

Hepatitis B Fact Sheet

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a series of fact sheets written by experts in the field of liver disease

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Liver Biopsy

The liver biopsy is believed to be one of the best ways to find out if the liver has become damaged from diseases such as hepatitis B (HBV). Liver biopsies are important for many different reasons:

- To rule out any other liver diseases that a patient may have
- To stage and grade – find out how much the hepatitis B virus has damaged the liver
- To help make decisions about the best treatment for HBV
- To reassure both the patient and the doctor
- To provide a starting point to compare with future biopsies

This allows the doctor to see if HBV is doing more damage or if HBV treatment is needed.

Before the Procedure

Before the liver biopsy procedure, some blood tests will be taken to find out how well the blood can clot. It is important that any drugs that could increase the risk of bleeding are stopped before the procedure. Your doctor or nurse will tell you when to stop taking these drugs before and after the biopsy.

The Biopsy Procedure

A liver biopsy is usually done in a doctor's office or hospital as an out-patient procedure – it does not usually require a hospital stay. The most common type of biopsy is done through the skin (percutaneous). Ultrasounds (using sound waves to make an image of the liver) are sometimes performed before or during the biopsy to figure out where the biopsy needle should be placed. Some people want to have a medication to calm them before the procedure and to make the procedure more comfortable. Keep in mind that the patient must be awake during the procedure. This is done to avoid possible problems. There are three



Liver Biopsy

different types of needles used in a biopsy (suction needle, cutting needle and spring-loaded). The patient is given a shot to numb the area (similar to novacaine from the dentist) where the needle will be inserted. The biopsy itself takes very little time to do – usually only a couple of seconds.

The size of the sample of liver removed is a very, very tiny piece of the liver about one to one-and-a-half inches long.

Role of Liver Biopsy

Liver biopsies are performed for many reasons. The most important thing the liver biopsy can do is find out if the liver is damaged. Also, they are used to tell the type of problem or illness someone has. Other times they are used to tell if HBV medicines might help. Learning about other liver diseases is very important in the management and treatment of hepatitis B. Some illnesses that can be found only during a biopsy include:

- Deposits of too much iron in the liver, called hemochromatosis.

- Hepatitis B that has not been found in previous testing, called occult HBV.
- Build up of fat in the liver, called steatosis.

There are other lab tests used to find out how much damage HBV has done, but these tests are not always as accurate as a biopsy. For some people the liver biopsy is the only test that can find out if the liver is damaged.

Side Effects and Complications of a Liver Biopsy

The most common side effect of the biopsy is pain – only about one out of five people who have a biopsy have mild to moderate pain during and after the procedure. A few people will have severe pain. There is also a small risk of bleeding.

Problems after the biopsy has been performed are another area of concern. These are not usually common. Only about 1-2% of patients need to go to the hospital as a result of the procedure. It is estimated that only 1 in 10,000 to 1 in 12,000 people die as a result of complications from a liver biopsy.

After the biopsy is performed, a medical expert will review the results of the liver biopsy and issue a report that will list the amount of inflammation in the liver and if there is any scarring or damage to the liver.

Liver Biopsy

Next Steps

It is important to make sure the amount of liver damage is known. It is also important to be able to tell if and how quickly or slowly HBV is causing damage. Some people can figure out the approximate time they may have become infected with HBV by thinking about when they had things like blood transfusions or sharing works to inject drugs. Finding out how long you may have had HBV and knowing how much the disease has progressed is important. This information can help tell how active the disease will be in the future. For example, in someone who has been infected for 20 years and where the liver has been found to have little or no damage—it would be reasonable to think the disease progression is slow. To find this out for sure, a patient can have biopsies every 5-7 years. On the other hand, if someone believes

they have only been infected with HBV for 5 years and the biopsy shows more advanced damage or scarring, that person should consider HBV treatment so that future damage can be avoided. This information can be a comfort to the patient and physician and is another tool used to help manage HBV to keep people as healthy as possible.

Overall, the liver biopsy and other diagnostic testing are good tools for helping doctors and patients make the best possible healthcare choices.

There is much research looking at various blood tests that can replace the biopsy in measuring the amount of inflammation and scarring of the liver.

Fibroscan

The Fibroscan is based on ultrasound elastography technology using a machine

that sends a vibration wave through the liver. The Fibroscan will measure how long it takes for the wave to travel through the liver. It has been tested extensively and has been cleared by the Food and Drug Administration (FDA). Although not 100% accurate, studies that have found that combining the Fibroscan and Fibrometer—a blood test that measures certain liver markers and chemicals—can provide an 87% accuracy rate.

The actual procedure is painless. A gel is deposited on the skin where the Fibroscan probe will be pressed (in the location of the liver) and multiple readings are taken. Once the procedure is completed the machine will take an average of all of the readings.



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The information in this fact sheet is designed to help you understand and manage HBV and is not intended as medical advice. All persons with HBV should consult a medical practitioner for diagnosis and treatment of HBV.

For more information about hepatitis B, visit the following websites.
Hepatitis B Foundation: www.hepb.org • HIVandHepatitis.com

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