

# A Monograph for Health Care Providers

## Lower-Extremity Venous Disease

Lower extremity venous disease (LEVD) accounts for approximately 80-90% of lower extremity ulcerations. Venous insufficiency is caused by venous hypertension that occurs as a result of obstruction and/or reflux. Dilatation of the capillaries and leakage of plasma proteins and red blood cells are a direct results of venous hypertension. This leads to fibrin deposition and impaired oxygen transport producing ischemia and hypoxia, resulting in cell death and ulcerations. Trauma or irritation are often the initiating event in venous stasis ulcer (VSU) development. VSU's are subject to delayed healing because delivery of oxygen and other nutrients are impaired by edema and fibrin deposition. The recurrence rate of VSUs is reported to be as high as 70% at five years.

## Appropriate Treatment Options

Lower extremity venous disease has a significant impact on quality of life and work productivity. Managing LEVD involves treating the cause, optimizing local wound care, and addressing patient-centered concerns. The most important aspect of treatment, when possible, is ensuring adequate blood flow and controlling edema. Other components of successful management include increasing mobility and medical management. Select patients may respond to surgery, biologicals, adjunctive therapies, and lifestyle enhancements. Once healed, long-term compression therapy with stockings or surgical intervention will reduce the incidence of recurrence.

## A Comprehensive Approach

Lower extremity venous disease is a complex chronic vascular condition with multifaceted primary and secondary etiologies leading to structural and functional changes in veins and valves and blood flow of the lower legs. As a consequence, a spectrum of clinical manifestations arise, ranging from symptoms of mild leg heaviness and achiness to debilitating pain, and signs of skin changes, such as eczema and hemosiderosis, to nonhealing, heavily draining ulcers. Triggers such as trauma to the skin are responsible for a large majority of these ulcers. The primary diagnostic test for venous reflux is ultrasound imaging. The hallmark of treatment of LEVD is compression, leg elevation, exercise, and wound management. Advanced healing technologies that provide an environment conducive to healing, should focus on reducing pain, necrotic debris, drainage, and odor, as well as preventing infection. LEVD that become chronic without evidence of healing over a 4 week period will best respond to a multidisciplinary wound care approach within a framework of patient-centered care, resulting in accurate diagnosis, decreased healing times, and improved healing rates.



### References

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