

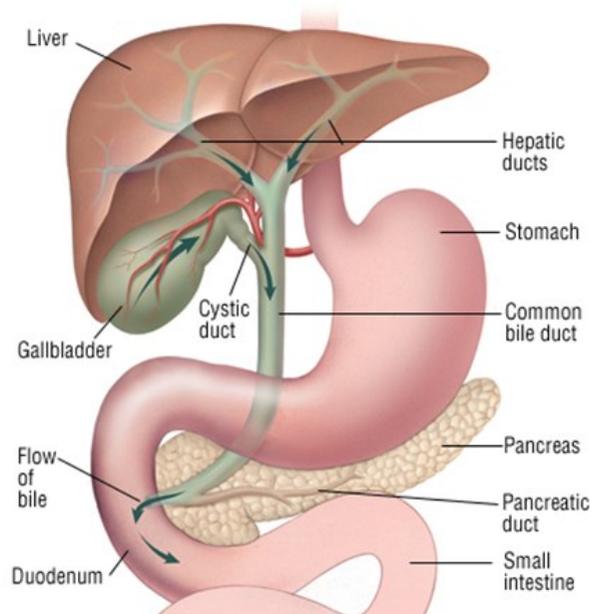
Understanding your Liver Injury



This information was compiled by
Trauma Services, Auckland City Hospital

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The Liver is in the upper right abdominal area, underneath the lungs & on top of the stomach, intestines & right kidney. It is the largest internal body organ & weighs about 1.5kgs. It is protected by the lower rib cage on the right side. The liver has 2 main sections & a very large blood supply. Up to 25% of the body's blood passes through & is processed by the liver at any one time. It is part of the digestive system & is joined to the gallbladder & bowel by small tubes called ducts.



What does the Liver do?

The liver is essential for our survival & has many functions in the body. These include the metabolism (breakdown, change & use) of carbohydrates, glucose, fats, protein & amino acids. It is essential for producing red blood cells & the factors which help our blood to clot. The liver also has a role in the production of hormones & cholesterol, immunity protection, keeping our blood pressure normal & it stores vitamins & minerals to be used later by the body.

The liver makes liquid bile which is needed to digest our food.

However, one of the liver's main roles in the body is to help get rid of toxins & poisons – such as alcohol, drugs, medications & other waste products.

After discharge

See your GP about a week after you leave hospital.

He/she can monitor your progress & manage your gradual reduction in pain medicines or check your blood tests as you improve. The GP & ACC can assist you in your return to work or if needed, access further community supports.

It is not unusual to experience more pain when you get home – you will be doing more normal activities rather than resting as you were in hospital.

Take your pain medicine as prescribed.

Return to sport

You should not participate in any aggressive or physically active sports or activities for at least 3 months. Once the liver is fully healed it will not limit your diet, work ability, school or recreational activities.

Alcohol

After a liver injury the use of alcohol should be avoided for about 6 weeks. This will give your liver the best chance to fully recover.

In the few weeks after a liver injury (or surgery) if you get any sudden or new abdominal pain, fever or increasing dizziness,

**contact your GP immediately
or if necessary Dial 111 for an ambulance**

Healthcare team members who you may meet during your stay in hospital

Nursing & Medical staff – will monitor you & support your recovery & arrange any investigations (x-rays &/or blood tests).

Trauma Nurse Specialist— will ensure your care is co-ordinated, especially if you have other injuries. They can give you & your whanau extra advice while in hospital, assist in planning for a safe discharge & support you need with any initial ACC queries.

Acute Pain service – can assist in managing your pain if needed.

Dietician— can monitor your ability to eat well & assist if needed.

Physiotherapist – to assess & monitor your progress with deep breathing & coughing exercises, to assist with mobility to prevent complications & enhance your recovery.

Occupational Therapist—to monitor your recovery if you hit your head, to ensure you are safe for discharge & provide any equipment you might need at home.

Social worker – available for support, arranging community support services or counselling should you require them. Please ask.

Maori & Pacifica support —please ask if you wish this service to visit.

Older Persons Health doctor—will visit you if you are 75 years or over.

Health Psychologist— available for counselling. Please ask the ward staff if you need this service.

If you have any questions—Please ask our team

Liver injuries

Because of its size & location, the liver is easily injured. This can be from a direct blow to the abdomen or chest during a road or cycle crash, a fall, an assault (direct blow or stabbing) or during contact sports. The liver can be torn or cut (lacerated) or crushed. Any of these injuries can cause the liver to bleed or cause a bruise (or haematoma) because it has a large blood supply.

Diagnosing a Liver Injury

An abdominal CT scan will identify a liver injury. Sometimes an emergency operation is required to control bleeding, remove the damaged or bleeding portion & a diagnosis is made then. The severity of the liver injury is also made at that time.

Treatment for a Liver Injury

The majority of liver injuries do not need surgery. Often the bleeding will stop by itself. This will depend on the type of injury, where the liver is injured & how severe the injury is.

Treatment may include:

- ◆ Bedrest initially, then slowly increasing how much you can move about e.g just getting up for the bathroom to being able to go for a reasonable walk
- ◆ Good pain medication, either by mouth or intravenously (IV) or a combination of both. If needed, a PCA (patient controlled analgesia) will be arranged for you. This device means you give your own pain relief when you need it.
- ◆ Frequent monitoring for early signs of re-bleeding by taking your blood pressure & heart rate regularly.
- ◆ Daily blood tests to check clotting factors, blood counts & liver function tests. Once stable these can be less often.

If needed, eating & drinking may be restricted to start with – then you will be given intravenous (I.V) fluids.



Complications that *may* occur

Bleeding from the Liver that keeps going:

On arrival to hospital a CT scan is done of your Liver. If at that time or in the next few days after your injury, the Trauma team feel it is necessary, a further scan may be done. If, during these scans, there is a specific area of bleeding that won't stop, usually from a blood vessel, specialised x-ray treatment may happen. This will be explained to you clearly at the time & is done by a specialised Radiology (X-ray) doctor. A procedure called an Embolization is the deliberate blocking of a blood vessel with tiny coils or foam. It is successful in the vast majority of cases with no life long effects.



Damage to the bile ducts:

Depending on where in the liver is injured, sometimes bile may leak from one of the small ducts (see picture on page 1) into the abdominal cavity. One option to treat this is to place a drainage tube (under X-ray guidance) into the area near where the leak is coming from. This will drain away the bile to stop it collecting inside you while the leak heals. This will be explained to you clearly at the time & is done by a specialised Radiology (X-ray) doctor.

Another treatment is a *Bile duct Stent*: This is a procedure done by a Gastroenterologist (a doctor who looks after the stomach, intestines & liver). This will be explained to you clearly at the time.

After some medicine to make you sleepy, a tube is passed into your mouth & down into the stomach & on to where the bile ducts open. A stent (narrow tube) is placed over the leak in the duct to allow it to heal & drain the bile into the bowel in the usual way. The stent is removed with the same procedure approx. 6-8weeks later once the injury is fully healed.



Rarely, surgery to fix the bile leak may be necessary. This will be discussed with you if required.

The above treatments do not mean that your digestive system or the other functions of the liver will necessarily be permanently affected, but it will slow your recovery from injury.

Recovery

The liver can regenerate (fully regrow) completely in approximately 6 weeks if a part has been removed during surgery. After an injury this may take a little longer if the liver is bruised or lacerated.

How long will you be in hospital?

This depends on how much & where your liver is injured, whether you required surgery or not, or if you have other injuries.

Eating well, being comfortable to move about freely with little pain & stable blood tests are good signs you are ready to go home.

Eating well

Sometimes after a Liver injury the stomach feels full & bloated after eating & your appetite may be less than usual.

We suggest having small snacks more often rather than trying to eat a full meal 3 times a day. Drink plenty of fluids, especially water. It is very easy to get constipated on the pain medicines & when your appetite is less.

If needed a Dietician will see you to provide advice or nutritional drinks. Your appetite will return to normal as you improve.

If you get any sudden increases in pain or dizziness while you are in hospital, please report this to the staff.