

Offloading Diabetic Wound Care



Shark-o™ offloading orthosis

Caring for and treating diabetic foot ulcers is a complex problem which should be handled by a team of healthcare providers – physicians, surgeons, podiatrists and pedorthotists. The object is to not only achieve resolution of the current wound, but also minimize recurrence.

Due to the false sense of security patients with diabetes have when they have an absence of pain sensation (neuropathy), approximately 25 percent will develop a foot ulcer at some point in their lifetime.¹ The high levels of blood glucose caused by diabetes can, over time, lead to poor blood circulation, making it difficult for blood, which is needed for skin repair, to reach the area with the sore or wound. Seven to 20 percent of these ulcers will subsequently become infected for a number of reasons and may require an amputation of part or all of the foot. Foot wounds lead to 85 percent of the lower extremity amputations for patients with diabetes.²

Offloading is pressure reduction and is a key factor in preventing complications from foot or leg ulcers. By redistributing pressure evenly, offloading can remove the weight putting pressure on the area which inhibits blood flow and promotes healing. There are several methods of offloading, the most common being bedrest which, if physical activity is part of the diabetes treatment plan, can be a problem. Offloading shoes can allow the patient to stand periodically and aid in stability and balance but are not primarily designed for walking.



Shark-o™ patent pending design allows adjustable volume changes of the calf while leaving the foot at a set volume.

Research over the past years has led to the development of offloading orthoses which require less adjustment time for changes in leg size due to edema. One such orthosis is the shark-o™ by Orthomerica. Adding and subtracting pads to accommodate these fluctuations has been minimized, freeing the patient from repetitive visits to the orthotist. The patient can self-adjust the orthosis to leg size needs with a strap adjustment new to offloading devices. These orthoses complement the ongoing wound therapies and post-operative care. It is used for the prevention and management of pressure ulcers, not only for patients with injuries caused by diabetes, but by Charcot deformity, decreased sensation and/or paralysis and foot fractures as well.

A Certified Pedorthotist can evaluate the needs and provide the proper device to relieve the possible gait deviation and/or pressure causing the wound. If you are being treated for a pressure ulcer, you should see a certified pedorthotist to learn of your options for orthotic treatment.

Sunshine Prosthetics and Orthotics located in Wayne New Jersey, provides a full range of certified Prosthetic, Orthotic and Pedorthotic services for physically challenged adults and children. Call 973-696-8100 to learn more about their custom services or visit their website at www.SunshinePandO.com.



Shark-o™ transition is made possible by the notched wedge shaped trim cutout at the ankle/instep.

1. Singh N, Armstrong DG, Lipsky BA. Preventing foot ulcers in patients with diabetes. *JAMA*. 2005;293(2):217–28.
2. Frykberg R, Zgonis T, Armstrong D, et al. Diabetic foot disorders: a clinical practice guideline (2006 revision). *J Foot Ankle Surg*. 2006; 45(5 Suppl):S1-66.