



Michigan Vascular Center (MVC) - Mission Statement

MVC exists to improve the quality of life for patients by providing the most comprehensive, innovative and best possible vascular care based on sound principles of treatment.

MVC exists to render that care with compassion, respect, & integrity; exercising the best possible thought and judgment for the patient's benefit.

A Heartfelt Thanks

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With the pressures exerted on physicians by third party demands, be they unfunded governmental mandates or insurance companies' newest and latest regulations, it is easy to lose sight of the special relationship we as physicians have toward each other in our efforts to provide the best care for patients. It is with this special relationship in mind—your trust in our ability to serve you in improving the vascular health of your patients—that we at the Michigan Vascular Center express our appreciation and heartfelt thanks to all of you for the confidence and trust you have placed in us to provide the best possible vascular care for your patients. It is a core value of our Center and the bedrock of our corporation.



When our group's founder, Dr. Albert Macksood, came home to Flint in 1963 as the first vascular surgeon in this community, he came with a rather simple philosophy—"cover the waterfront"—meaning provide all the vascular services the patients of any community would need so that they could be treated here and not have to travel elsewhere. This also meant getting the necessary manpower to provide not only the essential services but also new treatment modalities so that you and your patients always had the most up to date and in certain cases, the most exclusive, services.

"Cover the waterfront" was a simple way of stating that a pact was now created to provide the best possible vascular services available between those who followed in his footsteps and joined this group and the referring physicians and their patients from any community. This remains our commitment. This remains our mission.

Ultimately you, the referring physician, and your patients remain the judge of how well we carry out our mission. Let us know. We encourage your comments and suggestions along with those of your patients and thank you for taking the time to help us improve our services. Our commitment is resolute. In fact it was because of your suggestions that the subject of this journal, VeinSolutions, was created.

Let us continue the dialogue and while we are at it, we at the Michigan Vascular Center want to take this opportunity to extend a heartfelt thanks.

Sincerely,

≈ Carlo A. Dall'Olmo, M.D.



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VeinSolutions—A Center Dedicated to Vein Problems

Michigan Vascular Center has been treating varicose veins and other venous problems for over 40 years. In October of 2003 Michigan Vascular opened VeinSolutions, an office dedicated to providing comprehensive and exclusive care for patients with vein problems. Our aim is to provide patients with the most experienced, board certified vascular surgeons who use the latest technologies in the diagnosis and treatment of varicose and spider veins, venous insufficiency, and vascular birthmarks.

Michigan Vascular Center opened VeinSolutions to cater specifically to patients with vein problems. Our nurses and support staff are highly trained health care professionals with a special interest in vein care. Therefore, your patients receive the highest quality of care – not only from a clinical aspect – but also from a personal point of view. The principal physician staffing VeinSolutions for Michigan Vascular Center is Dr. Scott Garner. Every patient receives friendly, helpful, and prompt service. Our patient satisfaction surveys bear this out with continued high patient satisfaction ratings.



Free Consultation

In general, the first visit to our office is a free consultation with our board certified vascular surgeon who determines if there is any underlying problem, usually venous insufficiency. If a problem is suspected, a recommendation will be made for further evaluation, most often with a venous duplex and physician consultation. However if there is no clinical evidence of a venous problem, then no further work up is needed. If indicated, cosmetic treatment options will then be discussed with your patient.

Evaluation for Treatment Options

If clinical suspicion for venous insufficiency is present then most commonly a venous duplex is recommended to confirm or rule out any underlying venous problem. With the results in hand our physician will discuss clinical implications and treatment options with your patient. If venous insufficiency is present the appropriate treatment options will be presented to your patient, along with the risks and benefits of each treatment option. Most all treatments can be done in our office, and patient satisfaction is very high because of the comfort and convenience. Also, patients appreciate being able to return to normal activity soon after the procedure.

Venous Ablation

The venous ablation or 'Closure' procedure has proven to be an excellent alternative to vein stripping and ligation. The results are impressive. Dr. Garner has been performing venous ablation for over three years, and is among the most experienced physicians in the tri-state region.

VeinSolutions—A Center Dedicated to Vein Problems (Continued)

Comfort is a Key Element in Treatment

Patients express how comfortable they feel having their procedure in our office. A member of our staff will stay with the patient from admission to discharge. Prior to arrival at our office, the patient will take a mild anti-anxiety medication (usually Xanax) and are accompanied by a family member or friend to drive them to and from the office. Upon arrival, the patient will rest in a pre-warmed bed. The combination of medication, warmth, and relaxation contributes to the comfort of the patient and will ease in the performance of the procedure.

The procedures are well tolerated. Our patients are comfortable post-op and require minimal, if any, pain medication. Patients generally return to work in one to two days. However, if the procedure is more extensive recovery may take longer.

Cosmetic Options

Once the issue of venous insufficiency is resolved, your patient has a complete range of cosmetic treatments available to them. Injection sclerotherapy still remains the best treatment for spider veins of the legs. Laser therapy works very well for spider veins and rosacea on the face. Our staff thoroughly explains each procedure to the patient and insures that all questions are answered. If the treatment is cosmetic; and, therefore, not covered by insurance, we explain this before any treatment is performed. In that way, your patient can make an informed decision as to whether they wish to proceed.

Our Commitment

Our focus is to stay on the cutting edge of new treatments for all vein related problems. Because of this, we have made several changes at our VeinSolutions office in the 3 years since its inception. In addition to delivering excellent care, we also strive to give your patient a convenient, comfortable, and enjoyable experience. Having a dedicated staff and physician for vein patients has resulted in a satisfied and happy patient population. We plan to continue the tradition of excellent care that Michigan Vascular Center demands and provides.



≈ Sheila Linsenman, R.N., Nurse Manager



Venous Insufficiency and the Vascular Lab

Venous insufficiency has been evaluated by the Vascular Laboratory for over twenty-five years. The testing modalities have changed over time but the purpose of determining valvular competency as well as vein patency remains constant.

In the Venous system, if the valves are working properly “What goes up, should NOT come down.” Patients with

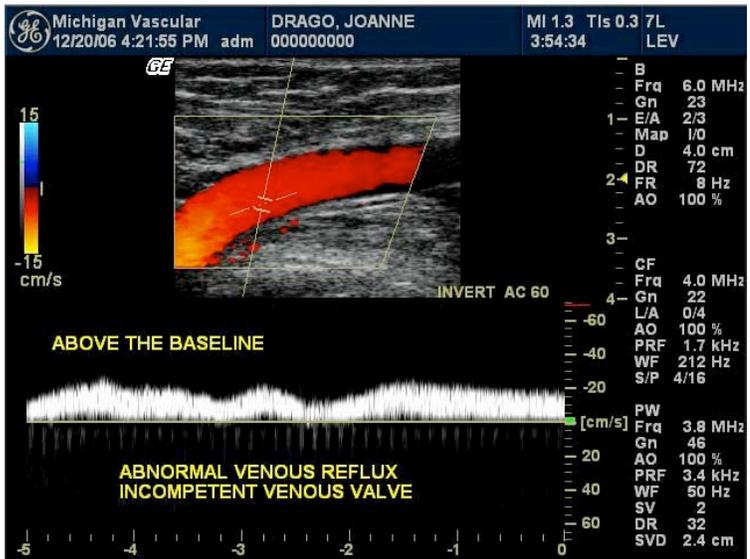
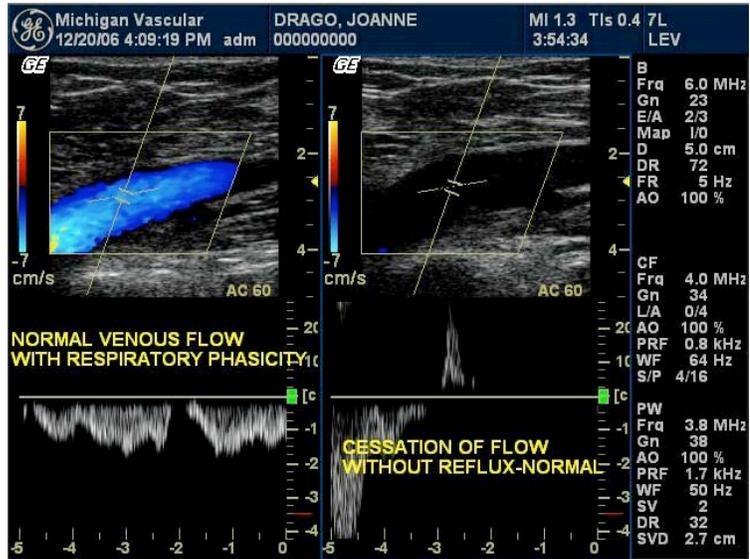
“WHAT GOES UP SHOULD NOT COME DOWN!”

varicosities, post-phlebotic syndrome, venous stasis, and chronic edema are evaluated for proper function of these valves in both the deep and superficial systems. When the function of a venous valve has been damaged the vein wall distends. This is due to the reflux of blood which

causes changes in the hydrostatic pressure and the larger volume of blood in the vein.

The extent of the incompetence or “reflux” and the source can be determined with a comprehensive *Duplex Ultrasound* exam.

The Vascular Lab plays an important role in the pre-operative and post-operative management of these patients.



≈ Joanne Drago, LPN, RVT

Therapies and Treatments for Venous Disease

Michigan Vascular Center has been treating venous problems for more than forty years. However, in order to provide continued excellence in vascular care, Michigan Vascular Center established VeinSolutions, an office dedicated to the care of venous problems. VeinSolutions provides a center which focuses exclusively on the diagnosis and treatment of all vein problems which include spider and varicose veins of the legs, trunk, and face; venous malformations and hemangiomas; and venous insufficiency resulting in dermatitis and ulcerations.

Venous insufficiency affects approximately 15-20% of the adult population. The clinical manifestations of venous insufficiency not only affect appearance, but cause symptoms in the lower extremities. Appearance manifestations cover a spectrum from the cosmetic issues of spider telangiectasias and varicose veins to the medical problems of venous dermatitis/ulceration. Symptoms of functional venous insufficiency are usually vague and mild, but are nevertheless bothersome, and include achy, fatigued, and restless legs; also common are symptoms of burning, pruritis, and lower extremity edema. Though these symptoms are perceived as mild by the patient, after correction of venous hypertension by minimally invasive procedures, a majority of patients note a significant improvement in how their legs feel with a complementary improvement in lifestyle.

**VENOUS
INSUFFICIENCY
AFFECTS
15-20%
OF THE ADULT
POPULATION**

At VeinSolutions a wide complement of therapeutic options are available allowing us to fashion the treatment plan which best meets your patient's particular clinical needs. Most all the treatments can be done in the comfort of our office, which patients have found to be convenient, a time saver, and most importantly tolerated well with immediate resumption of normal activities.

THE OFFICE

How it Works

Usually the patient's first visit to VeinSolutions is a free screening. The purpose of this physician visit is to determine if there is any possibility of underlying venous insufficiency. If no clinical evidence of insufficiency is present, then cosmetic treatment options will be discussed. However, if there is a question of venous insufficiency, then a recommendation for further work-up and evaluation will be made. Any testing and subsequent physician visits (even if done on the same day as the free screening) will be billed as part of a medical work-up to see if the symptoms are secondary to venous insufficiency. Subsequent evaluations, most treatments, and follow-up care can all be done at the same location.

Is this cosmetic? — Will my insurance cover the treatment?

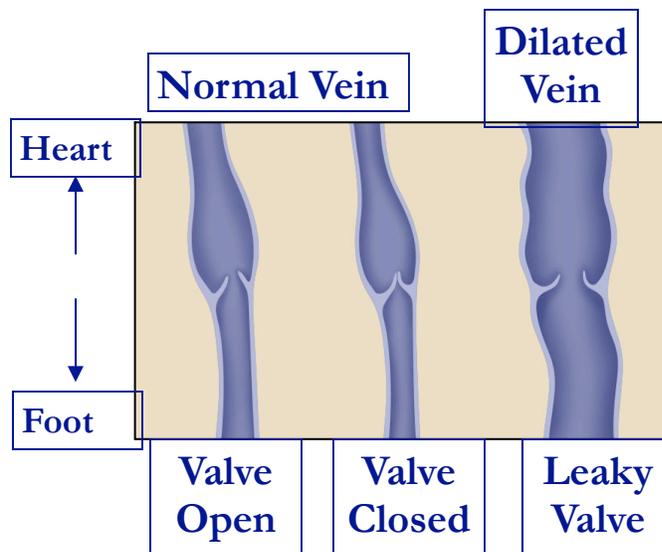
Venous insufficiency is a medical problem and the correction of this condition is an intervention which is covered by a patient's insurance in most circumstances. However, elimination of spider telangiectasias, reticular veins, or varicose veins is done to improve appearance problems; and is, therefore, cosmetic and not covered by most insurances. At VeinSolutions, time is taken to explain this to your patients. Before any intervention is undertaken, we provide your patient with a clear explanation of which treatments covered are medically necessary (covered by insurance), and which treatments are considered cosmetic. In addition, we will discuss the cost associated with each type of treatment. In this way, your patient can make an informed decision as to whether they will proceed with a treatment.

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Therapies and Treatments for Venous Disease (Continued)

VENOUS INSUFFICIENCY

The key issue when evaluating a patient with varicose/spider veins - with or without leg discomfort - is whether there is underlying venous insufficiency. Venous insufficiency arises from failure of the venous valves, resulting in an increase of hydrostatic pressure through-out the venous bed from gravitational force. For a patient with leg discomfort, dermatitis, or even ulceration it is imperative to evaluate if venous insufficiency is an etiology. Venous hypertension directly causes the signs and symptoms of vein problems. The mechanism for this is the increase in hydrostatic pressure which is transmitted through the venous network and into surrounding tissue resulting in aching, throbbing, and fatigue. Additionally, the increase in hydrostatic pressure in the more distal parts of the lower extremity, leads to transudation of serum causing increased interstitial fluid manifested as edema. Extra-vascular erythrocytes and leukocytes stimulate a chronic inflammatory process, mainly via leukocyte activation with degranulation, releasing toxic metabolites causing tissue damage and inflammation. This inflammation leads to symptoms of burning and pruritus. If there is venous insufficiency, then in many circumstances corrective intervention will result in significant improvement of leg symptoms, arrest the progression of venous dermatitis, and heal venous ulcers. From an appearance standpoint with varicose veins or spider telangiectasias, correction of underlying venous insufficiency will allow for better aesthetic outcomes and reduce the rate of recurrent veins.



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Therapies and Treatments for Venous Disease (Continued)

When evaluating venous insufficiency it is essential to differentiate between deep venous functional disease and superficial venous functional disease. Deep venous insufficiency involves valvular incompetence of the deep veins - namely the femoral, popliteal, tibial, and perforator veins. Superficial venous insufficiency most commonly entail the Great and Small Saphenous veins. The distinction between deep and superficial involvement is key in deciding the best treatment options. Except for incompetent perforating veins, there is no satisfactory intervention for deep venous insufficiency. However, superficial insufficiency can be treated usually with minimally invasive procedures, most commonly endovenous ablation of the incompetent vein, which in most circumstances can be done under local anesthesia in the convenience of an office setting.

The majority of patients present with either leg discomfort and/or unsightly veins. Less common symptoms are lower extremity dermatitis or venous ulceration.

CLINICAL MANIFESTATIONS OF VENOUS INSUFFICIENCY

Leg Discomfort

Lower extremity symptoms from venous problems are varied and general in their nature. The symptoms include aching, fatigued, throbbing legs with symptoms most noticeable after prolonged standing or sitting. Other common symptoms include burning, itching, swelling, and restless legs. If these symptoms are venous related, then venous insufficiency is a direct cause of these symptoms. Correction of venous insufficiency in many cases will significantly improve these symptoms.

Unsightly Veins

The spectrum of appearance problems range from dilated intradermal venules and veins (spider telangiectasias and reticular veins, respectively) to large ropey varicose veins. In general, larger varicose veins are caused by underlying venous insufficiency. Spider telangiectasias, reticular veins, and smaller varicosities arise from several etiological factors including genetic factors, hormonal influences (especially progesterone and estrogen), trauma, and age. When treating unsightly veins, it is essential to first treat any underlying venous insufficiency to assure the best results and to reduce the chance for recurrence.

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Therapies and Treatments for Venous Disease (Continued)

Venous Leg Ulcers

Longstanding venous hypertension – with its resulting abnormal venous hemodynamics, especially at the dermal level – in addition to the chronic inflammatory process which venous insufficiency induces, leads to lower extremity venous dermatitis and ulceration. These dermatologic changes usually occur in the distal lower extremity, most commonly in the medial malleol area, where hydrostatic forces are highest. These can be difficult and longstanding wounds to care for, with a significant recurrence rate even after the wounds heal. In some patients correction of the underlying venous hypertension will result in accelerated wound healing and a significant reduction in recurrence of venous ulcers.



Therapies — Treatments

The key to optimal treatment for venous problems, both symptoms and outward appearance, is to alleviate any underlying venous hypertension. Traditionally this was accomplished with stripping or ligation and division of the offending vein. Treating the underlying venous insufficiency is the key to relieving the pain, fatigue, restlessness, and other somatic symptoms. Once venous insufficiency is corrected, then treatment of the appearance problems will be more effective and have a significant reduction in recurrence rates.



Endovenous ablation is spearheading significant changes in the treatment of venous insufficiency

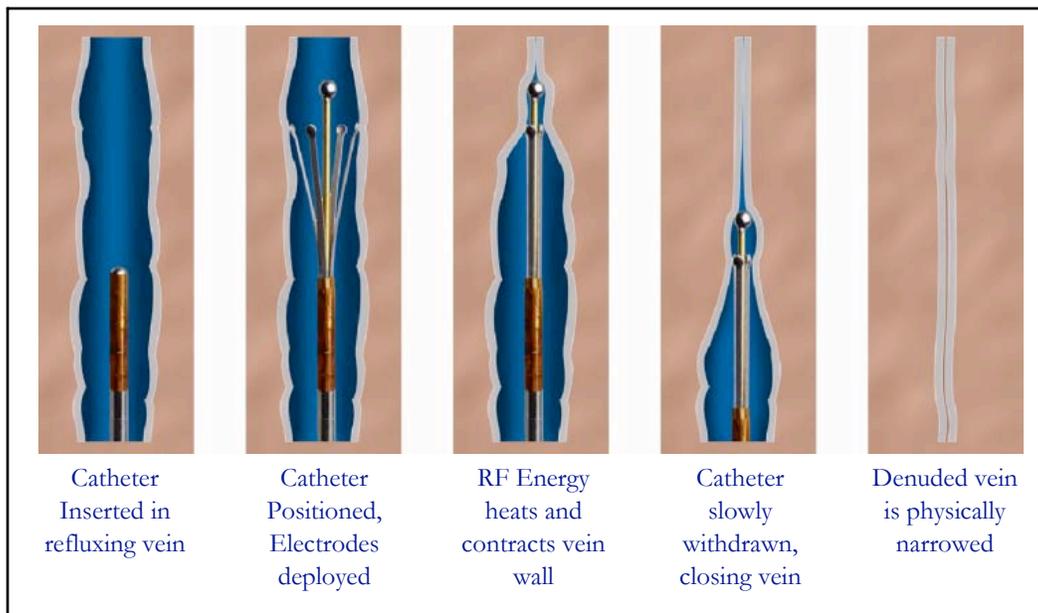
Significant change has occurred in the last five years in the treatment of venous insufficiency and large varicose veins. Endovenous ablation of insufficient veins has spearheaded this change. The procedures are minimally invasive, usually require only local anesthesia, and are performed in the comfort and convenience of our office. In most instances, patients return immediately to normal light activity with little or no time from work.

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Therapies and Treatments for Venous Disease (Continued)

Endovenous Ablation

Endovenous ablation entails percutaneous placement of a catheter into the incompetent vein - usually the Great Saphenous, Small Saphenous, or a perforator. Energy is delivered using either radiofrequency or laser which injures the target vein wall, resulting in fibrotic obliteration of the insufficient vein causing venous return to be rerouted through the remaining competent, abundant venous network. Endovenous ablation is minimally invasive, and is generally done under local anesthesia in an office setting. We at VeinSolutions introduced endovenous ablation to this area and have the most extensive experience with this procedure.



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“The new venous closure technique offers the promise of a true ‘paradigm shift’ with respect to the treatment of some cases of varicose veins.”

Professor Peter Charlesworth, Auckland, New Zealand
Evoles Study 04-06-04

Therapies and Treatments for Venous Disease (Continued)

Ambulatory Phlebectomy

In most instances, ambulatory phlebectomy is the preferred therapeutic option for the treatment of larger varicose veins. In general, phlebectomies are done under local anesthesia, in an office setting, and requires only a minute stab incision small enough to close with a steri-strip. For larger veins, ambulatory phlebectomies afford improved aesthetics and even less discomfort compared with sclerotherapy. Sclerotherapy of larger veins is predisposed to hyperpigmentation and superficial phlebitis. Also, it has been shown that recurrence rates are less after two years with phlebectomies compared with sclerotherapy.

The illustration below reveals an excellent outcome post ambulatory phlebectomy.



Sclerotherapy

Sclerotherapy is an effective treatment modality for spider telangiectasias, reticular veins, and smaller varicose veins. Sclerotherapy's mechanism of action involves irreversible chemical injury to the endothelium with subsequent fibrosis of the vein. The most common sclerosing agents are hypertonic saline and sodium tetradecyl sulfate. Here at VeinSolutions sodium tetradecyl sulfate is the sclerosing agent of choice. If clinically warranted, hypertonic saline will be used.

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Therapies and Treatments for Venous Disease (Continued)

Laser Treatment

Cutaneous laser therapy (as opposed to endovenous laser therapy) of spider telangiectasias has been available now for approximately twenty years. The mechanism of action involves hemoglobin's absorption of specific wavelengths of light resulting in energy transferred as heat - damaging the endothelium – with subsequent fibrosis. In general, sclerotherapy yields superior results for typical spider veins of the lower extremity. Laser treatment is best used for very tiny spider veins or telangiectatic matting (fine red telangiectasias resulting from sclerotherapy or other trauma). Excellent results are obtained with cutaneous laser therapy for facial spider veins, rosacea, cherry hemangiomas, and port-wine stains.

CONCLUSION

VeinSolutions has allowed Michigan Vascular Center to provide quality of treatment to your patients with vein problems by offering the full range of diagnostic and treatment options. In addition to providing state of the art venous care, the doctors and staff at VeinSolutions strive to give your patients an enjoyable and convenient office experience, delivering timely, cordial, and professional service and care to your patients. If you have any questions, or would like to schedule an evaluation for your patients, please call our office at (810) 232-3363 or (866) 301-8346

≈ Scott A. Garner, M.D.



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MVC Core Values

We are a professional organization –a team– working equally in a common cause: To provide the best possible vascular care for the physicians, patients, and institutions of our community.

We share a commitment to excellence in the vascular care of patients through the pursuit of knowledge, communication, innovation, and research.

We value our employees and incorporate them into our team.

We commit to each other to honor & pursue these values.



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