

VCU Health System
MCV Hospitals and Physicians

Medical College of Virginia Hospitals
The Hume-Lee Transplant Center



Becoming a Liver Donor

VCU | Hume-Lee
Transplant Center
Virginia Commonwealth University Medical Center



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Introduction

Welcome to the VCU Medical Center's Hume-Lee Transplant Center.

Liver Transplantation is a surgical operation, in which a donated human liver is placed into a person whose liver is failing. A transplanted liver comes from either a deceased organ donor or a living donor.

The liver transplant program at the Hume-Lee Transplant Center began in 1964. Since that time our center has performed over 1,000 liver transplants. The physicians at our center have been pioneers in both the treatment of liver diseases and liver transplantation.

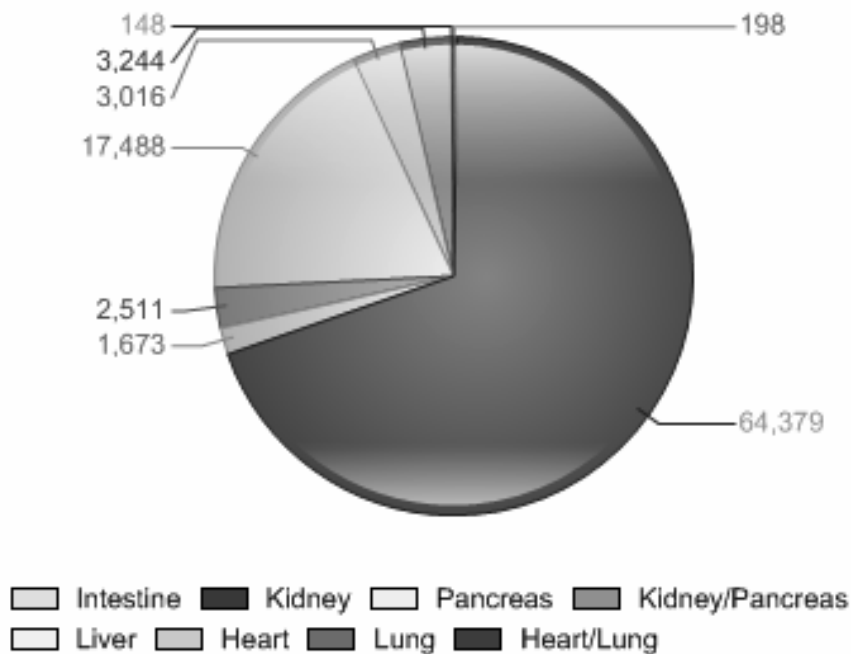
Enclosed in this booklet you will find information regarding your liver donor transplant evaluation. We hope this information will help answer the many questions you may have regarding your upcoming week and the weeks to follow. Please bring this booklet with you to all of your appointments during your evaluation; this information will be reviewed with you by one of the liver transplant coordinators. Please write down any questions you may have in the space provided at the end of this booklet. This will help you remember to discuss them with the members of the transplant team.



A GREAT NEED FOR DONOR ORGANS

Many thousands of people with liver disease are on the national waiting list for a liver transplant and are waiting for a donor organ to become available. Unfortunately, there are not enough organs to fulfill this demand. As of June 2006, there were approximately 17,645 people waiting for a deceased donor liver transplant. Annually, there are approximately 6,000 liver transplants performed. This organ shortage has led people to a specialized and complex procedure, which entails using a living donor for transplantation. A living donor is able to donate a portion of their liver to someone in need of a liver transplant. Fortunately, the liver is the only organ that can regenerate and will grow back to nearly 100 % of its size in a short amount of time.

U.S. Waiting List Candidates by Organ



From UNOS.org



WHAT IS LIVING DONOR LIVER TRANSPLANTATION?

A living donor liver transplant is a surgical procedure that involves the removal of the recipient's native liver (the one they were born with) and replacing it with a portion of the living donor's liver. The remaining liver of the donor will regenerate to normal functional volume within one month after the donation. The recipient's transplanted liver will also regenerate to almost full size in 2-4 weeks. This procedure was developed as a result of the national shortage of organs from deceased donors. Adult to Adult Living Donor Liver Transplantation originated in Europe and was adopted in the United States in 1997. In 1998, VCU Medical Center performed the second adult-to-adult living donor liver transplant in the country.



About your Liver

The liver is the largest and most important solid organ in the body. It serves many functions. These four are the most important:

- The liver receives all of the blood and nutrients absorbed from the intestine, and processes these nutrients. Any toxins absorbed from the intestine are neutralized in the liver.
- The liver produces bile that is emptied into the intestine through bile ducts that connect the liver to the intestine. The bile is required to help the intestines digest all of the food you eat.
- The liver produces almost all of the proteins found in your body. These proteins help your body perform many of its important functions like helping your blood to clot after you cut yourself, and helping your body to fight off infection.
- The liver detoxifies waste products produced by muscle and other organs.





The Decision to Donate

The decision to donate a portion of your liver is an individual, voluntary act. When making the decision to donate, you may experience mixed feelings. Of course you'd like to help someone in need, but what does it mean for you?

How does living donation affect the donor?

Because the liver is the only organ that can fully regenerate and grow back to almost 100% of its size in a very small amount of time, living donors can donate a part of their liver to the recipient, and return to their normal lives in a short period of time.

Suppose I decide against being a living donor?

If at any time during the evaluation process you decide that you would not like to donate your liver, the transplant team will fully support you in your decision. The decision to become a living donor is voluntary and should be free from internal or family pressures. As an individual, you have the right to decide that liver donation is not for you. If you choose not to donate, the decision is respected provided it is made after a complete discussion of the available choices and possible results. Each aspect of donor evaluation is confidential, so no matter what the reason for your decision, it will remain confidential between you and your doctor.



The Decision to Donate (continued)

How much does living donation cost? Who pays?

All medical expenses that are related to the evaluation of a potential donor, the transplant operation and hospitalization, and the immediate follow-up care of the potential donor, are paid for completely by the potential recipient's insurance coverage. As a potential donor, you should not see any bills related to your medical evaluation, hospitalization, or post hospital care. Typically, no other costs (i.e. travel expenses, time off from work, non-medical bills, etc.) are covered by the recipient's insurance company or by the hospital. Some employers may allow this time to be taken as sick leave.

Are transplants from living donors always successful?

It is important to understand that, although living donor transplants are highly successful, problems may occur. Sometimes, the liver is lost to rejection, or the original disease that caused liver failure may come back in the transplanted liver, causing it to fail.

The decision to become a living liver donor is complex, and it is essential that you discuss this decision with your family, the person you want to donate to, and the transplant team. You need to learn as much as possible about the procedure before you proceed with the donation process.





Types of Donors

Living Related Donor—

A living related donor is any healthy blood relative of the recipient. They can be brothers and sisters, parents, children over 18 years of age, or other blood relatives, such as aunts, uncles, cousins, half brothers and sisters, or nieces and nephews.

Living Unrelated Donor—

A living unrelated donor is a healthy individual who is emotionally close to, but not related by blood, to the transplant candidate. They may be spouses, in-laws, close friends, co-workers, neighbors, or other acquaintances.

“Good Samaritan” Donor—

A “Good Samaritan” Donor, also known as a non-directed donor, is a living donor who is not related to or known by the recipient, but makes their donation purely out of selfless motives. This type of donation is also referred to as anonymous, altruistic, altruistic stranger, or stranger-to-stranger living donation.

Individuals considering this option should contact the Hume-Lee Transplant Center to discuss the possibility of becoming a donor.





WHAT IS THE FIRST STEP

1. The person you want to donate to must be on the liver transplant waiting list in order to start your donor evaluation.
2. You must have a compatible blood type. The graph below will help you know if you are compatible.

Recipient	Donor
A	A,O
B	B,O
O	O
AB	A, B, O, AB

3. You must be between the ages of 18 and 55 and in good health.
4. It is important to be approximately the same height and weight as the recipient.
5. You should have your primary care doctor perform a medical evaluation to determine if you are in good health and notify them of your interest in liver donation.
6. Contact the coordinator in charge of setting up the evaluation so an initial telephone health screening can be done. Please have a list of questions ready to discuss with the coordinator when you call. The telephone screening takes approximately 45 minutes.



THE EVALUATION TESTING

1. The testing to become a liver donor takes approximately 4 days.
2. **Laboratory Testing** is done to determine if you have any obvious liver problems, unknown diseases, blood clotting problems, or an incompatible blood type.
3. You will meet with a **Transplant Psychologist** and **Social Worker** to further discuss your decision and any questions or concerns you may have about becoming a liver donor.
4. A **Volumetric MRI** is a radiology test done to determine the amount of liver volume you have in various sections of your liver. This will give the transplant surgeon an estimated idea of whether you have enough volume in the right lobe of your liver for the recipient and left over volume in the left lobe to support you after donation. It also looks at blood vessels, and bile ducts, which are things that flow through your liver. The other part of this test that is important is that it looks for any possibility of fat accumulation in your liver that would hinder the functioning of the portion of liver you are about to donate. If there is any question of fat accumulation you will have a liver biopsy, which we will discuss later in the testing.
5. The liver is also evaluated through **Doppler Ultrasound**, which is another picture of your liver to evaluate for fat, and the blood flow through your liver.
6. An **Echocardiogram** and **Electrocardiogram (EKG)** evaluate the function and conduction of your heart. If there is an abnormality with these preliminary tests, you may need a stress test or a more advanced test called a cardiac catheterization, which is rare.
7. A **Chest X-Ray** and **Arterial Blood Gas (ABG)** evaluate the functioning of your lungs and is a baseline of the normal oxygen content in your lungs. If you are a smoker we will ask you to stop smoking in order to become a liver donor.



8. You will meet with a **Transplant Hepatologist**, which is a liver medical doctor. The doctor will ask you medical questions to determine your eligibility of becoming a liver donor.

9. A **Liver Biopsy** may be performed to evaluate for any fat or abnormalities in your liver. Not every donor needs this procedure. This will be determined by any risk factors that you may have based on your findings on the MRI and Ultrasound. We also look at your height and weight ratio; if you are considered obese we will schedule this procedure regardless of the radiology test results. This procedure is an all day test by which your side is injected with a numbing solution, a large needle is put through your right side, and a piece of tissue from your liver is removed. You are then placed on your right side for 4 hours to protect you from bleeding.

10. The last procedure is the **Mesenteric Angiogram**. This is a procedure in which a large intravenous catheter is placed in a blood vessel in the upper portion of your leg. A dye solution is then injected into the catheter so that the blood supply of your liver is very clearly defined. The transplant surgeon will use this test to determine how he can safely operate on the right lobe of your liver. This is also an all day test.

11. You will meet with the **Transplant Surgeon** who will review your testing, discuss your concerns with you, and also your risks and benefits of surgery. He will talk to you about the consent for surgery and you will be asked to sign a copy at this visit and you will sign it again the day before surgery. The surgeon will examine your abdomen and talk to you about the surgery and the recovery process.

NOTE: You will need someone to help drive you on the days of a liver biopsy and mesenteric angiogram. If you have an allergy to dye or shellfish, please let the coordinator know at the time of your telephone screening. Any additional tests may prolong the evaluation process.



RISKS OF SURGERY

1. Bleeding that may require a blood transfusion
2. Infection
3. Pain
4. Blockage in your bowels
5. Problems with numbness or tingling in your fingers and arm
6. Blood clot in your lung
7. Hernia at the incision site
8. There have been 3 reported donor deaths in the United States (none were at the VCU Medical Center)
9. Leakage of fluid at the incision site
10. Leakage of fluid from the bile duct
11. Wound healing problems
12. An area of hair loss on the back of your head (we try to prevent this by placing a special pillow under your head during surgery, but it has been known to occur in rare instances)



Hospital Stay

- ❑ Average hospital stay for the donor is 5-7 days.
- ❑ You will recover on the transplant unit. The nurses and staff will encourage you to get out of bed to walk, and exercise your lungs by coughing and breathing deeply.
- ❑ You will be given a shot to prevent you from having blood clots in your legs or lungs. You will be taught how to do this at home for approximately one week.
- ❑ There is more information on how to get to the hospital, places to stay, and accommodations while you are here at the end of this book.





What Happens if I am Considered an Acceptable Donor?

- ❑ The liver transplant coordinator will be in close contact with you throughout the testing process. You will be notified if there are any problems that may exclude you from being a donor. The testing will be reviewed each day with the living donor transplant surgeon, Dr. Robert Fisher.
- ❑ If all of your testing is complete and normal, you will meet with Dr. Robert Fisher to discuss the risks and benefits of surgery. This will be the opportunity to ask any last minute questions and to discuss any concerns with the doctor performing your surgery. We require your spouse, significant other, or other support system to be present at this appointment so that all parties involved are able to hear about all aspects of the surgery.
- ❑ You will be asked to sign your first surgery consent, which is a detailed overview of any risks involved with the surgery. The consent will be signed again the day before the surgery.
- ❑ You will be given a list of past donors with their phone numbers so that you can discuss their experiences with them first hand and find out what it was like to donate and what happened during their recovery period.



What Happens if I am Turned Down as a Donor?

- ❑ Sometimes a liver donor has an abnormal anatomy of their liver or abnormal testing that would put them or the recipient in danger if they were to have the surgery. We will determine this by analyzing all of the testing that is done. If there is any risk to you at all we will not proceed with you as a donor.

- ❑ The abnormal findings may not cause any harm to you but if there is any problem that seems significant we may refer you to one of our liver medical doctors (hepatologists) to determine if you may need any treatment.

- ❑ The recipient will remain on the national liver transplant list up to the day of the scheduled living donor transplant. If an offer is made for a deceased donor liver before that time, we will proceed with the deceased donor liver transplant.



Thank you for your interest in living donor liver transplantation. We are happy to answer any questions you may have during this process. We are working together to help your loved ones and your interest is the first step. Please do not hesitate to call with any questions to 804-828-9249.



Sincerely,

April Ashworth, R.N., B.S.N
Living Donor Coordinator
Senior Liver Transplant Coordinator



Directions to VCU Medical Center

Arriving by I-64 West- coming from Virginia Beach, Williamsburg, etc.

1. Take Exit 190 for 5th Street and Downtown/Coliseum
2. Turn left at the 4th traffic light onto Marshall Street
3. Drive 6 blocks and turn left onto 11th Street
4. Drive one block and turn right onto Clay Street
5. Go one and one-half blocks to the Patient and Visitor Parking Decks E&S

Arriving by I-64 East- coming from Charlottesville, I-81, etc.

1. Follow I-64 East which merges with I-95 South
2. Remain on I-95 South to Exit 74C West Broad Street
3. Proceed West on Broad Street and follow directions given under “arrive by I-95 North.”

Arriving by I-95 North- coming from Petersburg, North Carolina, etc.

1. Take Exit 74C West Broad Street
2. Proceed West on Broad Street for three blocks to 11th Street, take right
3. Drive two blocks to Clay Street and turn right
4. Proceed one and on-half blocks to the Patient and Visitor Parking Decks E&S.

Arriving by I-95 South- coming from Washington, Fredericksburg, etc.

1. Take Exit 74C to West Broad Street
2. Follow directions given under “arriving by I-95 North”

Arriving by U.S. Route 60 coming from Lexington, etc.

1. Follow U.S. Route 60 which merges with 9th Street
2. Remain on 9th Street and go one block past Broad Street to Marshall Street, turn right.
3. Drive two blocks and turn left onto 11th Street
4. Drive one block and turn right onto Clay Street
5. Go one and one-half blocks to the Patient and Visitor Parking Decks E&S

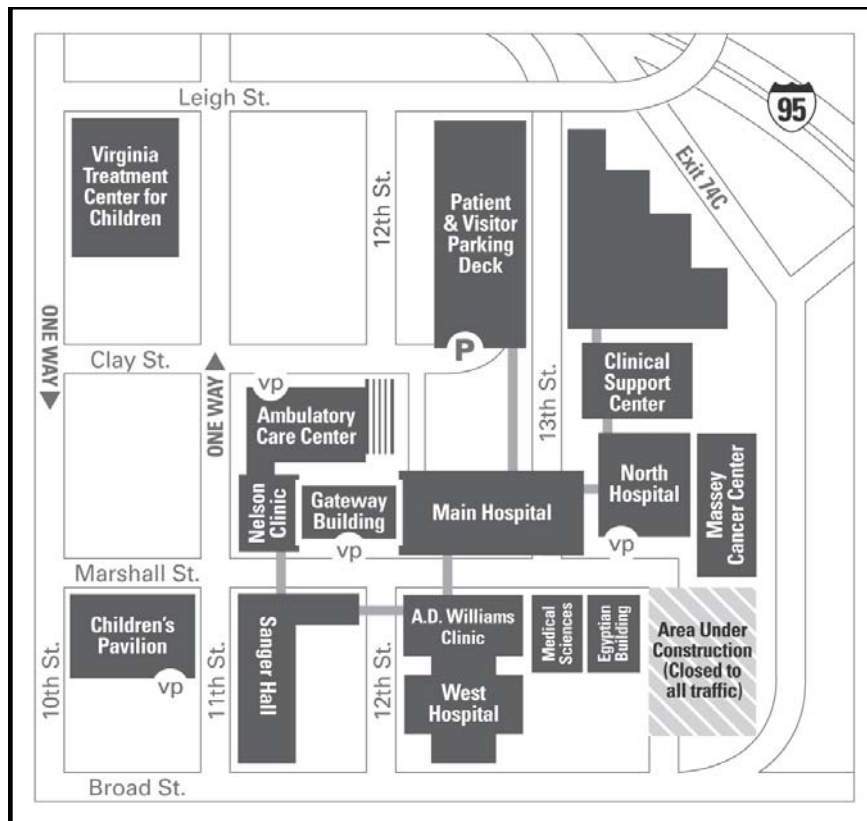


Valet parking is available for \$5.00 at the entrances of the Gateway Building, ACC and North Hospital. Parking for the Children’s Pavilion is available in the Pavilion’s lower garage on 11th St. for \$4.00.

The VCU Medical Center has a Patient and Visitor Parking Deck located at 12th and Clay Streets. The Deck is open 24 hours daily. There is a charge for using this facility during the week.

Reduced parking rates (\$2.00 per visit) are available for patients and visitors that obtain parking validation at the Information Desks located on the first floor of Main Hospital, ACC, Nelson Clinic, the Children’s Pavilion and the ground floor of the Gateway Building.

Lost parking tickets for the Patient and Visitor Parking Deck will be charged \$10.00 upon exit unless a \$2.00 validation is presented.



VP Valet Parking P General Parking



Food and Vending

Cafeteria – Main Hospital, 1st Floor
Blimpie’s – Main Hospital, 1st Floor
Chick-fil-a – Main Hospital, 1st Floor
Alpine Bagels – Gateway Building, Ground Floor
McDonald’s – Gateway Building, Ground Floor
Espress Oasis Coffee – Main Hospital, 1st Floor
Vending Machines – Main Hospital, 1st Floor
Three Bears Gift Shop – Main Hospital, 1st Floor



Security

Security staff is available at all times. Immediately report any questionable situation to your health care provider. An escort service is available to any location on the downtown campus by calling 828-WALK. This service is provided free of charge, at any time of the day. Security can also assist visitors in obtaining help for car related problems by calling 828-6595.

Telephones

Visitors are invited to use pay telephones located throughout the medical center.



Cell Phone Usage

The use of cell phones is allowed in any area of the medical center, unless otherwise indicated.

Smoking Policy and Locations



Smoking is not allowed anywhere in the medical center and is also prohibited in and adjacent to all entrances. Smoking is restricted to designated outdoor smoking areas. Please check with your health care provider for the appropriate smoking locations.



Medical College of Virginia Hospitals
The Hume-Lee Transplant Center

Hospitals Patient Representatives 804-628-0400

This department is available for assistance for housing and travel arrangements. Certain area hotels also provide discounts if reservations are made through representatives.

Hospital Hospitality House 804-828-6901

612 E. Marshall Street
Richmond, VA 23240

This facility provides temporary lodging arrangements for visiting families of VCU Health Systems, out-of-town patients, and patients requiring long-term treatment. Provides free shuttle to hospital.

Days Inn- Richmond Airport 804-222-2041

5500 Williamsburg Road
Sandston, VA 23150

Holiday Inn- Central 804-559-0022

3207 North Boulevard
Richmond, VA 23230

Holiday Inn Express 804-559-0022

7441 Bell Creek Road
Mechanicsville, VA 23111

Omni Richmond Hotel 804-344-7000

100 South 12th Street
Richmond, VA 23219

Radisson Hotel 804-644-9871

301 West Franklin Street
Richmond, VA 23220

Residence Inn Richmond- West End 804-285-8200

2121 Dickens Road
Richmond, VA 23230

Richmond Marriott 804-643-3400

500 East Broad Street
Richmond, VA 23219
Provides free shuttle service to hospital

Ronald McDonald House 804-355-6517

2330 Monument Avenue
Richmond, VA 23220



Notes
