



## Operation Information

### Hepatectomy (Open/Laparoscopic)

#### Introduction

The liver is located in the right upper half of the abdomen. It is an important organ of the body without which we cannot survive. Liver makes breaks or stores substances in the body. It makes bile to help digest food, proteins which help with many functions in the body including clotting of blood. It also helps break many 'bad' substances in the body and excretes them.

Hepatectomy is a surgical intervention for removing segments of the liver. It is mostly performed to treat certain conditions such as benign hepatic neoplasms and cancer. We can survive with just 30% of the liver. This allows the surgeon to remove as much as 70% of the liver if necessary without any problems. The liver has a very good capacity to grow back (regenerate). Surgeon can remove each part on its own or with others depending on the location of the tumors in the liver.

There are two types of Hepatectomy: open hepatectomy and laparoscopic hepatectomy. The doctor will discuss with the patient for the best option. Liver operations are complicated and major operations. The exact time depends on the type of liver resection. This operation, on an average, takes about 6 hours. Depend on the patient's condition, the patient may be transferred to ICU for close observation.

#### Outcomes

This operation is a surgical intervention to remove tumors from the liver. After removing the cancerous portion of the liver, it may help to prevent or control the disease from spreading.

#### Procedures

1. The operation is performed under general anaesthesia.
2. Open hepatectomy:
  - A reversed "L" incision is made in the upper right area of the abdomen below the ribs.
  - An ultrasound probe is used to locate the diseased tissue.
  - A portion of the liver is removed and some tissue may also be destroyed by a special instrument.
- Laparoscopic hepatectomy:
  - Several small incisions are made in the abdomen.
  - A laparoscope and surgical instruments are inserted to view and remove a portion of the liver.
  - A separate incision is made for the extraction of specimen.
3. The wound is closed with sutures or staples.

#### Possible Risks and Complications

1. Wound infections (chest infection and other infections)
2. Wound bleeding, massive bleeding
3. Damage to the bile ducts or bowel
4. Liver failure
5. Bile leakage
6. Deep vein thrombosis
7. Difficulty in passing urine

8. Ileus
9. Heart attack or stroke
10. Other complications

\*\* The risks listed above are in general terms and the possibility of complications is not exhaustive. Please understand that even though all operations are carried out with utmost professionalism and care, this does not rule out the possibility of complications arising. In the event of peripheral organ damage or post-operative haemorrhage or leakage, further operations may be required.

### **Pre-operative Preparations**

1. Good hygiene can prevent surgical wound infection. Therefore, we advise you to clean up yourself on the day of operation.
2. The procedure and possible complications will be explained by the doctor and a consent form must be signed prior to the operation.
3. Please inform the doctor and nurse all your past medical history, previous surgical operations, current medication and any complication with drug or anaesthesia. Please inform doctor if you are taking medications that affect blood coagulation such as Aspirin, Warfarin, Xarelto or Pradaxa, nonsteroidal anti-inflammatory drug (NSAID) such as Ibuprofen, Naproxen and Chinese medication.
4. Routine tests such as blood test, cross match, ECG, chest x-ray, ultrasound, CT/ PET scan may be performed before the operation as ordered by the doctor.
5. Nurse will supply surgical soap to you for washing the operation site as necessary.
6. No food or drink six hours before operation.
7. A pair of anti-embolism stocking will be given to you to prevent post-operative deep vein thrombosis.
8. Please change into a surgical gown after removing all belongings including undergarments, dentures, jewellery and contact lenses.
9. Please empty your bladder before the operation.

### **Post-operative Instructions**

#### **General**

1. After general anaesthesia, you may:
  - experience discomfort in the throat after tracheal intubation.
  - experience side effects of anaesthesia including feel tired, drowsy, nausea or vomiting.Inform the nurse if symptoms persist or worsen.
2. Please inform the nurse of wound pain. Proper pain relief treatment by injection or oral medication may be prescribed by the doctor. You may also be connected to a special pump called a patient controlled analgesia pump (PCA) for pain relief on first few days.
3. An intravenous infusion will be given to replenish fluids and administer medications.
4. The blood pressure, pulse, oxygen levels, blood sugar levels, temperature and the wound of you will be regularly measured and monitored.
5. Regular blood tests will be done to monitor the progress.
6. An indwelling urine catheter will be inserted during operation, normally be removed a few days after the operation.
7. The hospital stay may vary with the conditions of the patient and the type of Hepatectomy.

#### **Wound Care**

1. A wound drain may be inserted to drain away any excess fluid around the wound site. It will be removed after a few days.
2. The stitches will be removed around 7-10 days.
3. The wearing of loose-fitted clothing is encouraged to avoid irritation of the wound.

Activity

1. Deep breathing and coughing exercises should be practiced to prevent chest infection.
2. Early mobilization is encouraged to reduce the risk of deep vein thrombosis.
3. Doctor and nurse will encourage and assist you to change position. Nurse will encourage and assist you to sit up in bed, or sit on a chair, and gradually increase your activity such as taking short walks as you are able to.

Diet

A normal diet may be resumed as instructed after recovering from anaesthesia.

**Advice on Discharge**

1. Prescribed pain medication may be taken as needed.
2. You may normally takes up to 3 months to fully recover.
3. It is wise to avoid any alcohol for at least 3 months after hepatectomy. This is the time when the liver will be regenerating.
4. Please avoid heavy lifting and strenuous activities for 4-6 weeks.
5. You may take shower after the operation but must ensure that the dressing is waterproof and remains clean and dry.
6. Immediately consult your doctor or return to hospital for professional attention in the event of severe wound pain associated with redness and swelling, secretion of pus, massive bleeding, shortness of breath, jaundice, tea color of urine, shivering, high fever over 38°C or 100.4°F, or any other unusual symptoms etc.
7. Any follow-up consultations should be attended as scheduled.
8. Depending upon your histology results you may be referred to an Oncologist (a Consultant who specialise in cancer treatments).

Should there be any enquiries or concerns, please consult the attending doctor.

Under the professional care of the doctor, you will gradually recover. We wish you all the best during your treatment and recovery.

If you have any questions after reading the entire leaflet, please write them down in the spaces provided in order for the doctor to further follow-up.

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Compiled by Union Hospital Operating Theatre (OT) Governance Committee

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