Supporting patients to use a vacuum erection device

This leaflet aims to help nurses answer patients' questions so that they can support patients using a vacuum erection device (VED) for penile rehabilitation after complex pelvic surgery or pelvic radiotherapy, or to prevent shrinkage due to lack of erections

Why is penile rehabilitation important?

- A very minimal amount of blood flow, and therefore oxygen, exists in a flaccid (non-erect) penis
- Penis health requires reoccurring erections to increase blood flow, which brings nutrients and more oxygen to the tissues in the penis
- Erections during sleep are a natural way for the penis to remain healthy; however, if a disease or medical treatment results in a patient being unable to get erections, lack of oxygen in penile tissues can result in penile fibrosis and shrinkage (atrophy)
- Penile atrophy can cause psychological distress, have a negative effect on body image, and affect intimate relationships
- Men with penile shrinkage often have to sit to pass urine, which can affect their feelings and their sense of masculinity

What are the aims of penile rehabilitation?

- To help men have erections suitable for intercourse
- To maintain penile health
- To maintain the length and girth of the penis, which can be lost due to lack of erections
- To improve the chance of erections returning following complex pelvic surgery, pelvic radiotherapy, or courses of hormone therapy

What does penile rehabilitation involve?

Penile rehabilitation can involve the following:

- Counselling and sex therapy
- Taking a phosphodiesterase type 5 (PDE5) inhibitor
- Using a VED
- Trying a cream
- Implants
- Healthy living, such as exercise, weight control, and not smoking



When to start penile rehabilitation

- Use of a VED should not start earlier than 6 weeks after radical prostatectomy
- There is no need to delay using a VED after any other prostate cancer treatment or for other causes of lack of erections; the earlier penile rehabilitation starts, the greater the chance of erectile function returning

Encouraging patients to use a VED for penile rehabilitation

- Regular use of a VED for penile rehabilitation increases the chance of erectile function returning and reduces the risk of penile shrinkage
- To encourage regular use of a VED, patients should be advised to make using a VED part of their daily routine, for example before showering, shaving, cleaning teeth, etc.
- PDE5 inhibitors can be used in conjunction with a VED if not contraindicated











Why do patients use a VED?

- To facilitate men to have an erection suitable for intercourse and to maintain penile health
- A VED encourages penile blood flow after prostate cancer treatment, playing a part in penile rehabilitation (see other page)



Who can use a VED?

- A VED can be used by any man who is unable to attain or maintain an erection suitable for penetration
- It can be used in conjunction with PDE5 inhibitors, such as sildenafil or tadalafil, if these medications are not contraindicated
- VED contraindications include uncontrolled coagulation or blood cell disorders (for example, hemophilia, leukemia, polycythemia vera, and factor 8 deficiency)
- Use of clinical doses of anticoagulants require clinician approval based on International Normalized Ratio stability post-titration

How often should a VED be used?

• Once per day for 2 months, then two to three times per week



How to use a VED for penile rehabilitation

- **1.** Follow steps 1–7 below, excluding application of the penile ring to the VED and penis
- **2.** Release the VED after a maximum of 5 seconds at satisfactory erection; repeat pumping and releasing 10–20 times over 5–10 minutes
- 3. Release the vacuum and remove the VED
- 4. Ensure the VED is clean and dry before storage

How to use a VED for sexual activity

- 1. Check that the penis is clean with no cuts or sores
- **2.** Check that the VED is clean and in working order with no damage
- **3.** Apply the penile ring to the VED in accordance with manufacturer's instructions
- **4.** Apply water-based lubricant directly over the entire head of the penis (glans) and on the cushioning insert of the VED
- **5.** Place the VED fully over the penis to the base, avoiding the testicles, creating a good seal (pubic hair may need to be shaved if causing difficulty obtaining a good seal)
- **6.** If scrotal skin is being drawn in to the cylinder during pumping, the user can manually hold the scrotum out of the way by pulling down with their free hand
- **7.** Pump the VED, in accordance with manufacturer's instructions, until a satisfactory erection is achieved
- **8.** Roll the penile ring over the base of the penis (if necessary, results can be improved by additional pumping and addition of a second, low-tension maintenance ring)
- **9.** Once sexual activity is completed, ensure that the penile ring is removed
- 10. Ensure the VED is clean and dry before storage

Considerations when using a VED

- Anticoagulant and antiplatelet therapy: extra care needs to be taken to ensure correct use of the VED because there is increased risk of bleeding into the corpus cavernosum, which can lead to severe bruising and discomfort; if this occurs, do not use the VED for penile rehabilitation for at least 2 weeks, or for sexual intercourse for a further 2 weeks (4 weeks in total)
- Diabetes: extra care needs to be taken to ensure correct use of the VED, and it is particularly important that the penis is inspected carefully for cuts and sores (a VED should not be used less than 8 weeks after circumcision surgery)
- People with sickle cell disease can use a VED to prevent penile shrinkage, but should not apply a constriction ring
- A VED should not be used after administration of alprostadil or phentolamine mesylate





