



# Specialist VeinCare

Thank you for requesting this informative booklet about the treatment of varicose disease. Included is information on varicose vein disease, a comparison of treatment options, estimates of costs and contact details for finding out more.

## DR. Ivor Berman - Biography

Ivor Berman graduated from Medical School in 1988. In the years that followed, he gained vital experience in hospitals while also working as a General Practitioner in Canada and Australia. In 1998, Ivor completed his Radiology training at the Alfred hospital in Melbourne, which was followed by fellowships the same hospital and also in Cincinnati, USA. Ivor has held a number of well-regarded appointments in Radiology since completing his training. He is Unit head of the Casey Hospital Radiology Department and is presently sharing his knowledge with young peers as a Radiology Examiner for the RANZCR.

Ivor is also a qualified and practicing Phlebologist and is passionate about combining his interests. He concurrently specializes in Sports Medicine and Vein Care in Glen Waverley.

### Qualifications

Graduated from Medical School 1988 (MBCHB) South Africa

Radiologist: Fellow of the Royal Australasian and New Zealand College of Radiology (FRANZCR)

Master of Medicine (Radiology) – Examination component.

Phlebologist: Fellow the Australasian College of Phlebology (FACP)

### Memberships

- Royal Australasian and New Zealand College of Radiology
- Australasian College of Phlebology
- American College of Phlebology
- Australasian Society of Cosmetic Medicine



# Introduction to Venous Disease

## How do veins work?

Veins carry blood back from the body's periphery to the heart and lungs. They have many small valves which prevent the backflow of blood and are particularly important when the blood must travel up the legs against the force of gravity. If the valves are weak or damaged, blood can back up and pool in your veins. This causes the veins to swell, and can lead to varicose veins. Varicose veins are enlarged veins, or blood vessels, close to the skin's surface.

## What are varicose and spider veins?

We have two kinds of veins: surface and deep. These are connected in the thigh and calf through veins called perforators. Varicose veins occur most commonly in the leg where most of the circulation is through the deep veins. Any vein may become varicose, but they mostly occur in the lower limbs due to the pressure caused by standing and walking.

- "Varicose veins" are large surface veins that bulge above the skin surface
- "Reticular veins" are smaller blue veins that do not bulge.
- "Spider veins" or "telangiectasia" are tiny, short, and unconnected or spidery branching vessels.

Varicose disease is common, affecting an estimated 1 in 22 people, and 41% of women by the time they reach 50 (NHIS 95). While the cause of varicose veins is mostly unknown, there are a number of factors that can predispose an individual to developing them.

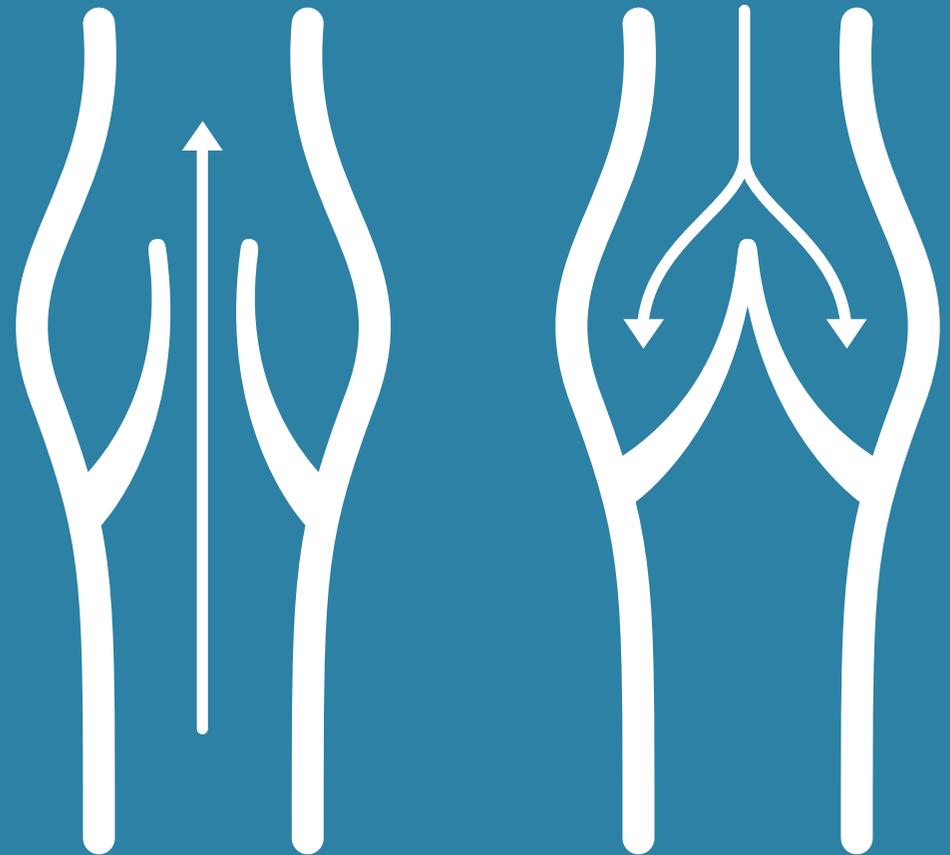
However some individuals may have all of these factors and no varicose veins and others may have no factors and still develop the condition.

- family history
- increasing age
- being female
- prolonged standing,
- smoking
- pregnancy may also precipitate varicose vein formation

## What are the clinical problems?

Varicose veins are not merely a cosmetic concern, and have many associated clinical problems. Common symptoms can occur even with small veins, and include:

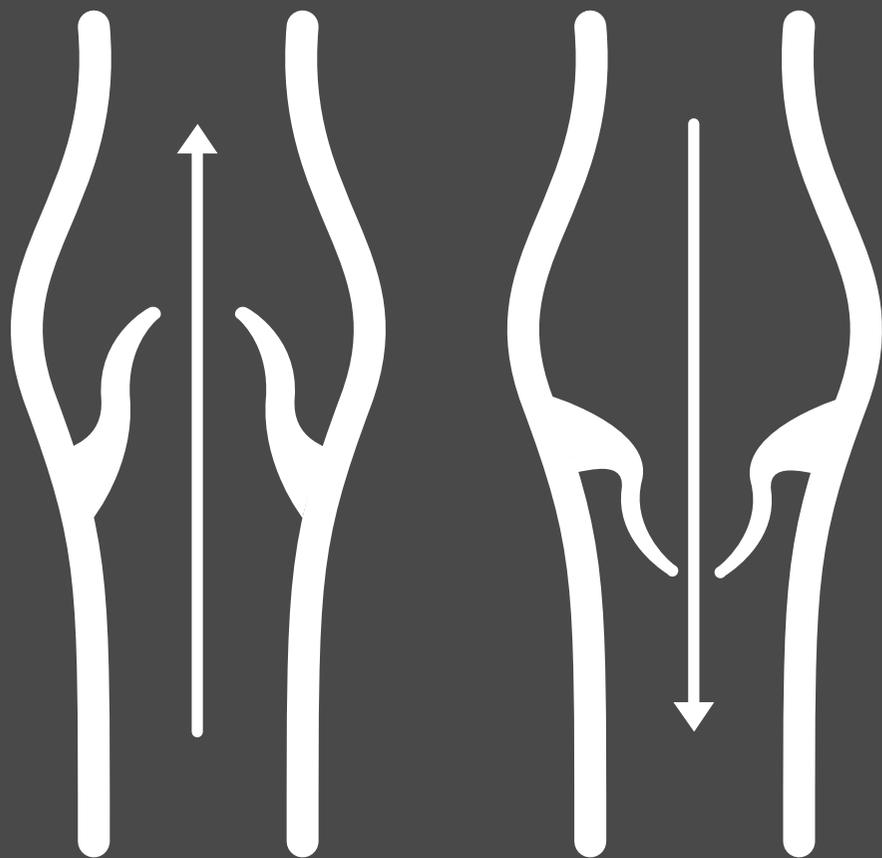
## Venous valves prevent reverse blood flow.



Blood flowing to heart.

Healthy valve prevents reverse blood flow.

## Varicose vein valves.



Blood flowing to heart.

Reverse blood flow due to damaged valve.

1. Discomfort, throbbing and aching
2. Fatigue/tiredness in the legs
3. Heaviness, cramps, burning or itching
4. Restless legs.

Clinical Complications of varicose vein disease include:

5. Swelling due to poor circulation
6. Bleeding and blood clots
7. Pigmentation and damage to the skin and fat (lipodermatosclerosis)
8. Ulceration

## Treatment

Treatment of Varicose veins has become far less invasive and disruptive since the development of better alternatives to open surgery. Many patients and doctors are not yet aware of the excellent toleration and safety of modern treatment methods.

- **Endovenous laser ablation (EVLA)** is an outpatient procedure and is very well suited to selected patients with large refluxing veins such as saphenous.
- **Ultrasound-guided sclerotherapy (UGS)** is used for small to medium sized refluxing veins, such as saphenous, and is also conducted as an outpatient procedure.
- **Microsclerotherapy** is a highly effective treatment for spider veins.
- **Ambulatory phlebectomy** refers to excision of large surface veins through small incisions (1-2mm), done under local anaesthetic as an outpatient procedure.
- **Conservative treatment** with compression stockings may sometimes be the best option.
- **Surgical ligation** is effective. However it requires in-patient treatment in hospital, and general anaesthesia, scars, protracted recovery and longer time off work.

Choosing the optimal treatment for you is dependent on a number of factors

- Where disease is located
- The severity of the disease
- Your age
- Associated medical conditions

The most effective treatment may utilise one method or multiple in combination. The relative risks and benefits of these procedures should be discussed with a medical practitioner experienced in treating venous disease.

# Comparison of Treatments

Procedure	Ultrasound Guided Sclerotherapy	Microsclerotherapy	Endovenous Laser Ablation	Ambulatory Phlebectomy	Surgery - Ligation and Stripping	Conservative Treatment
Indications	Small to medium veins	Very small to small veins, spider veins	Large veins	Most veins including very large veins	Large veins or extensive disease	All size veins
Type of Procedure	Outpatient, approx 20 m	Outpatient, approx 20 min	Outpatient, approx 45-60 min	Outpatient <60 min	Inpatient under General Anaesthetic, variable length	Lifestyle changes, compression stocking use
Recovery	Walk in-walk out	Walk in-walk out	Activities resume subsequent day	Activities resume subsequent day	Lengthy rehabilitation	None
Number of Sessions	Usually 1, occasionally 2	1 +	1	1	1	Follow up determined by patient
Complications	Very uncommon	Very uncommon	Very uncommon	Very Uncommon	Comparatively higher, including Anaesthetic and surgical complications	None
Cost	Medium	Low	High	Medium	High (2000 plus hospital/ anaesthetic costs, 500-1000 rebate)	Low (consultation fees and stockings)

## Endovenous Laser Ablation (EVLA)

EVLA uses ultrasound guidance to direct a laser probe to close veins off through fibrotic formation. The procedure is completed in subsequent sessions one to two weeks later.

### Advantages and Disadvantages of Endovenous Laser Ablation

ELVA is effective in treating larger veins, such as the great and small saphenous, and the anterior accessory vein. Procedures involving the small saphenous vein have been shown more effective than traditional techniques. Practice of EVLA began more than 10 years ago in Europe and has been in use in Australia since the early 1990s. EVLA was developed as a far less invasive alternative to surgical ligation and stripping, which involves general anaesthetic and a long hospital stay.

Clinical results from EVLA have been excellent in comparison with general surgery, with a similar success rate, shorter recovery time, and lower risk of complications (See references below). Patients undergoing ELVA usually experience only mild soreness and bruising at the site. Following treatment, many patients can walk out of the clinic and continue daily activities. While the small saphenous vein often responds better to ELVA than Sclerotherapy, ELVA can be a more expensive treatment. EVLA is not currently recommended for spider vein treatment. EVLA is provided by Specialist Vein Care and provides similar outcomes and a better complication and rehabilitation profile to traditional surgical methods.

## Ultrasound-guided Sclerotherapy (UGS)

UGS is performed following a local anaesthetic by Duplex Ultrasound Guidance. This approximately twenty minute procedure involves minimal discomfort and is completed as an outpatient in your doctor's clinic. Occasionally, two sessions are required to completely seal off a vein, with subsequent sessions usually organised after a two to six week interval. Compression stockings are then worn for up to two weeks to assist with recovery and prevention of deep vein thrombosis.

### Advantages and Disadvantages of Ultrasound Guided Sclerotherapy

UGS is a well established clinical procedure with better recovery times and fewer side effects, and has similar success rates to surgery. The Duplex Ultrasound allows exact precision and is particularly effective at treating small to medium sized veins, which may include the great and small saphenous, the anterior accessory vein and their tributaries.

The two products that we use are Polidocanol ®(Aethoxysklerol) or Fibrovein® (Sodium tetradecyl sulphate).

Occasionally several treatment sessions are required to effectively treat diseased veins and the number of sessions depends on how many veins across both legs require treatment.

UGS is less suited for larger veins, which are more effectively treated with Endovenous Laser

Ablation, Ambulatory Phlebectomy or surgery. The side effects of UGS are usually quite manageable. Most people are treated in the outpatient clinic and are able to return to work and normal activities the same or following day. Complications are rare, with most patients only experiencing local tenderness and swelling for a short time after the procedure. However, there is a small risk of superficial skin pigmentation and deep vein thrombosis.

## Microsclerotherapy

Microsclerotherapy involves a similar procedure to Sclerotherapy, using a very fine needle to inject the medicine directly into small surface veins, causing them to fibrose and close. Microsclerotherapy is very effective at treating small to very small veins such as fine spider veins. Sessions normally take 20 minutes each, with multiple sessions sometimes required. Compression stockings are used after the procedure to enhance healing and protect against complications.

### Advantages and Disadvantages of Microsclerotherapy

Microsclerotherapy is a procedure selectively designed to treat small surface varicose and spider veins, and is inappropriate for treating larger vein disease. Like Ultrasound Guided Sclerotherapy, the procedure is done as an outpatient, with most patients able to continue their everyday activities almost immediately. Most patients can expect at least a 70% improvement in appearance, however up to 3 months may be required before full benefits are attained. Common side effects include local tenderness and swelling directly after the procedure, and complications such as deep vein thrombosis are very rare. Microsclerotherapy patient outcomes are particularly good for spider vein treatment

## Ambulatory Phlebectomy and Vein Ligation

Ambulatory Phlebectomy (AP) is an outpatient surgical procedure, and is a viable treatment for veins of most sizes. After applying local anaesthetic, a small incision is made in the skin and a specially designed phlebectomy hook is inserted to remove part or whole of the diseased vein. Sometimes the vein will be tied off with suture material, leaving the vein inside, and sometimes multiple small incisions will be required to extract the vein. There is minimal bleeding which is controlled by local pressure. AP is often used in collaboration with Ultrasound Guided Sclerotherapy and endovenous laser ablation.

### Advantages and Disadvantages of Ultrasound Guided Sclerotherapy

As Ambulatory Phlebectomy can be used to treat almost any leg vein including very large ones, it is often the procedure recommended if other techniques such as Sclerotherapy and Endovenous Laser Ablation are not suitable. AP has been in use for millennia, and was originally described by Cornelius Selsus (56BC-30AD). AP is a slightly more invasive procedure than Sclerotherapy

or Laser Ablation, however AP is also conducted as an outpatient procedure, with most patients returning to normal activities the day after treatment. After the operation most patients experience some bruising, and mild to moderate pain, however more serious complications such as deep vein thrombosis are very rare.

## Conservative treatment

The best option in some patients with minor vein disease may be to use compression stockings and to manage symptom triggers. Conservative management can include:

- exercise and walking
- weight loss
- elevating limbs
- avoidance of lengthy periods of sitting or standing.

Compression bandaging may be required for acute thrombosis or for active ulceration. It is usually left in place for weekly intervals until the problems resolve. Your doctor will provide you with the information to decide which treatment is best.

Conservative treatment is inexpensive compared to the cost involved in surgery, ligation and stripping.

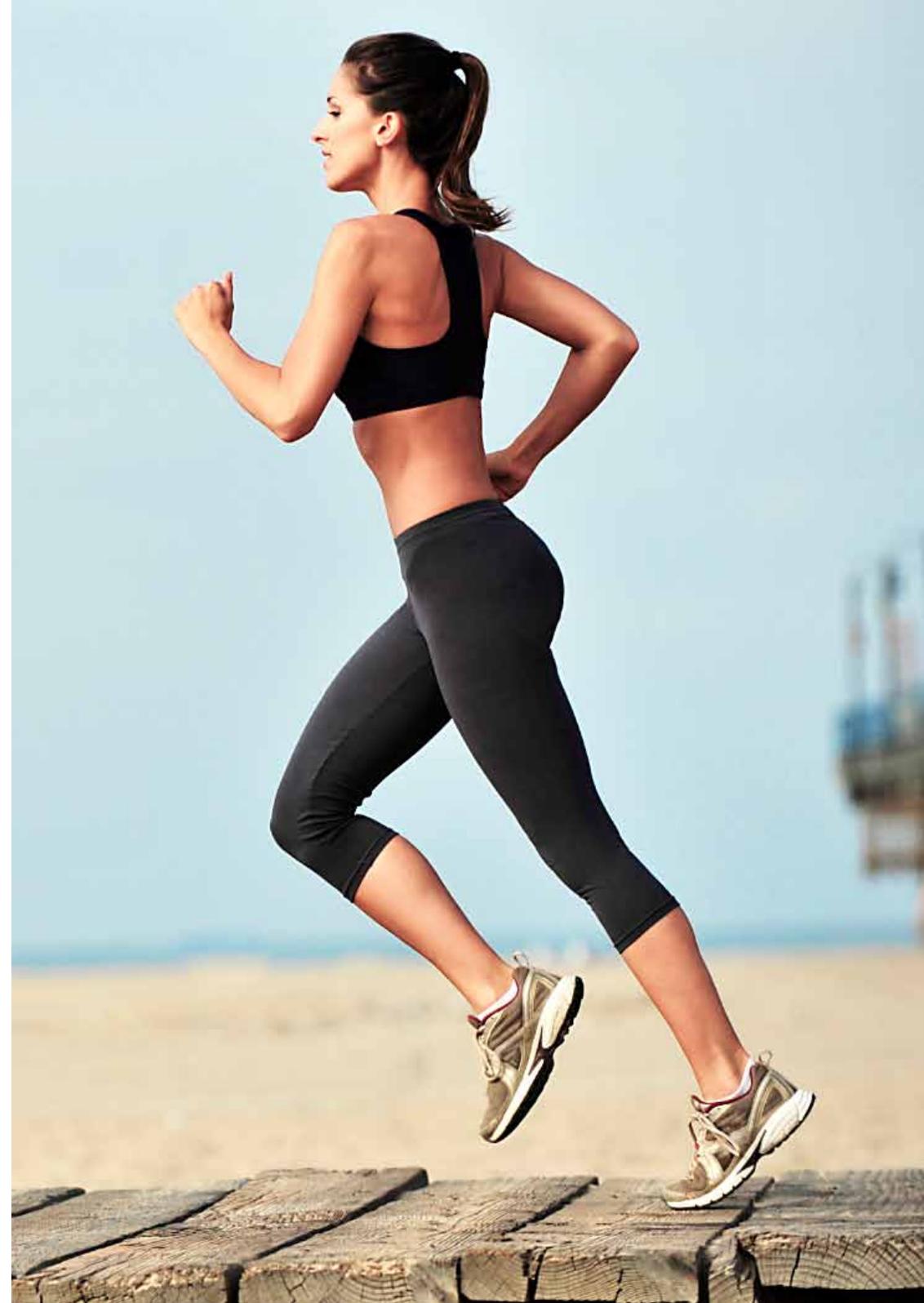
## Surgery - ligation and stripping

Traditional surgical options for the treatment of varicose veins are performed in a hospital setting, with the patient under general anaesthetic and requiring a long hospital stay.

[Incisions are made and veins can be ligated (“tied off”) or stripped by inserting a pin with a hook, which is then pulled out to remove the vein.]

### Advantages and Disadvantages of surgery

Surgery is an option for very large veins which are unsuitable for treatment with less invasive methods and is generally effective. Patients will require a lengthy hospital admission and time off work, depending on the invasiveness of the particular operation. The surgical option commonly results in bruising, tenderness and swelling. Complications include deep vein thrombosis, heart and breathing problems as a result of the anaesthetic, wound infection, lymphatic and nerve damage around the treated vein. Complication rates increase and are more likely with longer hospital stays. Your doctor will be able to assess whether surgery is advisable and refer you to a vascular surgeon.



# Frequently Asked Questions

## Does the injection procedure hurt?

The amount of discomfort will vary with the individual. The needles used are extremely fine (similar to acupuncture needles) and many are hardly felt at all. The injected solution can sting slightly for short periods of time. If EVLA is used then minimal discomfort is experienced, as it is performed under local anaesthetic.

## Does the vein treatment interfere with my work or home duties?

These treatments are walk-in, walk-out procedures. Most treatments take about 30 minutes to perform. Your daily routine should not be disrupted following treatment. Heavy physical work or exercise should be avoided for approximately two weeks following the procedure.

## What if I do not treat my varicose veins?

Vein disease left untreated will inevitably get worse with time. Untreated varicose veins will likely result in symptoms such as leg tiredness, heaviness, aching, throbbing, restlessness, tingling, itching, numbness and swelling. More serious complications such as phlebitis, blood clots, dermatitis and vein ulcers can also develop.

## Do I need these veins?

Varicose veins and spider veins are not functional. Once veins become abnormal our body finds alternative pathways with healthy veins to carry blood. The circulation does not "miss" varicose veins; in fact it improves without them.

## Will the treated veins come back?

Treated correctly the treated veins do not come back, as the body reabsorbs the scar tissue. However, new veins may appear with time. How quickly and how many appear is impossible to predict. Hereditary links seem to have a large role to play. Other factors such as starting the pill, becoming pregnant, or occupations with prolonged standing can also affect the development of abnormal veins.

## What about topical skin lasers for spider vein treatment?

The use of laser light to the skin as a treatment for large varicose veins has thus far been disappointing despite EVLA being useful for this condition. The currently available lasers can be very useful in treating small cosmetic facial veins, but have been significantly less effective on leg veins when compared to expert sclerotherapy.

## Should I wait until I have completed my family?

If one has existing varicose veins, these tend to become significantly worse as pregnancy develops. Phlebologists agree that treatment for varicose veins is best performed before or between pregnancies. When compared to expert sclerotherapy.

## How much do vein treatments cost?

The number of treatments required to provide a significant improvement in your condition will be determined at your first consultation. Rebates are available through Medicare excluding only the smallest spider veins (<2.5mm diameter), with the Medicare Safety Net reimbursing eligible patients 80% of out of pocket medical expenses once a threshold has been reached. Concessions may also be available for pensioners and Healthcare Card holders. For more information, consult your doctor or go to [www.hic.gov.au](http://www.hic.gov.au).

## About Specialist Veincare

Specialist Vein Care provides state of the art techniques for the diagnosis and treatment of venous disease.

These procedures are:

- Minimally invasive
- Extremely effective
- Involve little or no pain
- Without downtime
- Minimal risk

Our procedures offer an effective alternative to the traditional surgical methods of vein ligation and stripping. We utilise the accuracy of the Duplex Ultrasound Examination to determine the best management option and the optimal treatment to maximise all our patient outcomes.

Our practice incorporates a Vascular Laboratory: Independent Vascular Ultrasound. This combines the use of the very best ultrasound machines with dedicated vascular sonographers. These sonographers have worked for years performing venous and arterial scans in a phlebology environment and so have a deep understanding of what is required to select the best treatment option.

### Contact:

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