**15 - 55%**

Età > 40 anni

### Donne

**20 - 60%**

Età < 40 anni

**40 - 78%**

Età > 40 anni

## *Fattori di rischio*

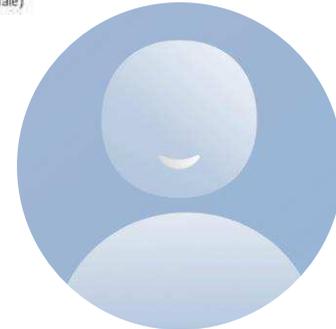
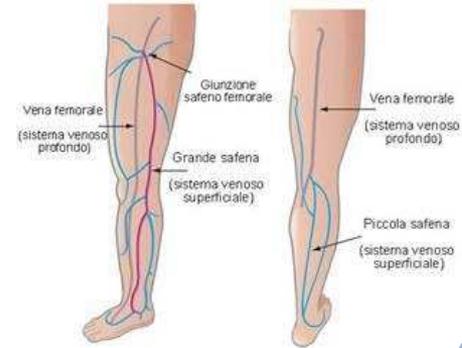
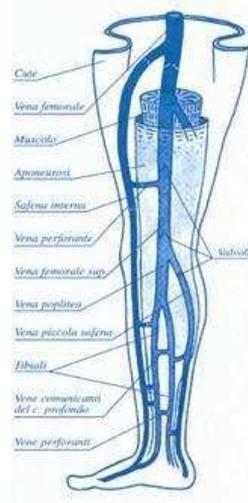
- ❖ Età
- ❖ Familiarità
- ❖ Sesso femminile
- ❖ Sovrappeso
- ❖ Sedentarietà
- ❖ Gravidanze



## • Sistema Venoso degli Arti Inferiori

Rete di vasi venosi deputati al trasporto del sangue dalla periferia al cuore.

- Rete Superficiale
- Rete Profonda
- Sistema delle Perforanti



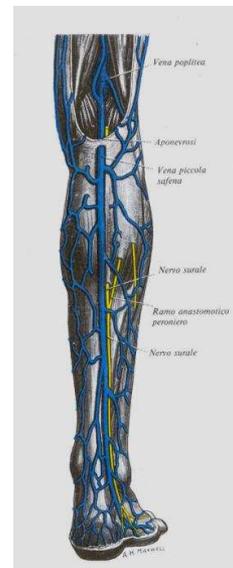
# Anatomia venosa dell'arto inferiore

## *Circolo superficiale*

- \*Circolo plantare
- \*Safena interna
- \*Safena esterna

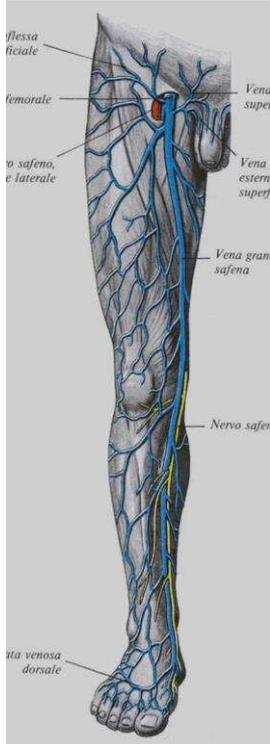
## *Circolo profondo*

- \*circolo plantare
- \*vene tibiali (anteriori e posteriori),
- \*vene gemellari
- \*vena poplitea, femorale superficiale, profonda e comune.



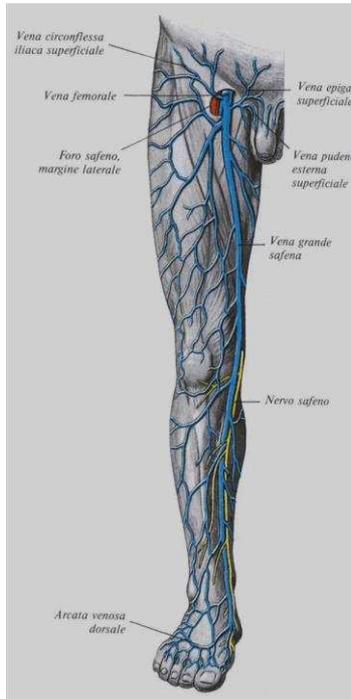
*Presenza di valvole*

## La grande safena



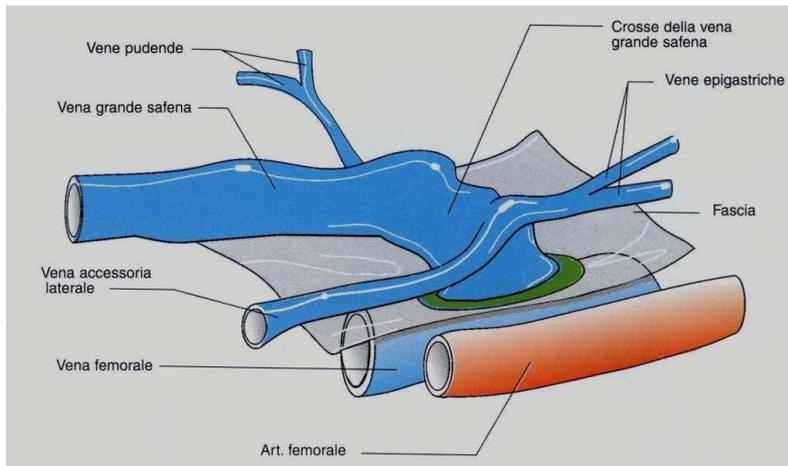
Origina dalla vena marginale mediale del piede e termina nella vena femorale comune. Decorre anteriormente al malleolo mediale, sale lungo la faccia mediale della tibia. Quindi sale postero-medialmente al condilo tibiale mediale, femorale, e la superficie mediale della coscia. E' spesso duplice, soprattutto sotto al ginocchio e presenta un numero variabile di valvole (da dieci a venti). Costante è la presenza di una valvola a livello del passaggio nella fascia cribrosa (valvola preterminale) e nel punto di confluenza nella vena femorale comune (valvola terminale).

## La grande safena.



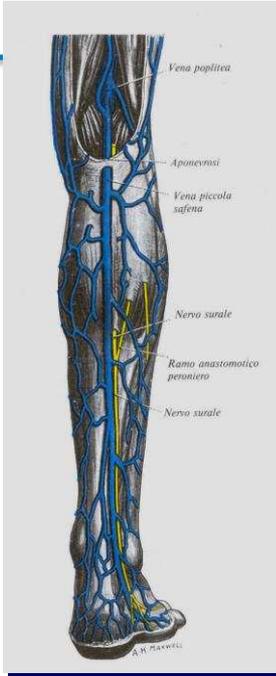
I suoi affluenti sono variabili per numero e decorso. Sotto il ginocchio confluiscono nella safena tre rami, uno proveniente dalla superficie anteriore della gamba, una dalla regione del malleolo mediale, e una che viene dal polpaccio, che comunica con la piccola safena. Nella faccia posteriore e mediale di coscia alcuni rami si uniscono a formare la vena safena accessoria, o del Giacomini, collegata in basso con la piccola safena. Nella porzione di gamba la safena decorre in stretto rapporto con il nervo safeno.

## La grande safena ostiale.



La crosse safeno-femorale

A livello inguinale la safena riceve i seguenti affluenti: la vena iliaca circonflessa superficiale, la vena epigastrica superficiale, la vena pudenda esterna, la safena accessoria ed un ramo antero - laterale (safena accessoria laterale). La modalità di confluenza è molto variabile.

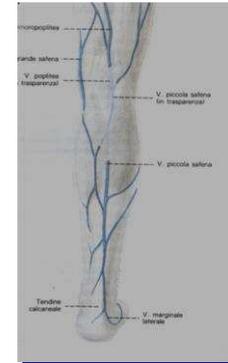


## La piccola safena

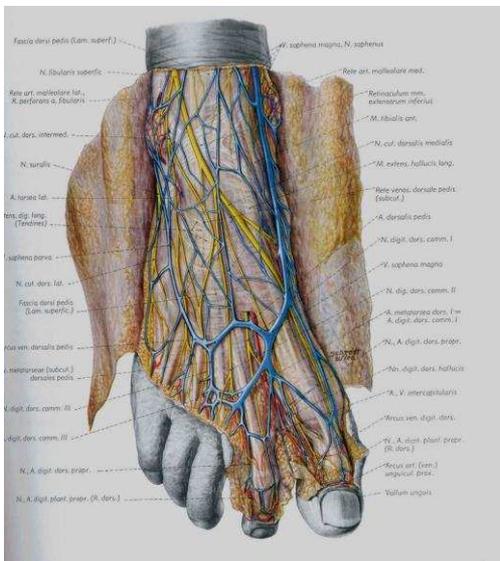
Origina dietro il malleolo laterale come confluenza della vena marginale laterale. Sale lungo la faccia laterale del tendine di Achille, poi nella porzione mediana posteriore della gamba. Al terzo-medio superiore perfora la fascia, si porta nella loggia poplitea tra i capi del gastrocnemio e sbocca nella vena poplitea a 3-7,5cm sopra l' articolazione del ginocchio. Riceve rami dalla cute della porzione posteriore della gamba. Decorre con il nervo surale.

### Confluenza molto variabile

- a) Nella grande safena al terzo superiore di coscia;
- b) Biforcarsi nella grande safena e nella vena poplitea;
- c) Nella grande safena sotto il ginocchio
- d) Continuarsi nella safena accessoria



# Circolo plantare



## *Superficiale*

Vene digitali dorsali, vene metatarssee dorsali, arcata venosa dorsale, vena marginale laterale e mediale.

## *Profondo*

Vene digitali plantari, vene metatarssee plantari, arcata venosa plantare, vene plantari laterale e mediale

Circolo superficiale  
+  
Circolo profondo

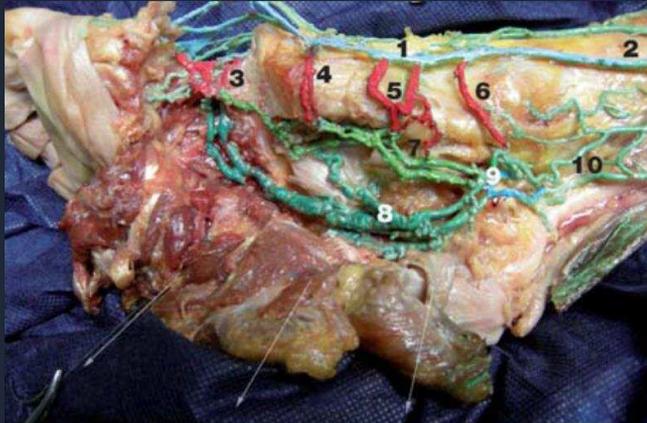


*“Suola venosa del Lejars”*

## EDEMA ED ALTERAZIONI BIOMECCANICHE AAII

Ruolo pompa veno-muscolare a livello di

- Piede
- Gamba
- Coscia
- Addome

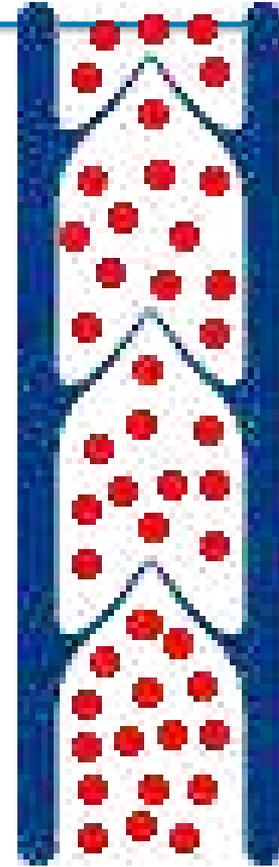
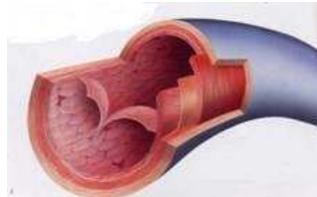
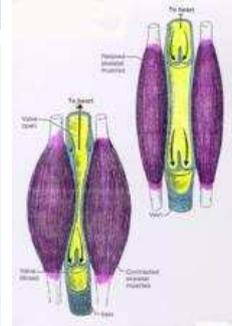


## Attivazione del sistema venoso

Il Sistema venoso viene attivato dal sistema delle pompe periferiche (Cuore Periferico):

- Pompa plantare
- Pompa muscolare del polpaccio

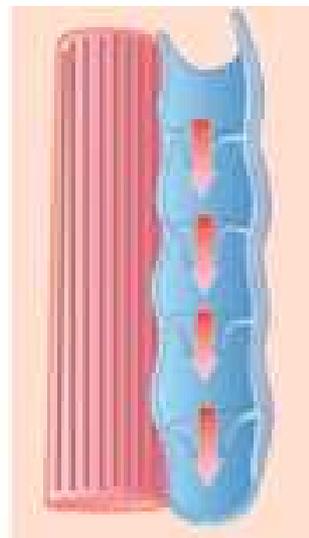
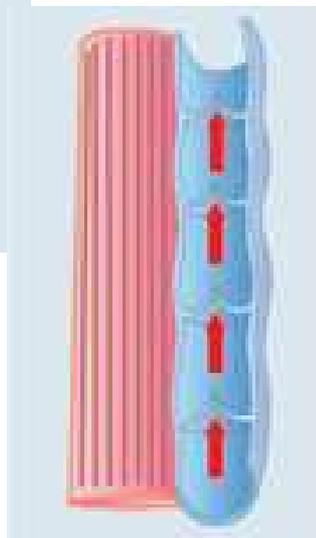
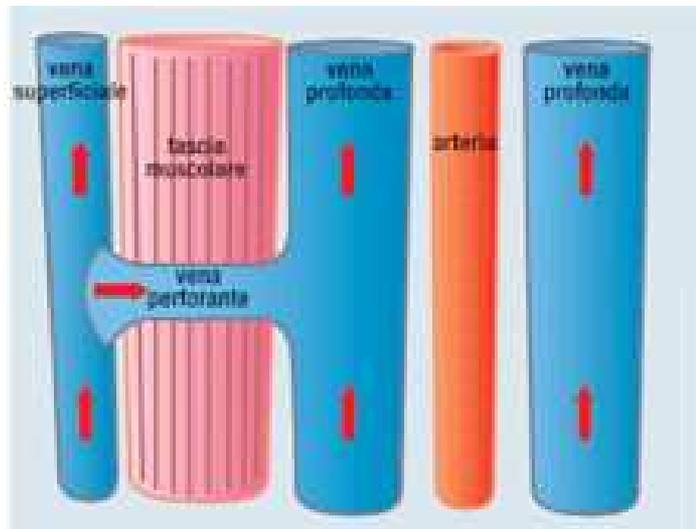
Il sistema valvolare delle vene impedisce il reflusso di sangue fra una sistole muscolare e la successiva

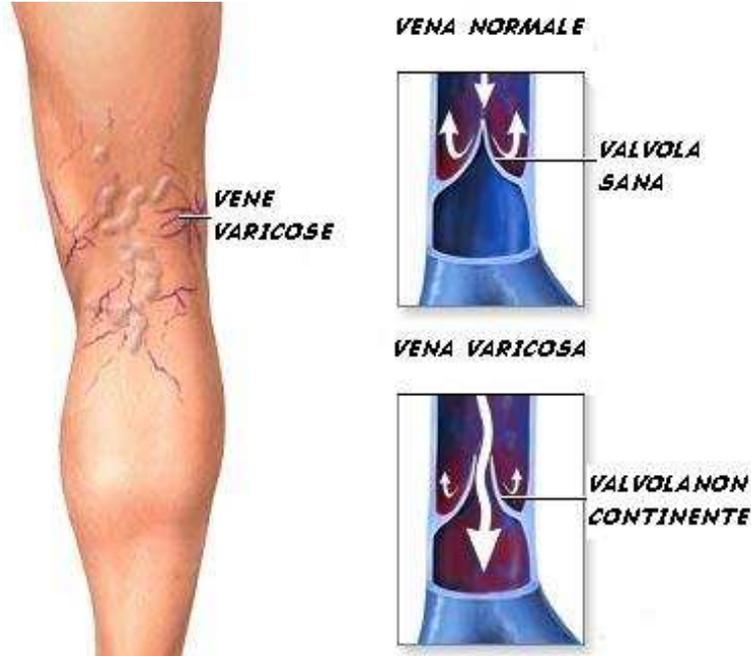


## EDEMA ED ALTERAZIONI BIOMECCANICHE AAII

Alterazione dell'appoggio plantare (piede piatto) ed **insufficienza venosa da ridotto riempimento venoso**

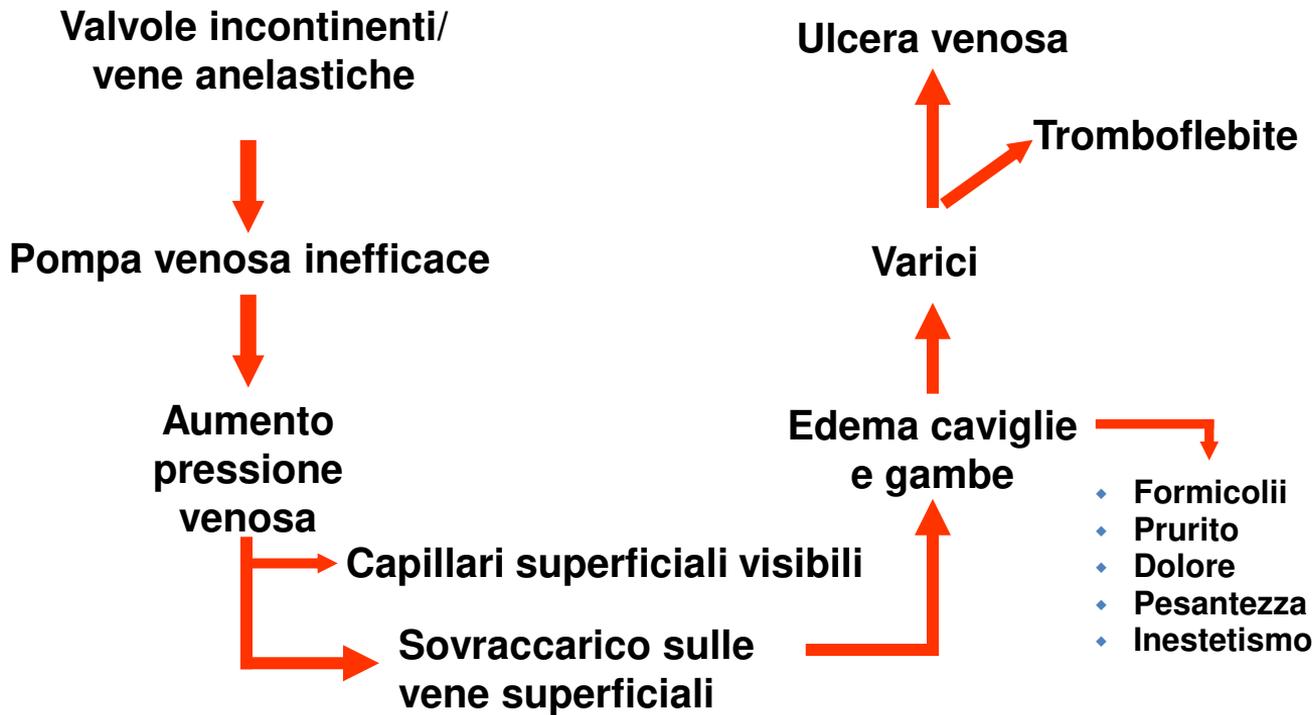






Alterazioni della parete venosa e/o del sistema valvolare determinano anomalie del ritorno venoso con comparsa di *reflusso*, *ipertensione venosa* e quindi di segni e/o sintomi correlabili all'Insufficienza Venosa Cronica

# Insufficienza Venosa Cronica



# Fisiopatologia IVC

reflusso

IPERTENSIONE VENOSA CRONICA



STASI



> PERMEABILITÀ  
CAPILLARE



EDEMA, STRAVASO DI EMASIE

FIBRINOGENO E PROTEINE



MANICOTTI DI FIBRINA



RALLENTAMENTO MICROCIRCOLO  
INTRAPPOLAMENTO LEUCOCITARIO



PRODUZIONE  
CITOCINE



FIBRINOLISI



E IPOSSIA



MICROTROMBI

ISCHEMIA



**ULCERA**

## PAROGENESI: FORZE DI STARLING

la filtrazione attraverso la membrana dei capillari è determinata dalla **pressione idrostatica** cui si oppone la **pressione oncotica**. Pertanto a livello della **estremità arteriosa del capillare** dove la **pressione idrostatica supera la pressione oncotica**, il liquido passa dai capillari negli spazi interstiziali. **All'estremità venosa del capillare invece, dove la pressione oncotica supera la pressione idrostatica**, il liquido rientra nei capillari.

