

Low Pressure improves blood flow

A new method developed by medical space researcher gives additional support in treating patients with peripheral arterial disease.

3 times a week Mrs. E. Stöckmann is allowed to feel like an astronaut: her treatment-device was used first by space travellers. Since the 60ties the astronauts improved the bloodflow in their legs with the low pressure device. Otherwise the circulation would diminish during their stay in space. Mrs. E. Stöckmann doesn't suffer lack of gravity but serious problems with arterial blood flow. The cause is an intense arteriosclerosis esp. in the arteries of both legs, which cuts-off the blood supply to the



Erna Stöckmann suffers of PAD. She gets low pressure treatment 3 times a week.

muscles and tissue. “Constantly I was forced to stop walking and to wait until the pain in both calves ceased. The last weeks I could not walk 200 meters without pause”, explains the 70years old pensionier the typical symptoms of her disease: peripheral arterial disease (PAD). Now she's in a much better state and can walk without pain. This is owed to the treatment “intermittent low pressure device” in the rehabilitation hospital Fallingbostal, North-Germany. The principle is simple: The patient is lying with the legs in a tube, which

produces low and normal air pressure in rhythmic intervals. “The changing pressure en-

Astronauts use low pressure to improve blood flow in their legs



Photo: NASA

hances the circulation in the body and the blood flow in the legs”, explains Dr. S. Schink, senior consultant of hospital Fallingbostal, who treated more than 100 patients since august

Simple but effective: Principle of Low-Pressure-Treatment



The patient lies relaxed in the tube with his lower part of the body (abdomen). A vacuum turbine sucks off air (red: low pressure) and sucks in new air (blue: normal pressure) in rhythmical intervals. A fabric seal prevents the air from escaping.

2004. The results encourage him in his efforts. “Most patients experience an improvement of their complaints”, summarizes Dr. Schink.

One session lasts 20 minutes. Inpatients with severe symptoms are treated daily, ambulant patients with modest complaints receive 1-3 treatments per week. “Of course, miracles can't be performed by the low pressure device”, restrains Dr. Schink unrealistic expectations. He recommends walking-training to his patients after every session, which is a well-established treatment method in PAD (peripheral arterial disease).



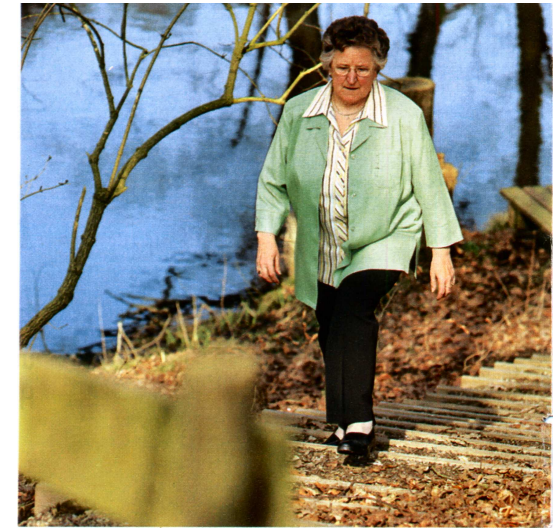
Dr. Schink examines the circulation by ultrasound.

In Germany an estimated 4.5 million people live with PAD. Diabetic patients have a 5times higher risk to develop PAD. High blood sugar, smoking and high blood-pressure are beneath the main causes of the arteriosclerosis, in which fatty and connective tissue and inflammation cells grow in the inner wall of the arteries and diminish the blood flow. If this process occurs in the arteries of

the legs, people will feel pain in both calves during walking. In advanced stages they suffer pain in the feet during rest especially during the night. Further progress of disease will produce non-healing-wounds, mumification of toes and severe infections. Without proper medical aid the patient will undergo amputation.

Patients with diabetes can't trust the early symptom 'walking-pain'. Often diabetes-associated nerve-disorders hinder those symptoms: the patient can't feel the pain in the ischemic muscles. In this case continuous medical examinations are very important. Simple puls- and bloodpressure-measurement at both legs combined with ultrasound or x-ray helps to recognize the stage of PAD.

This has been done to Mrs E. Stöckmann months before. Now she is on the best way back to recovery. With respect to the low pressure treatment and the walking-training she can manage a good stroll. “At the last wedding I could enjoy two dances without any pain”, she tells us happily. ■



The aim: Finally walking without pain.

4 states of Peripheral Arterial Disease

Stage I:

Blood circulation is already impeded, but does not cause complaints.

Stage II:

Long walks lead to pain, which decreases in relaxation. Walking distances become shorter.

Stage III:

Tormenting pains are present even without strain, during relaxation periods oder at night.

Stage IV:

Due to arterial calcification tissue dies off. Without immediate aid, amputation follows.



**KLINIK
FALLINGBOSTEL**

Kolkweg 1
29683 Bad Fallingbostal
Germany

Contact:

Tel.: +49 5162 / 44 – 604
E-Mail: info@klinik-fallingbostal.de

Medical questions:

E-Mail: schink@klinik-fallingbostal.de