



# Information for Potential Live Liver Donors



Liver transplants may be performed using a part of a liver (lobe) from a healthy, live donor. Any healthy family member, between the ages of 18-60, such as a mother, father, child, sibling, half-sibling, aunt, uncle or cousin, who has a compatible blood type and body size may be considered a potential donor. A spouse or other emotionally related person (between the ages of 18-60), such as long-time friends, also may donate. The liver has the unique ability to regenerate or grow back. It is the only solid organ in the body that can do so.

Please note that, while a person may be willing to donate part of their liver to someone who needs a transplant, not all potential recipients are candidates to receive a piece of liver from a live donor. Previous abdominal surgery, TIPS (transjugular intrahepatic portosystemic shunt) and other medical considerations may prevent this option. If the recipient is considered a suitable candidate for live donation, then a discussion with interested family or friends can be arranged.

## A Personal Decision

The decision to donate a part of your liver should be given careful thought and consideration. Getting as much information as you can and understanding the risks and benefits to you, as well as the recipient, will help you with this decision. For some, the decision is clear right away. For others, it is very difficult. Feeling guilty about being hesitant or fearful about becoming a donor is normal. Confidential discussions with the Independent Donor Advocacy Team can give you the opportunity to ask questions without any obligation to donate. All conversations will be kept in the strictest confidence. You also can talk with someone who has donated a part of their liver to hear about their experience first hand. The most important thing is to be completely comfortable with your decision, whether you decide to pursue donating a part of your liver or whether you decide that doing so would not be right for you. If you decide to become a donor, you may change your mind any time before the operation.

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## **A Family Decision**

Families with more than one willing potential donor should consider the individual circumstances of each person to determine the most appropriate candidates. Such circumstances may include the ability to take time off from work as well as family obligations. Eligible donors are evaluated through a series of blood tests, determination of liver size compatibility, and assessment of medical risk.

## **Advantages of Live Donor Adult Liver Transplantation (LDALT)**

Although donating a part of the liver offers no direct medical benefit to the donor, there are significant advantages for the recipient. The surgery can be scheduled at a time when the recipient is in fairly good physical condition; timing is very important because the recipient should neither be too sick nor too well. Because this is an elective operation, the surgery can be scheduled at a time that is convenient for both the donor and the recipient. A live donor transplant shortens the length of time the recipient must wait for an organ, eliminates this stressful period of waiting for a suitable organ to become available, and usually shortens the hospital stay.

Live donor liver transplantation is not performed in a recipient who is critically ill. A piece of liver is not enough to sustain life in a very sick person.

## **Effects of Donation on the Live Donor**

A person who donates a part of their liver can lead a normal life after recovering from the surgery. The liver has the unique ability to regenerate or grow back to a normal size for each individual. There is not an increased risk of developing liver disease after donation. You do not have to restrict your diet or take medications for life after donating a part of your liver. Being a donor does not in any way restrict or interfere with a person's lifestyle. It usually does not change life expectancy or the ability to have children.

## **Donor Evaluation**

Potential live donors are only considered after the team has determined that the recipient is an appropriate candidate for LDALT.

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If you are a potential partial liver donor, you will need to have an extensive evaluation to determine that you are in good health, your blood type is compatible with the recipient, and your liver is large enough to share; about 60% of the donor's liver is transplanted into the recipient. The blood vessel anatomy of both the donor and recipient also is an equally important consideration to determine whether it is technically possible to divide the donor liver without harming either portion (i.e. the portion to be transplanted or the part that will remain in the donor). The evaluation also is meant to help you be sure about your decision to donate a portion of your liver. Remember, you may change your mind at any time during the evaluation process. This evaluation is scheduled on an outpatient basis over several days with members of the Independent Donor Advocacy Team at Lahey Clinic. These care providers do not care for potential transplant recipients; their role is to advocate for donor interests. Testing includes:

- An initial evaluation with the donor nurse coordinator and donor surgeon to discuss in detail the evaluation, surgery, and postoperative complications associated with live liver donation
- A meeting with the Independent Living Donor Advocate
- A CT scan to determine liver size and any variations or abnormalities in the liver, blood vessels, or bile ducts
- A complete medical history and physical examination by a medical doctor
- A chest x-ray (to evaluate the lungs)
- An EKG (to evaluate the heart)
- Blood and urine tests (including HIV testing)
- A meeting and evaluation with a social worker
- A meeting and evaluation with a psychiatrist
- A meeting and evaluation with a pharmacist
- A meeting and evaluation with a dietician
- A meeting with the financial coordinator
- A meeting with a research coordinator

## **Surgical Complications and Risks**

The risk of serious complications associated with partial liver donation is very low, but as with any operation, is never zero. Approximately one-third of donors will have a complication associated with the surgery which is usually minor in nature such as a superficial wound infection, urinary tract infection, or pressure sore. More serious complications such as a need for re-operation, bleeding requiring transfusions, or bile leaks requiring further procedures may occur, but occur much less frequently.

Major complications are very uncommon but may include heart attack, severe infection, need for an urgent liver transplant, or death of the donor. Although the risks of undergoing the donor operation are minimal, you need to understand them completely before making your decision.

## **Preadmission Testing**

About a week before the surgery is scheduled, both the donor and the recipient will undergo more testing including:

- Blood tests to confirm compatibility
- A meeting with the donor surgeon to sign surgical consent
- A meeting with the anesthesiologist with the opportunity to ask questions related to anesthesia and sign consent
- A meeting for you, your family, caregivers, and friends with the living donor nurse coordinator
- Donation of one unit of your own blood

## **Before the Operation**

You can eat normally until midnight the night before your surgery. Do not shave your abdomen or chest before surgery; this will be done immediately before the operation. Just before going to the operating room, you will be given medication to help you relax. General anesthesia, which puts you to sleep, will be administered in the operating room. The operation, including the time taken to prepare you, takes about six hours.

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## **The Surgery**

The operation to remove a portion of your liver is called a liver resection. After you are asleep, an incision is made across your upper abdomen underneath your rib cage. The piece of liver is carefully dissected, removed and prepared to be transplanted into the recipient.

While the liver is being prepared and transplanted into the recipient, (who is in an adjacent operating room), your incision is closed and stitched. After the surgery, you will be moved to the post anesthesia care unit, (recovery room), to be monitored closely. Donors stay in the post anesthesia care unit overnight and are moved to the transplant unit the next day.

## **Recovering in the Hospital**

Although recovery times vary, a liver donor usually remains in the hospital for five to seven days. Intravenous lines will be in place for four to five days to provide fluid and medication until you are able to eat and drink without difficulty. Donors also have a catheter in their bladder and a wound drain in their abdomen. Pain is managed through your IV with patient controlled analgesia (PCA). You will have medication available to help control any nausea that you may experience. It is important to turn, cough and breathe deeply to clear secretions from your lungs and to be out of bed and walking within 24 hours after the surgery to prevent blood clots. Nurses very skilled in the care of liver surgery patients will help you with these activities. Most live liver donors do not experience complications and are released from the hospital to continue their recovery at home about five to seven days after the operation. Some patients are able to be discharged from the hospital, but need to be close for follow up care; for this purpose a nearby hotel may be available to complete your immediate recovery before returning home. Your care team will decide if this is an appropriate option to offer you.

## **Recovering at Home**

After having general anesthesia and surgery, it is normal to feel very tired and emotionally drained. For several weeks after the surgery, take things slowly, rest frequently and give your body the time it needs to heal. Discomfort around your incision will decrease gradually and your energy level will return a little each day. The skin around your incision may itch or feel numb as the wound is healing. You may have trouble stretching as well. You may not sleep soundly through the entire night for a few weeks after surgery.

## **Resuming Your Activities**

You may resume activities such as light work around the house, sexual activities, and mild exercise whenever you feel comfortable. Heavy lifting, (over 15 lbs.), and strenuous activities should be avoided for six weeks.

## **Returning to Work**

If your job does not require heavy lifting, you should be able to return to work within four to six weeks. If your job does require lifting or other strenuous activities, you should be able to return to work in about eight to 12 weeks.

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## **A Gift**

If you donate a portion of your liver, you have truly given the gift of life. Although deceased liver donation is possible, there are far more people waiting for a suitable liver than there are available donor organs. Deciding to become a donor usually is a positive experience for both the donor and the recipient.