

Treating Chronic Ulcers and Pain in the Feet and Legs

Circulator Boot Treatment



Patient is 46 year old male. Diabetic for 25 years. Non-healing foot ulcer with staphylococcus and enterococcus bone infection. Swelling and drainage. Resection of infected bone recommended. Instead, patient presented for Circulator Boot treatment.



If an infection is present, an antibiotic can be infiltrated into the wound by injection before treatment. The Circulator Boot causes the medication to diffuse effectively through the affected tissue.

POOR CIRCULATION is a major cause of non healing wounds, ulcers and chronic pain in your legs and feet. Skin ulcers develop when blood flow is no longer able to supply the nutrients and oxygen needed by the tissues. This is the result of arteries and veins that have deteriorated and lost their capacity, often as a complication to diabetes.

Some forms of vascular disease can be corrected by surgical procedures, but many cases are inoperable. If a wound or ulcer is not responding after four weeks of conservative treatment, the deterioration process will continue. However, there is an effective treatment available so that you can keep your toes, feet and legs.

Circulator Boot Therapy Program

The Circular Boot uses air pressure to provide a continuous series of gentle, short-duration compression pulses. The main reason that the system works so well is that the timing of the compressions is controlled by its cardiac monitor, attached to your chest. The accurately timed pressure pulses occur between heart beats.

Doctors who are familiar with the Circulator Boot recommend it as an excellent method for treating and correcting circulation problems. A recent article, from the Mayo Clinic & Foundation, published in *Vascular Medicine*, reported that "Complete ulcer healing as well as preservation of the affected limb can be achieved in most cases."¹

As well as providing an immediate boost to arterial and venous circulation, the procedure slowly breaks down clots. It increases the breakdown of plaque within the arteries by the release of nitric oxide and PGI₂ from the endothelial cells of the capillaries. Nitric oxide is a vasodilator and activator of angiogenesis (formation of new arteries). PGI₂ is a vasodilator and inhibitor of platelet aggregation. Oxygen and nourishment increase. You will see swelling and pain subside with the first few sessions. As circulation is restored with each further session, the body can begin to heal itself.

It is important for you to begin boot therapy early, at the first sign of an erupting problem if possible. The healing process develops more quickly when extensive tissue damage has not yet occurred.

Without Circulator Boot treatment, amputation of the affected area is the usual end result when faced with continuing deterioration, infection, gangrene and pain. Most amputations start with only a minor injury to your foot or leg. It leads to a syndrome of medical complications, further amputations and permanent disability. There is a huge continuing cost to yourself and your caregiver in quality of life, lost income and large expenses.



Patient given Circulator Boot treatment 5 – 6 times per week and oral antibiotics for 2 months until June 8. Continued with antibiotics. By June 18 the ulcer is largely healed. At follow up visit August 1, foot appeared to be normal.

The Treatment Session

Based on a thorough assessment of your condition, the Circulator Boot treatments will be customized to your specific requirements.

There are mini boots for the foot and long boots for the full leg. The foot is wrapped in a bag which can contain a multi electrolyte soak solution and an antibiotic if needed. Where both legs have pain and lameness, two boots are used.



The Circulator Boot boosts circulation in the whole leg, from toe to groin.

The typical treatment time is 40 minutes, plus pre-soak time and dressing time, within a one-hour clinic session. With a schedule of three to five treatments per week, a minor ulcer can heal in four weeks. A severely diseased leg could take 15 to 25 weeks to save. A typical treatment program spans about eight weeks.

As circulation returns, you see a healthy pink colour, the size of the wound decreases, pain fades and tactile sensation returns. The results are lasting.

The Circulator Boot, described as a cardio synchronous, end-diastolic, pneumatic compression boot, is neither an alternate form of therapy, nor an expensive option to conven-

tional treatment. It is the primary non-surgical method of treatment for arterial and venous insufficiency. It is a complementary treatment before and after bypass surgery. It is a viable option for those who are not candidates for surgery and offers only positive effects on other forms of treatment. It is not experimental; the Circulator Boot has been used successfully for more than 20 years. The treatment process is well understood.

Where to Get Treatment

There are currently 40 clinics that offer the Circulator Boot treatment. Some of the main clinics are listed in the following table. It includes clinics near the populations of Canada and the northern US states. Also included are Florida clinics which can be especially attractive in the winter months. Some clinics offer additional compatible treatments such as electrotherapy and hyperbaric oxygen.

If planning to travel to one of the clinics for treatment, you should discuss all costs, arrangements and questions directly with the clinic coordinator. In Canada, submit cost estimates to your provincial Ministry of Health and any applicable private health insurance plan.

Without Circulator Boot treatment, you can face a continuing and ever increasing series of doctor visits, home-care treatments, hospital stays, multiple surgical procedures and prosthesis fitting. Your quality of life will be significantly reduced, and your out-of-pocket expenses will be many times higher than the cost of the treatments.

Progress is faster when boot therapy is started early. An apparently stable

condition can suddenly flare up, necessitating an urgent amputation.

You can usually start right away, with no wait. There is very little risk.

If you have questions about any aspects of Circulator Boot therapy, call for information. Visit our web sites; there are 200 case studies described. Each case is different. Your leg likely has close similarity to some of those listed.

The web sites give a complete list of boot clinics, with phone numbers.

The Circulator Boot is a safe alternative to amputation. You can treat pain, lameness and ulcerated areas effectively and restore your quality of life.



A nurse specialist — trained in the Circulator Boot, diabetic conditions and in wound care — sets up the equipment and administers treatment.

Reference 1. Vella, A., Circulator Boot therapy alters the natural history of ischemic limb ulceration. Vascular Medicine 2000; 5: 21-25. BIOMATION distributes the Circulator Boot, supplies other quality wound healing equipment, and provides training in clinical technique.

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Partial List of Clinics providing Circulator Boot Treatment

Florida

Clinic Name	Phone Number	Lodging Nearby	# of Boots	Antibiotics with Treatment	Number of Staff for Care	HMO	Other Therapy	Cost of Session US \$	Number of Years in Use
Jacksonville Foot Health Center Dr. Earl Horowitz Jacksonville, FL	(904) 387-0433	Hotels	5	Yes, injected at site and Sea Soaks	1 M.D. 8 trained assistants	No	Interferential	\$ 60.00 per 40 minutes	5 years
The Foot & Ankle Medical Center Dr. Larry Kipp Tampa, FL	(813) 988-4801	Yes	1	No	1 M.D. 1 R.N.	No	None	\$65.00 up to 1 hour	5 years
Countryside Foot & Ankle Dr. Bruce Levine Clearwater, FL	(727) 797-5008	Yes	1	No. Sea Soaks	2 M.D. 8 trained assistants	No	Interferential	\$ 69.00 up to 1 hour	4 years

Illinois

Zubin Tantra, PT Wheeling, IL	(847) 229-0140	Hotels	1	Injections by M.D.	3 M.D. 1 N.P. 1 P.T.	No	Interferential, E-STIM, irrigation	\$ 75.00 per 45 minutes	5 years
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Maryland

American Wound Healing Center Dr. M. Bernstein Hagerstown, MD	(301) 665-381	Hotels	2	Yes	2 M.D. 2 R.N.	US Medicare	E-STIM, neuromuscular, hyperbaric	\$ 78.00	5 years
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Minnesota

Gonda Vascular Center Mayo Foundation Methodist Hospital Dr. T. Rooke Rochester, MN	(507) 266-7348	Underway to hotels; subway close by	15	Various methods available	20 M.D. 3 P.T.	US Medi- care	No	\$180.00 per 40 - 45 minute session	4 years
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Pennsylvania

Bryn Mawr Diabetes & Endocrine Center Dr. John Filip Dr. Marvin Preske Bryn Mawr, PA	(610) 527-6300	Hotels	16	Sea Soaks, injections at wound site	2 M.D. 2 trained assistants	US Medi- care	No	\$79.00	22 years
Franklin County Foot & Ankle Center Dr. M. Bernstein Waynesboro, PA	(717) 762-6300	Hotels	2	Yes	2 M.D. 2 R.N.	US Medi- care	Many other treat- ments	\$78.00	5 years

Tennessee

Dr. Dennis Bizzoco Chattanooga, TN	(423) 855-0728	Hotels	4	Sea soaks	3 M.D. 4 trained assistants	No, US Medi- care	No	\$49.00 per 1 hour session	11 years
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Virginia

Dr. Marc Blatstein Fredericksburg, VA	(540) 785-4335	Yes	3	No	1 M.D. 1 medical assistant	Yes	No	\$50.00 per leg (45-60 mins)	9 years
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Wisconsin

St. Luke's Medical Center Dr. Jeffrey Niezgoda Milwaukee, WI	(414) 489-4058	Hotels	2	Antibiotic creams, Sea Soaks	Several R.N., trained assistants	No	Hyper- baric, wound care, and manage- ment	\$34.00 for M.D., \$40.00 for hospital	3 years
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