

Medical Surveillance for Beryllium-Exposed Workers

Beryllium is a lightweight metal used primarily in alloys to add strength, thermal stability, and other properties valued in the aerospace and defense industries. Workers can develop adverse health effects from breathing beryllium in dust, mist, fumes, or in other forms, or through skin contact with beryllium particulate, fumes, or solutions. OSHA has finalized new beryllium standards for general industry, construction, and shipyards to better protect workers from this toxic metal.

What is Medical Surveillance?

Medical surveillance is a way to optimize worker health using health data. The purpose of medical surveillance is to detect and eliminate the underlying causes of observed health effects from hazards. Medical surveillance programs can contribute to the success of workplace health and safety programs by identifying potential problem areas and verifying the effectiveness of existing control and prevention programs.

Medical Surveillance Requirements for Beryllium Workplaces (paragraph (k))

OSHA requires employers to offer medical surveillance to workers who meet one of the following conditions: is or is reasonably expected to be exposed above the action level of 0.1 µg/m³ for 30 days in a year; show signs or symptoms of CBD; were exposed to beryllium during an emergency; or have received a recommendation for continued medical surveillance from a physician or other licensed health care professional (PLHCP) from the most recent exam. These are referred to as triggers for medical surveillance ((k)(2)(i)).

Health Effects Associated with Beryllium Exposure

- Sensitization
- Chronic Beryllium Disease (CBD)
- Acute Beryllium Disease
- Lung Cancer

The medical surveillance program is voluntary for workers. However, once a worker meets any of the triggers described above, the employer is required under the new beryllium standards

to offer medical surveillance. The medical surveillance requirements within the beryllium standards include the following provisions:

- Employers must offer medical surveillance to a worker within 30 days of meeting the criteria set forth in paragraph (k)(2)(i), and then at least every two years thereafter for those who continue to meet the criteria in paragraph (k)(2)(ii).
- The medical examination must include:
 - Medical and work history with emphasis on past and present airborne exposure to or dermal contact with beryllium, smoking history, and any history of respiratory system dysfunction
 - Physical examination with emphasis on the respiratory system
 - Physical examination for skin rashes
 - Pulmonary function tests
 - BeLPT¹ (or other equivalent test)
 - Any other test deemed appropriate by the PLHCP (including low-dose CT scan²)

OSHA requires that employers provide certain information to the PLHCP. This information includes:

- A copy of the standard
- A description of the employee's former and current duties that relate to the employee's airborne exposure to and dermal contact with beryllium

¹ The BeLPT is a recognized diagnostic test for measuring the immune response to beryllium (i.e. beryllium sensitization). While no clinical symptoms are associated with sensitization, workers sensitized to beryllium are at risk for developing CBD and need continuing medical follow-up. CBD is diagnosed when medical screening identifies a beryllium exposure history and characteristics in the lung that indicate CBD.

² The Low-dose CT scan is generally used for diagnosing lung cancer.

- The employee's former and current levels of airborne exposure
- A description of any personal protective clothing and equipment (PPE), including respirators, used by the employee, including when and how long these were used
- Information from records of employment-related medical examinations previously provided to the employee, currently within the control of the employer, after obtaining written consent from the employee

OSHA requires the employer to ensure that the employee receives a written medical opinion from the licensed physician within 30 days of the medical examination. The written opinion must include:

- The results of the medical examination (including whether the employee has any detected medical condition that may place the employee at increased risk from further airborne exposure, any medical conditions related to airborne exposure that require further evaluation or treatment)
- Any recommendations on the employee's use of PPE or respirators
- Any limitations on the employee's airborne beryllium exposure
- Any recommendation for referral to a CBD diagnostic center, continued medical surveillance, or medical removal

OSHA also requires that the employer receive a written medical opinion from the licensed physician. The written medical opinion must include:

- The date of the examination
- Statements that the results of the examination were explained to the worker and that the examination met the requirements of the beryllium standard
- Any recommended limitations on the employee's use of respirators, protective clothing, or equipment

If the worker is either confirmed positive for beryllium sensitization, diagnosed with CBD, or a licensed physician has determined it appropriate, and the worker provides written authorization, OSHA requires employers to provide:

- A referral to a CBD Diagnostic Center (see criteria set forth in paragraph (b) of the standard)
- Continued medical surveillance
- Medical removal (upon request by worker)

Workers with potential exposure to beryllium are encouraged to participate in the medical surveillance programs offered by their employer. Active participation by workers in the medical surveillance program helps increase the effectiveness of any health and safety prevention program by providing the employer with valuable information on potential sources of beryllium exposure that result in any type of health effect (e.g. sensitization, CBD). Providing this information to the employer ensures that corrective actions can be taken to eliminate or reduce the risk to fellow workers. See section on [Workers' Rights](#) for more information.

Further Information

There is no known cure for CBD. Treatment may include corticosteroids, oxygen, and other means to ease symptoms or slow the disease progression. For more information, see OSHA's Health Effects section in the final beryllium rule, the National Institute for Occupational Safety and Health's [Workplace Safety and Topics – Beryllium](#) webpage; National Jewish Medical and Research Center's [Chronic Beryllium Disease Treatment](#) webpage; the Agency for Toxic Substance and Disease Registry's [ToxFAQs for Beryllium](#) webpage; and the Department of Energy's [Chronic Beryllium Disease Prevention Program](#) webpage.

Workers' Rights

Workers have the right to:

- Working conditions that do not pose a risk of serious harm.
- Receive information and training (in a language and vocabulary the worker understands) about workplace hazards, methods to prevent them, and the OSHA standards that apply to their workplace.
- Review records of work-related injuries and illnesses.
- File a complaint asking OSHA to inspect their workplace if they believe there is a serious

hazard or that their employer is not following OSHA standards. OSHA will make every effort to keep all complaints confidential.

- Exercise their rights under the law without retaliation, including reporting an injury or raising health and safety concerns with their employer or OSHA. If a worker has been retaliated against for exercising his or her rights, the worker may file a complaint with OSHA, but it must be filed within 30 days.

For more information, see [OSHA's Workers page](#).

How to Contact OSHA

For questions or to get information or advice, to report an emergency, fatality, inpatient hospitalization, amputation, or loss of an eye, or to file a confidential complaint, contact your nearest OSHA office, visit www.osha.gov or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



www.osha.gov (800) 321-OSHA (6742)



U.S. Department of Labor