

# TOGETHER WITH TOSHA



Department of  
**Labor & Workforce  
Development**

TOSHA

Winter 2016

## Cold Stress Guide

Anyone working in a cold environment may be at risk of cold stress. Some workers may be required to work outdoors in cold environments and for extended periods, for example, snow cleanup crews, sanitation workers, police officers and emergency response and recovery personnel, like firefighters, and emergency medical technicians. Cold stress can be encountered in these types of work environments. The following frequently asked questions will help workers understand what cold stress is, how it may affect their health and safety, and how it can be prevented.

### How cold is too cold?

What constitutes extreme cold and its effects can vary across different areas of the country. In regions that are not used to winter weather, near

freezing temperatures are considered "extreme cold." A cold environment forces the body to work harder to maintain its temperature. Whenever temperatures drop below normal and wind speed increases, heat can leave your body more rapidly.



Wind chill is the temperature your body feels when air temperature and wind speed are combined. For example, when the air temperature is 40°F, and the wind speed is 35 mph,

the effect on the exposed skin is as if the air temperature was 28°F.

Cold stress occurs by driving down the skin temperature and eventually the internal body temperature (core temperature). This may lead to serious health problems, and may cause tissue damage, and possibly death.

### What are the risk factors that contribute to cold stress?

*Some of the risk factors that contribute to cold stress are:*

- Wetness/dampness, dressing improperly, and exhaustion
- Predisposing health conditions - hypertension, hypothyroidism, and diabetes
- Poor physical conditioning

## Hospitalization, Amputation, or Loss of an Eye Reporting



To help employers comply with new requirements to report severe worker injuries, TOSHA has created an on-line form for employers ([click here](#) to view the form). The expanded requirements took effect in January 2015. Now, in addition to reporting any worker fatality within eight hours, employers must report within 24 hours any severe injury – defined as an amputation, hospitalization, or loss of an eye.

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As we start a new year in Tennessee workplace safety and health continues to be a challenge for both employers and employees in our state. It's a challenge we must all face. The injury and illness rates continue to fall slowly, but the number of fatalities Tennessee OSHA investigated rose from 29 in 2014, to 34 in 2015. For the families and friends of these men and women who left to go to work and never returned home, the loss and pain cannot be measured,

it's immense and it's unacceptable. We know what works and what it takes to create a safe and healthful workplace and it transcends simple OSHA compliance. Tennessee currently has 37 Volunteer Star (VPP) sites and 17 SHARP sites. These sites have injury and illness rates between 65 and 70% below their national industry average. The products they produce are diverse, including lawnmowers, truck tires, potato chips, and strobe lights for the aviation industry. These sites all have something in common, a highly functional safety and health management system and a core belief that workplace safety and health is a prerequisite, not an afterthought. Tennessee OSHA's consultation program can help employers develop a program and system that can produce real, measurable results. In addition, we offer classes in the spring and fall to help employers recognize hazards and learn how to make the workplace safer and more healthful. Contact our consultation program at 1-800-325-9901 or visit the [web page](#). Click [here](#) to view our current training schedule.

*"For the families and friends of these men and women who left to go to work and never returned home, the loss and pain cannot be measured."*

A promotional banner for the National Safety Stand-Down. It features a background image of a construction worker in a hard hat and safety vest working on a steel beam. The text is overlaid on the left side of the image.

Join the  
National Safety  
**Stand-Down**  
To Prevent Falls in Construction  
**MAY 2-6, 2016**

Make sure and mark your calendar for the National Safety Stand Down to prevent Falls in Construction on May 2-6, 2016. There will also be a unique Tennessee Stand down and TOSHA encourages all employers to participate in this event as well! Details on the Tennessee Stand Down will be sent in the upcoming weeks via the TOSHA website, social media, and the Listserv, so make sure to keep an eye out for information!

# Worker Safety in Hospitals

Did you know that a hospital is one of the most hazardous places to work? In 2011, U.S. hospitals recorded 253,700 work-related injuries and illnesses, a rate of 6.8 work-related injuries and illnesses for every 100 full-time employees. This is almost twice the rate for private industry as a whole.

OSHA created a suite of resources to help hospitals assess workplace safety needs, implement safety and health management systems, and enhance their safe patient handling programs. Preventing worker injuries not only helps workers—it also helps patients and will save resources for hospitals. [Download the overview\\*](#) and explore the links below to learn more about the resources available.



## Understanding the Problem

Hospitals are hazardous workplaces and face unique challenges that contribute to the risk of injury and illness.

[Learn More >](#)



## Safety & Health Management Systems

A safety and health management system can help build a culture of safety, reduce injuries, and save money.

[Learn More >](#)



## Safe Patient Handling

Safe patient handling programs, policies, and equipment can help cost-effectively reduce the biggest cause of workplace injuries.

[Learn More >](#)



## Preventing Workplace Violence

A comprehensive prevention program can help address the problem of workplace violence in healthcare facilities.

[Learn More >](#)

## New Draft Safety & Health Management Guidelines

The draft document will provide employers and workers with a sound, flexible framework for addressing safety and health issues in the workplace. Originally published in 1989, the new guidelines build on the previous version, as well as lessons learned from successful approaches and best practices under two TOSHA programs — Voluntary Protection Program (VPP) and Safety and Health Achievement Recognition Program (SHARP), and similar industry and international initiatives such as ANSI/AIHA Z10 and OHSAS 18001.

### What's New in the Guidelines

- A proactive approach to finding and fixing hazards before they cause injury, illness or death
- Improved safety and health in all types of workplaces
- Help for small and medium-sized businesses to effectively protect their workers
- Increase worker involvement, so all workers have a voice in workplace safety and health
- Better communication and coordination on multi-employer worksites

The guidelines are not a new standard or regulation and do not create any new legal obligations or alter existing obligations created by TOSHA standards or regulations.

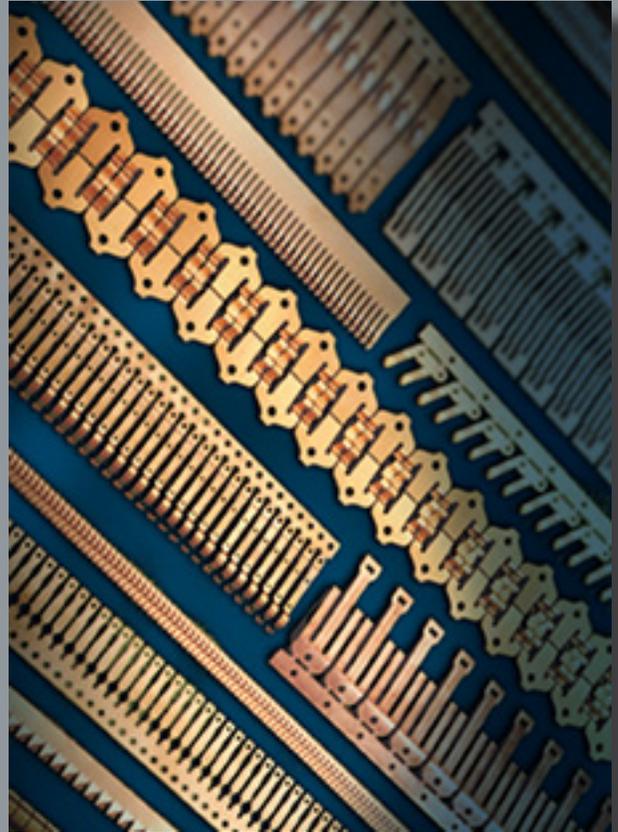


# Beryllium Exposure

On August 7, 2015, OSHA issued a proposed rule to dramatically lower workplace exposure to beryllium, a widely used material that can cause devastating lung diseases. The long-sought proposal would reduce allowable exposure levels by 90 percent and add other protections. The proposal gained renewed momentum after the nation's primary beryllium product manufacturer, Materion, the United Steel-workers, and the union representing many of those who work with beryllium, approached OSHA in 2012 to suggest a stronger standard.

For Dr. David Michaels, Assistant Secretary of Labor for Occupational Safety and Health, the development had special significance: In 1999, as Assistant Secretary of Energy for Environmental Safety and Health, he issued the final regulation lowering allowable worker exposure to beryllium in nuclear weapons facilities. "OSHA's new proposed rule is the beginning of the final chapter of our making peace with the past," he wrote in a DOL blog. "Once we finish, workers exposed to beryllium will be protected and we will save the lives and lungs of hundreds."

OSHA estimates that every year the rule would prevent almost 100 deaths and 50 serious illnesses among the approximately 35,000 workers exposed to beryllium in occupations such as foundry and smelting operations, machining, and dental lab work.



## How do you know you are working with and are potentially exposed to beryllium?

Beryllium (Be) is a lightweight naturally occurring metal used in industrial processes in many different forms, such as pure metal, metal alloys, oxides, or salts.

Processing beryllium in the workplace may expose workers to beryllium compounds through inhalation, ingestion, or skin contact. Exposure to beryllium occurs through:

- Breathing or ingesting airborne beryllium dust, mist, or in other forms during activities including machining or grinding
- Breathing fumes from heating metal containing beryllium or other beryllium compounds at high temperatures
- Skin contact with beryllium-laden dust settled on surfaces or in liquids containing beryllium

## How can beryllium affect you?

Exposure to beryllium below OSHA's current permissible exposure limit (PEL) may cause chronic beryllium disease or lung cancer. Employers that use beryllium in workplace processes must provide information and training about beryllium to exposed workers and should encourage them to share it with their health care providers.

Chronic Beryllium Disease (CBD) is an incurable, debilitating and life-threatening disease caused by inhalation of airborne beryllium by individuals sensitized to beryllium. People with CBD have lesions in the lungs and signs and symptoms that may include shortness of breath, an unexplained cough, fatigue, weight loss, fever and night sweats. However, these signs and symptoms may develop at different rates and severity for different people. Signs and symptoms may not be noticed until years after a worker is exposed to beryllium and then may rapidly worsen. CBD diagnosis is difficult because the signs and symptoms for CBD are similar to other lung diseases, such as pulmonary sarcoidosis.



## Crystalline Silica Exposure

### What is crystalline silica (quartz)?

The term "crystalline silica" and "quartz" refer to the same thing. Crystalline silica is a natural constituent of the earth's crust and is a basic component of sand and granite.

### What is silicosis?

Silicosis is a disease of the lungs due to the breathing of dust containing crystalline silica particles. This dust can cause fibrosis or scar tissue formations in the lungs that reduce the lung's ability to work to extract oxygen from the air. There is no cure for this disease, thus, prevention is the only answer.

### What are the symptoms of silicosis?

There are several stages of silicosis. Early stages may go completely unnoticed. Continued exposure may result in the exposed person noticing a shortness of breath upon exercising, possible fever and occasionally bluish skin at the ear lobes or lips. Silicosis makes a person more susceptible to infectious diseases of the lungs like tuberculosis. Progression of the disease leads to fatigue, extreme shortness of breath, loss of appetite, pain in the chest, and respiratory failure, which all may lead eventually to death. Acute silicosis may develop after short periods of exposure. Chronic silicosis usually occurs after 10 or more years of exposure to lower levels of quartz.

### Where are general industry employees exposed to crystalline silica dust?

The most severe exposures to crystalline silica result from sandblasting, which may be done to clean sand and irregularities from foundry castings, finish tombstones, etch or frost glass, or remove paint, oils, rust, or dirt from objects that will be repainted or treated. Other exposures to dust from sand occur in cement manufacturing, asphalt pavement manufacturing, and the foundry industry. Crystalline silica is used in the electronics industry and in manufacturing abrasives, paints, soaps, and glass. Calcined diatomaceous earth, which can contain crystalline silica, is used for filtration in food and beverage production.

### What can employees do to limit their exposure to crystalline silica?

- Employers are required to provide and assure the use of appropriate controls for crystalline silica-containing dust. Be sure to use all available engineering controls such as blasting cabinets, water sprays, and local exhaust ventilation. Substitution of less hazardous materials can also be used.
- Be aware of the health effects of crystalline silica and that smoking adds to the damage.
- Know the work operations where exposure to crystalline silica may occur.
- Participate in any air monitoring or training programs offered by the employer.
- Use type CE positive pressure abrasive blasting respirators for sandblasting.
- For other operations where respirators may be required, wear a respirator approved for protection against crystalline silica-containing dust. Do not alter the respirator in any way. Workers who use tight-fitting respirators cannot have beards/mustaches which interfere with the respirator seal to the face.
- If possible, change into disposable or washable work clothes at the worksite; shower and change into clean clothing before leaving the worksite.
- Do not eat, drink, use tobacco products, or apply cosmetics in areas where there is dust containing crystalline silica.
- Wash hands and face before eating, drinking, smoking, or applying cosmetics outside of the exposure area.

## SHARP Spotlight: Cassemco



*Cassemco's first SHARP presentation December, 1999*

In 1998, Tennessee OSHA's Consultative Services section created an award and recognition program called the Safety and Health Achievement Recognition Program or SHARP. The program is targeted towards smaller employers, those with 250 or fewer employees at their site and 500 or fewer employees nationwide. SHARP requires that the employer have injury and illness rates below the national average for their industrial classification.

Tennessee OSHA's first SHARP participant is still with

the program today and was recently re-certified. In June of 1998, TOSHA Consultative Services performed the first-ever SHARP evaluation in Tennessee at Cassemco in Cookeville. The consultation team made recommendations for improvements at the site and in December of 1999, Cassemco received the SHARP award, a recognition it has maintained ever since. Partnering with Tennessee OSHA, Cassemco has worked nearly 150,000 hours over the past three years with zero recordable injuries. Compared to the national average of 4.9, Cassemco's zero injury rate means that nearly 20% of their employees have gone home injury-free as compared to their peers.

The key to any effective safety and health program is management commitment and employee involvement. This

partnership of management and employees can be seen in Cassemco's words below:

*"Even though Cassemco is a small factory, we have high standards for our products and especially our clients. All that we have accomplished over the years with the help and assistance of TOSHA, has benefited our clients and helped our employees stay safety conscience. Receiving the SHARP award 16 years in a row proves how much the Cassemco family values our employees. We have come a long way and we strive to continue with TOSHA's standards, and continue being awarded the SHARP in the future."*

*-Jerry Samon,  
General Manager*

For more information about SHARP, please visit the [TOSHA website](#) or call (800) 325-9901.

## Voluntary Protection Program

Lucite International in Memphis, Tennessee, was recently certified for the third time as a Volunteer STAR VPP site. Lucite International-Memphis manufacture Methyl Methacrylate Monomers and Cast Lucite Sheeting. The facility has 175 employees.

An Area of Excellence for Lucite International is the goal of zero injuries for employees and contractors working at the facility. This goal is clearly communicated to all of the employees and contractors on a continual basis. Employees are expected to know and follow all safety rules, as well as actively participate in the company's safety programs. They have instituted a "Take Two" safety awareness program where a personal risk assessment is completed prior to conducting work. Employees are assessed by the four states of rushing, frustration, fatigue and complacency. They have maintained their goal of zero injuries for more than a year for their employees and contractor employees working on their site. Additionally their three year Total Case Incident Rate (TCIR) is 81 percent below the national average for their industry and their Days Away Restricted and Transferred Case Rate (DART) is 80 percent below the national average for their industry.

# Bulletin Board



**TOSHA wants to hear from you!**

If you have a question about safety and health you would like to have answered please submit a Dear TOSHA question to: [Jennifer.Farrar@tn.gov](mailto:Jennifer.Farrar@tn.gov).



## Agency Links

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[OSHA](#)

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[Tennessee's Government Website](#)

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[Tennessee Department of Labor & Workforce Development](#)

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[Tennessee Occupational Safety & Health Administration \(TOSHA\)](#)

## Useful Links

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[File a Complaint](#)

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[Video Library](#)

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[TOSHA Publications](#)

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[Safety & Health Congress](#)

## Recognition Links

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[TOSHA Safety Awards](#)

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[VPP](#)

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[SHARP](#)



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