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## Patient information: Hepatitis B (Beyond the Basics)

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### INTRODUCTION

The term "hepatitis" is used to describe a common form of liver injury. Hepatitis simply means "inflammation of the liver" (the suffix "itis" means inflammation and "hepa" means liver). Hepatitis B is a specific type of hepatitis that is caused by a virus.

It is estimated that there are more than 300 million carriers of the hepatitis B virus in the world, with over 500,000 dying annually from hepatitis B-related liver disease.

Fortunately, several medications are available for the treatment of chronic hepatitis B, and hepatitis B infection can be prevented by vaccination. Hepatitis B vaccines are safe and highly effective in preventing hepatitis B infection and are now given routinely to newborns and children in the United States and in many other countries. (See "[Patient information: Adult vaccines \(Beyond the Basics\)](#)".)

More detailed information about hepatitis B is available by subscription. (See "[Overview of the management of hepatitis B and case examples](#)" and "[Investigational treatments of chronic hepatitis B virus infection](#)".)

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### HOW DID I BECOME INFECTED WITH HEPATITIS B?

There are several ways to become infected with hepatitis B virus.

**Contaminated needles** — Using contaminated needles can spread the hepatitis B virus. This includes tattooing, acupuncture, and ear piercing (if these procedures are performed with contaminated instruments). Sharing needles or syringes can also spread the virus.

**Sex** — Sexual contact with someone who is infected is one of the most common ways to become infected with hepatitis B. If you are infected with hepatitis B, make sure your spouse or sex partner gets vaccinated.

**Mother to infant** — Hepatitis B can be passed from a mother to her baby during or shortly after delivery. Having a Cesarean delivery (also called a C-section) does not prevent the virus from spreading. Experts believe that breastfeeding is safe.

During pregnancy, all women should have a blood test for a marker of hepatitis B virus, called hepatitis B surface antigen (HBsAg). Normally, the HBsAg should be negative.

If the mother's HBsAg test is positive, the infant should be given a shot soon after birth (called hepatitis B immunoglobulin or HBIG). HBIG provides immediate protection to the infant, but the effect only lasts a few

months. The infant should get the hepatitis B vaccine at birth, at 1 to 2 months, and at 6 months. Finishing all three doses is important for long-term protection. The infant should have a blood test for hepatitis B infection and for hepatitis B antibody at 9 to 18 months of age; if the antibody test is negative, a fourth dose of the vaccine should be given at that time. In some cases, the mother is also given a medication that reduces the amount of virus in her blood for several weeks before giving birth.

**Close contact** — Hepatitis B can be spread through close personal contact. This could happen if blood or other bodily fluids get into tiny cracks or breaks in your skin or in your mouth or eyes. The virus can live for a long time away from the body, meaning that it can be spread by sharing household items like toys, toothbrushes, or razors.

**Blood transfusion and organ transplantation** — Nowadays, it is extremely rare for hepatitis B to be spread through blood transfusion or organ transplantation. Blood and organ donors are carefully screened for markers of hepatitis infection. (See "[Patient information: Blood donation and transfusion \(Beyond the Basics\)](#)".)

**In the hospital** — In the hospital, hepatitis B virus can spread from one patient to another or from a patient to a doctor or nurse if there is an accidental needle stick. It is rare for a doctor/nurse to pass hepatitis B to a patient. Wearing gloves, eye protection, a face mask, and washing hands can help to prevent spreading the virus.

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## HEPATITIS B SYMPTOMS

Symptoms due to hepatitis B vary. After a person is first infected with hepatitis B, they can develop a flu-like illness that includes fever, abdominal pain, fatigue, decreased appetite, nausea, and in some cases yellowing of the skin and eyes (jaundice). In the most severe cases, liver failure can develop, which is characterized by jaundice, fluid accumulation, and confusion. However, many patients do not develop symptoms, particularly if the infection occurs in infants and children. Not having symptoms does not necessarily mean that the infection is under control. Most people with chronic hepatitis B have no symptoms until their liver disease is at a late stage. The most common early symptom is feeling tired. Everyone with chronic hepatitis B is at increased risk of developing complications, including liver scarring (called cirrhosis when the scarring is severe) and liver cancer. (See "[Patient information: Cirrhosis \(Beyond the Basics\)](#)".)

**Acute hepatitis B** — After a person is first infected with hepatitis B, they are said to have acute hepatitis. Most people with acute hepatitis B recover uneventfully.

However, in about 5 percent of adults (1 in 20) the virus makes itself at home in the liver, where it continues to make copies of itself for many years. People who continue to harbor the virus are referred to as "carriers". If liver damage develops because of longstanding infection, the person is said to have chronic hepatitis.

**Chronic hepatitis B** — Chronic hepatitis B develops more commonly in people who are infected with the virus at an early age (often at birth). Unfortunately, this is common in some parts of the world such as in Southeast Asia, China, and sub-Saharan Africa, where as many as 1 in 10 people have chronic hepatitis B infection.

Many people with chronic hepatitis B have no symptoms at all; other people have symptoms of ongoing liver inflammation, such as fatigue and loss of appetite.

