

Article 1070

## **Overview**

A bilirubin test measures the amount of bilirubin in the blood. Hemoglobin is the protein that binds oxygen in red blood cells. When hemoglobin breaks down, it produces bilirubin. The liver processes bilirubin. If liver cells are damaged, bilirubin can back up into the bloodstream. Indirect or unconjugated bilirubin tests measure the bilirubin that has just been made by the breakdown of hemoglobin in the body. Once bilirubin has been processed in the liver, it can be measured as direct or conjugated. Sometimes the total amount of bilirubin in the blood is measured.

## **Who is a candidate for the test?**

The bilirubin test is often done when a doctor suspects liver or gallbladder disease. The person may have jaundice, which causes yellowed eyes and skin. A buildup of bilirubin causes jaundice.

## **How is the test performed?**

To measure bilirubin levels, a lab technician takes a blood sample from a vein in the forearm or hand. First, he or she cleans the skin over the vein with an antiseptic. Next, a rubber tube called a tourniquet is wrapped around the upper arm. This restricts blood flow in the veins in the lower arm. And that causes them to enlarge. A fine needle is gently inserted into the enlarged vein, and the tourniquet is removed. Blood flows from the vein through the needle into a vial. After the needle is withdrawn, the technician covers the puncture site with a bandage.

## **What is involved in preparation for the test?**

Generally, nothing is required to prepare for a bilirubin test.

## **What do the test results mean?**

Normal values for total bilirubin are between 0.3 and 1.2 mg/100 ml. Normal conjugated or direct bilirubin levels should be between 0.0 and 0.2 mg/100 ml. Abnormal bilirubin levels can be found in many disorders, including:

- » blocked bile ducts
- » cirrhosis, or scarring of the liver
- » congenital, or hereditary, problems with the liver
- » hepatitis and other liver diseases
- » immature liver development in newborns