

Vacuum Assisted Closure (VAC) therapy

Information for patients

This leaflet explains more about having a Vacuum Assisted Closure (VAC) to help heal a wound on your leg, including the benefits, risks and any alternatives. It also provides information on what to expect when you come to hospital. If you have any further questions, please speak to a doctor or nurse caring for you.

What is a Vacuum Assisted Closure (VAC)?

Vacuum assisted closure of a wound is a type of therapy or dressing to help wounds heal. It is also known as 'a VAC' or 'negative pressure wound therapy' (NPWT). The VAC system has several parts to it. During treatment, a special foam or gauze dressing is placed directly onto the wound. An adhesive film then covers this and seals the dressing and wound. A drainage tube is stuck over a hole in the adhesive film and connects to a portable vacuum pump. This pump creates a suction effect on the wound, either in cycles or continuously, which can help wounds heal more quickly in several ways.

The dressing is usually changed every 4 to 7 days. Sometimes this can be done on the ward or you may need to be taken to the operating theatre to have this done. During the therapy, you will need to carry the portable pump everywhere you go. You may be able to go home with a pump depending on the circumstances.

Why should I have a Vacuum Assisted Closure (VAC)?

You might need a VAC to help speed up healing or to keep things clean while waiting for the next stage of your treatment. VACs can also be used on a long term wound that is struggling to heal over time, to help improve the healing process. You may also need a VAC to help a skin graft to heal (please see other leaflet – SSG).

A wound vacuum system may help your wound heal more quickly by:

- draining excess fluid from the wound
- reducing bacteria in the wound
- keeping your wound moist and warm

- helping draw together wound edges
- increasing blood flow to your wound
- decreasing redness and swelling (inflammation)

A VAC may offer some other advantages over other types of wound dressings, because they usually need changing less often and are usually easier to keep in place.

What are the risks?

There are very few risks to having a VAC dressing. If you need to have your VAC put on in theatre then there are the risks associated with a general anaesthetic, which we will discuss with you separately. If you can have your VAC put on or changed on the ward then the main issue can be discomfort or pain when the dressing is taken off and put back on, however, we will make sure that you have plenty of pain relief before your change of dressing.

Other risks include:

Bleeding

Heavy bleeding is unusual but possible due to the suction effect of the dressing. If this happens there may be blood visible in the dressing sponge or in the canister attached to the pump. Often this can be managed by turning down the pressure on the VAC. If there is a lot of bleeding and it does not stop, we may need to remove or change the dressing. Rarely, you may need a blood transfusion to replace this blood. Very rarely, you may need to be taken back to theatre, under a general anaesthetic to stop the bleeding. To reduce the risk of bleeding, you may be asked to stop any medications or supplements that may act to thin your blood before and during your therapy.

Swelling and pain

There will be some swelling of your leg from your injury. Gently elevating the leg on one or two pillows at rest will help to reduce the swelling and pain while you are having your VAC therapy when you are not mobilising.

Wound healing problems and technical issues

Sometimes wounds take longer than normal to heal, or the VAC system does not work in the way we wanted it to for your wound. This may mean you need a different type of dressing or treatment. Also, sometimes it can be difficult to get a proper seal around the VAC dressing and it does not create the suction that it is meant to. If this happens your machine may beep and we may need to reinforce the dressing or change it. Occasionally we cannot get it to work at all and then an alternative dressing may be used.

Blood clots

Blood clots can form in the leg (deep vein thrombosis – DVT) due to you not being able to move around as much as normal. These cause pain and swelling and need to be treated with blood thinning medication. Rarely, parts of these clots can break off and go to the lungs (pulmonary embolus – PE). This can cause difficulties in breathing and can cause death. The risk of this is higher if you have been in a big accident leading to the admission, smoke, are overweight or are taking the oral contraceptive pill.

Are there any alternatives?

There are many alternative dressings to a VAC which may work for you just as well. There was some recent research which showed no difference in outcomes in patients with lower limb injuries in those that had a VAC and those that had a conventional dressing. This means that

while VAC dressings are very good in terms of providing a sealed environment and promoting healing, it is unlikely that the outcome of your injury will be worse if, for whatever reason, you cannot have a VAC dressing.

How can I prepare for my VAC?

If your VAC is put on in surgery, often this will be performed under general anaesthesia and, if this is the case, you will be told to fast for 6 hours before the operation. This means that you must not eat anything for 6 hours before your operation. You may drink water only during this time, but must stop 2 hours before the operation. For these 2 hours you must not eat or drink anything.

You will be seen and examined by the anaesthetist and your surgeon before the operation. The surgeon will also place some markings on your legs which will be crucial for the operation. It is important not to rub these marks off.

Giving your consent (permission)

We want to involve you fully in all decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment, any alternative procedures have been made clear to you, and you understand what it involves, including possible risks and complications.

If you would like more information about our consent process, please speak to a member of staff caring for you.

Will I feel any pain?

You may feel some pain and discomfort initially after your operation or during changing the VAC on the ward. You will be given regular pain relief after the operation and you will also have some pain relief that you can ask the nurses for, if the regular pain relief is not sufficient. This will be the same before and during dressing changes.

What happens after a VAC has been put on?

This depends upon your reason for needing a VAC. You may be able to walk around with your VAC on in the hospital or even go home. You will be given a bag to help carry the portable pump and information leaflets from the company who provide the VAC and from our clinical nurse specialist about what to do if the VAC stops working, or if you have any technical problems.

What do I need to do after I go home?

If you are able to go home with your VAC you should be able to gently move around as normal. Your surgical team and nurses will advise you of this depending upon why you have a VAC in the first place. When you are at rest or asleep, you should elevate your leg on one or two pillows. The physiotherapy team will instruct you regarding weight bearing through the affected leg, exercises, and activities at home depending on the reason for your operation.

It is important to look out for any signs of infection around the VAC. These include: increasing pain, redness, swelling, or leaking from around the VAC dressing, or more general signs, such as having a fever or feeling generally unwell or nauseous. If you have any of these symptoms you must contact your GP or a member of the surgical team.

Will I have a follow-up appointment?

You will be given appointments to come to our Plastics Dressing Clinic for a change of your VAC dressing or district nurses may change your VAC for you at home. You will also be given an appointment to come back to your Consultant Clinic for review as is deemed appropriate. We will organise these appointments for you and you will either be given the date and time of them on your discharge summary from hospital or you will be told via text or letter once you are at home.

If you have any problems with your wounds or any concerns, you will be given an information leaflet with the contact numbers on of different members of our team including our dressing clinic nurses and the on-call plastic surgical team.

Useful sources of information

The British Association of Plastic and Reconstructive Surgery (BAPRAS) provides detailed information regarding lower limb injuries. Find BAPRAS lower limb patient information here: www.bapras.org.uk/public/patient-information/surgery-guides/open-fractures-of-the-lower-limb

Contact us

If you have any questions or concerns about your lower limb flap, please contact our Senior Lower Limb Reconstruction Nurse Specialist, Krissie Stiles, call the hospital switchboard on **020 3299 9000** and ask for Wi-Fi phone **38567** or email k.stiles@nhs.net
Krissie is available Monday and Tuesday, 8am to 8pm and Wednesday 8am to 4pm.
At other times, please contact the Senior Orthopaedic Trauma Coordinators (see below).

If you have any concerns about your bone healing, please contact our Senior Orthopaedic Trauma Coordinators, Dawn James and Emma Harris on: **020 3299 5197**.

Sharing your information

King's College Hospital have teamed up with Guy's and St Thomas' Hospitals in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at Guy's or St Thomas'. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Care provided by students

We provide clinical training where our students get practical experience by treating patients. Please tell your doctor or nurse if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

PALS

The Patient Advice and Liaison Service (PALS) is a service that offers support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you. The PALS office is located on the ground floor of the Hambleden Wing, near the main entrance on Bessemer Road - staff will be happy to direct you.

PALS at King's College Hospital, Denmark Hill, London SE5 9RS

Tel: **020 3299 3601**

Email: kch-tr.palsdh@nhs.net

You can also contact us by using our online form at www.kch.nhs.uk/contact/pals

If you would like the information in this leaflet in a different language or format, please contact PALS on 020 3299 1844.