Hepatitis B Lab Tests

If you have chronic hepatitis B, your health care provider will usually order additional tests to determine whether the infection is active, such as:

- **HBeAg and anti-HBe**: HBeAg is the hepatitis B envelope antigen, and anti-HBe are the antibodies produced against this antigen. If HBeAg is detectable in a blood sample, this means that the virus is still active in the liver (and can be transmitted to others). If HBeAg is negative and anti-HBe is positive, this generally means that the virus is inactive. However, this is not always the case. Some people with chronic hepatitis—especially those who have been infected with HBV for many years—may have what is known as a precore or core variant mutated form of HBV. This can cause HBeAg to be negative and anti-HBe to be positive, even though the virus is still active in the liver.

- **HBV viral load**: This test measures the actual amount of hepatitis B in a blood sample, which helps determine whether HBV is reproducing in the liver. In a person with detectable HBeAg, an HBV viral load greater than 20,000 international units per milliliter (IU/mL) of blood indicates that the virus is active and has the greatest potential to cause damage to the liver. Similarly, in a person with an HBeAg-negative chronic hepatitis B, an HBV viral load of greater than 2,000 IU/mL indicates that the virus is active and has the potential to cause damage to the liver. Generally speaking, if the HBV viral load is above these numbers, treatment is considered necessary. However, HBV treatment decisions are based on multiple factors, and your medical provider may make recommendations based on other input.

- **Liver function tests**: One of the most important liver enzymes to look for is alanine aminotransferase (ALT), sometimes called SGPT on lab reports. An elevated ALT level indicates
that the liver is not functioning properly and that there is a risk of permanent liver damage. During acute hepatitis B infection, ALT levels can be temporarily elevated, but this rarely leads to long-term liver problems. In chronic hepatitis B, ALT levels can be either periodically or consistently increased, indicating a higher risk of long-term liver damage.

- HBV genotype: There are 10 different types, or genotypes, of HBV in the world (labeled A through J). The differences among genotypes are based on differences in HBV's genetic structure. Certain HBV genotypes tend to be more common in various regions of the world. Genotype C is common in Asia, whereas genotype A occurs frequently in sub-Saharan Africa. All the genotypes have been found in the United States, but A, D and G are the most prevalent. There is still some debate regarding whether it is important to know a patient’s HBV genotype, but finding out the genotype may have some value when choosing treatments for hepatitis B.

Tips for Understanding Lab Tests

Because hepatitis B is a liver disease, your medical provider will likely order regular blood tests to monitor your liver’s health. Looking at lab tests may be overwhelming at first, but eventually they will be easier to understand.

Before discussing specific lab tests, here are some important tips:

- Keep copies of your lab results. Ask your provider for copies of your labs and keep them in one place. You may download a tracking tool to help you record your labs all in one place.
- Lab results should be read by your medical provider. Do not attempt to interpret results on your own.
- If you have questions about a test result, ask your provider about it.
- If you have an abnormal result, ask whether there are factors that might affect the test, such as medications, supplements or food.
- Do not lose sleep over test results. An abnormal lab result does not necessarily indicate a problem.
- Look for trends. Often a single abnormal lab result is insignificant.
• Never let a lab test tell you how you feel. Plenty of people have abnormal labs but still feel good or normal labs and feel lousy. Stay tuned to your body, not to your lab results.

• Sometimes the worst part about getting lab tests is waiting for results. Try not to put your life on hold while waiting for results. The results will be what they will be.

Last Reviewed: March 4, 2019

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