



Liver Transplants

Different Aspects

লিভার ট্রান্সপ্লান্ট এর বিভিন্ন দিক

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Liver Transplant

What is liver transplant ?

A liver transplant is the operation, where a diseased liver of a patient is removed, and either a complete or partial liver from a donor is implanted at the same place.

What types of patient need liver transplant ?

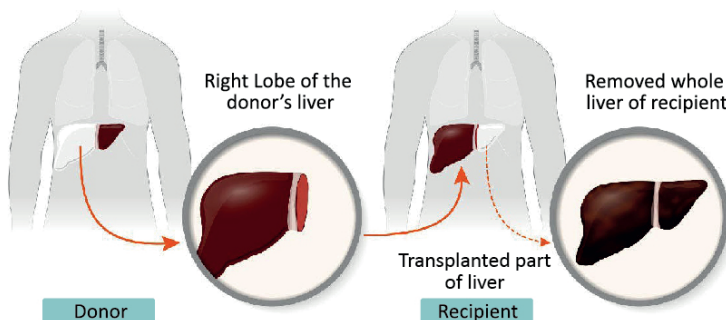
The necessity for liver transplant is usually evaluated when a person is affected by long-term or short-term severe liver diseases, leading to a significant decrease in liver function or complete liver failure.

What types of liver diseases need liver transplant ?

Common reasons for liver transplant includes hepatitis B and C virus infection, non-alcoholic fatty liver disease (NAFLD / MAFLD) or non-alcoholic steatohepatitis (NASH / MASH), alcoholic liver cirrhosis, primary sclerosing cholangitis, primary biliary cirrhosis, metabolic disorders, biliary atresia in children, or any other condition resulting in liver cirrhosis and liver failure. In some cases, liver transplantation may also be necessary due to sudden acute liver failure caused by acute viral hepatitis, medications, or alcohol consumption. Liver transplantation is also performed as a last resort for life-saving treatment in cases of primary liver cancer.

When a patient need to have liver transplant

The need for liver transplant is considered when a patient becomes repeatedly exhausted and debilitated due to the end stage of long-term liver diseases, experiences recurrent vomiting of blood or passing blood in stools, suffers from reduced levels of albumin in the blood, develops significant abdominal fluid accumulation (Ascites), experiences excessive drowsiness, mental confusion, or hepatic coma. However, liver transplantation is considered before the patient reaches a critically complex state. In cases of acute liver failure, liver transplantation is performed as an urgent life-saving measure.



What are the sources of the liver for liver transplants?

Usually, donated livers come from two sources:

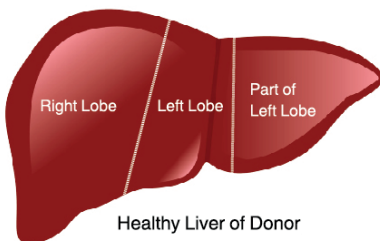
From a living person: A healthy individual can donate a portion of their liver (right lobe, left lobe, or a portion of the left lobe) to a close relative.

From a deceased person: The liver is removed from a deceased donor's body, declared brain death (after removing life-support systems, when there is no chance of survival), and the liver is suitable for transplantation.

Who can be a living liver donor?

Donating a portion of the liver is a weighty gift. Any healthy person between the ages of 18 and 65, whose blood group matches with the recipient's blood group, can donate a portion of their liver, right lobe (60%-65%), left lobe (30%-35%) or a portion of the left lobe (left lateral section) (about 20%) to the recipient. The suitability of a liver donor is assessed through physical and mental health examinations, laboratory tests and various imagings. The donor's safety and physical well-being is of utmost importance in these considerations to ensure that the donor's life is not adversely affected by the donation in any way.

It's important to remember that the selection of liver donors and recipients must be done according to the 'Human Body Organs and Tissues Transplantation Act 2018' of the Government of Bangladesh.



Recipient Blood Group	Donor Blood Group
O	O
A	A, O
B	B, O
AB	AB, O, A, B

How is Liver Transplant surgery performed?

During liver transplant from a living person, two teams of experienced liver transplant surgeons work in two separate operating theaters. One team removes the diseased liver from the recipient's body, while the other team prepares the healthy liver portion obtained from the donor's body for transplantation. Then, the donated portion of the liver (graft) is transplanted into the recipient's body.

During liver transplant from a deceased person, the entire liver is removed from the deceased donor's body and transplanted into one or two recipients, depending on the suitability. A liver transplant operation typically takes about 12-14 hours.

What changes occur in the donor's liver after Liver Transplant?

After donation, the remaining liver in the donor's body regenerates rapidly. It regains its full functionality within 6-12 weeks.

What happens in the recipient's body after liver transplant?

The transplanted liver (graft) in the recipient's body regenerates rapidly in a manner similar to a healthy liver, adapting to the body's demands for crucial functions.

How successful is liver transplantation from a living donor?

After a successful liver transplant from a living donor, the likelihood of an adult recipient surviving for 1 year is approximately 86.4%, for 3 years is 77.7%, for 5 years is 72.8%, and for 10 to 20 years is 62.6%. Children have even higher survival rates, with approximately 92% surviving for 1 year, 90.7% for 3 years, 85.4% for 5 years, and 79.6% for 20 years.

What is rejection, and how can it be prevented?

Our body's immune system always actively defends against foreign substances (which are not part of our body). After a transplant, the newly transplanted liver (graft) is also considered a foreign substance in the body. The recipient's immune system tries to reject it, leading to its functional impairment and damage, which is termed rejection. To prevent rejection, anti-rejection drugs (immunosuppressants) are used after liver transplantation.

What complications can occur after liver transplantation?

In the post-transplant period, recipients can easily be susceptible to various infections. The use of immunosuppressants and other medications may increase the risk of infection. Additionally, side effects such as high blood pressure, weight gain, increased cholesterol levels, diabetes, bone weakness, and kidney damage (elevated creatinine levels) may occur. Furthermore, the same liver disease that caused the liver failure in the patient can affect the transplanted liver as well (recurrent disease). Regular monitoring and utmost caution are necessary.

Can a recipient return to their daily activities after a liver transplant?

After a successful liver transplant, a recipient can return to their previous normal daily activities. It mainly depends on the pre-transplant patient's physical condition, the cause of the disease and the stage of the liver disease at which the transplant is performed.

Maintaining a healthy daily lifestyle is the main way to keep the new liver healthy. The recipient should be under the supervision of a liver transplant

specialist to check regularly for complication, damage to the transplanted liver due to rejection, infection, vascular and biliary problems. By planning a balanced diet and reducing the amount of fat in the diet, avoiding smoking and drinking alcohol, it is possible to keep a transplanted liver healthy. In women, pregnancy should be avoided for the first year after transplant.

Post-transplant immunosuppression

Immunosuppressive drugs are started in the recipient immediately after the transplant to prevent rejection. The number and the cost of medicines is a little high in the first few months, but within a year it comes down to one or two medicines and in 2-4 years to just one medicine, which is to be continued for life. It is recommended to check the liver function and blood level of medicine (trough level) with regular tests. Liver transplant as the last resort for liver diseases is a revolutionary medical procedure in today's world. Millions of people suffering from liver failure got a new life.

Come forward to save the lives of liver failure patients

Many people around the world are helping to save the lives of patients suffering from liver failure through organ donation. In case of sudden death, liver and other organ donation is a noble initiative. Liver and other organ failure patients can live a new life by receiving these donated organs.

While alive, you can donate a part of liver (left lobe, right lobe or part of left lobe) to your relative as per the 'Human Organ Transplantation Act' of the Government of the People's Republic of Bangladesh. Millions of people around the world have been saved by transplanting a part of a liver donated by a healthy person.

Let us come forward to save the lives of patients suffering from liver failure, stand by them.



**Your generous donation of liver or part of a liver
will save a precious life.**

Liver Diseases in Bangladesh

A significant portion of Bangladesh's population is affected by various liver diseases, including hepatitis B and C, complications related to fatty liver (NASH/MASH), alcohol consumption, drug-induced liver diseases, and other viral and nonviral diseases affecting the liver. Additionally, congenital liver diseases, especially congenital defects in children (biliary atresia) are notable. These conditions can progress to acute/chronic hepatitis, liver cirrhosis and liver cancer.

Liver Transplantation in Bangladesh

Liver transplantation requires skilled personnel and wide-ranging resources. The initiative for liver transplants began in Bangladesh with the establishment of the first Department of Hepato-Biliary-Pancreatic Surgery at BIREDM General Hospital in 1999. After successful performance of liver surgeries for a significant period, the first successful liver transplant (living donor) of Bangladesh was done at BIREDM General Hospital in June 2010. Liver transplants need specialized multidisciplinary team work. The creation of trained manpower in this field is an absolute necessity. Public also to be aware about the prospects of liver transplants and should be encouraged to come forward for liver donation. Government and nongovernment organizations must come forward for running sustainable liver transplant programmes in Bangladesh.

Reports and interviews about liver transplantation in Bangladesh



Interview of successful
liver transplant recipient



Interview of successful
liver transplant donor



Program on successful
liver transplant at Television

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