

BTMED news



SUPPORTED BY NORTH AMERICA'S BUILDING TRADES UNIONS • COORDINATED BY CPWR - THE CENTER FOR CONSTRUCTION RESEARCH & TRAINING

Medical Edition Vol. 4

January 2016

www.btmed.org

Clearing the Air about COPD

COPD is on the rise in the general population and among construction workers. We joined with researchers at Duke University to conduct a large case-control study of construction worker COPD rates based on patient data from the BTMed program. Work histories of 834 BTMed participants with COPD were compared to 1,243 controls without it. The research findings, published in the *American Journal of Industrial Medicine*, found a correlation between general exposures to vapors, gases, dusts, and fumes (VGDF) and the risk for COPD. Workplace exposures to an unhealthy



Photo courtesy of eICOSH/Mt. Sinai

combination of VGDF accounted for nearly one in five COPD cases. Many workers with COPD had never smoked a day in their lives; one-third of these cases were attributable to workplace exposure.

The results can be found at <https://www.btmed.org/doc/AJIM Airways Obstruction 2015.pdf>.

By the Numbers

32,508

Total Screenings

22,867

Completed Initial Screenings

9,641

Completed Rescreens

2,168

CT Scans



What does an “Uninterpretable” BeLPT mean?

The Beryllium Lymphocyte Proliferation Test (BeLPT) checks construction workers for sensitivity to beryllium, which was used to make reactor fuel rods and bomb components on DOE sites. Many construction workers frequently work in buildings with beryllium contamination, usually doing maintenance, repair, renovation, or demolition tasks that can disturb beryllium dust on walls, ceilings, pipes and other surfaces. The dust can often be found behind wall boards, in crawlspaces, and in rafters, where it can linger for decades after beryllium is no longer actively used.

While the BeLPT only tests for beryllium sensitivity, it is the first step in determining if a

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Beryllium, cont'd

worker has developed Chronic Beryllium Disease (CBD). In an initial BeLPT test, a sample of the worker's blood is exposed to varying levels of beryllium, and examined to see how the still-living blood cells react. A normal test result means that the blood cells were unresponsive to beryllium, while an abnormal test result indicates that the worker may be beryllium-sensitive. Further testing is needed to determine if he or she has CBD.

If a test result comes back uninterpretable, here is what you need to know:

- A mitogen and antigen are introduced as positive controls to the sample blood to see how the blood cells react, and if they are healthy enough to respond to the beryllium test.
- Test results are uninterpretable when the blood fails to react to *both* mitogen and antigen. A reaction to one or the other will still yield an interpretable test.
- Sometimes a test is uninterpretable due to "overgrowth of cells" which is from an interaction with the serum 90% of the time. If a test is uninterpretable BTMed sends the repeat beryllium blood test to the ORISE lab for repeat testing.
- Many times the lack of cell growth is because the specimen got too cold or sat in a delivery location too long.
- Shipping blood samples in extreme winter weather can cause low blood cell recovery. Make sure to add extra insulation around sample tubes to minimize the risk of low blood cell recovery.



CT Scan Finds Cancer in Two Generations of Workers

When asked what the most dangerous thing he remembers doing in his years working different jobs at the three Oak Ridge DOE sites, Larry Rosenbalm simply states, "Let's be realistic, it's all dangerous." A member of Carpenters' Union Local 50, Larry first stepped onto Oak Ridge's X-10 site in 1992, continuing to work on and off for different subcontractors between X-10, Y-12, and K-25 through the late 2000s.

Charles Sweet, a millwright with Local 50 who worked at K-25 for almost 30 years, remembers the site before many of the safety measures that Larry may have used ever existed. "We didn't have any respirators in the late '60s or early '70s," Charles recalls.

Because Larry and Charles were both identified as being at higher risk for lung cancer, they were both offered a CT Scan through BTMed. The CT Scan found lung cancer in both of them, and, thanks to the

screening, both cancers were detected early enough to treat.

"People walk around with cancer and don't know they have it until it's advanced," Larry remarks. "I'm going to be straight about it. If it hadn't been for BTMed, I would never have known I had cancer."

CT Scan Eligibility

- Age 50 to 79 years old
- Not recently treated for cancer
- Current/former smoker, having smoked at least one pack a day for 20 years, or the equivalent (i.e. two packs a day for 10 years).
- Chest X-Ray shows asbestosis, even if non-smoker
- Worked at a DOE site for five years