Patient information and consent to insertion of ventriculo-peritoneal and ventriculo-atrial shunt

Key messages for patients

- Please read your admission letter carefully. It is important to follow the instructions we give you about not eating or drinking or we may have to postpone or cancel your operation.

- Please read this information carefully, you and your health professional will sign it to document your consent.

- It is important that you bring the consent form with you when you are admitted for surgery. You will have an opportunity to ask any questions from the surgeon or anaesthetist when you are admitted. You may sign the consent form either before you come or when you are admitted.

- Please bring with you all of your medications and its packaging (including inhalers, injections, creams, eye drops, patches, insulin and herbal remedies), a current repeat prescription from your GP, any cards about your treatment and any information that you have been given relevant to your care in hospital, such as x-rays or test results.

- Laxatives and painkillers may be required after your hospital stay; please ensure you have appropriate supplies at home.

- Take your medications as normal on the day of the procedure unless you have been specifically told not to take a drug or drugs before or on the day by a member of your medical team. If you have diabetes please ask for specific individual advice to be given on your medication at your pre-operative assessment appointment.

- If you have any questions or concerns about this procedure or your appointment, please call the clinical nurse practitioner on telephone number 01223 245151 and ask the switchboard operator for bleep 152-423.

After the procedure we will file the consent form in your medical notes and you may take this information leaflet home with you.

Important things you need to know

Patient choice is an important part of your care. You have the right to change your mind at any time, even after you have given consent and the procedure has started (as long as it is safe and practical to do so). If you are having an anaesthetic you will have the opportunity to discuss this with the anaesthetist, unless the urgency of your treatment prevents this.

We will also only carry out the procedure on your consent form unless, in the opinion of the health professional responsible for your care, a further procedure is needed in order to save your life or prevent serious harm to your health. However, there may be
procedures you do not wish us to carry out and these can be recorded on the consent form. We are unable to guarantee that a particular person will perform the procedure. However the person undertaking the procedure will have the relevant experience.

All information we hold about you is stored according to the Data Protection Act 1998.

**About insertion of ventriculo-peritoneal and ventriculo-atrial shunt**

As part of your ongoing treatment at Addenbrooke’s Hospital, this operation is performed to allow the excess brain fluid (cerebro-spinal fluid (CSF)) to be drained away.

You have been recommended to have an operation to insert a plastic-like (silastic/bendy) tube into the fluid space in the brain (ventricle) and a valve which sits under the scalp. These are connected to a tube, which drains into the tummy (peritoneum) or atrium (heart), where the brain fluid can be easily absorbed. This is called a ventriculo-peritoneal (VP) shunt and ventriculo-atrial (VA) shunt.

There are many different types of valves available to the neurosurgeon. He/she will choose the one which most suits your condition.

The decision to offer you this operation will be based on the results from a variety of investigations, which can include CT scan, MRI scan, venogram, ICP results and infusion studies, neuropsychology (memory tests) and eye tests.

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Figure one: diagram of a VP shunt  
Figure two: diagram of VA shunt
Intended benefits
The aim of the surgery is to allow excess brain fluid to drain away relieving your symptoms.

Who will perform my procedure?
This procedure will be performed or supervised by a consultant neurosurgeon.

Before your procedure
You will be seen as appropriate in clinic by a consultant neurosurgeon, specialist registrar (junior doctor), neuropsychologist and the nurse practitioner.
At this clinic, we will ask for details of your medical history and carry out any necessary clinical examinations and investigations. Please ask us any questions about the procedure, and feel free to discuss any concerns you might have at any time.

We will ask if you take any tablets or use any other types of medication either prescribed by a doctor or bought over the counter in a pharmacy. Please bring all your medications and any packaging (if available) with you. Please tell the ward staff about all of the medicines you use. If you wish to take your medication yourself (self-medicate), please ask your nurse. Pharmacists visit the wards regularly and can help with any medicine queries.

We need to know if you are taking any of the following tablets as they thin the blood which may cause excessive bleeding at the time of surgery:
- Asprin
- Warfarin
- Clopidogrel
- Or any other medication which may thin your blood.

If to your knowledge the answer to any of the following is YES, it is important that you tell us:
- Have you ever received Human Growth Hormone;
- Have you had brain surgery prior to 1992 or;
- Has anyone in your family been diagnosed with Creutzfeldt Jakob Disease (CJD)?

A positive answer will not prevent any treatment, it will however allow us to take the infection control advice and plan your procedure so as to minimise any risks to you.

This procedure involves the use of general anaesthesia. We explain about the different types of anaesthesia or sedation we may use at the end of this leaflet. You will see an anaesthetist before your procedure.

You will either be admitted to hospital the day before or on the day in preparation for the operation. Your doctor will discuss the length of stay with you.
Patient Information

Hair removal before an operation
For most operations, you do not need to have the hair around the site of the operation removed. However, sometimes the healthcare team need to see or reach your skin and if this is necessary they will use an electric hair clipper with a single-use disposable head, on the day of the surgery. Please do not shave the hair yourself or use a razor to remove hair, as this can increase the risk of infection. Your healthcare team will be happy to discuss this with you.

During the procedure
This involves a surgical procedure under general anaesthetic. The procedure involves making a hole in the skull at the front of the head, usually on the right side and passing the small plastic tube (catheter) into the fluid space (ventricle) within the brain. The valve sits underneath the skin and is only visible if the patient is balding. If you have had an Ommaya reservoir inserted, then the valve will be placed next to the reservoir and a tube attached which goes into the tummy or heart.

After the procedure
Once your surgery is completed you will usually be transferred to the recovery ward where you will be looked after by specially trained nurses, under the direction of your anaesthetist. The nurses will monitor you closely until the effects of any general anaesthetic have adequately worn off and you are conscious. They will monitor your heart rate, blood pressure and oxygen levels too. You may be given oxygen via a facemask, fluids via your drip and appropriate pain relief until you are comfortable enough to return to your ward.

If there is not a bed in the necessary unit on the day of your operation, your operation may be postponed as it is important that you have the correct level of care after major surgery.

Eating and drinking. After this procedure, you can eat and drink after surgery unless you feel nauseated or are vomiting.

Getting about after the procedure. We will help you to become mobile as soon as possible after the procedure. This helps improve your recovery and reduces the risk of certain complications. If you have any mobility problems, we can arrange nursing or physiotherapy help.

Leaving hospital. Generally most people who have had this operation will be able to leave hospital after one to two nights. However, the actual time that you stay in hospital will depend on your general health, how quickly you are recovering from the procedure and your doctor's opinion.

Resuming normal activities including work. Your doctor will advise you on how quickly you can resume normal and more vigorous activity.

- Once you are at home you should increase your activities gradually. You should have minimal discomfort from the wound.
Patient Information

- You should contact the DVLA to find out when you can drive again. The DVLA will send the neurosurgeon a questionnaire; he will complete the form at the first clinic appointment and send it back to them. A medical officer at the DVLA will consider your fitness to drive and when you can start driving again; they will contact you. The process may take six months.

Check-ups and results: You will be seen in the CSF clinic at Addenbrooke’s Hospital three months after surgery.

Significant, unavoidable or frequently occurring risks of this procedure

- The procedure carries some small risks of approximately one to three percent (1 to 3 in 100) including fits, stroke, haemorrhage, infection, blockage, over drainage, under drainage, and, less likely, death.
- If infection occurs the shunt will need to be removed under general anaesthetic, and antibiotics administered.

There are general risks associated with all major operations and from being hospitalised, for example, bleeding, infection, blood clots.

Alternative procedures that are available

Various surgical treatments are available to treat disorders of CSF circulation. Your consultant and his team will explain whether these are appropriate for you and explain the relative advantages and disadvantages.

An alternative to this surgery is a decision not to have surgery. We will discuss with you the implications of deciding not to have surgery.

Information and support

You will be given a shunt information card by the clinical nurse practitioner and any further information specific to your condition.

Anaesthesia

Anaesthesia means ‘loss of sensation’. There are three types of anaesthesia: general, regional and local. The type of anaesthesia chosen by your anaesthetist depends on the nature of your surgery as well as your health and fitness. Sometimes different types of anaesthesia are used together.

Before your operation

Before your operation you will meet an anaesthetist who will discuss with you the most appropriate type of anaesthetic for your operation, and pain relief after your surgery. To inform this decision, he/she will need to know about:
• your general health, including previous and current health problems
• whether you or anyone in your family has had problems with anaesthetics
• any medicines or drugs you use
• whether you smoke
• whether you have had any abnormal reactions to any drugs or have any other allergies
• your teeth, whether you wear dentures, or have caps or crowns.

Your anaesthetist may need to listen to your heart and lungs, ask you to open your mouth and move your neck and will review your test results.

**Pre-medication**

You may be prescribed a ‘premed’ prior to your operation. This is a drug or combination of drugs which may be used to make you sleepy and relaxed before surgery, provide pain relief, reduce the risk of you being sick, or have effects specific for the procedure that you are going to have or for any medical conditions that you may have. Not all patients will be given a premed or will require one and the anaesthetist will often use drugs in the operating theatre to produce the same effects.

**Moving to the operating room or theatre**

You will usually change into a gown before your operation and we will take you to the operating suite. When you arrive in the theatre or anaesthetic room and before starting your anaesthesia, the medical team will perform a check of your name, personal details and confirm the operation you are expecting.

Once that is complete, monitoring devices may be attached to you, such as a blood pressure cuff, heart monitor (ECG) and a monitor to check your oxygen levels (a pulse oximeter). An intravenous line (drip) may be inserted. If a regional anaesthetic is going to be performed, this may be performed at this stage. If you are to have a general anaesthetic, you may be asked to breathe oxygen through a face mask.

It is common practice nowadays to allow a parent into the anaesthetic room with children; as the child becomes unconscious, the parent will be asked to leave.

**General anaesthesia**

During general anaesthesia you are put into a state of unconsciousness and you will be unaware of anything during the time of your operation. Your anaesthetist achieves this by giving you a combination of drugs.

While you are unconscious and unaware your anaesthetist remains with you at all times. He or she monitors your condition and administers the right amount of anaesthetic drugs to maintain you at the correct level of unconsciousness for the period of the surgery. Your anaesthetist will be monitoring such factors as heart rate, blood pressure, heart rhythm, body temperature and breathing. He or she will also constantly watch your need for fluid or blood replacement.
What will I feel like afterwards?
How you will feel will depend on the type of anaesthetic and operation you have had, how much pain relieving medicine you need and your general health.

Most people will feel fine after their operation. Some people may feel dizzy, sick or have general aches and pains. Others may experience some blurred vision, drowsiness, a sore throat, headache or breathing difficulties. You may have fewer of these effects after local or regional anaesthesia although when the effects of the anaesthesia wear off you may need pain relieving medicines.

What are the risks of anaesthesia?
In modern anaesthesia, serious problems are uncommon. Risks cannot be removed completely, but modern equipment, training and drugs have made it a much safer procedure in recent years. The risk to you as an individual will depend on whether you have any other illness, personal factors (such as smoking or being overweight) or surgery which is complicated, long or performed in an emergency.

Very common (1 in 10 people) and common side effects (1 in 100 people)
Feeling sick and vomiting after surgery
Sore throat
Dizziness, blurred vision
Headache
Bladder problems
Damage to lips or tongue (usually minor)
Itching
Aches, pains and backache
Pain during injection of drugs
Bruising and soreness
Confusion or memory loss

Uncommon side effects and complications (1 in 1000 people)
Chest infection
Muscle pains
Slow breathing (depressed respiration)
Damage to teeth
An existing medical condition getting worse
Awareness (becoming conscious during your operation)

Rare (1 in 10,000 people) and very rare (1 in 100,000 people) complications
Damage to the eyes
Heart attack or stroke
Serious allergy to drugs
Nerve damage
Death
Equipment failure

Patient Information
Deaths caused by anaesthesia are very rare. There are probably about five deaths for every million anaesthetics in the UK. For more information about anaesthesia, please visit the Royal College of Anaesthetists’ website: www.rcoa.ac.uk

Information about important questions on the consent form

1 Creutzfeldt Jakob Disease (‘CJD’)

We must take special measures with hospital instruments if there is a possibility you have been at risk of CJD or variant CJD disease. We therefore ask all patients undergoing any surgical procedure if they have been told that they are at increased risk of either of these forms of CJD. This helps prevent the spread of CJD to the wider public. A positive answer will not stop your procedure taking place, but enables us to plan your operation to minimise any risk of transmission to other patients.

2 Photography, Audio or Visual Recordings

As a leading teaching hospital we take great pride in our research and staff training. We ask for your permission to use images and recordings for your diagnosis and treatment, they will form part of your medical record. We also ask for your permission to use these images for audit and in training medical and other healthcare staff and UK medical students; you do not have to agree and if you prefer not to, this will not affect the care and treatment we provide. We will ask for your separate written permission to use any images or recordings in publications or research.

3 Students in training

Training doctors and other health professionals is essential to the NHS. Your treatment may provide an important opportunity for such training, where necessary under the careful supervision of a registered professional. You may, however, prefer not to take part in the formal training of medical and other students without this affecting your care and treatment.

4 Use of Tissue

As a leading bio-medical research centre and teaching hospital, we may be able to use tissue not needed for your treatment or diagnosis to carry out research, for quality control or to train medical staff for the future. Any such research, or storage or disposal of tissue, will be carried out in accordance with ethical, legal and professional standards. In order to carry out such research we need your consent. Any research will only be carried out if it has received ethical approval from a Research Ethics Committee. You do not have to agree and if you prefer not to, this will not in any way affect the care and treatment we provide. The leaflet ‘Donating tissue or cells for research’ gives more detailed information. Please ask for a copy.

If you wish to withdraw your consent on the use of tissue (including blood) for research, please contact our Patient Advice and Liaison Service (PALS), on 01223 216756.

Insertion of VP and VA shunt, CF393, V3, April 2017
Privacy & dignity

Same sex bays and bathrooms are offered in all wards except critical care and theatre recovery areas where the use of high-tech equipment and/or specialist one to one care is required.

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.
Consent Form

Patient agreement to investigation or treatment for neurosurgery, spinal surgery or vitreoretinal surgery

Please use ‘Procedure completed’ stamp below on completion:

Interpreter’s statement (if appropriate)

I have interpreted the information to the best of my ability, and in a way in which I believe the patient can understand:

Signed (Interpreter): ................................................................. Date: D D / M M / Y Y Y Y

Name (PRINT): ..................................................................................................................

Or, please note the language line reference ID number: ......................................................

Patient safety – at the heart of all we do

Addenbrooke’s Hospital | Rosie Hospital

CF393 Version 3 April 2017
Patient Information

Insertion of VP and VA shunt, CF393, V3, April 2017

Prevent neurological deterioration

Insertion of ventriculo-peritoneal and/or ventriculo-atrial shunt

Statement of health professional (details of treatment, risks and benefits)

1. I confirm I am a health professional with an appropriate knowledge of the proposed procedure, as specified in the hospital's consent policy. I have explained the procedure to the patient. In particular, I have explained:
   a) the intended benefits of the procedure (please state)
      Prevent neurological deterioration
   b) the possible risks involved. Addenbrooke's always ensures any risks are minimised. However all procedures carry some risk and I have set out below any significant, unavoidable or frequently occurring risks including those specific to the patient
      Infection / Bleeding / CSF leak / Stroke / Epileptic Seizures / Major permanent disability / Blockage / Needs for revision surgery / Over drainage / Chest infection and Pleural Effusion / General eg DVT and PE / Anaesthetic including the risk of death
   c) what the treatment or procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient:

   d) any extra procedures that might become necessary during the procedure such as:
      □ Blood transfusion □ Other procedure (please state)

   e) Was the patient born after 1 January 1997? □ Yes □ No

2. The following information leaflet has been provided:
   Insertion of ventriculo-peritoneal and ventriculo-atrial shunt
   Version reference and date: CF393; version 3; April 2017

   or □ I have offered the patient information about the procedure but this has been declined.

3. This procedure will involve:
   □ General and/or regional anaesthesia □ Local anaesthesia □ Sedation □ None

Signed (Health professional): .......................................................... Date: DD/MM/YYYY
Name (PRINT): .......................................................... Time (24hr): HH:MM:SS
Designation: .......................................................... Contact/bleep no: ...........................................
Consent of patient/person with parental responsibility

I confirm that the risks, benefits and alternatives of this procedure have been discussed with me and that my questions have been answered to my satisfaction and understanding.

Important: please read the patient information on ‘Consent’ and then put a tick in the relevant boxes for the following questions:

1 Creutzfeldt Jakob disease (CJD)
   a) Have you ever been notified that you are at risk of CJD or variant CJD for public health purposes? If yes, please inform your health professional. □ Yes □ No

   b) Have you had a history of CJD or other prion disease in your family? □ Yes □ No

   c) Have you ever received growth hormone or gonadotrophin treatment? If yes, please give details below:
      Please specify:
      (i) whether the hormone was derived from human pituitary glands □ Yes □ No

      (ii) the year of treatment

      (iii) whether the treatment was received in the UK or another country □ UK □ Other

   d) Have you ever had surgery on your brain, eye or spinal cord? □ Yes □ No
      If yes, please give details below:

   e) Since 1980, have you had any transfusions of blood or blood components (red cells, plasma, cryoprecipitate or platelets)? □ Yes □ No
      If yes, please answer questions below:
      Have you either:
      (i) received more than 50 units of blood or blood components, □ Yes □ No
      or
      (ii) received blood or blood components on more than 20 occasions □ Yes □ No
      Where possible, please provide the names of all the hospitals where you received blood or blood components:

2 Photography, Audio or Visual Recording
   a) I agree to the use of any of the above type of recordings for the purpose of diagnosis and treatment. □ Yes □ No

   b) I agree to unidentified versions of any of the above recordings being used for audit and medical teaching in a healthcare setting. □ Yes □ No

3 Medical Training
   I agree to the involvement of medical and other students as part of their formal training. □ Yes □ No
4 Use of Tissue
   a) I agree that tissue (including blood) not needed for my own diagnosis
      or treatment can be used and stored for ethically approved research
      which may include ethically approved genetic research.  
      □ Yes  □ No

   b) Where additional clinical information is needed for the purposes of ethically
      approved research, I agree that relevant sections of my medical record may
      be looked at by researchers or by relevant regulatory authorities. I give
      permission for these individuals to have access to my records.  
      □ Yes  □ No

I have listed below any procedures that I do not wish to be carried out without further discussion.

I have read and understood the Patient Information entitled Consent and the above additional
information. I agree to the procedure or treatment.

Signed (Patient): ___________________________  Date: __D.D./M.M./Y.Y.Y.Y__

Name of patient (PRINT): ______________________

If signing for a child or young person; delete if not applicable.
I confirm I am a person with parental responsibility for the patient named on this form.

Signed: ___________________________  Date: __D.D./M.M./Y.Y.Y.Y__

Relationship to patient: ______________________

If the patient is unable to sign but has indicated his/her consent, a witness should sign below.

Signed (Witness): ___________________________  Date: __D.D./M.M./Y.Y.Y.Y__

Name of witness (PRINT): ______________________

Address: ______________________________________

D Confirmation of consent

Confirmation of consent (where the treatment/procedure has been discussed in advance)
On behalf of the team treating the patient, I have confirmed with the patient that she/he has
no further questions and wishes the treatment/procedure to go ahead.

Signed (Health professional): ___________________________  Date: __D.D./M.M./Y.Y.Y.Y__

Name (PRINT): ___________________________  Job title: ___________________________

Please initial to confirm all sections have been completed:

E Withdrawal of patient consent

□ The patient has withdrawn consent (ask patient to sign and date here)

Signed (Patient): ___________________________  Date: __D.D./M.M./Y.Y.Y.Y__

Signed (Health professional): ___________________________  Date: __D.D./M.M./Y.Y.Y.Y__

Name (PRINT): ___________________________  Job title: ___________________________