We can provide interpreters for a variety of languages, information in larger print or other formats (e.g. audio) - please call us on 01932 723553.

To use the Text Relay service, prefix all numbers with 18001.
Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Advice and Liaison Service (PALS) on 01932 723553 or email pals@asph.nhs.uk. If you still remain concerned please contact our Complaints Manager on 01932 722612 or email complaints@asph.nhs.uk.
# Undergoing Implantation of a Permanent Pacemaker

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Introduction - Information for Patients and Carers

This booklet has been designed for patients undergoing implantation of a permanent Pacemaker at St Peters Hospital NHS Foundation Trust and their carers to help you make an informed decision. You may be having the procedure as a day case or after being admitted to hospital. It gives important information about the pacemaker procedure, the benefits and risks to you, about going home and for getting back to normal afterwards. Your doctor has recommended this procedure, however, it is your decision to go ahead with the procedure or not.

InHealth is an independent service provider working in partnership with Ashford & St Peters NHS Foundation Trust and Epsom & St Helier University Hospitals to provide a high quality service for the local community.

If after reading this leaflet, you have any further questions regarding this booklet or your procedure please call one of the following:

- The Angiography Suite - 01932 722262
- Dr Odemuyiwa’s Secretary – 01372 735 128

Why do I need a Pacemaker?

A pacemaker is designed to sense if the heartbeat is too slow or if your heart beat pauses occasionally causing blackouts, falls or dizzy spells. It can also control irregular heartbeats.

This procedure is carried out by a cardiologist (heart specialist) using X-ray screening. X-ray screening may be harmful to a

USEFUL WEBSITES:

Further information may be obtained by logging on to any of the following websites:

- www.bcs.com
- www.bhf.org.uk
- www.dvla.gov.uk
- www.nhsdirect.nhs.uk
- www.patient.co.uk

Further Information:

- NHS smoking helpline: 0800 0224332 and at www.smokfree.nhs.uk
- Advice on maintaining a healthy weight: www.eatwell.gov.uk
improve the service we offer. We would also appreciate your comments regarding this information if you think it could be improved in some way.

Complaints
If you are unhappy with any aspect of the service provided within the Angiography suite or ward, we do apologise. If you would like to make a complaint, please address your letter to either, the Angiography Services Manager and post to Angiography Suite, St Peters Hospital, Guildford Road, Chertsey. KT16 0PZ or alternatively you can request a copy of the InHealth or NHS Trust complaints policy by contacting any of the staff on the ward or the Angiography Suite.

Are there any Alternatives to a Pacemaker?
Sometimes changes to your medications can help with a slow heartbeat.
Some symptoms of an abnormal heart rhythm can be treated using drugs; however, medication may not be as effective as a pacemaker.

What will happen if I decide not to have the Pacemaker?
Your doctor may be able to recommend an alternative treatment. However, you may be at a higher risk of further heart problems. If you decide not to go ahead with the pacemaker procedure you should discuss this carefully with your doctor.

Before the Pacemaker Procedure
PRE-ASSESSMENT APPOINTMENT
You will be invited to attend a face to face pre-assessment with a nurse a few days or weeks before your procedure. The pre-assessment appointment is to advise you about the preparation you need to do and what medications you need to stop and when. The pre-assessment nurse will also take two swabs, one from your nose; the other from your groin to test for MRSA (this is routine hospital policy for any admission). You will also be given a special washing solution to use twice before your procedure to help clean and prepare your skin and body for the procedure.
WARFARIN
If you take Warfarin, you will be given advice for managing your medication before, during and after the procedure. If you are not sure when to stop your Warfarin, you must contact the Angiography Suite at least one week prior to your procedure. It is important that your blood clotting (INR) levels are lower prior to your procedure to manage the bleeding from your wound after your procedure. You will also need to have a blood test at an anticoagulation clinic, 7-10 days after your pacemaker, to ensure your levels have stabilised.

ASPIRIN AND CLOPIDOGREL
If you are taking either of these tablets please discuss this with your nurse at your pre-assessment appointment. You should not stop taking this medication unless instructed by your pre-assessment nurse or cardiologist.

DIABETIC PATIENTS
If you have diabetes and use insulin, please contact the Diabetes Nurse one week before your procedure to receive appropriate advice for managing your medication and diet before and during the procedure. The number to ring is:
• St Peters Hospital 01932 723315 and ask for the Diabetes Nurse.
• Epsom Hospital 01372 73 5444 and ask for the Diabetes Nurse.

• In 1 in 500 cases the pacemaker will develop a fault. If this occurs you will need to have the pacemaker replaced or removed.

Alternatives to a Pacemaker Implantation
Sometimes changes to your medications can help with a slow heartbeat.
Some symptoms of an abnormal heartbeat can be treated using drugs. However, medication may not be as effective as a pacemaker.
If, after reading this leaflet you have any further questions regarding the necessity for this procedure and/or concerns about going through the procedure, please contact the cardiologist responsible for your care via the appropriate consultant’s secretary listed below:

Dr Beeton: 01932 722 308
Dr Fluck: 01932 722 069
Dr Jacques: 01932 722 230
Dr Odemuyiwa: 01372 735 128
Dr Wilkinson: 01932 722 230

Patient Feedback
All patients will be offered the opportunity to complete a patient satisfaction survey at the end of their procedure. This information is audited and available to patients. Every effort is made to
Benefits of a Pacemaker
Having a pacemaker inserted may eliminate or reduce the need for any oral medication. It can control and prevent slow, fast or irregular heartbeat.

Risks Associated with a Pacemaker
In order to consent for the pacemaker procedure, you must understand the possible adverse effects and risks involved. These are:

- Bleeding or bruising where the pacemaker was inserted.
- In 1 in 50 cases a blood clot will occur in the vein in the arm. You may need treatment with blood-thinning medication. Rarely a blood clot can move to the lungs.
- In 1 in 100 cases, a patient will have a pneumothorax where air escapes into the space around the lung. This is usually very small and does not cause any problems. If a lot of air escapes this may need to be sucked out using a needle and by placing a special drain into the chest area. If you suddenly become short of breath at home, go to your nearest A/E or call an ambulance.
- In 1 in 100 cases, an infection of the wound will happen. You should not shave the chest hair before your procedure in case you cut your skin. A nurse will use clippers to remove any hair. Antibiotics will be given to you during your procedure.
- In 1 in 400 cases the pacemaker battery will come through the skin. You will need another operation to replace the battery.
- In 1 in 500 cases, a pacemaker lead will move out of place. You may need to have the procedure again to put the lead back in place.

If you have diabetes and are taking metformin/avandamet tablets, you should stop taking the tablets the day before your procedure. Do not stop taking other diabetic tablets. Bring your glucose tablets with you on the day of your procedure.

The Evening before your Procedure
You must avoid alcohol for 24 hours before and after the pacemaker to avoid any complications from bleeding.

On the evening before your procedure, please shower or wash your body using the special washing solution.

On the Day of your Pacemaker
If your procedure is in the morning, you must not eat or drink anything after 6.00 am. If your procedure is in the afternoon, you can have a light breakfast of tea and toast at 08.00 am. You may take sips of water after this time up until the time of your admission.

For both morning and afternoon procedures, you should take your usual medication (including blood pressure or water tablets) at 6.00 am with a small amount of water on the day of your procedure. If you do not have a coronary stent please do not take your aspirin or dipyridamole (Persantin) in the morning. Please bring all your medications with you on the day of the procedure.

Please bring your dressing gown and slippers with you. Nightclothes are not necessary as you will be given a gown to wear.
Avoid bringing any valuables or cash with you, as they may be left unattended while you are undergoing your procedure.

You may wish to bring some reading material to occupy yourself after the procedure.

Should you require a chaperone or interpreter, please inform the Angiography Suite prior to your procedure.

Where do I go for my Procedure?

Please arrive at Maple ward, St Peters Hospital at the time requested on your appointment letter. Maple ward can be accessed from the Out Patient Departmental block or via the Duchess of Kent wing.

Telephone: 01932 722431

Please note, Maple Ward is a same-sex gender ward. Occasionally there may be some delay in obtaining a bed for you due to emergency admissions. We are sorry if this happens and will keep you fully informed of progress and the availability of a bed for you.

The ward is not suitable for visiting children.

Due to limited space in Maple Ward, we ask that no relatives or friends remain with you for the day. They may drop you off and collect you.

You must be escorted or be driven home after the procedure, as you must not drive for 24 hours. A responsible adult should stay with you overnight.

• Do not carry or use a mobile phone or iPod within 6 inches (15 cm) of the pacemaker. It is best to hold a mobile phone or iPod on the opposite side to where the pacemaker was inserted.

• You should avoid security systems at airports and standing for too long near shop entrances

• You should not use a TENS machine.

You do not need to take any precautions with everyday household appliances such as microwaves, oven or hi-fi equipment.

If you need to go to hospital to have a scan you should let a member of staff know that you have a pacemaker. You cannot have an MRI scan.

The Driver and Vehicle Licensing Agency (DVLA) will need to know that you have a pacemaker. You will not be able to drive for at least a week. If you drive a large good vehicle (LGV) or public service vehicle (PSV) you must let the DVLA know that you have a pacemaker. You will not be able to drive a LGV or PSV for at least 6 weeks.

Always check with your insurance company first.

The type of work you do may also be affected and you will need to discuss this with your Cardiologist.

You will continue to have regular check-ups at the hospital. For the first year these may take place 6 monthly and then yearly.
minutes and then gradually release the pressure. If the bleeding continues keep on pressing firmly on the wound and go to your nearest A/E.

Keep the wound clean and dry for the first 5 days after your pacemaker implant and until you have seen your practice nurse or GP on the 5th day. Do not immerse the wound area in a bath and protect from water splashes if using a shower. Do not apply talc to the skin area or pick at the wound or skin glue.

The dressing can be removed on the 3rd day after your procedure. If the wound appears dry you do not need to replace the dressing. If the wound appears to have a discharge you must see your GP or call the Angiography Suite on 01932 722262. If out of hours, you should contact your local Emergency Department.

You should not operate machinery (including cooking) for at least 24 hours. It is important that you do not do any strenuous activity for about a week, particularly activities that involve moving your affected shoulder.

It is important to contact your GP or the Angiography Suite for further advice.

The wound site will feel tender and look bruised. This is normal and you may need to take a painkiller such as Paracetamol to help. Do not take Aspirin as a painkiller. The bruising may take up to three weeks to disappear.

**Living with a Pacemaker**

There is a risk the electro-magnetic fields could interfere with the pacemaker so you should take the following precautions:

**The Permanent Pacemaker Procedure**

During your admission, you will be asked to put on a gown and paper pants. Your details will be checked and a name band placed on your wrist. Where necessary the chest hair will be clipped on the left side.

You will sign your consent form with a cardiologist.

The procedure is performed in a special x-ray room called a cardiac catheterisation laboratory. It looks like a small operating theatre. You will be asked to walk to the catheter laboratory. If you are unable to walk, a wheelchair will be provided.

The procedure will take between 45 minutes to 1.5 hours.

There will be several members of staff in the room during the procedure including a doctor, nurses, a cardiac physiologist and a radiographer. All of the staff will be wearing hats and masks during the procedure in order to prevent you getting an infection. You will be asked to lie on your back on a special x-ray table and will be asked to wear a paper hat.

The procedure drape will be placed over your body and head to reduce the risk of infection. The head drape will be positioned over a frame so that you can turn your head and see out of the side.

A doctor and nurse will be with you at all times. You will not be asleep but, if required, some sedation or a painkiller can be given.

ECG electrodes that allow for the continuous recording of your heartbeat will be placed on your chest and limbs.

The radiographer will move the table and camera into position so that the x-ray pictures can be taken.
The procedure will most often be undertaken through an incision below your left collarbone and above your left breast; however, occasionally the right chest area will be used. The skin around the incision area below your collarbone will be numbed with a local anaesthetic; this will sting for a moment. Once numb the doctor will make a cut into the skin and fatty tissue.

One, two or three leads will be placed into your vein and passed to your heart under x-ray imaging to guide the leads. When the lead(s) reach your heart it is normal for your heart to beat a few extra times (palpitations). A small incision about 3 inches/7-8cm wide will be made and a pocket created under the skin for the pacemaker (battery) to be inserted. You may feel a pulling sensation while the pocket is made. The leads will then be connected to the pacemaker (battery) generator.

Your heart specialist will give you antibiotics during the procedure to reduce the risk of infection.

Once the doctor has completed some initial checks on the leads and battery with the cardiac physiologist, the leads and battery will be stitched into position.

The skin incision will be held together with either stitches or by special skin glue, which will peel off after several days. If non-dissolvable stitches are used you will need to have these removed 5 days later. If a dressing has been placed over the skin incision, this can be removed after 3 days. If the wound is dry, leave the wound uncovered. In all cases, whether your stitches are dissolvable or not, or glue has been used, you should see your GP/Practice Nurse 5 days after your pacemaker has been inserted. This is so that they can check the healing process of your wound.

You will rest in the ward for 1-2 hours. The ward nurse will check your wound site regularly for bleeding or swelling and will record your blood pressure and heart rate.

You may eat and drink on return to the ward. A chest X-Ray will be required 2 hours after you return to the ward to check the lungs and to ensure that the leads are in the correct position.

In all cases before you go home you will require a check and test of your new pacemaker by the cardiac physiologist. This usually takes place in the cardiology department. A nurse or porter will take you to the cardiology department when they are ready to check your pacemaker. The cardiac physiologist will also talk to you about how to look after your new pacemaker.

The check involves a special device held over the pacemaker where it was inserted. A computer will look at the settings of your new pacemaker and will adjust them where necessary.

Providing there are no complications, you will be allowed to go home later in the day. A post procedure instruction sheet will be given to you to help you look after your wound.

**Going Home from Hospital**

You must not drive for 7 days after discharge. Please arrange to be driven home and for a responsible adult to stay with you for 24 hours.

If the wound site begins to bleed, you or the responsible adult should apply a firm pressure over the dressing for 15 to 20