

## **Worker Information on the BeLPT**

### **What is CBD?**

Chronic beryllium disease (CBD) is a chronic granulomatous lung disease caused by inhalation of airborne beryllium by an individual who is beryllium-sensitized. In the early stages of CBD, an individual may not experience any symptoms. However, over time, the following symptoms may develop: shortness of breath with physical activity, dry cough that will not go away, fatigue, night sweats, chest and joint pain, or loss of appetite. A work and medical history of exposure to beryllium is an important step in diagnosing CBD. The first medical test for diagnosis of CBD is the beryllium lymphocyte proliferation test (BeLPT).

### **What is the BeLPT?**

The BeLPT is a test that determines if the immune system reacts to beryllium as a foreign substance—this reaction results in an abnormal BeLPT. In individuals who are not sensitized to beryllium and do not have chronic beryllium disease (CBD), the immune system does not respond to beryllium in any manner, and they have normal BeLPT results. Individuals must be sensitized to beryllium in order to develop CBD, although not every beryllium-sensitized person will develop CBD.

### **How is the BeLPT conducted?**

The BeLPT is generally conducted using blood but has also been performed using bronchoalveolar lavage (BAL) fluid. The blood test involves drawing blood from a vein (usually the arm) and collecting it in tubes for shipment to a lab. The lab separates the immune cells from the blood and mixes the cells with beryllium. The BAL test is performed by inserting a flexible tube into the bronchial

tube and inserting saline into the lung. The fluid is collected and sent to a lab, which analyzes it in a similar way to a blood sample. If a worker is sensitized to beryllium, the immune cells will react by multiplying. This is referred to as an abnormal response. Cells from non-sensitized workers do not react and multiply.

## **What type of results should I expect?**

Results from the BeLPT are given as either abnormal, borderline, or normal. If the results are abnormal or borderline, the employer must offer a second test to confirm the results within 30 days.

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

Individuals with either two abnormal BeLPT test results, an abnormal and a borderline test result, or three borderline test results are considered to be “confirmed positive” and should be encouraged to undergo further evaluation to determine if they have CBD. An individual may also be considered “confirmed positive” based on the result of a more reliable and accurate test indicating the person has been identified as having beryllium sensitization. The type of follow-up is outlined on the [Beryllium Medical Surveillance Information for Workers QuickCard](#).

## **Where can I find more information?**

For more information on the BeLPT and potential treatments related to developing CBD, please see [Beryllium Medical Surveillance Information for Workers QuickCard](#); [Guidance on Medical Surveillance for Beryllium Exposed Workers](#); [Beryllium FAQs](#); and the [Beryllium Safety and Health Topics](#) webpage.



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