



VEINDOCTORS GROUP

Modern and minimally invasive treatment for:

- Spider Veins
- Varicose Veins
- Venous Ulcers
- Pelvic Veins – Pelvic Congestion
& Varicoceles
- Haemorrhoidal Veins
- Swollen Legs – Lipoedema &
Lymphoedema

Please read this document carefully
and clarify any concerns prior to treatment.

PHONE: 1800 4 VEINS or 1800 483 467
Email: info@veindoctorsgroup.com.au

www.veindoctorsgroup.com.au





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ADVANTAGES OF TREATMENT WITH VEIN DOCTORS GROUP:

- ✓ Outpatient and hospital admission available
- ✓ Anaesthetic options available for complicated cases or needle phobias (private health insurance rebates apply)
- ✓ Walk-in, walk-out procedure
- ✓ Return to normal duties
- ✓ High safety profile and low complication rates
- ✓ No surgical scarring
- ✓ High patient satisfaction

Treatments at Vein Doctors Group are performed by doctors who specialise in vein treatments. Vein Doctors Group offers treatments by doctors who have completed advanced training and doctors who are Fellows of the Australasian College of Phlebology.

What is **PHLEBOLOGY?**

Phlebology is the branch of medical science concerned with the anatomy and diseases of the veins, lymphatics and lipoedema (diseased fat of the limbs) and the subsequent diagnosis and treatment of these diseases.

This includes:

- Spider veins
- Varicose veins
- Venous ulcers
- Pelvic veins - pelvic congestion & varicoceles
- Haemorrhoidal veins
- Lipoedema (conservative management & surgical management)
- Lymphatics

The Phlebologist is an expert in managing veins and swollen legs.

It is advisable your treating doctor is an expert in the field of Phlebology.

For more information, please visit the Australasian College of Phlebology website at www.phlebology.com.au

TYPES OF VEINS

Venous disease is very common and affects about 30% of the population. There are three common types which are frequently seen in combination.

1. **'Spider' veins** are the finest veins that appear on the surface and can have a feather-like appearance. They are also known as 'telangiectasias' and are usually fed by larger 'reticular veins'.
2. **'Reticular' veins** are under the skin and often referred to as 'feeder veins'. They are smaller branches that lead to larger veins. They can appear larger than spider veins and flatter and less twisted than varicose veins.
3. **'Varicose' veins** are the largest and bulge above the skin surface due to a weakness in the vein wall. Symptoms associated with varicose veins include heaviness, burning, aching, stinging, throbbing, swollen ankles, restless legs and leg cramps. The presence of a skin rash, small blue veins on the feet, skin discolouration, ulcers and scarring is usually due to advancing vein problems. Treating the abnormal veins will significantly improve symptoms for majority of patients.



Spider veins



Varicose veins

WHAT CAUSES ABNORMAL VEINS?

A definitive cause is unknown, however a strong family history suggests that some people inherit veins that are more likely to deteriorate. In women, oestrogen may play a role as occurs in the onset of puberty, pregnancy and through oral contraceptive use which may give rise to vein abnormalities. In pregnancy, the enlarged uterus can restrict blood flow from the legs and promote the development of varicose veins. Spider veins and varicose veins are also associated with obesity. Occupations involving prolonged standing tend to increase the likelihood of vein development. Bone fractures and soft tissue trauma can cause localized vein abnormalities. Crossing your legs does not cause varicose veins.

WHAT IS THE MECHANISM BY WHICH VEINS DEVELOP?

Blood in leg veins normally travels upwards to the heart. Due to gravity, blood tries to flow back down towards the feet. However, normal veins have valves, which close to prevent abnormal flow towards the feet. It is the breakdown of the valves that leads to abnormal flow, which in turn leads to increased pressure in the vein. The increased pressure eventually causes the vein wall to expand and bulge, producing a varicose vein. Varicose veins serve no useful function in the body's circulation. Our body can establish alternative pathways to bypass the abnormal varicose veins. When varicose veins are closed-down the circulatory system improves, as do many of the symptoms. It is important to understand that varicose veins can be a progressive condition and that totally new veins can develop with time. Maintenance treatment is likely for most patients.

CAN VEIN PROBLEMS BE PREVENTED?

If you are prone to vein problems, it is advisable to pursue a healthy diet and lifestyle and to maintain normal weight through regular exercise to minimize the likelihood of further problems. Wearing specialized venous support stockings may ease symptoms and slow the progression of abnormal veins, however no specific preventative treatment exists.

WHAT TO EXPECT ON YOUR FIRST VISIT?

At your first appointment, the doctor will carefully assess your medical history and examine the areas of concern. This is usually followed by a Doppler investigation, which uses sound waves to determine the presence of vein abnormalities hidden beneath the skin.

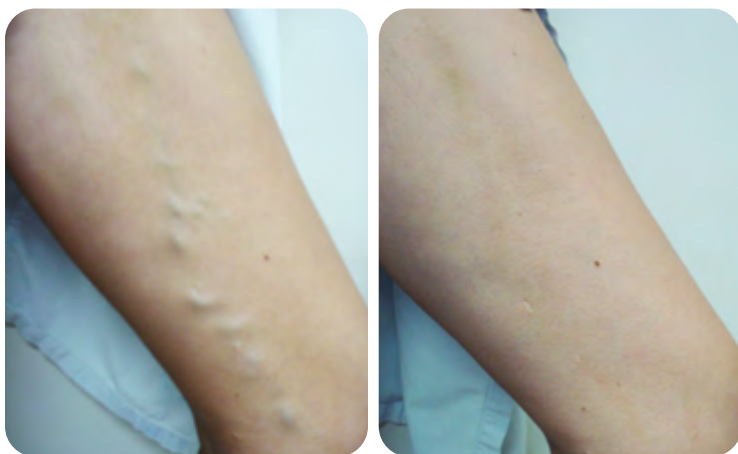
If these are present then a duplex ultrasound scan (specialised equipment similar to that of a pregnancy ultrasound) will be performed so that the exact nature of the abnormality can be determined with great accuracy. Our expert sonographers will map your veins and work with our Doctors.

A discussion will then follow to explain the findings and the procedure method that will be most appropriate to treat your veins. Detailed information will be discussed and provided in written form for better understanding.

Ample time is allocated for this consultation and assessment, so please do not hesitate to ask questions at any time.

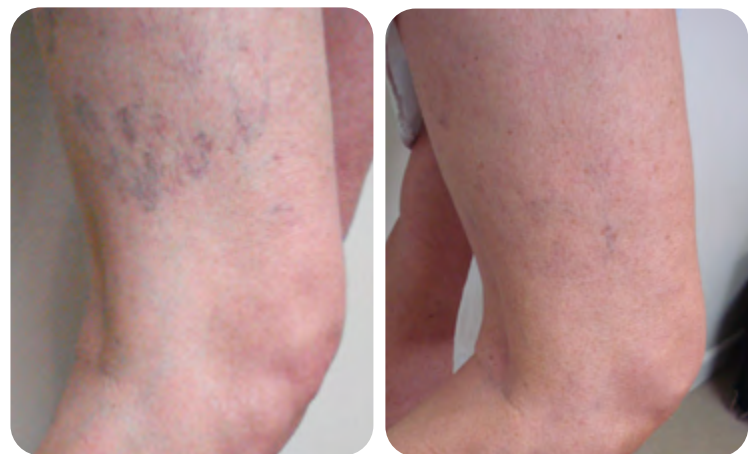


VEIN DOCTORS PATIENT RESULTS



BEFORE

AFTER



BEFORE

AFTER

In trained hands, modern varicose vein treatment has become a superior procedure to surgical stripping.

For more information refer to the NICE and European Guidelines for treatment of varicose veins: <https://www.nice.org.uk/guidance/cg168/chapter/Key-priorities-for-implementation>

HOW DO MODERN, MINIMALLY-INVASIVE TREATMENTS WORK?

It is generally well known that spider veins are being successfully treated with injection Sclerotherapy. However in the past, surgery/ stripping was the only method for the treatment of varicose veins. Time has proven that varicose vein surgery is plagued with a higher incidence of complications when compared to the newer non-surgical treatment methods.

At Vein Doctors Group, the following modern, minimally-invasive treatment methods are performed under ultrasound guidance:

- **INJECTION MICROSCLEROTHERAPY** - reserved for the treatment of small veins including unsightly spider veins and small reticular veins. This treatment of small veins is performed using direct vision (eyes – not ultrasound) and is typically only performed once the larger, underlying veins are treated using one of the ultrasound guided techniques listed below.

This method requires the doctor to use an extremely fine needle to inject a solution called sclerosant directly into unwanted abnormal veins. This creates a change in the vein lining causing the vein wall to collapse and subsequently the collapsed vein disappears gradually as the body absorbs it.

- **ULTRASOUND GUIDED SCLEROTHERAPY** - reserved for treatment of small to medium sized veins including hidden and bulging varicose veins. Ultrasound guided sclerotherapy requires the assistance of ultrasound technology to guide the precise placement of the injections into the abnormal veins, hidden below the skin. The sclerosant solution causes a change in the vein lining that leads the veins to collapse and the body will gradually absorb the vein.

Numerous injections may be required and can be associated with a slight burning sensation that usually only lasts for a few minutes. The sclerosant solution becomes diluted within a short distance from the injection site and therefore is unlikely to damage normal veins. The appearance of the treated veins rapidly improves over a few weeks with continued improvement still occurring for about three months and beyond.

Unlike surgery there is no need for hospitalisation or an anaesthetic. There is no surgical scarring and virtually no downtime. Most patients with varicose veins are suitable for UGS. Our doctor will determine your individual suitability during the assessment. Prior to treatment, a duplex ultrasound scan is performed to establish and map out the exact nature of the vein problem.

- **ULTRASOUND GUIDED FOAM SCLEROTHERAPY** – a medical detergent designed to be used in conjunction with other modalities of treatment to ensure the best outcomes by shrivelling up abnormal varicose veins. Ultrasound guided sclerotherapy using foam is much the same as using the solution, outlined above. This procedure requires the assistance of ultrasound technology to guide the precise placement of the injections of the sclerosant foam into the abnormal veins, hidden below the skin. The sclerosant foam causes a change in the vein lining that leads the veins to collapse and the body will gradually absorb the vein.

The detergent sclerosant solution is converted into foam with the addition of a small amount of air. The use of foam has proved to be advantageous in patients with varicose veins. A meeting of European specialists (2003) concluded "Foam Sclerotherapy... is a powerful tool in experienced hands and in general more powerful than conventional sclerosant solution". It was stated at the 2003 UIP World Congress meeting that the use of foam "marked a new era in treatment of primary venous disease with the advent and universal acceptance of Foam Sclerotherapy".

Published studies from Australia and New Zealand support the safety and efficacy of foamed sclerosants. The Australasian College of Phlebology in (2004) has developed guidelines for the use of both sclerosant solution and foam. The Therapeutics and Goods Administration (TGA) have approved the use of sclerosant solution for clinical use in Australia several years ago. However, this approval was granted before Foam Sclerotherapy was introduced and properly evaluated. Applications have been made to

the TGA for the use of foam but this approval process takes time. Until then, the use of foam does not have formal TGA approval. However, foam can be used as an "off label" product provided consent has been obtained and if there is a benefit to the patient.

Should you have varicose veins then using foam is now considered a more effective option.

- **ULTRASOUND GUIDED ENDOVENOUS LASER ABLATION AND RADIOFREQUENCY ABLATION** is reserved for treatment of large hidden veins that in the past would have required surgical stripping. Endovenous laser ablation and radiofrequency ablation are the latest methods for the treatment of major veins previously treated by stripping surgery under general anaesthetic. These methods involves the passing of a fibre into the abnormal vein via a tiny incision using ultrasound guidance. The vein is then numbed with local anaesthetic. The laser is then activated as the fiber is slowly removed. The heat energy creates a change in the vein lining and wall, which then leads to the absorption of the vein. The procedure involves minimal discomfort. The published success of these treatments is between 95-98% with far fewer complications compared to surgery.

- **ULTRASOUND GUIDED MEDICAL SUPERGLUE** (cyanoacrylate) – a medical glue designed to be used in conjunction with other modalities of treatment to ensure the best outcomes for technically more demanding feeding veins.

This is a new modality used to close more difficult feeding veins under ultrasound guidance. It is generally accepted by experienced Phlebologists that large volumes of medical super glue should be avoided for the treatment of straight forward truncal veins where endovenous laser ablation and radiofrequency ablation is effective. Large volumes of super glue have a higher chance of causing inflammation as well as hypersensitivity reactions. For veins that are resistant to ultrasound guided sclerotherapy and endovenous ablation, small volumes (0.1mL injection at a time) is very effective as a one-off treatment, as opposed to multiple sessions of foam sclerotherapy.

To achieve the best results, some patients will require a combination of the above treatment methods. Most modern treatments are followed by the application of compression stockings, which must be worn from 3 days to 3 weeks depending on the treatment provided. All patients are advised to walk regularly and when combined with the use of compression stockings, this largely assists with the success of treatment.

VENOUS ULCER CASE STUDY



BEFORE



AFTER

This female patient, 45 years of age, had three years of unnecessary pain and suffering with a venous ulcer. The ulcer closed in four (4) weeks after one treatment.

How Successful is Non-Surgical Vein Treatment?

Our doctors will explain the treatment course required to produce a significant improvement in your legs. The degree of success from treatment depends on many factors including your age, severity of the disease, your healing rate, whether you have any other concurrent medical conditions and how well you adhere to the post-treatment instructions. It is not possible to guarantee complete clearance. Treatment should restore an even and uniform appearance to the legs and an improvement of 80-90% can be expected within 3-6 months.

Compression Following Treatment

Following each treatment, you will be required to wear a Class 2 compression stocking to assist closure of the treated veins and protect against deep vein thrombosis (DVT).

The length of time the stocking needs to be worn varies from three days to three weeks depending on the size of the veins injected and the treatment method used. It is important to follow the provided compression instructions carefully to achieve the best results.



Possible Side Effects of Non-Surgical Vein Treatments

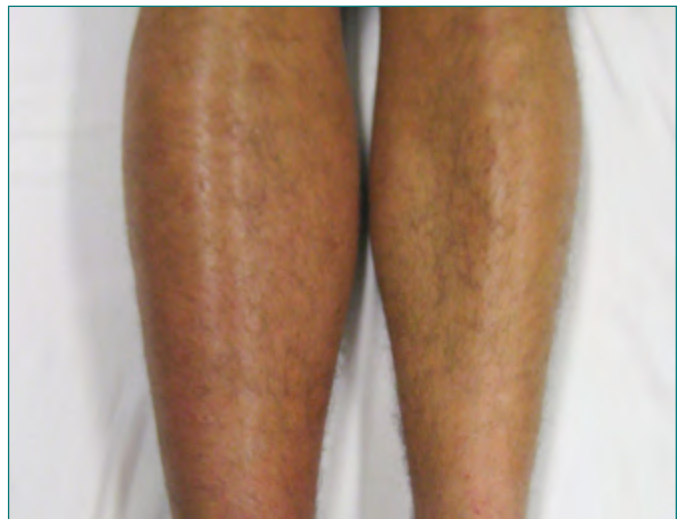
There are possible side effects seen with non-surgical vein treatment that are considered a normal consequence of successful treatment:

- **Stinging sensation** – some stinging may be experienced at the time of treatment, which settles within minutes. Many patients find the treatment almost painless.
- **Bruising** will disappear over a couple of weeks.
- **Darkening of spider veins** soon after treatment is common and is a sign of successful therapy. This fades over the next few weeks.
- **Blood trapping** can lead to tender lumps along the course of the treated veins. It is harmless but may make the vessels more noticeable in the first few weeks. Trapped blood is usually drained at review appointments. This accelerates the healing process. Persistent lumps (even without draining) will usually disappear within six months. Blood trapping is common with treatment of all vein sizes.
- **Aching in the legs** for the first few days can occur after treatment. This more commonly occurs when larger veins are treated and is usually relieved by walking. You may take Panadol or Nurofen to help relieve any aching. Most people do not need any pain relief after treatment.
- **Phlebitis** is the appearance (3:100) of tender, red, swollen areas and is due to inflammation of the treated veins. It may be associated with tender lumps along the line of the treated veins. These lumps are a normal reaction to the vein treatment and are due to trapped blood. Phlebitis can be treated with anti-inflammatory medication (such as Nurofen or Voltaren Rapid 25mg) and improves with walking and the continued wearing of the compression stocking. Please contact our rooms if you suffer excessive tenderness.

Possible Complications of Non-Surgical Vein Treatment

There are possible complications that can occur with non-surgical vein treatment, even when the greatest of care is taken.

- **Pigmentation** is the appearance (1:10) of brown marks on the skin located over or near the treated veins. This is a common consequence of therapy, particularly when treating spider vein clusters with injection microsclerotherapy. Pigmented areas are composed of haemosiderin (a form of iron) that can become trapped in the skin. In most patients the pigmentation gradually fades, disappearing completely within 3-12 months although faint pigmentation lasting greater than 12 months has been reported in 5% of cases. Close attention to wearing the compression stocking and having trapped blood removed at your follow-up appointments will minimize pigmentation. It is advisable to stop iron supplements before your treatment. Recently, topical laser therapy has proved promising in reducing areas of pigmentation.
- **Matting** is the development of extremely fine networks of spider veins likely to occur on the outer and inner thighs. Matting usually resolves spontaneously though some will resolve with further injection treatment. Some may persist despite further treatment. Matting is more common in people with extensive surface veins and in overweight people with poor muscle tone. Matting can also follow the surgical removal of varicose veins. Matting is not generally seen with endovenous laser and radiofrequency ablation.
- **Hair growth** at sclerotherapy injection sites can occur but is mild, quite localised, temporary and rare. It resolves spontaneously over several weeks.
- **Swelling** of the leg or ankle occurs occasionally (2:100) and will settle with time. It is due to inflammation of the skin. Wearing the compression stocking, elevating the leg when sitting and regular walking will help.
- **Numbness** of the skin is rare and temporary (3:1000) but can last up to three months. It is usually located down the inner aspect or back of the calf. It is due to irritation of nerves that are in close proximity to an injected vein. Numbness can be expected for a few hours with endovenous laser and radiofrequency procedures as local anaesthetic is used to anaesthetize the vein to be treated.
- **Migraine** sufferers may experience visual disturbances (1:1000) lasting a few minutes when treated with injection sclerotherapy. This may be followed by the onset of a headache (2:1000). Taking a mild analgesic such as Panadol or Panadeine or anti-migraine medication can provide relief. Should you suffer with migraines then it is best to attend with a friend who can assist with driving home.
- **Ulcers** of the skin are rare and usually appear as small, painful sores within two weeks of injection sclerotherapy treatment (9:1000). They heal slowly and leave a scar, which can be excised if unsightly. They occur due to sclerosant passing from the injected veins into the small associated skin arteries. Ulcers are more common in people who smoke cigarettes or who have certain associated skin conditions.
- **Allergic reactions** to either the sclerosant used or to the local anaesthetic are rare (3:10,000) but may be serious and life threatening. Some reactions require immediate treatment. Should you feel any abnormal sensations during treatment such as generalised itchiness, nausea or shortness of breath, please tell our doctor so we can immediately provide appropriate treatment.



Different size legs can be a sign of a serious underlying condition.

Possible Complications of Non-Surgical Vein Treatment (Cont'd)

- **Deep Vein Thrombosis** is a clot in the deep venous system – beyond the treated varicose veins. This potentially serious problem is extremely rare if the compression stocking is worn as directed and regular daily walking is maintained. The approximate risk of this is less than 1:2000 patients for sclerotherapy and even less in endovenous laser ablation and radiofrequency ablation. If your relative risk of DVT is considered increased then prophylactic treatment will be advised. Deep vein thrombosis may lead to clots in the lung (pulmonary embolism), which can be a life-threatening condition requiring hospitalisation. It is advisable to avoid long distance travel (greater than 4 hours duration)

for at least 4 weeks following the treatment of varicose veins. Should you need to travel within 4 weeks of your last treatment please contact our rooms. Symptoms of deep venous thrombosis and pulmonary embolism include a painful swollen calf or leg that is unrelieved by walking, unusual shortness of breath, cough with or without blood stained sputum and stabbing chest pain. Should you experience any of the above symptoms please contact our doctors immediately or go to your local emergency department if the symptoms are severe.

- **Intra-arterial injection** is an extremely rare (1:10,000) complication that can result in significant muscle and skin damage or the loss of a leg. This now rarely occurs due to the use of ultrasound guidance of the needle, which allows for a more accurate placement during the injection procedure.

Precautions

- **Pregnancy and breastfeeding** – sclerotherapy is best avoided when pregnant or breastfeeding. This is advised even though there is no current documented evidence to suggest that sclerotherapy is unsafe during pregnancy or breastfeeding. Vein treatments during pregnancy are not as effective often-producing poor results. It is recommended that sclerotherapy should be avoided if pregnancy is contemplated within the treatment course. Veins that appear during pregnancy should be treated before the next pregnancy to avoid deterioration with subsequent pregnancies.
- **Oral contraception and hormone replacement therapy** – both oestrogen and progestogen have been implicated in increasing the risk of thrombosis whether you have a vein treatment or not. Taking the low dose contraceptive pill or HRT increases the risk of deep vein thrombosis 3 fold compared to those not taking these products.

Total correction of this increased risk requires ceasing hormone treatment for a minimum of 4 weeks. The increased risk seems to lessen the longer you have been on the medication. There is no current evidence demonstrating that during sclerotherapy or endovenous laser and radiofrequency ablation treatment,



the taking of a low dose contraceptive pill or HRT medication actually increases the risk of thrombosis above the already existing risk before treatment.

The relative merits of ceasing or continuing hormone therapy prior to sclerotherapy and endovenous laser and radiofrequency ablation treatment will be discussed. There are no reported long-term side effects from the use of sclerosants or laser treatment.

YOUR QUESTIONS ANSWERED

Will the injection procedure hurt?

The amount of discomfort felt will vary with each individual. The needles are small and many are hardly felt at all. The injected solution can sting slightly for short periods of time. If endovenous ablation is used, minimal discomfort is experienced as it is performed under local anaesthetic.

Will the vein treatment interfere with my work or home duties?

This is a walk-in, walk-out procedure for out-patients treated in the clinic. Most treatments take about 60 minutes to perform. Following treatment, your daily routine should not be disrupted, however heavy physical exercise or workloads should be avoided for about 2 weeks following each treatment.

What if I do not treat my varicose veins?

Vein disease is progressive and if left untreated, is likely to become worse over time. Increasing symptoms that can occur with untreated varicose veins include leg tiredness, heaviness, aching, throbbing, restlessness, tingling, itching, numbness and swelling. More serious complications such as phlebitis, blood clots, dermatitis, and vein ulcers can develop if varicose veins are left untreated.

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. You can never run out of veins. Varicose veins are not missed by the circulation, in fact, it improves without them.



Will the treated veins come back?

Treated correctly, the veins will not come back, as the body has absorbed them. New veins however, may appear with time. How quickly and how many appear depends on whether you have inherited veins that are more likely to deteriorate. Other factors such as the oral contraceptive pill, becoming pregnant or occupations with prolonged standing can affect the development of abnormal veins.

What about topical skin lasers for spider vein treatment?

Despite the proven usefulness in the treatment of large varicose veins using endovenous laser ablation, the treatment of leg veins by laser light to the skin has thus far been disappointing. Currently available lasers can be very useful in treating the tiny cosmetic facial veins, also treatable with sclerosant injections, but have been significantly less effective on leg veins when compared to expert sclerotherapy. Also, topical laser therapy is far from painless.

Should I wait until I have completed my family?

Becoming pregnant with existing varicose veins will only lead to the veins becoming significantly worse as the pregnancy develops. Treatment for varicose veins is best performed before or between pregnancies.

What are the options for being treated in the clinic as an out-patient or as a hospital in-patient?

We have both inpatient and outpatient facilities available.

Outpatient facilities are available and beneficial for those without private health insurance.

Inpatient facilities are suited for more complicated medical conditions or when patients have needle phobia, they can be offered:

- twilight sedation
- in a licensed, accredited hospital, which is purpose built for varicose vein treatment
- walk in, walk out – day procedures
- private health insurance rebates are available.



APPOINTMENTS

If you wish to proceed with treatment after the initial consultation, the receptionist will make the required number of appointments in advance.

FEES - PAYMENT AND REBATE

The number of treatments required to provide a significant improvement in your condition will be determined at your first consultation and outlined with your quote. Medicare rebates are available for most treatments. Payment is required prior to each treatment.

 1800 4 VEINS (1800 483 467)

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