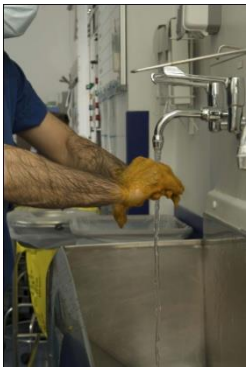
# SACRAL NERVE STIMULATION (NEUROMODULATION)

## What evidence is this information based on?

This leaflet includes advice from consensus panels, ICI and ICS. You should read this leaflet with any advice your GP or other healthcare professional may already have given you. We have outlined alternative treatments below that you can discuss in more detail with your urologist or specialist nurse.

## What does the procedure involve?



Temporarily stimulating the nerves in the sacrum to see if this alters bladder function. If the test is successful, a permanent lead is placed into the sacrum and a stimulating implant is inserted into the buttock area.

## What are the alternatives to this procedure?

Alternatives to this procedure include bladder re training, physiotherapy, drug treatment, botox injections into the bladder, bladder enlargement or replacement (using bowel) and urinary diversion into a stoma.

## What should I expect before the procedure?

You will usually be admitted to hospital on the same day as your surgery. You will normally receive an appointment for a “pre assessment” to assess your general fitness, to screen you for MRSA and to do some baseline investigations. Once you have been admitted, you will be seen by members of the medical team which may include the consultant, specialist registrar, house officer and your named nurse.

You will be asked not to eat and drink for six hours before surgery. Immediately before the operation, the anaesthetist may give you a pre medication, which will make you dry mouthed and pleasantly sleepy.

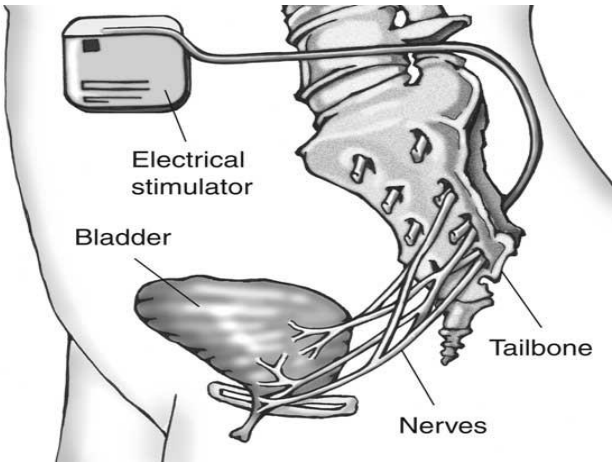
**Please tell your surgeon (before your surgery) if you have any of the following:**

- An artificial heart valve
- A coronary artery stent
- A heart pacemaker or defibrillator
- An artificial joint
- An artificial blood vessel graft
- A neurosurgical shunt
- Any other implanted foreign body
- A regular prescription for a blood thinning agent such as warfarin, aspirin, clopidogrel (Plavix®), rivaroxaban, prasugrel or dabigatran
- A previous or current MRSA infection
- A high risk of variant CJD (if you have had a corneal transplant, a neurosurgical dural transplant or injections of human derived growth hormone).

When you are admitted to hospital, you will be asked to sign the operation consent form giving permission for your operation to take place, showing you understand what is to be done and confirming that you want to go ahead. Make sure that you are given the opportunity to discuss any concerns and to ask any questions you may still have before signing the form.

## What happens during the procedure?

The procedure involves two different admissions. During the first admission, we will place a test electrode alongside one of the sacral nerves in your lower back, under local anaesthetic. The test electrode is connected to an external device, which generates electrical impulses for seven to 21 days. During this time, you will be at home and we will ask you to complete an input/output chart. The electrode may then be removed and the results discussed with you.




If the initial test shows that the stimulation **does** show that the stimulation alters your bladder function, you will proceed to a permanent implant (of an electrode and impulse generator). In many units, the test phase is carried out with an electrode that can remain permanently, and be attached to an implanted neurostimulator at the second operation, if the test phase gives a positive outcome.

The second admission usually doesn't requires a general anaesthetic This may involve placement of a permanent electrode into the sacral nerves in your lower back, if this has not been used for the test phase. In addition, the surgeon will implant a permanent generator in our buttock area. The neuromodulating system will be switched on and programmed when all your wounds have healed.

## What happens immediately after the procedure?

You should be told how the procedure went and you should:

- ask the surgeon if it went as planned;
- let the medical staff know if you are in any discomfort;
- ask what you can and cannot do;
- feel free to ask any questions or discuss any concerns with the ward staff and members of the surgical team; and
- make sure that you are clear about what has been done and what happens next.

In the days (or weeks) after your surgery, your implant will be switched on. It will be programmed so that you get maximum benefit with the least discomfort. When the implant is switched on, you will feel a tapping sensation in the genital or rectal area.

We will teach you how to use the programmer and will allow you to adjust the strength of the stimulating voltage with a hand held remote control.

The average hospital stay for each stage of neuromodulator implantation is one day.

## Are there any side effects?

Most procedures have possible side effects. But, although the complications listed below are well recognised, most patients do not suffer any problems.

### Common (greater than 1 in 10)

- Replacement, relocation or removal of the implanted pulse generator.
- Replacement, relocation or removal of the lead.
- Mild pain (usually managed with simple painkillers).

### Occasional (between 1 in 10 and 1 in 50)

- Wound infection.
- Adverse effect on bowel function.
- Urinary infection.
- Implanted pulse generator malfunction.

### Rare (less than 1 in 50)

- None.

### Hospital acquired infection

- Colonisation with MRSA (0.9% 1 in 110).
- MRSA bloodstream infection (0.02% 1 in 5000).
- Clostridium difficile bowel infection (0.01% 1 in 10,000).

**Please note:** The rates for hospital-acquired infection may be greater in "high risk" patients. This group includes, for example, patients with long-term drainage tubes, patients who have had their bladder removed due to cancer, patients who have had a long stay in hospital or patients who have been admitted to hospital many times.

## Is any research being carried out in this area?

Before your operation, your surgeon or specialist nurse will tell you about any relevant research studies taking place. In particular, they will tell you if any tissue that is removed during your surgery will be stored for future study. If you agree to this research, you will be asked to sign a special form giving your consent.

All surgical procedures, even those not currently undergoing research, are audited so that we can analyse our results and compare them with those of other surgeons. In this way, we learn how to improve our techniques and results; this means that our patients will then get the best treatment available.

## How to contact us/further information

If you would like to ask for further information about this procedure, or if any problems arise, you may contact us via any of the following details:

Harley Street Medical Centre
Marina Village, A villa 18, 19, 20, 21,
Po Box 41475
Abu Dhabi
Phone 02 613 3999

www.hsmc.ae