Anti-embolic stockings (AES)

This information is for patients needing anti-embolic stockings and their carers. It describes what anti-embolic stockings are and why they are required. It also tells you how to use them.

Compression stockings are specialized hosiery elastic garments worn around the leg. They are designed to compress the limb to help prevent venous disorder such as thrombosis, which is why they can be called ‘anti-embolic’ stockings.

How do anti-embolic stockings work?

These stockings are made with firm elastic that gives graduated compression to the leg, with greatest pressure at the ankle gradually reducing along the leg. Most are below the knee but occasionally some are full thigh length. They are worn to help reduce the risk of blood clots or deep vein thrombosis forming in your leg veins when you are less active than normal.

When we walk or run the muscles in our legs contract and relax which pumps the blood around. Valves in the veins help the blood to flow in one direction. The graduated compression from the stockings puts gentle pressure on the muscles to squeeze the veins. This helps pump the blood back up to the body, therefore reducing the risk of a clot developing.

Why must I wear them?

When mobility is reduced for an unnatural length of time, such as lengthy operations, it creates an ideal environment for a blood clot to form. The body also naturally releases clotting agents into the blood stream when the skin is cut, like a surgical incision.

You will have been assessed by a medical professional and advised that it is necessary for you to wear stockings day and night during your hospital stay. This will either be due to the doctor’s preference and/or as part of your preparation for your operation.

Those advised to wear anti-embolic stockings will be patients:

- Undergoing major surgery.
- Undergoing lengthy operations.
- Whose mobility is greatly reduced by surgery or illness.
- On certain medications or with a medical history indicating the need for anti-embolic stockings to be worn.

If you are currently suffering or have a history of vascular or circulatory problems or if you have diabetes then please inform your nurse or doctor. The correct assessment of your suitability for anti-embolic stockings can then be performed and documented.
How long will I need to wear them?
You will need to wear them day and night until you get back to a normal or improved level of mobility. The stockings must be removed daily so that you can wash your legs/have a bath or shower. It will also allow you to check for any skin/pressure problems caused by the stockings such as redness, soreness or bruising. The stockings must be replaced straight away. If you have had recent hip or knee surgery, you will need to wear them for up to six weeks. This may vary depending on the reason for wearing them and this will be discussed with you before your discharge from hospital. If you need to wear anti-embolic stockings after your discharge from hospital then these will be provided for you for the duration of your planned treatment.

How to apply anti-embolic stockings
A nurse will measure your legs for the correct size. The stockings should feel snug but not too tight or too loose. If they do not fit, please inform a nurse straight away. While in hospital you may need to have your legs re-measured to ensure you are still in the correct size.

The stockings should always be put on according to the manufacturer’s instructions but some handy hints are:

- Insert your hand into the stocking as far as the heel.
- Grasp centre of heel pocket and turn stocking inside out to heel area.
- Carefully position the stocking over your foot and heel. The inspection hole should be on the underside of your foot.
- Pull the stocking up and fit around your heel and calf.
- Smooth out any excess material, pull toe section forward to smooth ankle and instep area and allow toe comfort.
- You may require a slip sock to help apply your stockings. If this is not available you may apply a plastic bag or silk scarf over your feet prior to applying stockings as this will aid the stocking to slip over your foot more easily. The bag or scarf can then be pulled out at the bottom of the stocking.
- Check for the proper heel placement.
- Ensure the hole in the foot of the stocking is on the ball of the foot, toes must not stick out.
- If you need assistance the nursing staff will help you with this.

The stockings should be taken off once a day for hygiene purposes, and to check for any skin discolouration or damage.

Do not turn tops of anti-embolic stockings down
This may constrict your circulation, form tight bands around your leg and may cause skin sores to develop.

Keeping stockings free from oily substances
Avoid using oil based moisturisers on your legs as these can damage the elastic fibres of the stockings. Aqueous cream is the best emollient to hydrate the skin.
Stop wearing the anti-embolic stockings if …

You have any pain, discomfort, rash or trauma changes to the skin. For example, redness, soreness, bruising, or if you develop a rash, which may mean you have an allergy to the elastic fibres in the stockings. Remove your stockings and report immediately to your nurse/carer.

Check your toes and feet for sensation, circulation and movement. Report to your nurse/carer immediately if you have any of the following symptoms;

- discoloured toes – either blue or white
- cold toes
- tingling – pins or needles in your toes
- swelling to your toes
- numbness in the foot or leg

Any of these symptoms may be a sign that your stockings are too tight.

Safety

- If you are walking around while wearing these stockings, please wear shoes or slippers to avoid slipping.

How do I look after my stockings?

- Refer to the manufacturer’s washing and drying instructions.
- Do not apply if wet
- Do not tumble dry

Contacts/Further information

If you have any further queries about your anti-embolism stockings, please contact your nurse or doctor for advice.

References

NICE clinical guideline 92, Venous thromboembolism: reducing the risk. January 2010
We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Other formats:

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

Document history
Authors  Caroline Baglin, Christina Sleep, Gillian Carr, Sharon McNally
Department Cambridge University Hospitals NHS Foundation Trust, Hills Road, Cambridge, CB2 0QQ www.cuh.org.uk
Contact number  01223 245151
Publish/Review date  January 2018 / January 2021
File name  PIN0618_antiembolic_stockings_v5.doc
Version number/Ref  5 / PIN0618 / Document ID 21354