

AMH

InsideOut

Beryllium Disease

by L.B. Sandy Rock MD MPH—AMH Risk Communicator

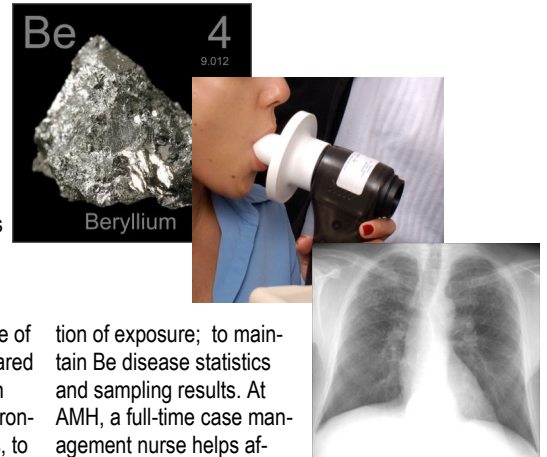
Beryllium disease consists of beryllium sensitization (BeS) and chronic beryllium disease (CBD), involving the lungs. Unlike most lung diseases caused by exposure to substances such as coal dust, tobacco smoke, asbestos, silica and many other occupational or naturally-occurring chemicals, metals or minerals, CBD occurs in workers who have first been sensitized to beryllium. At the Hanford Site, and other DOE and non-DOE industrial sites, beryllium disease has been recognized for many years; many workers who were or may have been exposed to the dust of this unique metal created during processing, grinding or etching beryllium have been tested for it. Some have become sensitized, and some of those have developed the lung disease. From breathing beryllium dust or, possibly, having skin contact with it, an allergic-type reaction occurs in the white blood cells of some workers. These cells participate in the formation of inflammatory deposits in the lungs called granuloma(s). CBD consists of progressive loss of respiratory function—obstruction of airflow and decreased oxygenation—due to the granulomas which fill up the lung spaces.

For unknown reasons, only a small percentage of workers who have been exposed to beryllium develop sensitization, likely due in part to genetic differences. Testing for sensitization is done with a blood test called the Beryllium Lymphocyte Proliferation Test (BeLPT). CBD is diagnosed through an extensive medical evaluation which includes in-depth personal, medical and occupational history, physical examination, breathing tests, and bronchoscopy with biopsy and/or lavage (inserting a tube into the airway and sampling tissue and/or washings).

Someone with CBD may have no symptoms at all or may have begun to have such problems as shortness of breath, cough and reduced physical stamina. Not every sensitized individual develops

CBD; not everyone with CBD develops a severe case. But some do. Until breathing symptoms occur, there are typically no external signs of either sensitization or early CBD; workers may be unaware that they have been affected. Beryllium disease is unheard-of in the general population and occurs in just a small percentage of workers. Over the years, the disease has appeared in certain worker populations within industries in which beryllium has been used—nuclear, electronics, ceramics, foundry, and telecommunications, to name a few. While the number of affected workers within the national workforce is relatively small—at Hanford, 96 workers with BeS and 32 with CBD—it has been gradually increasing. (Some family members of workers have also developed BeS/CBD, presumably from exposure to Be dust brought home; some affected current Hanford workers were exposed and sensitized at other worksites. Both BeS and CBD can take months, years, even decades to appear.)

In 1999, a group of Hanford workers affected by beryllium formed a group called the Beryllium Awareness Group (BAG). In both closed and open sessions held monthly, members give each other support, advice and recommendations for dealing with all aspects of beryllium disease. Representatives from DOE, AMH and other Site contractors join them in the open sessions, often answering questions, and more often taking information back to their respective organizations for discussion and response. Other groups at Hanford and across the DOE complex have met over the years to develop programs such as the Chronic Beryllium Disease Prevention Program (CBDPP), which enhances worker protection by detailing guidance and standards for monitoring, prevention of exposure, medical surveillance, and work practices; to deal with questions about air and surface sampling for beryllium dust in facilities where known beryllium activities took place; to share information about preven-



tion of exposure; to maintain Be disease statistics and sampling results. At AMH, a full-time case management nurse helps affected workers understand beryllium disease and navigate the waters of applicable medical, regulatory and compensation programs.

Representatives from AMH have for years fully participated in all of the activities noted above. Recognizing that beryllium disease is well-known among those affected and those assisting them, but unfamiliar to many at the Hanford Site, at the December 2009 BAG meeting AMH proposed developing a featured beryllium educational program available to Hanford Site workers. The AMH Featured Presentation for the month of March, therefore, is "Beryllium Disease: Increasing Awareness/Improving Worker Health." AMH Risk Communication urges Site representatives at all worker and managerial levels to become more aware of the challenges of beryllium disease: cause, prevention, surveillance, testing, diagnosis, management, treatment and research needs.

Resuming the HAMMER Lecture Series, Dr. Sandy Rock will present "Beryllium Disease: Increasing Awareness/Improving Worker Health" at that facility on Friday, March 12, 2010 from 2:00-3:00PM. During the month of March and thereafter, groups can schedule this one-hour presentation at their facilities by calling or emailing Dr. Rock: 372-0407 or sandy_rock@rl.gov.

WATCH FOR UPCOMING EVENTS WITH AMH

March

[Tobacco Cessation Program \(ongoing\)](#)
[Weight Loss Convoy \(ongoing\)](#)
 Site-Health Fairs (11th)

April

[Weight Loss Convoy \(ongoing\)](#)
[Site-Wide Nutrition Challenge \(5th-29th\)](#)
 Site-Health Fairs (8th)

Select a link or visit our website: www.hanford.gov/amh



Eating Myself to Death

Hanford Success Story by Capt. Sam Hernandez



Recently I entered a contest to try and lose weight. The contest was similar to the Biggest Loser contest as seen on TV. The differences are:

1. I could not be voted off the farm,
2. I had to regulate my own food, and
3. I did not have a HOT trainer like Jillian Michaels to "inspire me."

The contest started October 3rd and ended December 5th. At the last weigh-in I had lost 60 pounds and took 2nd place in the contest.

I would like to back-up and give you an idea of what got me to the first weigh-in and what it took to get to the last weigh-in. In the past, I have tried many times to lose weight and "get back in shape." But over and over again it would be short lived, and I would end up right back where I started, most of the time worse off than when I started. One of the big changes and motivations this time was my health. Over the last couple of years I have been feeling different physically, e.g.,

- pain in my joints,
- being tired all the time,
- lack of endurance,
- aches and pains, and
- acid reflux, etc.

If I continued down the path I was on, these would only get worse.

I went in and signed-up on October 3rd. My wife, Cindy, went in and signed-up with me for support, even though she doesn't have a bunch of weight to lose. Weigh-in includes a body fat check. We ended up on the Blue Team and our trainer was Becky. While there, we also joined the Kia Ora Gym.

So we were off and running. The first thing that I needed to figure out was where I needed to make changes in my lifestyle and eating habits. Now you might think that I would have a couple of breakfast sandwiches each morning, a big pile of food for lunch, a big dinner and a gallon of ice cream during the evening, with plenty of snacks in between. Not true. For a couple of years now I have had a banana, yogurt, and a cup of coffee for breakfast. Lunch was usually not necessarily healthy but also was not usually big. Dinner was big and not always healthy. The big problem for me was eating between dinner and bedtime. Sunflower seeds and soda was the killer for me. I generally sat at the kitchen counter (where all the food was readily available), read the paper, watched TV, and snacked.

I started out the week hungry. (NO kidding!) Believe me, I had plenty of those moments. I had moments that I thought I might eat my own hand. One of the individuals on my team asked, "How do you get past those moments?" My answer, "I just don't eat." I had to learn that just because I was hungry did not mean that I was going to die. I had to learn that I could eat but choose not to. Once I was past the moment, usually about an hour, I would have a small snack.

The next thing I had to do was up my workouts. We joined the gym and began to work out 6 days a week. On top of that I would work out at the PTA gym 4 days a week. The encouragement and support I received from the guys I work with helped a lot. It made a big difference in my calorie burn. The formula is easy:

Less calories + More workouts = Weight loss.

The hardest part is the discipline, but when you feel like your life is on the line it's a pretty good incentive. At the first of the year I started the next contest with the first weigh-in coming up on the 21st. My goal is another 60 pounds. So, wish me luck and if you see me with a candy bar give me hell.

Invite AMH to be a guest at your next work group meeting.


March Feature Presentation:
Beryllium Disease:
Increasing Awareness/Improving Worker Health



FOR PRESENTATION INFORMATION CONTACT:
372-0407 OR SANDY_ROCK@RL.GOV

2010 Site-Wide Exercise Challenge Results!!!

Prize Winners	Company
Dale McKenney	CHPRC
Debi Starr	DOE
Stacey Bolling	MSA
Julie Urrutia	CHPRC
Ted Tanasse	PNNL
Casey Carter	CHPRC
Mike Czebota	PNNL
Mark Jones	WRPS
Lori Thompson	PNNL
Theodore Davis	WRPS
Ted Hohl	WRPS



Prize:
OMRON GOSmart pedometer (links with PC!)

Prizes can be picked up at 1979 Snyder Street, Suite 120. Please call ahead to make sure someone will be here to assist you.
AMH Health Education: 376-3939

Healthy Recipes

Mini Mushroom & Sausage Quiches

Serves 12

Ingredients:

- 8 ounces turkey breakfast sausage, removed from casing and crumbled into small pieces
- 1 teaspoon extra-virgin olive oil
- 8 ounces mushrooms, sliced
- 1/4 cup sliced scallions
- 1/4 cup shredded Swiss cheese
- 1 teaspoon freshly ground pepper
- 5 eggs
- 3 egg whites
- 1 cup 1% milk

Preparation:

Position rack in center of oven; preheat to 325°F. Coat a nonstick muffin tin generously with cooking spray or use foil baking cups. Heat a large nonstick skillet over medium-high heat. Add sausage and cook until golden brown, 6 to 8 minutes. Transfer to a bowl to cool. Add oil to the pan. Add mushrooms and cook, stirring often, until golden brown, 5 to 7 minutes. Transfer mushrooms to the bowl with the sausage. Let cool for 5 minutes. Stir in scallions, cheese and pepper. Whisk eggs, egg whites and milk in a medium bowl. Divide the egg mixture evenly among the prepared muffin cups. Sprinkle a heaping tablespoon of the sausage mixture into each cup. Bake until the tops are just beginning to brown, 25 minutes. Let cool on a wire rack for 5 minutes. Place a rack on top of the pan, flip it over and turn the quiches out onto the rack. Turn upright and let cool completely.



For more: [Healthy Recipes](#)

PER SERVING:	
Calories	90
Total Fat	5
Saturated	2
Cholesterol	105
Sodium	217
Carbohydrate	3
Dietary fiber	0
Protein	9
Iron	0
Calcium	0
Potassium	108