

from the large bowel can be removed by liver resection. Cancer that has spread to the liver from other sites can not be treated by transplantation.

Alcohol

Alcoholic Liver Disease results from excessive alcohol intake. In the case of men this is more than 21 units per week. In the case of females it is more than 14 units per week. In the early stages inflammation resulting from the alcohol can resolve itself if the individual abstains. With continued alcohol intake, fibrosis, and ultimately cirrhosis will result. Susceptibility to severe alcoholic liver disease appears to be somewhat under genetic control and may be made worse by obesity.

Transplantation

Is now a well accepted form of treatment for end stage liver failure. In recognised centres like ours, it is safe and successful. The chance of being alive and well a year after a liver transplant is in the region of 90% and after 5 years about 80%. There are many indications for liver transplantation but the vast majority of patients will have cirrhosis. Some of the more common reasons to replace a liver are:

- PBC
- Viral Hepatitis
- Cirrhosis of an unknown cause
- PSC (Primary Sclerosing Cholangitis)
- Alcohol (provided patients have been abstinent and on a rehabilitation programme for at least 6 months)
- Biliary Atresia (a childhood condition in which children are born without bile ducts)

LIVERNORTH is indebted to:

Mr DM Manas FRCS of the Freeman Hospital, Newcastle upon Tyne for his professional contribution to this information leaflet.

LIVERNORTH can help you

As well as having many of the Freeman's health professionals as members, we have access to extensive information on all liver diseases and treatments.

Information leaflets are available explaining each specific liver disease in detail. To obtain an information leaflet about a specific liver condition, visit our information boards in the Outpatient's Department and Wards 12 and 16 of the Freeman Hospital where most of our leaflets are on display. If you are unable to find what you want, ring us, mail or e-mail us and we will post it to you free of charge.

We support each other in our free newsletter, at our meetings and via our helpline. To join our mailing list and receive your own free copy of our bi-monthly newsletter which lists all the meeting times and local helpline numbers, ring us on 0191 3702961. All calls are treated in strictest confidence and membership is absolutely free.

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LIVERNORTH is the regional liver patient support charity and has provided this leaflet free of charge. We have no paid employees.

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Your Liver

Is a complex organ originally thought to be an accessory organ of digestion. It is now known to be vital for life and plays a central role in controlling many metabolic functions, some of which we still don't understand:

It helps convert nutrients absorbed from the gut into the chemical building blocks necessary for life and...

- Produces bile that is necessary for absorption of fat
- Produces and stores glucose
- Detoxifies poisons and wastes
- Produces proteins
- Produces 'Clotting Factors'
- Regulates hormones
- Is a central part of the immune system and helps resist infection
- Stores iron

Cirrhosis

Is the liver's attempt to 'heal' itself and continue functioning despite injury - from whatever cause.

It is often assumed that Cirrhosis is caused by excessive alcohol consumption. This is not true and is associated with a whole range of conditions and injury. The injury may be sudden as in a Paracetamol overdose, or it may be the end stage of a disease that has been present for some years, such as Primary Biliary Cirrhosis, Chronic Active Hepatitis (B or C), Primary Sclerosing Cholangitis, Cryptogenic Cirrhosis or Chronic Alcoholism.

Cirrhosis results from Hepatocytes (liver cells) being progressively destroyed. They are replaced by nodules (swellings) containing normal liver cells surrounded by fibrous tissue which has no metabolic function. These restrict normal blood and lymph flow through the liver leading to varices (abnormal veins) in the gullet which can in turn produce life threatening bleeding and ascites (excess fluid) in the abdomen.

Cirrhosis - How Does It Feel?

Some patients are completely unaware of their illness. Others may have vague symptoms:

- Weakness and lethargy
- Loss of appetite
- Nausea and indigestion
- Intense itching of the skin
- Loss of weight
- Loss of Libido

What Next?

With advancing disease, the spleen may enlarge, 'spider veins' may develop on the upper body, the amount of hair may diminish, fluid may build up in the abdominal cavity making it difficult to breathe and the new veins in the gullet may burst under pressure causing the patient to vomit blood. Jaundice _ yellowing of the skin and eyes is a sign of deteriorating liver function.

How Soon?

In some patients the disease process may progress more rapidly than in others. The cause of the cirrhosis may in some way determine this. For example, alcoholics who continue to abuse alcohol will have a much more rapid progression than those who do not. As the liver function deteriorates, patients may have a massive haemorrhage, overwhelming infection or encephalopathy ('liver coma'). Some patients will have a much slower disease progression, over many years. They may have only minor complications or never need a hospital admission.

Primary Biliary Cirrhosis (PBC)

Is a disease of unknown cause leading to destruction of the bile ducts in the liver. It appears that the body views the bile duct cells as foreign and attacks them as if they were a threat. As a result bile does not drain from the liver and this leads to a progressive destruction of the liver. Some patients with PBC will never progress to cirrhosis within their life time, others will develop end stage disease and need liver transplantation.

Hepatitis

Chronic Hepatitis means inflammation of the liver. Viral infections are among the more important causes and Hepatitis A, B and C are now important public health issues, especially the B and C strains.

Hepatitis A

Is transmitted through the digestive tract and passes from person to person by contaminated food or water through infected stools.

Hepatitis B & C

Enter the bloodstream either from the transfusion of infected blood (or blood products) or from contaminated needles, especially among drug users. These viruses can also live in body fluids including saliva, semen and urine. This allows hepatitis B and C to be sexually transmitted. After being infected with the hepatitis B virus, chronic (long term) problems develop in about 2_10% of people. On the other hand, patients infected with hepatitis C have a 60% possibility of chronic problems. There are now simple blood tests that can quite accurately diagnose the disease and the carriers. Unfortunately, treatment is still unsatisfactory and requires further clinical trials. Prevention using hepatitis A and B vaccines is now quite effective and is recommended for those at risk. Patients who develop cirrhosis may require liver transplantation.

Liver Cancer

Can develop from within the liver (primary) or spread to the liver (secondary).

Primary

Hepatocellular (primary) Cancer is seen most commonly in patients with cirrhosis, especially that associated with the viruses B and C. The treatment can be chemotherapy or occasionally, under the right circumstances, liver transplant.

Secondary

Is cancer that has spread from other sites; most commonly: the large bowel, pancreas, breast and stomach. Under the right circumstances cancer spread