

Ultra-Sound Guided Liver Biopsy

What is a liver biopsy?

A liver biopsy is a procedure used for making the diagnosis of abnormal liver conditions. A small piece of liver tissue is removed using a special needle for examination under a microscope. The liver tissue allows the doctor to see if your liver is healthy or to better understand why you have liver damage or disease and how severe any damage is. The most common method of liver biopsy is percutaneously (“through the skin”). This procedure is often performed as an outpatient and does not routinely require hospital admission.

A qualified gastroenterologist does the liver biopsy. This is a doctor who specializes in diseases of the digestive system and liver.

Does the liver biopsy hurt?

You may feel minor discomfort during the biopsy. Some people do have some discomfort at the site of the biopsy for the first 24 to 48 hours after the procedure but this is often relieved by simple painkillers such as Tylenol.

Why do I need a liver biopsy?

Your doctor will have discussed this with you or written to you about the need for a liver biopsy. If you have any questions, please ask.

This test may be carried out for a number of reasons. Common indications include:

- Your symptoms, blood tests and scans (ultrasound, CT or MRI scans) suggest you have liver disease. However, sometimes it is not possible to tell what the cause is on the basis of these tests alone.
- There appears to be a lump in your liver which has been seen on previous scans and a sample of tissue is needed to identify what it is.
- Assessing the amount of scarring (known as fibrosis) in the liver due to certain diseases such as chronic hepatitis B or C, primary biliary cirrhosis, primary sclerosing cholangitis, autoimmune hepatitis or Wilson’s disease.
- Monitoring the liver following a liver transplant.
- Assessing the stage or progression of a known liver condition.
- Assessing the degree of liver inflammation or damage.
- Occasionally, a guided biopsy is performed on a liver mass or “spot” to see if it is cancer.
- Assessing for non-alcoholic fatty liver disease (NAFLD); a disease in which there are increased amounts of fat in the liver.

By obtaining a sample of the liver tissue, it can be analyzed in the pathology laboratory for more information.

Sometimes it is not safe to carry out a liver biopsy if your blood tests show that the blood is too thin or if there is fluid around the liver (ascites). These problems would need to be corrected before a biopsy can be performed and your doctor will advise you on how this needs to be done.

How do I prepare for the test?

To ensure the best results for your liver biopsy, follow these instructions carefully and completely.

- You may **not** have anything to eat or drink for 8 hours before your test. If your test is scheduled in the afternoon, you may have clear fluids (apple juice, clear Gatorade, ginger ale, or water) **only** until 7 am.
- **Inform** your doctor of all the medicines you take, especially medicine to thin your blood such as:
 - Coumadin®, Jantoven® (warfarin)
 - Plavix® (clopidogrel)
 - Lovenox® (enoxaparin)
 - Persantine (dipyridamole)
 - Advil, Motrin (ibuprofen)
- **These medicines to thin your blood will need to be stopped 7 days prior to your liver biopsy.** Let your doctor know right away if you take these medicines.
- You will be asked to have some blood tests done a few days before the liver biopsy.

What will happen on the day of your test?

- If you are diabetic and take Insulin, talk with the doctor who prescribes your Insulin about reducing the dose the day of the exam.
- If you are diabetic, please bring your glucose meter, test strips, and a source of fast-acting glucose with you (such as glucose tablets or glucose gel).
- Remember not to eat or drink 8 hours before the liver biopsy.
- Take other medicines you normally take with a few sips of water.
- Arrive for your appointment at the scheduled time:
- You **must** arrange for a responsible adult to bring you to the hospital, remain in the hospital during the procedure and drive you home after the procedure or accompany you if you are taking a taxi.
- The doctor will explain the biopsy procedure: how the biopsy will be performed and the risks involved. The doctor will then ask you to sign the Informed Consent Form to give your permission for the biopsy to go ahead.

How is the procedure performed?

- You will be taken to the MIDC Pre-op area and asked to change into a hospital gown. You will be placed on a monitor for your blood pressure, heart and oxygen saturation. This will remain on you during the procedure and until discharge.
- The nurse will perform a pre-procedure assessment. Please ask the nurse if you have any questions. The nurse will start an IV. You will be given a sedative and pain medicine through the IV prior to the test. This will make you sleepy.
- The doctor will spread some gel on your skin and use the ultrasound probe to decide the best position from which to take the tissue sample. This will often be on the right hand side of the abdomen and below or between the lower ribs.
- You will be lying on your back with your right hand under your head. It is important to lie as still as possible.
- The doctor will clean the skin and use a small needle to inject local anesthetic to numb the area. This will cause some stinging at first but should not be too uncomfortable.
- A small cut is made and the biopsy needle will be inserted through the skin into your liver and a sample will be collected.
- During the biopsy procedure, the doctor may ask you to hold your breath for a few seconds, as the liver moves slightly when you breathe.
- Two or three tissue samples may be taken to ensure that the specimens provide as much information as possible.
- The biopsy procedure takes about 30 minutes.
- Pressure will be applied to stop bleeding, and a bandage is placed over the site.
- You will lie on your right side for 2 hours with a pressure roll at the site to prevent bleeding.
- After 2 hours, you may sit up and eat lunch.

- You will stay in the Recovery area for extra time based on the doctor's evaluation post procedure.
- The nursing staff will monitor you often throughout your recovery period.

What happens after the liver biopsy?

- Your doctor will explain the immediate results to you. The tissue results will take a few days. Patients often go home 2 to 4 hours after the biopsy.
- Someone **must** drive you home and be available to assist you for the next 24 hours. You will **not** be allowed to drive yourself home.
- Even if you feel alert afterwards, your ability to think may be impaired. Do not sign important papers or operate heavy machinery for the rest of the day.
- Do **not** take aspirin or anti-inflammatory medicines such as Advil, Motrin (ibuprofen), for 7 days after the biopsy.
- Do **not** lift anything over 5 pounds for one week.

What are the benefits?

The biopsy helps to find the cause and severity of liver disease or the nature of abnormalities in your liver, as seen on previous scans.

What are the risks?

The doctor performing the biopsy will discuss the risks with you before asking your permission to perform the biopsy.

- The most common risk is bleeding from the biopsy site, but this is often self-limiting and very rarely requires blood transfusions.
- In rare cases, bleeding may not stop and surgery or X-ray guided measures are needed to stop it.
- You may have mild pain for a few hours.
- Ask your care provider about what medicines you take to relieve the pain.
- It is possible that the needle can hit other structures in your abdomen but this risk is minimized by using the ultrasound to guide the needle.
- Very rarely, an operation may be needed if this were to occur. Serious complications are rare and the risk of death is about 1 in 10,000.
- If you have a fever or pain that seems to be getting worse or bleeding from the site that does not stop, get medical attention right away.

Are there any alternatives?

There are no good alternatives to liver biopsy in most situations when the diagnosis is not clear. If the only information which is required from the liver biopsy is the amount of scarring in your liver, specific blood tests or a special test known as a Fibroscan can sometimes be performed. However, these tests may be less reliable than a liver biopsy. Your doctor will have considered the possibility of alternatives before suggesting that you have a liver biopsy. If you have any questions regarding this, please discuss them with your doctor.

Unfortunately, a liver biopsy may not provide enough information to make a definitive diagnosis every time, but it is successful in about 80 out of 100 patients.

Cancellations

If you are unable to keep this appointment, please let us know as soon as possible by calling 393-398-1355. This will allow us to give your appointment to another patient and rearrange another one for you. If you are taking any medicines to thin your blood, please talk with your doctor right away.

How do you get to your test?

If you are being seen at National Jewish Health, please check in at the Front Desk. If you have questions please call 303-398-1355. Also, if you need to cancel the appointment please call.

Visit our website for more information about support groups, clinical trials and lifestyle information.

PTE.290 © Copyright 2013

NOTE: This information is provided to you as an educational service of National Jewish Health. It is not meant to be a substitute for consulting with your own physician.

National Jewish Health is the leading respiratory hospital in the nation. Founded 123 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit njhealth.org.