

# Patient agreement to investigation or treatment

## Live donor liver transplantation (using part of a liver from a living donor)

**Authors:** Cambridge Transplant Unit

**Brief description:**

- This is an operation to remove a diseased liver and replace it with a healthy liver. The new liver is obtained from a living donor (often related to the patient), who donates part of his/her liver.
- Here, we explain some of the aims, benefits, risks and alternatives to this procedure (operation/treatment). We want you to be informed about your choices to help you to be fully involved in making any decisions.
- Please ask about anything you do not fully understand or wish to have explained in more detail.
- If you would like this information in another format or language or would like help completing the form, please ask a member of our staff.

**Please bring this form with you to hospital**

- You will be asked to read this form carefully, and you and your doctor (or other appropriate healthcare professional) will sign it to document your consent.
- All our consent forms are available on the Addenbrooke’s website:  
<http://www.addenbrookes.org.uk/consent>
- Guidance for health professionals can be found on the Addenbrooke’s intranet site  
<http://nww.addenbrookes.nhs.uk/consent>
- Remember, you can change your mind about having the procedure at any time even after you have signed the form.

**For staff use:**

Does the patient have any special requirements? (For example: requires an interpreter or other additional communication method)

.....  
.....

## About live donor liver transplantation

This is a complex and major procedure to remove your diseased liver and replace it with a new healthy liver lobe donated by a living donor through a different operation. This procedure is generally recommended for patients who suffer from non-reversible, end stage liver disease. The transplant procedure typically takes eight hours or more to perform. However, if we encounter any difficulties, the operation might take substantially longer.

## Before your operation

- You have been prepared for this procedure by a team of Hepatologists, with input from Surgeons, Anaesthetists, Psychiatrists, Dentists, Co-ordinators Paramedical staff and Nursing personnel. Your name will have been added to the Cambridge liver transplant waiting list. You and the donor would have undergone extensive investigations to make sure that the proposed living donor liver transplantation is possible from a surgical point of view. You will be given a date for this procedure and will be admitted to the transplant ward the day before the operation.
- Most patients attend a pre-admission clinic, when you will meet the surgeon performing your operation.
- At this clinic, we shall ask you for details of your medical history and carry out any necessary clinical examinations and investigations. This is a good opportunity for you to ask us any questions about the procedure, but please feel free to discuss any concerns you might have at any time.
- You will be asked if you are taking any tablets or other types of medication - these might be ones prescribed by a doctor or bought over the counter in a pharmacy. It helps us if you bring details with you of anything you are taking (for example: bring the packaging with you).
- This procedure involves the use of general anaesthesia. See below for further details about the types of anaesthesia/sedation we shall use.
- When you arrive, a doctor will see you in the transplant ward, go through your medical history again, examine you and take some blood for final laboratory tests.
- On the day of the operation you will be taken to the operating theatre as soon as the surgeons carrying out the donor operation are happy with the appearance of the liver in the donor.
- Very occasionally, the donor liver having been inspected will be found to be unsuitable for you, just prior to your planned operation. Your operation will then be cancelled. If this should happen, it will not affect your place or priority on the waiting list for another liver.

## During the procedure (operation/treatment) itself

- We will give you a general anaesthetic, which means you will not be conscious during the operation.
- We will place several lines (tubes) into some blood vessels in your arms and neck. These give you medication, fluids and/or blood, and help us take blood for tests and monitor your condition. In addition, a tube might be passed into your stomach through the nose to empty your stomach.

- We also place a urinary catheter into your bladder during and after the operation to drain the urine.
- A team of surgeons will first prepare the new liver and then carry out the liver transplant procedure in you.
- The surgeon will make a long curved incision (cut) in the upper part of your abdomen (tummy) and remove the diseased liver. The new liver will then be connected up to the blood vessels and bile duct.
- Typically, this takes eight hours or more. However, if we encounter any difficulties, the operation might take substantially longer.

## Prevention of Surgical Site Infection (SSI)

- In order to prevent infection, hair from the area where you are being operated on may need to be removed.
- Hair removal procedure is usually carried out on the operating table. The skin is then cleaned with an appropriate skin preparation solution. This can leave a colouration to the skin which can be washed off.
- You must not shave the area that is being operated on yourself; this will be carried out in the operating theatre. Shaving at home, or the night before surgery, increases the risk of infection as no matter how careful you are the skin may become irritated and this could increase the risk of infection.
- It may be necessary during the procedure to shave other areas of your body if appropriate to allow equipment/machines, for example diathermy machines (used to seal blood vessels), to stick to your skin to achieve the best and safest performance.

*(Reference: Department of Health. High Impact Intervention No 3: Preventing surgical site infection. Saving Lives: reducing infection, delivering clean and safe care: DH June 2005.)*

## After the procedure (operation/treatment)

- After the liver transplant procedure has been carried out you will be taken to an intensive care bed. You might be woken up the same day from the anaesthetic or depending on your condition, the team might decide to keep you anaesthetised and ventilated (placed on a breathing machine) for a day or two in intensive care.
- After this procedure, most people will have a small, plastic tube in one of the veins of their arm. This might be attached to a bag of fluid (called a drip), which feeds your body with fluid until you are well enough to eat and drink by yourself.
- Sometimes, people feel sick after an operation, especially after a general anaesthetic, and might vomit. If you feel sick, please tell a nurse and you will be offered medicine to make you more comfortable.
- You will be attached to several tubes and monitors for a number of days.
- Generally you will be allowed to eat and drink a couple of days after the operation.
- As soon as you are able, you will be encouraged to be mobile and carry out deep breathing exercises. This both reduces the chance of getting a blood clot in the leg and also helps you to avoid chest infections.
- Following a liver transplant operation, you are likely to need to stay in hospital for at least 10 to 14 days. You might however, need to stay longer, depending on your clinical condition and your doctor's opinion.

- When you leave hospital, you should be able to carry out light daily activities at home. However, it might be a few months before you can return to normal active work.
- In the period after the operation, you will be seen very frequently in the transplant clinic to check your progress and to make sure your new liver is functioning well.

## Intended benefits of the procedure

- Liver transplantation is considered to be a life-saving procedure.
- Most people who have had a liver transplant consider they have more energy and a better quality of life after the operation. They find that most of the symptoms of liver failure, such as jaundice, itching, fluid in the tummy, swelling of legs etc, will gradually disappear.
- After a liver transplant, you can expect a 60 to 70% chance of being alive at the end of a 10 year period.

## Who will perform my procedure?

- The liver transplant operation will be carried out by an appropriately experienced surgical team within the liver transplant unit

## Alternative procedures that are available

- Liver transplantation is the only successful form of treatment for non-reversible, end stage liver failure. However, symptoms such as jaundice, itching, fluid overload can occasionally be managed non-operatively, for a limited period of time, with medication.

## Serious or frequently occurring risks

- Liver transplant is a complex and major procedure and there is up to 10% risk of death in the first year following the transplant. There is a very small but real risk of death during the operation itself.
- Following the operation, there is a small risk (of 2%) that the new liver might not function or a risk (of 4%) that the blood vessels taking blood into the liver might get blocked. This will lead to failure of the liver and we will need to urgently re-transplant the liver within 48 hours, without which survival is not possible.
- In the event of bleeding or a bile leak, a further operation may be needed to sort out the problem.
- Bile duct narrowing and bile leaks may occur in up to 25% (1 in 4) of patients undergoing this procedure. This would require further procedures and occasionally a new liver transplant.
- Occasionally the transplanted lobe may not be sufficiently big enough to work adequately in you ('small for size syndrome') and this may result in prolonged hospital stay. It may also result in jaundice and fluid retention until the lobe grows in size and starts to function normally.
- After the operation, there is a 25% risk of acute rejection of the new liver. If this happens, we need to give you some extra treatment with more powerful medications.

- In the longer term, you might develop chronic rejection of the new liver. If this happens you might need to have a further transplant procedure.
- The primary liver condition (that caused your original liver failure) can recur in the new liver.
- Most people who have had a liver transplant need to undergo further admissions into hospital in the subsequent months and years. These are necessary so that we can check you, using blood tests, scans, endoscopies and/or liver biopsies.
- As with any other operation, complications can occur, such as wound infections, fluid leaks from drains and wound sites etc. These complications can often be managed with medication, rather than any further surgical procedures and every effort will be made to prevent this.
- We take every effort to screen liver donors for infections and tumours; however, we cannot guarantee that an infection or tumour will not be transmitted from the donor to you, the recipient. The risks are, however, extremely low and similar to that of blood transfusion.
- You will need to take a number of medications on a long-term basis to prevent rejection of the new liver. This is called Immunosuppression.

## Immunosuppression

- In order to protect the new 'foreign' liver from rejection by your immune system, you will need to take some powerful immunosuppressive medications. Although these should protect your new liver, they also reduce your immunity for example; they make you more susceptible to some infections.

## Side effects of immunosuppressive medication

- The potential side effects of these medicines include infections, kidney problems, diabetes, stomach upset and wound problems. There is also a higher risk of cancer in patients taking these medications.
- To reduce any side effects, the medical team will try adjusting the dose of medications you take, based on your specific condition.
- It is very important that you follow our instructions on when and how to take your medication. If you do not follow the dosage schedule strictly (ie if you miss taking tablets), you run a significant risk of losing your liver without the prospect of a new one.

**Please remember that the Transplant Unit has recommended the liver transplant procedure to you because the team feels that the benefits will greatly outweigh the risks for you.**

## Information and support

If you have any anxieties or questions, please feel free to ask any member of staff. Further information can be obtained from the transplant co-ordinators who can be reached through the Addenbrooke's Switchboard or 01223 216672. Further information can also be found on the Addenbrooke's website:

[www.addenbrookes.org.uk](http://www.addenbrookes.org.uk) or [www.cambridgetransplant.org.uk](http://www.cambridgetransplant.org.uk)

## General anaesthesia

Your surgery will be performed under 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.

## Before your operation

You will already have seen an anaesthetist during your initial transplant assessment. After your admission to hospital for your operation the anaesthetist who will be looking after you during your operation will come to see you and ask you questions about your recent health and might also examine you. You will be asked about your general health, any previous illnesses or operations, medications, allergies or adverse drug reactions, any problems with neck movement and mouth opening and whether you have any caps or crowns on your teeth.

Minor illnesses can cause problems for anaesthesia, surgery and recovery after the operation. If you have a cough, cold or other illness please let the anaesthetist know, as it might be better for you to recover from this prior to your surgery.

It is very important that you follow the instructions you are given regarding eating and drinking. You are asked not to eat and drink for six hours before the operation. This allows your stomach to empty by the time you are ready for surgery. With an empty stomach there is less likelihood of complications of vomiting during or after your anaesthetic. You should let your anaesthetist know if you have a problem with hiatus hernia or acid reflux. You can drink a glass of water up to two hours before your operation. You may also take a small amount of water to swallow your tablets.

Before your operation you will usually be changed into a gown and wheeled to the operating suite into an anaesthetic room. This is an ante-room outside the theatre. The anaesthetist, his or her assistant and nurses are likely to be present. An intravenous line (drip) may be inserted. Monitoring devices may be attached to you, such as a blood pressure cuff or a pulse oximeter. A pulse oximeter is usually a little red light in a small box, which is taped to your finger. It shows how much oxygen you have in your blood and is one of the vital monitors that an anaesthetist uses during your operation to ensure that you remain in the best of health. You may be given some oxygen to breathe. You will be connected to a monitor and a small needle will be placed in a vein in the back of your hand. Drugs to start anaesthesia will be put through this needle.

## During your operation

Once asleep, a tube will be placed into your breathing pipe and your breathing controlled. The insertion of this tube can often be difficult when neck movement is limited and it is sometimes necessary to use a special telescope to do this. You will be advised if this will be necessary at the preoperative visit.

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 in the correct level of unconsciousness for the period of the surgery. Your anaesthetist is constantly aware of your condition and trained to respond. 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. If you have any other medical conditions, your anaesthetist will know of these from your pre-operative assessment and be able to treat them during surgery.

## After your operation

You will continue to be closely monitored in the Intensive Care Unit or High Dependency Unit to ensure that your vital signs are stable and that your pain relief is adequate. For your post operative pain management you may receive either tablets or injections.

## What are the risks of general 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 done in an emergency. Please discuss any pre-existing medical condition with your anaesthetist.

- Very common and common side effects (1 in 10 or 1 in 100 people)  
Feeling sick and vomiting after surgery, sore throat, dizziness, blurred vision, headache, itching, aches, pains and backache, pain during injection of drugs, bruising and soreness, confusion or memory loss. ), damage to teeth, lips or tongue
- Uncommon side effects and complications (1 in 1000 people)  
Chest infection, bladder problems, muscle pains, slow breathing (depressed respiration), an existing medical condition getting worse, awareness (becoming conscious during your operation).
- Rare or very rare complications (1 in 10,000 or 1 in 100,000)  
Damage to the eyes, serious allergy to drugs, nerve damage, death, equipment failure.



We are currently working towards a smoke free site. Smoking is only permitted in the designated smoking areas.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169

#### Help with this leaflet:



If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or

[patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)



#### Document history

Authors	Transplant Surgery
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# Patient agreement to investigation or treatment

<b>For staff use only:</b>
<b>Surname:</b>
<b>First names:</b>
<b>Date of birth:</b>
<b>Hospital no:</b>
<b>Male/Female:</b>
<b>(Use hospital identification label)</b>

**Responsible health professional/job title**

.....

Special requirements .....  
 (For example, other language/other communication method)

**Name of proposed procedure or course of treatment**

**Live donor liver transplantation**

**Statement of health professional**

(To be filled in by 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:

- How it will be performed.
- The intended benefits of the procedure: Liver transplantation is considered to be a life-saving procedure. Most people who have had a liver transplant consider they have more energy and a better quality of life after the operation. They find that most of the symptoms of liver failure, such as jaundice, itching, fluid in the tummy, swelling of legs etc, will gradually disappear. After a liver transplant, you can expect a 60 to 70% chance of being alive at the end of a 10 year period. Other (please specify): .....
- Any serious or frequently occurring risks from the procedures including those specific to the patient: Liver transplant is a complex and major procedure and there is up to 10% risk of death in the first year following the transplant; There is a very small but real risk of death during the operation itself; Following the operation, there is a small risk (of 2%) that the new liver might not function or a risk (of 4%) that the blood vessels taking blood into the liver might get blocked. This will lead to failure of the liver and we will need to urgently re-transplant the liver within 48 hours, without which survival is not possible; In the event of bleeding or a bile leak, a further operation may be needed to sort out the problem; Bile duct narrowing and bile leaks may occur in up to 25% of patients undergoing this procedure. This would require further procedures and occasionally a new liver transplant; Occasionally the transplanted lobe may not be sufficiently big enough to work adequately in you ('small for size syndrome') and this may result in prolonged hospital stay. It may also result in jaundice and fluid retention until the lobe grows in size and starts to function normally; After the operation, there is a 25% risk of acute rejection of the new liver. If this happens, we need to give you some extra treatment with more powerful medications; In the longer term, you might develop chronic rejection of the new liver. If this happens you might need to have a further transplant procedure; The primary liver condition (that caused your original liver failure) can recur in the new liver; Most people who have had a liver transplant need to undergo further admissions into hospital in the subsequent months and years. These are necessary so that we can check you, using blood tests, scans, endoscopies and/or liver biopsies; As with any other operation, complications can occur, such as wound infections, fluid leaks from drains and wound sites etc. These complications can often be managed with medication, rather than any further surgical procedures; We take every effort to screen liver donors for infections and tumours. However, we cannot guarantee that an infection or tumour will not be transmitted from the donor to you, the recipient. The risks are, however, extremely low and similar to that of blood transfusion; You will need to take a number of medications on a long-term basis to prevent rejection of the new liver. This is called Immunosuppression. Other (please specify): .....

<p><b>For staff use only:</b>  <b>Surname:</b>  <b>First names:</b>  <b>Date of birth:</b>  <b>Hospital no:</b>  <b>Male/Female:</b>  <b>(Use hospital identification label)</b></p>
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- Any extra procedures that might become necessary during the procedure:  
 Blood transfusion    Other procedure (please specify)

I have discussed what the treatment / procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.

- The following information leaflet has been provided: Live donor liver transplantation.

Version/Date/Ref: 2/August 2011/CF400

This procedure will involve:

- General and/or regional anaesthesia

Health professional's signature: ..... Date: .....

Name (PRINT): ..... Job title: .....

Contact details (if patient wishes to discuss details later)

- I have offered the patient information about the procedure but s/he has declined information.

**Statement of the interpreter (if appropriate)**

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

Interpreter's signature..... Date: .....

Name (PRINT): .....

**Important notes: (tick if applicable)**

- The patient has withdrawn consent (ask patient to sign/date here) .....
- See also advance directive/living will

**Statement of patient**

Please read this form carefully. If your treatment has been planned in advance, you should already have your own copy, which describes the benefits and risks of the proposed treatment. If not, you will be offered a copy now. Do ask if you have any further questions. The staff at Addenbrooke's are here to help you. **You have the right to change your mind at any time before the procedure is undertaken, including after you have signed this form.**

Training doctors and other health professionals is essential to the continuation of the Health Service and improving the quality of care. Your treatment may provide an important opportunity for such training, where necessary under the careful supervision of a senior doctor. You may, however, decline to be involved in the formal training of medical and other students without this adversely affecting your care and treatment.

**Please read the following:**

**I understand** that I will have the opportunity to discuss the details of anaesthesia with an anaesthetist before the procedure, unless the urgency of my situation prevents this. (This only applies to patients having general or regional anaesthesia.)

**I understand** that you cannot give me a guarantee that a particular person will perform the procedure. The person undertaking the procedure will, however, have appropriate experience.

**I understand** that any procedure in addition to those described on this form will only be carried out if it is necessary to save my life or to prevent serious harm to my health.

**I have been told** about additional procedures which may become necessary during my treatment. I have listed below any procedures that **I do not wish, without further discussion, to be carried out.**

<b>For staff use only:</b>
<b>Surname:</b>
<b>First names:</b>
<b>Date of birth:</b>
<b>Hospital no:</b>
<b>Male/Female:</b>
<b>(Use hospital identification label)</b>

**I understand** that any tissue (including blood) removed as part of the procedure or treatment will be anonymised and may be used for teaching or quality control, and stored or disposed of in a manner regulated by appropriate, ethical, legal and professional standards.

**I understand** that all research will be approved by a research ethics committee and undertaken in accordance with appropriate ethical, legal and professional standards.

**I understand** that the research may be conducted within a hospital, university, not for profit organisation or a company laboratory.

**Please tick boxes to indicate you either agree/disagree to the three points below.**      **Yes**      **No**  
     

**I agree** that tissue (including blood) not needed for my own diagnosis or treatment can be used for **research which may include genetic research**. **If you wish** to withdraw your consent for the use of your tissue (including blood) for research, please contact the Patient Advice and Liaison Service at Addenbrooke's Hospital.              
     

**I agree** to the use of photography for the purpose of diagnosis and treatment.

**I agree** to anonymised photographs being used for medical teaching.

**I confirm** that the risks, benefits and alternatives of this procedure have been discussed with me and I have read and understood the above and agree to the procedure (or course of treatment) on this form.

**Patient's signature:** ..... **Date:** .....  
**Name (PRINT):** .....

If the patient is unable to sign but has indicated his/her consent, a witness should sign below. Young people may also like a parent to sign here (see guidance notes).

**Witness' signature:** ..... **Date:** .....  
**Name (PRINT):** .....

**Confirmation of consent** (to be completed by a health professional when the patient is admitted for the procedure, if the patient has signed the form in advance)

On behalf of the team treating the patient, I have confirmed with the patient that s/he has no further questions and wishes the procedure to go ahead.

**Signature**      **Date:** .....

**Name (PRINT):** ..... **Job Title:** .....

Copy accepted by patient: yes / no (please circle)