The good functioning of the return circulation is fundamental for blood to reach the heart. This fluid contains toxic substances and its mission is to carry out the biological interchange which is to eliminate CO₂, urea and waste material, which are the final product of tissue metabolism ("garbage" produced by normal cellular functioning). Once this cleansing process has finished, the oxygen enriching process starts in the lungs and the blood is then transported to the heart and from there distributed throughout the body via the arterial system.

When the systems that favour this return break down, it causes oedema in the lower limbs and leads to ideal conditions that cause chronic venous insufficiency, which is manifested in the form of varicose veins.

The factors which favour the return are perfectly known: *vis a tergo*, *vis a fronte*, muscular pump of the calf, valve system, venous tone and pulsation of neighbouring arteries. There is, however, another system which I consider to be of great physiological importance. I am referring to Lejars sole sponge.

In the return physiology, besides the centripetal, aspiration or propulsion forces, there exists another which acts as an injection pump adjacent to the central venous column, whose outer network resides precisely in the sole venous squashing.

The Lejars sponge is a dense intradermal and subdermal venous network. Anatomically, the front part flows into the subcutaneous sole arch; the side part into the back veins and the back part into the retromolar and Achilles arches. This system plays an important part in the physiology of the venous drainage of the feet.

One walks on a sponge, which is squashed with each step. When walking, the intermetatarsal spaces and the aponeurotic sheath undergo an alternating dilation and contraction process which corresponds to the pressure exerted on the venous cushion from the osteomuscular sole of the foot. This process implies a dilation of the perforating veins and the emptying of the deep veins of the feet due to the blood propulsion effect.

From a practical point of view, and keeping in mind the importance that the Lejars injection system has to the return physiology, it is logical to research new ways to improve it. In this regard, Mr Gálvez, an enthusiastic researcher from Aragon, has devised a machine called HAPPYLEGS, whose mechanism consists of directly applying pressure to the sole sponge, thereby increasing the flow of the venous system in the feet. The effect is similar to passive exercise which forces the feet to carry out a constant exercise of extensions and contractions.

I consider that this device will be of great benefit to all those people who lead a sedentary lifestyle, who suffer from chronic venous insufficiency or varicose veins, who suffer from classic venous ailments, and finally those who have insufficient calf venous pumping, which is often the cause of thrombosis.

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