

Compression bandaging and ankle brachial pressure index (ABPI)

This leaflet explains more about having compression bandages after an ankle brachial pressure index (ABPI) assessment, including the benefits, risks and any alternatives to this treatment.

If you have any further questions, please speak to a doctor or nurse caring for you.

What is compression bandaging?

Compression products consist of bandages, hosiery wraps or garments (like a stocking), designed to provide external pressure on legs with wounds to improve blood flow and promote healing. This leaflet focuses on the use of bandages to achieve compression in the lower limb to assist with healing.

Why should I have compression bandaging?

Although compression bandaging is usually associated with the care of venous leg ulcers, using them to reduce swelling around a wound can also assist in healing. The compression resulting from specialist bandages improves the blood flow from your legs back to the heart, reduces swelling around the wound and this can help the wound to heal. There are different bandaging systems available on the market. The nurse will decide on the most suitable one for you. It is important that compression bandages are applied by a qualified nurse because incorrect application can cause harm to the affected leg.

Before deciding to use compression bandages the nurses at the plastic dressing clinic (PDC) or your community nurse will assess your lower leg and undertake a simple test called an "ankle brachial pressure index test" (ABPI). This will be arranged by your community nurses or with the nurses at the PDC.

What is an ABPI?

Ankle Brachial Pressure Index (ABPI) is a test that compares blood pressure in the ankle with blood pressure in the arm. This contributes to the assessment that the blood flow in the arteries to the legs and feet are healthy enough to tolerate being compressed. A lower ankle pressure compared to the arm suggests narrowed or blocked arteries in the leg, indicating potential peripheral artery disease (PAD). If that is the case then compression must not be applied.

The test can be carried out in a number of ways but generally involves you lying as flat as you can for 20-30 minutes. Blood pressure cuffs are used around your arms and legs or toes to take readings to calculate the difference between the pressure in the arteries in your arms and those in your leg(s). From this the team can confirm if the blood vessels that supply blood to the leg will continue to do so even if compression bandages are applied.

What are the risks of having an ABPI?

If the wound on the limb is close to where the cuffs are used, it can cause pain and discomfort. If too painful the test will be abandoned.

If the result suggests reduced pressure in the arteries in the leg the nurse may discuss the need to undertake further tests to assess the blood supply into the leg. If the flow of blood into the leg is causing the delay in healing in some cases a referral to the Vascular Team may be required.

What are the risks of having compression bandaging?

Despite an ABPI result indicating compression bandaging is safe to apply, it can cause some discomfort and may feel too tight to tolerate. Sensations of “pins and needles” and discolouration of the toes may indicate the bandages are too tight and, in these cases, the top layer should be removed and your nursing team contacted.

In patients with heart failure or kidney disease, the movement of large amounts of fluid into the system can have a negative impact on those organs. The potential for this will be discussed with the patients when the nurse is considering the treatment.

Sometimes the bandages can cause dry and/or itchy skin.

Are there any alternatives?

The nurse has assessed that the use of compression bandaging may assist in wound healing. However, ordinary support bandages can be used. This may impact on the rate of healing. However, it is an acceptable alternative if the ABPI indicates the treatment is not suitable for them or if a person does not want to have compression or they cannot tolerate it.

If you decide not to have compression bandaging, the wound can still be dressed. It is possible that it will take longer to heal and may not heal at all. The nurse will identify the specific relevance for you when discussing the use of compression bandaging.

How can I prepare for having compression bandaging?

- When attending for the test and possible application be sure to wear loose fitting clothing that can be removed and put on over bandages.

- Wear suitable footwear that will allow for extra padding around the foot. A large trainer with laces or footwear with straps that can be extended are ideal. Be prepared that your leg will be bandaged from the base of your toes to just underneath your knee using a bandaging system of which there may be a variety of layers. It is important to make sure the bandages are applied from the toes to prevent your foot and the top of your calf from swelling.

Asking for your consent

It is important that you feel involved in decisions about your care. For some treatments, you will be asked to sign a consent form to say that you agree to have the treatment and understand what it involves. You can withdraw your consent at any time, even if you have said 'yes' previously. If you would like more details about our consent process, please ask for a copy of our policy.

Will I feel any pain?

If the wound is close to where the cuffs are placed to undertake the ABPI test, this can be painful but if it is too painful to carry out it will be stopped.

Wearing compression bandages should be supportive and not painful. Pain can result from the bandages being too tight or if the wound is becoming infected. In both cases you would need to seek medical attention to assess for this.

What do I need to do after I go home in compression bandages?

- You will usually remain in compression bandaging until your wound is completely healed with dressing changes once to twice a week depending on how much fluid your wound is producing.
- Stay as mobile as you can. If you can, walking around is beneficial as the compression system works with the movement of the leg, helping to improve the venous circulation around the leg.
- Remember to always elevate the leg when not moving around to help reduce swelling. Avoid standing still or sitting with legs down for long periods.
- The bandages need to be kept dry so take care during washing.
- If the bandaging becomes loose or slips, do not try to re-apply them yourself as the bandaging needs to be applied by a qualified person who is competent in applying compression. Please contact PDC or your GP practice. If this occurs out of hours locate your local walk in or urgent care centre. The team may not be able to reapply the compression bandages, but a support bandage can be applied until you are next due to be seen at you GP Practice or PDC. A good support bandage is better than a poorly applied or slipping compression bandage.

- If you have any of the problems listed below it may be necessary for you to remove the compression bandages immediately and contact your nurse straightaway:
 - Numbness or tingling of your toes
 - Cramp for any sustained period
 - Bluish discoloration of your toes
 - Excessive coldness in the toes that is not due to environmental temperature
 - Increasing pain following application of the compression bandages
 - Bandages have slipped down your leg (slipped bandages can often cause tight bands around the leg, creating circulation problems and new wounds)
 - Unusual swelling of your toes/knees where the bandage starts and finishes

If you notice any of these signs, cut off the top elasticated layer of the bandages and contact the PDC or your GP immediately. If both of these options are non-contactable and out of hours please visit your local Walk-in/Urgent Care Centre or attend your local ED.

Will I have a follow-up appointment?

Ongoing reviews in the Plastic Dressing Clinic (PDC) will be arranged.

Useful sources of information

[How to get the most out of your leg ulcer treatment – Wounds UK](#)

[A system approach to lower limb wound care – Wounds UK](#)

[Project information | Compression products for treating venous leg ulcers: late stage assessment | Guidance | NICE](#)

Contact us

If you have any questions or concerns, please contact the nurse(s) in the community doing your dressings or the Plastic Dressing Clinic nurses on 020 8725 0473 (Monday to Friday, 9am to 4pm). Out of hours, please contact 111.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency.

NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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