

## GUIDELINES

## Diagnosis and management of varicose veins in the legs: summary of NICE guidance

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This is one of a series of *BMJ* summaries of new guidelines based on the best available evidence; they highlight important recommendations for clinical practice, especially where uncertainty or controversy exists.

Further information about the guidance, a list of members of the guideline development group, and the supporting evidence statements are in the full version on [bmj.com](http://bmj.com).

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Previous articles in this series

- ▶ Acute management of myocardial infarction with ST-segment elevation: summary of NICE guidance (*BMJ* 2013;347:f4006)
- ▶ Diagnosis and management of chronic hepatitis B in children, young people, and adults: summary of NICE guidance (*BMJ* 2013;346:f3893)
- ▶ Familial breast cancer: summary of updated NICE guidance (*BMJ* 2013;346:f3829)
- ▶ Rehabilitation after stroke: summary of NICE guidance (*BMJ* 2013;346:f3615)
- ▶ Assessment and initial management of feverish illness in children younger than 5 years: summary of updated NICE guidance (*BMJ* 2013;346:f2866)

Varicose veins in the lower limbs are a common problem, estimated to affect at least a third of the UK population.<sup>1</sup> Although some individuals with varicose veins remain asymptomatic, others may experience pain, aching, heaviness, and itching, that can impair quality of life.<sup>2-3</sup> About 10% of people with varicose veins go on to develop skin changes, such as pigmentation or eczema,<sup>4</sup> while about 3% may develop venous ulcers.<sup>5</sup> At present there is substantial variation across the UK as to who qualifies for referral or treatment, and how varicose veins are treated.<sup>6</sup> Clear guidance on which individuals should be referred to specialist vascular services, as well as the most clinically effective and cost effective treatment, is required.

This article summarises the most recent recommendations from the National Institute for Health and Care Excellence (NICE).<sup>7</sup>

### Recommendations

NICE recommendations are based on systematic reviews of best available evidence and explicit consideration of cost effectiveness. When minimal evidence is available, recommendations are based on the Guideline Development Group's experience and opinion of what constitutes good practice. Evidence levels for the recommendations are in the full version of this article on [bmj.com](http://bmj.com).

#### Referral to a vascular service

- Refer people with bleeding varicose veins to a vascular service immediately.
- Refer people to a vascular service if they have any of the following:
  - Primary or recurrent varicose veins that are symptomatic (associated with troublesome lower limb symptoms such as pain, swelling, heaviness, or itching) or associated with lower limb skin changes (such as pigmentation or eczema) thought to be caused by chronic venous insufficiency.
  - Superficial vein thrombosis (characterised by the appearance of hard, painful veins) and suspected venous incompetence.
  - A venous leg ulcer (a break in the skin below the knee that has not healed within two weeks) or a healed venous leg ulcer.

#### Assessment and treatment in a vascular service

- Use duplex ultrasound to confirm the diagnosis of varicose veins and the extent of truncal reflux (backflow of blood through a main superficial vein), and to plan treatment for people with suspected primary or recurrent varicose veins.
- For interventional treatment to people with confirmed varicose veins and truncal reflux:

- Offer endothermal ablation, usually via radiofrequency or laser ablation (see NICE guidance on radiofrequency ablation of varicose veins<sup>8</sup> and endovenous laser treatment of the long saphenous vein<sup>9</sup>)
- If endothermal ablation is unsuitable, offer ultrasound guided foam sclerotherapy (see guidance on ultrasound guided foam sclerotherapy for varicose veins<sup>10</sup>)
- If foam sclerotherapy is unsuitable, offer truncal vein stripping surgery
- If incompetent varicose tributaries are to be treated, consider treating them at the same time.
- If offering compression bandaging or hosiery for use after interventional treatment, do not use for more than seven days.
- Do not offer compression hosiery as a standalone treatment for varicose veins unless interventional treatment is not suitable.

#### Information for people with varicose veins

This should include:

- An explanation of what varicose veins are. For example, people can be told that varicose veins are superficial veins with faulty valves that allow reversed venous blood flow, with subsequent venous pooling and distension.
- Possible causes of varicose veins, such as increased age or pregnancy.
- The likelihood of progression and possible complications, including deep vein thrombosis, skin changes, leg ulcers, bleeding, and thrombophlebitis. Address any misconceptions the person may have about the risks of developing complications.
- Treatment options aimed at symptom relief, an overview of interventional treatments, and an explanation of the limited role of compression hosiery.
- Advice on:
  - Weight loss (for guidance on weight management see NICE clinical guideline 43<sup>11</sup>)
  - Light to moderate physical activity
  - Avoiding factors that are known to make their symptoms worse
  - When and where to seek further medical help.
- When discussing treatment for varicose veins at the vascular service, advise:
  - What treatment options are available
  - The expected benefits and risks of each treatment option
  - That new varicose veins may develop after treatment
  - That patients may need more than one session of treatment
  - That the chance of recurrence after treatment for recurrent varicose veins is higher than for primary varicose veins.

### Management during pregnancy

- Give pregnant women presenting with varicose veins information on the effect of pregnancy on varicose veins. For example, although varicose veins may appear during pregnancy, these may regress spontaneously in the postnatal period. In other respects the symptoms of varicose veins in pregnant women are the same as those in people who are not pregnant.
- Do not carry out interventional treatment for varicose veins during pregnancy other than in exceptional circumstances.
- Consider compression hosiery for symptom relief of leg swelling associated with varicose veins during pregnancy.

### Overcoming barriers

Traditionally, conservative care (compression and advice) has been considered a low cost intervention for people with symptoms such as aching or pain from varicose veins. It has thus been routinely offered before interventional treatment. However, the evidence identified in this guideline challenges this practice, showing that interventional treatment is more clinically effective and cost effective than conservative care for people with symptomatic varicose veins.

In some regions of the UK, endothermal ablation is not currently available. The guideline provides solid evidence that this is the first choice of treatment on both clinical and cost effectiveness grounds, and should be made available throughout the UK.

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Forum, ARAB vein meeting (Saudi Arabia), Veith symposium (USA), Academic meeting of CACVS (Controversies and Updates in Vascular Surgery), American Venous Forum (USA), Charing Cross Symposium, annual meeting of the Australasian College of Phlebology, European Vascular Course (GM also attended), Veith Vascular Symposium, ISVS Miami, AVF Phoenix, vascular meeting in India); all meetings had commercial sponsorship from many organisations. AD received expenses to attend a meeting with Servier (Paris) to discuss Daflon and research opportunities, a pharmaceutical treatment of varicose veins. AD's research department was awarded grants from HTA/NHR, Venous Forum UK, European Venous Forum, Circulation Foundation, Stroke Association, Vascular Insights Ltd, FirstKind Ltd, Actegy Health, Sapheon INC, Urgo Laboratoire (Paris), Royal College of Surgeons of England, and Graham Dixon Charitable Trust.

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## A PATIENT'S JOURNEY

### Spinal injury

Martin Davies,<sup>1</sup> Pam Carter,<sup>2</sup> Loreto Drake<sup>3</sup>

This patient describes his seemingly interminable wait for surgery for prolapsed intervertebral discs coupled with a complete absence of useful information and worries about income support

My experience of back pain began ironically at a moment of great joy for me and my wife in June 2003—just before the birth of our second child. A few days before my wife went into labour, I sneezed, and so began a sequence of events that still affect me today. I never had a weak back before this, but I sneezed, fell to the floor, and it took three months for me to get straight again. The pain was horrendous. I saw my general practitioner immediately and was referred to a surgeon at the local NHS hospital. I waited about 12 months for this appointment. I have a little dog, and if I'd

have left her in pain for so long I'd have been prosecuted for cruelty by the RSPCA. I had some physiotherapy treatment and had to take amitriptyline, co-codamol, and diclofenac, and that is unpleasant. When my back went into spasm I had to have diazepam as well. Sometimes I used an ice pack belted on to numb my back totally, to enable me to do things I had to do.

My GP kept signing sick notes for time off work, and I visited a chiropractor. As far as I know, my GP did not press the hospital, perhaps because he thought it would make no difference. Finally he gave me the telephone number of a back surgeon who works both privately and within the NHS, whom I saw privately. At his suggestion, because of NHS waiting lists of between nine and 12 months, I paid £650 to have scans done privately. The surgeon said I had a prolapsed disc at L45 and that I had been born with narrow nerve channels which were making things worse. He

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This is one of a series of occasional articles by patients about their experiences that offer lessons to doctors. The BMJ welcomes contributions to the series. Please contact Peter Lapsley (plapsley@bmj.com) for guidance.

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Previous articles  
in this series

- ▶ Post-traumatic stress disorder after intensive care (BMJ 2013;346:f3232)
- ▶ Lessons from patients' journeys (BMJ 2013;346:f1988)
- ▶ Spinal injury (BMJ 2013;346:f3374)
- ▶ Psychotic depression (BMJ 2012;345:e6994)
- ▶ Klinefelter's syndrome—a diagnosis mislaid for 46 years (BMJ 2012;345:e6938)

## SEE ME IN MY PLASTER CAST

[www.youtube.com/watch?v=QxTstAAISCg](http://www.youtube.com/watch?v=QxTstAAISCg)



With my sister filming, we made a short video which we put on YouTube showing what it's like to be in a plaster cast. I had no pain when I was in it. It was to see if the operation was going to be a success because it replicates what they do with the metalwork in your spine.

## A DOCTOR'S PERSPECTIVE

I first met Martin Davies in May 2012 after his transfer from another surgery. His reason for attending was that he had started experiencing pain in his arms and problems with his neck. He was extremely apologetic for wasting my time as he had no expectation of help, but wished to know if there was something that could be done for his symptoms, and if there was any help available in support of his disability benefit claim. His gait was abnormal, with his neck projected forward.

His medical history showed that he had had three back operations that had not been entirely successful. Miraculously, he was not depressed, merely frustrated. His own determination to keep walking and keep going had not served him well with the staff of the job centre, who seemed to have downplayed the seriousness of his medical condition. The only useful role I could undertake was to refer him yet again to the spinal surgeon and support his claim for disability benefit and attempt to coordinate his care. (His cervical pain is now under investigation: magnetic resonance imaging has shown minor disc bulges at C5, C6, and C7. He has had computed tomography guided root block with no success.)

I see several cases of lower back pain a week. Guidelines from the National Institute for Health and Care Excellence (NICE) advise conservative management for the first six weeks unless patients present with red flag features. After assessment, patients are issued with a back care leaflet, offered analgesia, and advised to return if the problem is not

resolved within six weeks. Most cases resolve on their own, leaving a small group of patients who may develop persistent back pain and may need to be referred for specialist advice. The possibility of having an operation that can solve all their difficulties is often raised by patients. A prediction of the results of such operations are at best inconclusive. (In their review of the management of back pain, Cohen et al report that only 15-40% of such patients can expect a highly functional outcome,<sup>1</sup> while Gibson and Waddell report the difficulty of managing the patients' expectations.<sup>2</sup>)

There is clearly an important shared role for the GP and the surgeon in this area. Unfortunately, doctors are often poorly prepared for this role, leaving the important question of success rate to the premise of "Trust me, I'm a doctor." In general, the medical profession is not adept at enabling patients to make an informed choice about risk assessment and probability of outcome. Risk and probability should be presented in a manner that a patient can understand. Patients cannot always make a properly informed choice, as the emphasis is on informed consent.

The Integrated Care and Treatment Services (ICATS) for back pain are invaluable in reassuring patients and managing the investigation-cum-diagnostic phase. However, the problem remains of how to manage them long term when all that can be offered is tablets, exercise, and the occasional reassurance session with their usual doctor, which is generally unsatisfactory for both parties.

Loreto Drake [loreto.drake@gp-n81008.nhs.uk](mailto:loreto.drake@gp-n81008.nhs.uk)

referred me back to his NHS clinic and said that I needed a bilateral decompression and a discectomy to release the pressure and open the nerve channels. He then had an injury, and I was transferred to another NHS surgeon.

I was put on a waiting list, but was not seen at the hospital between my private consultation and the operation. I met the anaesthetist, who asked if I had any questions. I asked if I could meet the surgeon who would be operating on me, but did so for the first time only on the day of the actual operation.

**A wait too long**

I'd never not worked in my life before this happened. I didn't know anything about signing on or incapacity benefit. I didn't know what to do. Each month, because I was on an urgent waiting list I thought I was going to have my operation, but then I didn't, so I started feeling depressed. When you put the television on, the politicians say, "Everybody is operated on in three months." People kept asking me, "Haven't you had your operation yet?" and I felt silly. Several times I was telephoned the evening before my operation, when I had prepared myself to go in, to be told it had been cancelled.

You're left so long by the hospital system; there's never anybody to speak to, and I never met anybody who'd had a success from the operation. It felt as though there was no support or information on success rates. When you go to see your surgeon you're in with him [or her] for five or 10 minutes. He explains about the operation, but you go home and mull it over, and it would be easier if there were people to speak to and perhaps to reassure you that what you're having done isn't such a big thing because they do it all the time and it works for people. They never gave me

any statistics on success rates, and it was very frustrating having to wait. The surgeon's secretary worked only part time so it was difficult to get information.

When I had been waiting for over 12 months, my GP advised me to contact the Patient Advice and Liaison Service (PALS), who were excellent. I don't know what I would have done without them—I think I would still be waiting now for my first operation. Then I got a letter from the hospital asking what I wanted as an outcome of my complaint. I replied, explaining that I just wanted my operation. I said, "All I'm asking for is my surgery." Straight away I got a letter asking me to come in for my pre-op assessment and saying that my operation would happen in the next week. The operation was carried out in a private hospital but funded by the NHS because their waiting list target had not been met. It was as though I got a fast response because I'd put in this complaint about not being seen within the waiting list target. After the operation, they gave me exercises to get mobile again and they saw me every three months.

After the first operation, I sneezed again and damaged two more discs. I had another scan and was told I needed a spinal fusion, and after that failed, a 360° spinal fusion, with lots of different procedures in between.

After the second operation, I had metal work and loose screws moving, pressing on nerves to my legs. I had difficulty walking and functioning. Loose screws such as these can cause permanent damage. I had difficulty putting my feet down, so I worried about permanent damage. I was told that, while the fault was aggravating my nerves, it was very rare for it to cause permanent damage but they could not rule it out. Because of the long wait, my GP wanted to send me out of the area, but we were told, "There's only Mr A at the local hospital because all spinal surgeons work

## USEFUL RESOURCES

**SIA: Spinal Injuries Association ([www.spinal.co.uk](http://www.spinal.co.uk))**

The leading UK charity for people with spinal cord injury. It is a user-led organisation; its elected trustees are all spinal cord injured and are voted for by the spinal cord injured membership. It aims to offer support and assistance from the time of injury and for the rest of a paralysed person's life; provide services to increase an individual's quality of life; support the families of newly injured people; increase knowledge and awareness of the causes and consequences of spinal cord injury; and campaign for the best medical and social care for spinal cord injured people.

**Disability rights organisations and Citizens Advice ([www.citizensadvice.org.uk](http://www.citizensadvice.org.uk))**

These can help with advice about welfare rights and this may include help with tribunals.

**NHS complaints system**

This is currently under review

(see <https://www.gov.uk/government/news/review-of-nhs-complaints-system--5>)

differently." I wanted him anyway because he is said to be the best spinal surgeon, and he is very nice.

**Impact on my and my family's income**

After my first operation, I was sent for an incapacity benefit medical examination. I'd had my operation, but things were starting to go wrong. I told the assessor that I had had an operation five weeks previously, and I was doing my physiotherapy but something was going wrong. He asked to see my scar, and I showed him. He said, "I can see you've had an operation; this won't take a moment." So I imagined everything was fine.

Five days later I received a letter telling me my benefit was stopped because there was nothing wrong with me. It said: "This patient has not got a problem bending, twisting or lifting."

I had to go to a tribunal. My benefit was stopped for 11 weeks. When I got to the tribunal they couldn't believe I was there. There was a spinal specialist, a judicial officer in charge of the process, and an official from the Department of Work and Pensions. The spinal specialist asked what was wrong with my back, and I told him I had just had a bilateral decompression and that I was waiting to have a

three level fusion. When he heard this he looked down and whispered to the other man then told me to relax—case dismissed. The whole process took a matter of minutes.

After the second operation, JobCentre Plus contacted me to go for a "back to work" interview. I telephoned them and explained that I couldn't go as I was in plaster waiting to have a titanium rod inserted in my spine. I also explained that I was in plaster to my knees. They said they could stop my benefit and asked if I would be better next week. I said, "You get me my operation, and I'll be straight back at work." I was going mad. So she spoke to a manager and said they would contact me again in six months. This is what worries you when you're getting better. I received incapacity benefit of about £96 a week. I have to pay for all my prescriptions, and they're more than £20 a month. I only found out recently that you can pay so much a month. I have had to wait over a year for each of my three operations, and PALS helped me each time. To get my final operation, I had to make an official complaint against the hospital.

**What next?**

I must now let the bone grafts take. I am now on work related ESA (employment support allowance) and am involved in Patient and Public Involvement in research at Keele University to see if I can help others by getting involved in research. Nobody should have to wait so long for an operation when they are in so much pain. Nor should it be necessary to have to use PALS just to get follow-up appointments. I also think there should be more information and support available.

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**ANSWERS TO ENDGAMES, p 34**

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**PICTURE QUIZ****A young athlete with bradycardia**

- 1 Second degree atrioventricular block.
- 2 The atrioventricular conduction ratio is 2:1
- 3 Training related (exercise induced) second degree atrioventricular block.
- 4 The easiest way to confirm the diagnosis and level of block would be to repeat the ECG after gentle exercise.
- 5 This young athlete should be managed conservatively. A permanent pacemaker is not warranted in this situation.

**ANATOMY QUIZ****Interpreting a normal orthopantomogram**

- A: Anterior arch of C1  
 B: Vertebral body of C4  
 C: Pulp of left second inferior premolar  
 D: Right inferior third molar (wisdom tooth)  
 E: Left temporomandibular joint

**STATISTICAL QUESTION****What is number needed to treat (NNT)?**

Statements *a* and *c* are true, whereas *b* and *d* are false.