

Pressotherapy with adjustable high pressure gradient

Pressothérapie à gradient de pression élevé réglable

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Compliance of Compression Stockings and other Technologic Innovations

RESULTS WITH MERCURIAL PRESSOTHERAPY

Infective secondary lymphoedema (10 years old)



Before treatment



After treatment

Radio surgical lymphoedema (7 years old)



Before treatment



After treatment

Bilateral secondary lymphoedema (uterus cancer)



Before

After

1 year

Rebellious ulcer



1st session

4th session

SAFETY OF HIGH PRESSURE



*scuba diving :
1 bar/10 m. deep*



walking: 1 bar



running / jumping: > 1 bar

Isotopic lymphoscintigraphy study (Pr. H. Boccalon, Toulouse U.H.C., 1992)

30 primary and secondary lymphoedema (lower limbs)

(760 mm Hg = 1 bar maximum pressure on the extremities)

- 13 improvements of the lymphatic flow,
- 16 unchanged states
- only 1 aggravation on cancer recurrence, with clinical improvement

30 years experience of Mercurial Pressotherapy:

> 2M patients treated: no induced deterioration for usual results

 **Strong pressure gradients can be safely applied to pathological limbs.**

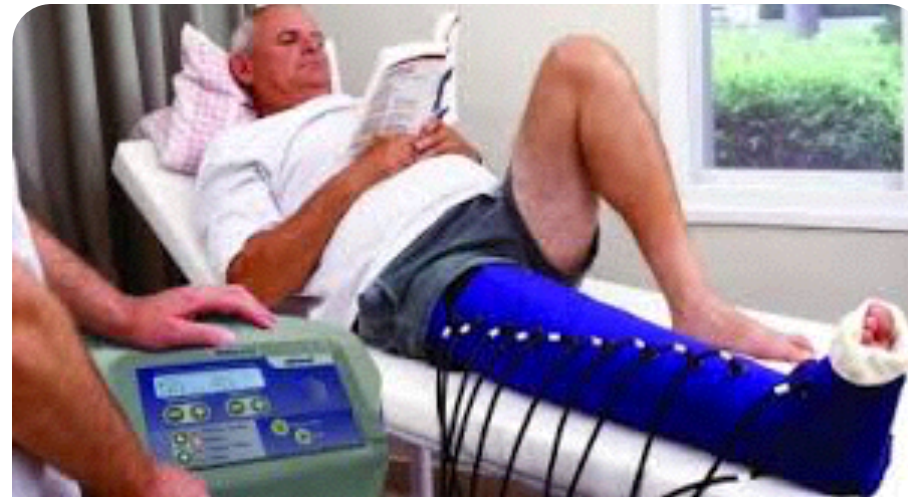
COMPRESSION MODES



Compression stockings

continuous compression

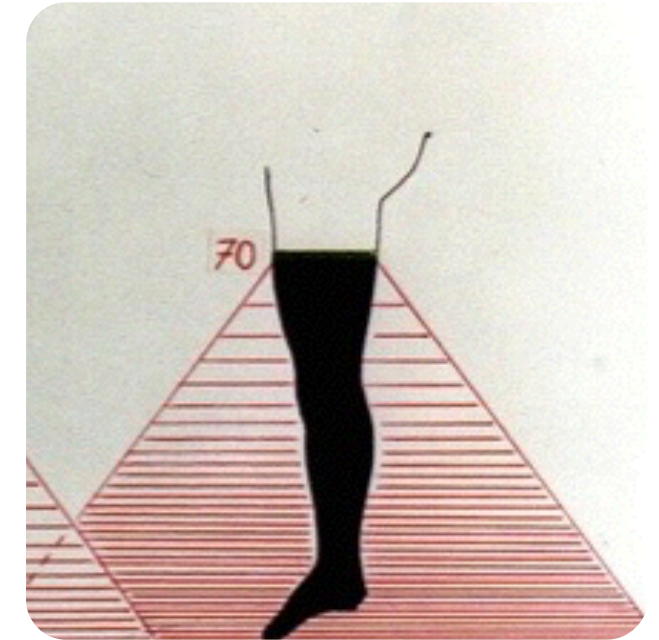
- 10 to 40 mm Hg
(0,01 to 0,04 bar)



*Intermittent pneumatic compression
(existing pressotherapy)*

intermittent compression

- **low** pressure gradients
< 200 mm Hg (0,2 bar)



*Pressotherapy with adjustable high
pressure gradient*

discontinuous gradual paroxysmal compression

- **high** pressure gradients
200 to 760 mm Hg
(0,2 to 1 bar)

ADVANTAGES OF HIGH PRESSURE GRADIENTS

- Loosening of **tissular constraints**
- Felt at a deep tissue level (rarer lymphatic vessels, aggravating spiral)
- Tightening effect on the **arterial endothelium**

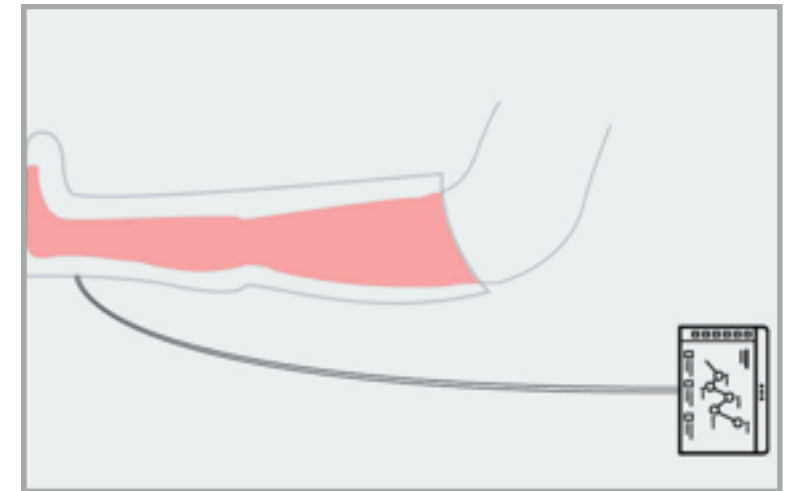
—> **Volume decreases**

—> Secondary reactive **hyperemia**

—> Quick return to a **muscle aerobiosis** state
(INSEP 1990)

EQUIPMENT

- Specifics **numerous air chambers**
- Gradient smoothing method
- Control module programs **variable high pressure gradients**



- Patient has to be relaxed, lying down with trunk inclined.
- Maximum peripheral pressures can be moved higher on the limb.
- In pure lymphatic pathologies, the device dispenses **proximal ganglionic pressures**.
- **Stockings** are widely used around treatments.

METHOD

Set of **gradual paroxysmal pressures**

- **Initial treatment:**
 - 3 to 4 sessions of 30 min.
 - 1 to 8 days apart
- **Maintenance treatment:**
 - 1 session at 1 month,
 - 3 months,
 - every 6 months or once a year
 - and when judged necessary, according to the evolution

Doppler examination classifies pathologies & protocols of sessions.

Differences with existing pressotherapy:

- range of macro pressure gradients (0,2 to 1 bar)
- action delivered in depth
- conjunction « evacuations/vasodilatations »
- induced aerobiosis

Compared with Mercurial Pressotherapy:

- absence of environmental stress
- treatment position at rest
- small bulk of the device, its mobility, its lightness, its cost

3 possible uses of the proposed pressure gradients:

- medical & paramedical fields
- sport fields, fitness, spas
- well-being and aesthetics

PRATICABILITY TARGETS

- **venous and veno-lymphatic pathologies**
(sequelae of thrombosis, pain, heaviness, edema, hypodermatitis, ulcers)
- **sequelae of traumas**
(sprains, fractures, tears, algoneurodystrophy)
- **sport** pathologies & traumas
- **primary and secondary lymphoedemas**, early and old stages
prevention of late edemas
- **mixed pathologies**
- arterial surgery contraindicated for the elderly

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Shall you have any further questions, please find our contacts at:



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