

Ask the Expert Exposure Limits on Vibrating Equipment – Spanish

Pregunta: ¿Existen límites de exposición o pautas de tiempo para el uso de herramientas de alta vibración como llaves de impacto, motosierras, martillos neumáticos y martillos remachadores?

Respuesta: Por lo general, cuando se utilizan este tipo de herramientas vibratorias, se recomienda limitar la exposición a 30 minutos al día.

Sin embargo, estas directrices de exposición no se presentan en forma de una norma reguladora específica, sino que se basan en normas de consenso.

La Organización Internacional de Normalización (ISO), la Conferencia Americana de Higienistas Industriales Gubernamentales (ACGIH®) y el Comité Europeo de Normalización (CEN) han elaborado normas y valores límite umbral (TLV®), que son niveles máximos de exposición recomendados basados en la salud.

La norma ISO sólo se ocupa de la vibración de todo el cuerpo, mientras que la ACGIH® y el CEN establecen límites para la vibración de mano/brazo y de todo el cuerpo.

Así pues, aunque OSHA y la mayoría de las jurisdicciones canadienses pueden no tener una norma específica que se ocupe de esta cuestión y la ACGIH no es un organismo de aplicación de la ley, un empleador podría seguir siendo citado en virtud de la Cláusula del Deber General o por falta de la debida diligencia.

Article Four Types of Meeting Participants – Spanish

Artículo – Cuatro Tipos de Participantes en la Reunión

Puede ser difícil tratar con los diversos tipos de personalidad, niveles de experiencia y diferentes antecedentes de los participantes de la reunión. No siempre se puede predecir cuál será su reacción, y puede que no se sepa de antemano quiénes asistirán, pero aun así se puede preparar. Una forma es entendiendo los cuatro tipos generales de participantes de la reunión que es probable que encuentre y la mejor manera de interactuar con ellos. También puede encontrar grupos enteros que tienen estas características – la respuesta es la misma.

El participante hostil

LA veces a un participante de la reunión no le gusta tanto. Pueden ser abiertamente hostiles o abiertamente agresivos. El truco es lidiar con su hostilidad lo más rápido posible y ponerlos de su lado.

- Establecer reglas de combate, mantener el control de la reunión, y mantenerla en marcha.
- Desafíelos si sabe que están equivocados o tienen pruebas incompletas. No los humille, ilumínelos con la verdad o el resto de la historia.
- Use el humor para desarmarlos, pero no sacrifique o socave su autoridad como expositor.
- Use historias y hechos.

El crítico

Los participantes críticos se consideran inteligentes, probablemente más inteligentes que usted. Serán escépticos con la

información y buscarán activamente maneras de refutar lo que estás diciendo.

- Presénteles hechos duros y fríos. Lo que significa que tendrá que hacer su investigación y estar preparado.
- No exagere. Use ejemplos simples y poderosos para comunicar su mensaje.

El participante desinformado

Lea el nivel de conocimiento, experiencia y habilidad de sus participantes para que pueda involucrar a los participantes de todo el espectro.

- Interrogue a la audiencia para averiguar lo que saben y lo que no saben.
- Ofrezca algunos datos básicos para ayudar a llenar los huecos – hágalo al principio y a lo largo de la reunión según sea necesario.

Si hay una gran brecha en los conocimientos, la experiencia y la habilidad, por ejemplo una reunión con una mezcla de trabajadores recién contratados y veteranos, considere la posibilidad de dividir el grupo en grupos más uniformes y adapte la información a cada grupo.

Participante simpatizante

Los participantes simpatizantes son sus aliados contra los hostiles y críticos. También pueden ayudarle a ganarles a los cínicos y a ayudar a los desinformados.

- Apelar a lo que tienen en común y a cómo se parecen para ayudar a crear y fortalecer su vínculo.
 - Pero sea sincero o perderá su simpatía rápidamente.
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A Better Way to Onboard – Spanish

UNA MEJOR MANERA DE SUBIR A BORDO

Definiendo el problema

En un seminario web del 2013, el administrador de la OSHA David Michaels dijo, “Hemos sabido durante décadas que los nuevos trabajadores, cuando empiezan en un nuevo trabajo, corren un riesgo mucho mayor de sufrir lesiones – y sabemos por qué: Los nuevos trabajadores a menudo no están adecuadamente entrenados en los peligros potenciales en el nuevo lugar de trabajo y las medidas que pueden tomar para protegerse.”

Y sin embargo, según el Instituto de Trabajo y Salud de Toronto, sólo 1 de cada 5 nuevos trabajadores recibe formación en seguridad. La formación – especialmente la orientación de los nuevos empleados o la incorporación y el refuerzo – es primordial para proteger a los nuevos trabajadores.

Resumen de los riesgos

En un [estudio de 10 años realizado por el Instituto de Trabajo y Salud](#), el riesgo de lesiones para los trabajadores con una menor permanencia en el trabajo se ha mantenido constantemente más alto en comparación con los que han estado empleados en un trabajo durante más de un año.

El riesgo es particularmente elevado entre los que están en el primer mes de trabajo, con más del triple de riesgo de una lesión con pérdida de tiempo que los trabajadores con más de un año de experiencia laboral.

Varios otros estudios han encontrado resultados similares:

- Bentley y otros (2002) informaron de que el 32% de las lesiones en las zonas de deslizamiento de la explotación

forestal se producen durante los primeros seis meses de empleo de los trabajadores.

- McCall y Horwitz (2005) informaron de que el 51% de las 1168 reclamaciones de accidentes de camiones que examinaron fueron hechas por conductores con menos de un año de antigüedad.
- Chi y otros (2005) encontraron que el 80,5% de las 621 caídas laborales fatales en la industria de la construcción de Taiwán que analizaron habían ocurrido en el primer año de trabajo del individuo.
- Jeong (1998) examinó las estadísticas nacionales sobre accidentes industriales en el sector de la construcción en Corea del Sur en los años 1991-1994 y descubrió que el 95,6% de las 120.417 lesiones no mortales y el 92,5% de las 2.803 muertes examinadas se habían producido en el primer año de trabajo de los empleados.

Además, el estudio de la IWH encontró que el riesgo de lesiones laborales entre los nuevos trabajadores es mayor entre los trabajadores de más edad, los hombres y los del sector de bienes, que incluye la construcción y la manufactura, entre otros.

Factores de riesgo y razones

Factores de riesgo:

- Edad
- Falta de formación/renovación de la formación
- Volumen de negocios

Con respecto a la experiencia y la edad, el Dr. Curtis Breslin, científico de la IWH, que dirigió el estudio de la IWH, dice que el riesgo de una lesión con pérdida de tiempo es mayor entre los trabajadores de más de 45 años de edad en comparación con todos los demás grupos de edad.

“El factor de riesgo clave es la novedad, no la juventud”, dice Breslin.

Además de la absoluta falta de capacitación, otro riesgo que enfrentan las organizaciones es la retención de la capacitación. Sobrecargar a su nuevo trabajador con cada proceso, instrucción paso a paso, regla de seguridad y política de RRHH que se espera que conozcan no es la mejor manera de aprender y retener la información. Nuestros cerebros simplemente no están diseñados para manejar tanta información de una sola vez.

Sin refuerzo, los alumnos pierden el 70% de lo que aprenden dentro de las 24 horas de haberlo aprendido.

El cambio de trabajo se está convirtiendo más en la norma que en la excepción. La gente ya no se queda en las empresas para toda la vida. Con cada cambio, o rotación de un empleado, viene el aumento del riesgo de “novedad”.

Otras razones:

- Los nuevos trabajadores no están familiarizados con las tareas, los procesos y el ambiente de trabajo.
- Los nuevos trabajadores a menudo tienen miedo de hablar o hacer preguntas si tienen problemas de seguridad o no están seguros de cómo realizar una tarea.
- Los trabajadores nuevos en un trabajo simplemente se enfrentan a un mayor número de peligros debido a su falta de experiencia.
- La percepción del riesgo no está tan desarrollada en un trabajador nuevo porque no tiene el conocimiento y la conciencia existente que vienen con el tiempo y simplemente subestima los riesgos.

Hacer que el trabajo sea seguro para los nuevos trabajadores

Los nuevos trabajadores necesitan capacitación antes de empezar a trabajar y siguen necesitando capacitación de manera continua durante los primeros 6 a 12 meses de comenzar un nuevo trabajo. La formación debe centrarse en:

- Procedimientos de seguridad y emergencia
 - Procedimientos específicos para el lugar y el trabajo
 - En el trabajo, en la práctica, y una demostración de habilidades y competencias
 - Tómese el tiempo necesario para aprender sobre lo que los trabajadores han sido entrenados, su experiencia y sus conocimientos generales de seguridad. Siga la formación inicial de a bordo con charlas de seguridad, reuniones de seguridad, y trabaje con un mentor.
 - Incorpore otros tipos de entrenamiento y refuerzo basados en los requisitos y necesidades específicas de su organización.
 - Finalmente, no asuma que los nuevos trabajadores conocen todos sus derechos de seguridad o se sienten cómodos expresando sus preocupaciones, haciendo preguntas o señalando los peligros.
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Argon Gas ‘Drowns’ Welder – Spanish

EL GAS ARGON ASFIXIA AL SOLDADOR

El gas argón utilizado como parte de una operación de soldadura causó la muerte por asfixia de un aprendiz de soldador que trabajaba en un espacio confinado.

Estaba completando el trabajo de soldadura dentro de un tanque construido con titanio. Debido a que el titanio es un metal reactivo, el cordón de soldadura de metal fundido debe ser cubierto por el gas inerte argón hasta que se enfríe. El argón es más pesado que el aire y se asentará en áreas bajas en espacios confinados, desplazando el oxígeno.

La víctima había estado en el tanque una hora antes de que el encargado lo encontrara. Los esfuerzos para revivirlo no tuvieron éxito.

Los espacios confinados y los gases tóxicos son una combinación mortal. Lea la Hoja de Datos de Seguridad de Materiales (MSDS) de cualquier sustancia peligrosa con la que trabaje, incluyendo los gases. El trabajo en espacios confinados, como un tanque, requiere una capacitación especial, equipo de prueba de la calidad del aire, permisos escritos y equipo de protección, como respiradores de aire suministrados y líneas de vida de rescate.

Argon Builds Up in Large Tank – Spanish

El Argón Se Acumula En Un Gran Tanque

El gas argón acumulado en el fondo de un gran tanque mató a dos trabajadores asignados a limpiar el tanque.

La atmósfera del tanque había sido probada antes de que entraran en él, pero la prueba se hizo incorrectamente y no detectó el argón. Uno de los trabajadores murió después de entrar en el tanque para salvar al otro.

La vigilancia atmosférica de los espacios confinados es un procedimiento riguroso que debe hacerse correctamente y que debe repetirse si es necesario para tener en cuenta las condiciones cambiantes del espacio confinado. El equipo de vigilancia en sí mismo debe ser probado y mantenido adecuadamente.

Back Safety Checklist

Back Safety Audit Checklist



Preventing Back Injuries

- Are hand trucks available for moving heavy loads?
 - Are employee instructed to ask for help when lifting heavy loads?
 - Have you asked distributors to deliver goods in smaller portions, to reduce the weight of supplies?
 - Are you storing heavy items off the floor, so that an employee does not need to lift below knee level or above shoulder height?
 - Are carts available for moving goods? Store goods at cart level for easy transfer of heavy items from the shelf to the cart.
 - Are abdominal (back) belts being used? If so, have the employees received training on how to use the back belt and its limitations?
 - Are all new employees being trained in proper lifting techniques during their initial training period?
 - Are employees that must stand in one area provided with floor mats to help reduce back and spine stress?
-

Back Safety Topic

Back Safety

This section addresses the importance of back safety and techniques to avoid injury in the workplace.

According to OSHA, back injuries are the second most common reason for lost days of work, "Back strain due to overexertion represents one of the largest segments of employee injuries in the American workplace." And according to The National Safety Council, 31% of all disabling work injuries are caused from overexertion. Back pain accounts for 25% of all workers' compensation payments—nearly \$10 billion annually.

What to Avoid

- Lifting Objects to a high shelf
- Lowering objects from a high place
- Lifting from a hard to reach place
- Drums, Barrels or Cylinders
- Awkward objects

Techniques to Avoid Injury

If lifting objects to a higher surface, make shoulders at equal height as the surface lifting to by using a platform or stepstool. Lift the object(s) in increments, steadying the object at mid body length before lifting. When lowering the object(s) from higher surface, push up on object to test the weight and stability. Slide the object(s) as close to yourself as possible prior to lifting. Lifting from a hard to reach place can be more difficult. Get as close as safely possible, keep the back straight and tighten stomach muscles push buttocks out behind you and bend knees. Never use your back to lift, instead use legs, stomach and buttocks. Take exceptional precaution when lifting drums, barrels or cylinders as these loads can shift suddenly. As with other objects, always plan the best way to grip an object prior to its

transportation.

Lifting Options

If an object appears excessively heavy for one, never try to lift it alone. Instead make use a “team lift”. To even further reduce risk of back injury, when possible employ the use of machinery to supply additional support.

For Further information please contact the National Safety Council
at

800-621-7615 or visit nsc.org

Company Name: _____ Date: _____

Safety _____ Recommendations: _____

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Burns and Scalds Safety Topic

Burns and Scalds Safety Topic

According to the American Burn Association, 1.1 million burn injuries need medical attention in the United States each year, 45,000 require hospitalization. A significant portion of injuries occur on the job where employee sare exposed to variety of hazards.

Burn Classification

- First-degree burns only affect the top layer of skin. First-degree burns, (ex: sunburns) skin is mildly red and dry with some localized pain, typically heals within a few days.
- Second-degree burns affect additional layers of skin. Second-degree burns result in blistering that are quite painful and can take several weeks to heal. Take caution with blisters as they are prone to infection.
- Third-degree burns are most severe and affect all layers of skin, muscle and nerve tissue. The burn area appears charred with patches of underlying tissues that have been exposed appearing white. There is a great threat of infection from these burns. These burns are often extremely painful, depending on the amount of nerve tissue destroyed.

Treatment

- Remove or cut away loose clothing around a burned area, never attempt to remove clothing that is stuck to the burn.
 - Immerse the burned area in cool water – not ice or ice water – or apply clean wet cloths to areas that can't be immersed.
 - After cooling, cover the affected area with a sterile bandage or clean cloth (if burns cover a large area of the body, use a clean sheet). Do not rub burned areas nor break blisters. Never use lotion, ointment, or butter on a burn.
 - For chemical burns, carefully remove contaminated clothing and flush the affected area for 15 minutes.
 - Consult medical assistance for second-degree burns and minor chemical burns. Call for emergency assistance for third-degree burns and chemical or second degree burns covering a large portion of the body.
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By the Numbers – Equipment/Machinery

equipment/machinery

DID YOU KNOW?

Employee exposure to unguarded or inadequately guarded machines is prevalent in many workplaces. Consequently, workers who operate and maintain machinery suffer approximately 18,000 amputations, lacerations, crushing injuries, abrasions, and over 800 deaths per year.

Occupational Safety & Health Administration (OSHA) nominated OSHA's top ten cited violations in 2017. Machine guarding was NO.8 on this not so famous list with 1.933 violations. In 2018, machine guarding was NO.9.

A lack of machine safeguarding also held the dubious distinction of making the list of OSHA's ten largest monetary penalties for the year – not once but four times. In fact, the largest proposed monetary penalty, a staggering \$2.6 million (USD), arose from an incident where a worker was crushed to death while clearing a sensor fault in a robotic conveyor belt.

According to the most recent Bureau of Labor Statistics data, manufacturing plants reported approximately 2,000 accidents that led to workers suffering crushed fingers or hands, or had a limb amputated in machine-related accidents. The rate of amputations in manufacturing was more than twice as much (1.7 per 10,000 full-time employees) as that of all private industry (0.7).

There was an average annual decrease of 2.8% in overall machine-related fatality rates from 1992 through 2010. Mobile machine-related fatality rates decreased an average of 2.6% annually and stationary machine-related rates decreased an average of 3.5% annually. Groups that continued to be at high risk included older

workers; self-employed; and workers in agriculture/forestry/fishing, construction, and mining.

KEEP IN MIND

Machines need to move to perform their tasks. Whether it's a conveyor belt carrying raw material to a mixing tank, power presses bending sheet metal or a drill press punching holes in a piece of wood, they all operate by movements that cause a serious risk to workers.

The risks occur because workers sometimes put their hands or other body parts in the point of operation, get caught in between two moving parts or fail to use proper safety procedures to clear a jammed machine. Not a day goes by when someone isn't killed by moving machinery or suffers a serious injury like an amputation because they got too close or didn't follow basic safety procedures.

Working with machinery and equipment is always hazardous. But workers are especially at risk when they try to troubleshoot machinery that isn't working properly. And troubleshooting is a common task in many workplaces. So given its inherent hazards, it's important that you have a troubleshooting policy to ensure that workers can safely address machinery issues.

The potential hazards include:

Safety hazards

- Contact with moving parts
- Contact with electricity, heat, fire, cold, and other energies
- Contact with pressurized gas or liquid

Health hazards

- Contact with harmful chemicals or biological hazards
- Contact with harmful noise, radiation, and/or vibration
- Exposure to ergonomic or MSD hazards

Mechanical Equipment Failures That Cause Workers to Suffer Long-Term Injuries or Death

Employers are increasingly using mechanical equipment and tools to increase productivity. While this can reduce the amount of manual labor some workers must perform and reduce the types of injuries workers once suffered, mechanical equipment and tools can be dangerous. Workers can suffer debilitating injuries or deaths when machinery and smaller tools fail or malfunction.

Reasons for Equipment, Machinery, and Tool Failures

Mechanical failure of equipment, machinery, and tools can involve many problems, such as misalignment of parts, power surge overloads, broken gear sets, chips or breaks of parts, and oil contamination. In some cases, the breakdown of a part can cause further damage to the machinery and lead to its malfunction and a worker being injured. There are many reasons why equipment fails and causes accidents including:

- **Wear and tear.** Parts in machinery and tools will wear down over time due to their constant use. At some point, they must be replaced due to wear and tear. When employers fail to replace them due to the cost, they will malfunction—sometimes repeatedly if only minor repairs are done.
- **Defective design or manufacture.** In some cases, the machinery, equipment, or tools were designed or manufactured improperly. If the defect is serious enough, it can cause a catastrophic workplace accident if the machinery malfunctions or breaks down.
- **Lack of training.** Workers must be trained in the safe use of heavy equipment, like forklifts, bulldozers, and other heavy machinery and equipment, before using them on the job. Even drills, power saws, and other power tools can be extremely dangerous if workers use them without training in their safe use. Many tragic accidents occur when employers do not take their workers' safety seriously and do not invest the time

to properly train their employees.

- **Improper maintenance.** Employers have a duty to inspect, repair, and replace machinery, equipment, and tools on a regular basis. Unfortunately, many employers do not do this, which can result in a tragic workplace accident.
- **Operator error.** Many accidents occur when operators of equipment and machinery make errors or engage in negligent actions. This can lead to their own injuries or the injuries of others, such as when a heavy machine operator hits a nearby worker.

Third-party negligence. In some cases, a third party, such as a sub-contractor or supplier, may have provided the machinery, operated it, or maintained it and may have caused an accident due to negligence.

By the Numbers – Fire Extinguishers

fire extinguishers

DID YOU KNOW?

[According to the Bureau of Labor Statistics](#), fires and explosion accounted for 148 workplace deaths in 2013—or 3.4% of all fatal occupational injuries for the year. Despite industry and regulatory efforts to improve fire safety, this number (and percentage) has remained stubbornly constant since 2007. Despite this levelling off, it's clear that OSHA intends that employers should remain committed to finding ways to reduce the number of fire-related fatalities in the workplace, and intends to enforce a high standard for fire safety.

OSHA stipulates that businesses should train workers regarding potential fire hazards in their workplace, and also on what procedures should be followed in the event of a fire emergency. OSHA recommends that all employers have an emergency evacuation/action plan in place in case of fire—featuring safety assignments for key personnel—and *requires* these plans for certain industries, such as hazardous chemical processing.

Many of OSHA's fire safety recommendations are industry- or even job-specific. For example, in the construction industry, OSHA calls for a "fire plan" to be formulated prior to any demolition job. Other OSHA-mandated standards – like the presence of adequate fire exits – are required in every industry.

There are many common misconceptions related to OSHA's fire safety requirements. One is that all employers are required to have portable fire extinguishers on-site. While this is not the case in most industries, OSHA [does require](#) that if employers *do* choose to provide extinguishers, employees must be trained on their use. Another misconception is that OSHA requires all employers to have [fixed extinguishing](#) or [automatic sprinkler](#) systems in all workplaces. Again, only in certain industries are these systems mandated. However, if they *are* in place, then OSHA can potentially enforce standards for their testing and maintenance.

The 5 frightening statistics of fire safety in the workplace

1. Less than 50% of building occupants feel confident of knowing what action to take and where to evacuate to during an emergency
2. Less than 50% of building occupants feel confident in how to operate a fire extinguisher
3. Less than 25% of people when randomly tested can locate their nearest fire extinguisher from memory without searching the building
4. Over 50% of the people who operate a fire extinguisher do so incorrectly or dangerously (i.e. not using the correct extinguisher, not sweeping across the fire, not continuing

to spray after the fire is out and not aiming at the base of a fire or using the incorrect fire extinguisher)

5. Only 13% of people are aware that different types of fire extinguishers must be used on different classes of fire and of the very dangerous effects of using the incorrect fire extinguisher on specific classes of fire

After reviewing various fire safety research papers and conducting some of our own research to test the accuracy of these findings, the statistics above paint an alarming picture of the state of emergency preparedness and readiness within Australian workplaces.

Our research found that workplaces are underprepared for emergencies that may occur on-site and employees are not confident in the procedures to follow during an emergency situation or how to use fire extinguishers.

How can workplace fire safety training benefit your organization? What is the impact?

Both Australian and international fire statistics show that:

95% of all fires are found to be extinguishable if the correct fire extinguisher is applied promptly. Fire extinguishers are located throughout Australian workplaces as part of their compliance with Australian Standard AS1851 and the Building Code of Australia (BCA), however the majority of people are fearful of fire extinguishers or do not understand how to operate a fire extinguisher in an emergency.

Fire extinguishers are quick and easy to use if personnel are provided with a basic level of fire extinguisher training so that they can identify the class of the fire that is burning, identify the appropriate fire extinguisher to use and effectively operate the fire extinguisher in a range of circumstances.

Our research found that:

- Fire safety training increases the knowledge and emergency response actions of building occupants when confronted with a fire or emergency situation.

- By conducting annual evacuation exercises (as is a mandatory requirement under AS3745-2010), building occupants will obtain more confidence in following emergency procedures for their workplace and they will better understand what emergency actions to take for themselves and their workplace colleagues.
- By conducting regular fire safety training, building occupants improve their knowledge about the location and operation of site firefighting and emergency equipment.
- After attending a basic fire extinguisher training session (where each participant operated a fire extinguisher on a real fire) over 90% of people operated the fire extinguisher correctly on their second attempt and they were 33% more effective in extinguishing the fire (they selected the correct fire extinguisher, they cooled the area after the fire was out and they aimed at the base of the fire).

By providing your staff with basic fire safety training you will increase the knowledge of fire safety within your workplace and grow the confidence and competence of your staff in responding to an emergency and you are encouraging your staff to extinguish small workplace fires before they grow large and potentially interrupt your business operations.

KEEP IN MIND

The best-case scenario will place extinguishers in highly visible, clearly labelled locations that are sufficiently low to the ground so that even shorter employees can easily reach them. Clear instructions in large print font should be printed and placed right beside the extinguisher sign.

Using a portable fire extinguisher is an important safety skill. You never know when you might have to use it at work, home or on the road.

To extinguish small fires before they become large, extinguishers' contents smother or cool the flames. However, not everyone knows how to use an extinguisher. If a fire broke out in your work area, you need to stop it before it spreads. You wouldn't have time to

ask your safety officer to teach you how to use equipment.

Fire extinguishers have received a new letter. The well-known Class A, B, C and D extinguishers have been joined by a Class K extinguisher. This new type was designed to fight fires that involve cooking oil.

The Class K extinguisher is a response to the trend toward using vegetable oils for frying instead of animal fats. The vegetable oils cook at a higher temperature. The Class B extinguishers used previously are not effective against these hotter fires.

What else do you need to know about the Class K extinguisher?

- A Class K extinguisher should be located near any deep fat fryer where vegetable oil is used. Make sure you know where to find it quickly in an emergency.
- The route to the extinguisher must be kept clear at all times. This means you must not place boxes, equipment or other obstructions in the path.
- The extinguisher must be maintained and serviced regularly. If it has been used, it must be refilled or replaced so it is ready to use again. Tell your supervisor if you see anything wrong with the extinguisher.
- You need training so you will understand when and how to operate a fire extinguisher. You also need hands-on practice to be able to operate a fire extinguisher in an emergency.

Most portable fire extinguishers operate in a similar manner. Use the word PASS to help you remember the steps in working an extinguisher:

P – pull the pin

A – aim at the base of the fire

S – squeeze the handle to release the extinguishing material

S – sweep from side to side until the extinguisher is empty

What about those other kinds of extinguishers besides the new K extinguisher? They are still around and useful for many other

kinds of fires.

- The Class A extinguisher is used for fires in ordinary combustibles. Wood, paper, plastic and cloth are examples.
- The Class B extinguisher is used for fires involving combustible and flammable liquids – except vegetable oils.
- The Class C extinguisher is for fires in electrical equipment.
- The Class D extinguisher is a specialized one used in certain workplaces. It fights fires involving combustible metals such as magnesium.

Classes A, B and C are often combined into one extinguisher, such as the Class ABC extinguisher you probably have in your home, or the Class BC extinguisher you carry in your motor vehicle.

And remember: It's "K" for 'kitchen.' This is the extinguisher to use now for a cooking fire.

REGULATIONS – OSHA

When OSHA conducts workplace inspections, it checks to see whether employers are complying with OSHA standards for fire safety.

OSHA standards require employers to provide **Proper Exits, Fire Fighting Equipment, And Employee Training** to prevent fire deaths and injuries in the workplace.

MONTHLY INSPECTIONS:

Monthly inspections will do the following:

- Ensure the fire extinguishers are present where they're supposed to be.
- Ensure the fire extinguishers are in good condition and ready for use.
- Ensure the fire extinguishers do not need any service, maintenance or annual certification.

Training

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operate a fire extinguisher and hands-on practice to be able to operate a fire extinguisher in an emergency.

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OSHA prohibits the use of fire extinguishers by anyone that has not been properly trained to use them. Training should be done annually and should also include a periodic practical component to give workers an opportunity to practice actual use.

AGONY OF THE MOMENT

What would you do if you suddenly saw or smelled a fire in your work area?

Here are the roadways:

Notify others: Are emergency numbers posted in a visible location next to the telephone in your work area? Do you know how to describe your exact location to the fire department? Where is the nearest fire alarm? Do you know how to activate it?

Follow the emergency plan: What is your company's emergency plan? Where would everyone meet so your supervisor can be sure you are safely out? Who is responsible for helping co-workers needing assistance? Do you have any other duties such as closing windows and doors or checking employee washrooms?

Find your exits: Which fire exits would you use? Can you find two fire exits—right now— from the room that you are in? Always plan two escape routes, so if one becomes blocked by fire you have an alternative exit.

Use the stairs. Do you know that you should never use an elevator when the fire alarm sounds? Elevators can jam between floors or accidentally drop to the floor that the fire is on. When the doors open, you could be subjected to flames, hot gases and toxic smoke.

Fight or flee: Do you know how to use a fire extinguisher? Some small fires, about the size of a wastepaper basket, can be successfully fought with a portable fire extinguisher. But if you're not sure what you are doing with the extinguisher or if the fire is spreading, get out!

You should not fight a fire when:

- A properly rated fire extinguisher is not readily available.
- You are not trained or do not feel comfortable using a fire extinguisher.
- There is a chance that the fire could block your escape route.
- The fire is too large to fight or seems out of control.

By the Numbers – Food Safety

Food safety

DID YOU KNOW?

The quality and safety of the food we eat is in the hands of millions of dedicated and skilled workers at food and beverage companies across the world. The key to maintaining that food quality and safety is ensuring workers have the training, tools and support they need to feel and perform work safely.

To give workers this support, food and beverage companies need to understand the attitudes, motivations and workplace perceptions of

their workers.

Below are some interesting statistics that food and beverage companies can use to guide their strategies for food safety:

- [24% of food workers](#) have been injured at their current job, and 17% of workers were injured in their first
- [42% of workers](#) rarely or never receive coaching from their manager or supervisor, and 20% said they received too little training before starting their job.
- [37% of workers and 43% of supervisors](#) agree that training is sometimes too complicated or difficult to understand.
- [75% of employees](#) say that feeling personally safe and secure in the workplace is important to them. 72% also say they're largely unaware of their company's EHS function.
- [89% of illness outbreaks](#) at restaurants are caused by food contamination by workers.
- Studies show that [for every \\$1 spent](#) on safety programs, \$5 is saved in accident avoidance and other related savings.
- Food manufacturing workers have a [60% higher rate of occupational injury](#) and illness than workers in other industries. The risk of occupational death is [5 times higher](#) for food industry workers than in non-food jobs.
- Severe injuries that required time off work are [more than twice as frequent](#) among food manufacturing workers.
- Researchers found that injuries from slips, trips and falls were [highest in food processing](#), storage and retail, possibly because of high use of refrigeration.

KEEP IN MIND

Food safety is used as a scientific discipline describing handling, [preparation](#), and [storage of food](#) in ways that prevent [food-borne illness](#). The occurrence of two or more cases of a similar illness resulting from the ingestion of a common food is known as a food-borne disease outbreak. This includes a number of routines that should be followed to avoid potential [health hazards](#). In this way, food safety often overlaps with [food defense](#) to prevent harm to consumers. The tracks within this line

of thought are safety between the industry and the market and then between the market and the consumer. In considering industry to market practices, food safety considerations include the origins of food including the practices relating to [food labeling](#), food [hygiene](#), [food additives](#) and [pesticide residues](#), as well as policies on [biotechnology](#) and food and guidelines for the management of governmental [import](#) and [export](#) inspection and [certification](#) systems for foods. In considering market to consumer practices, the usual thought is that food ought to be safe in the market and the concern is safe delivery and preparation of the food for the consumer.

Foodservice professionals face a unique level of pressure to successfully run their business. Whether it's help with restaurant marketing, menu development, distribution or staying ahead of industry trends, you need specific expertise.

FACT or FICTION?

Foodborne diseases are the illnesses contracted from eating contaminated food or beverages. Illnesses include foodborne intoxications and infections, **which are often incorrectly referred to as food poisoning**. There are many different foodborne diseases that are caused by viruses, bacteria, parasites, toxins, metals, and prions. Symptoms of foodborne illness range from mild gastroenteritis to life-threatening neurologic, hepatic, and renal syndromes.

The answer is clear – fact

These diseases may be occupationally related if they affect the food processors (e.g., poultry processing workers), food preparers and servers (e.g., cooks, waiters), or workers who are provided food at the workplace.

Control

Control of foodborne diseases is based on avoidance of contaminated food, destruction of contaminants, and prevention of further spread of contaminants. Prevention is dependent upon proper cooking and storing practices, and personal hygiene of food

handlers. The following references provide information on control and prevention for foodborne disease.

- [Abatement Requirements](#). OSHA, (April 8, 1999). Identifies abatement requirements following inspections resulting from the March 1999 food poisoning outbreak which occurred among garment workers who had eaten at the company cafeteria. OSHA has identified health programs to minimize the risk of outbreaks.
- [Division of Foodborne, Waterborne, and Environmental Diseases \(DFWED\)](#). Centers for Disease Control and Prevention (CDC). DFWED focuses on the control and prevention of disease, disability, and death caused by foodborne, waterborne, and environmentally transmitted infections.
- [Enteric Diseases Epidemiology Branch](#). Centers for Disease Control and Prevention (CDC). Innovative public health investigative and consultative groups that identify causes, sources and solutions for bacterial foodborne and diarrheal infections to prevent the disability and death those diseases cause.
- [National Antimicrobial Resistance Monitoring System \(NARMS\) for Enteric Bacteria](#). Centers for Disease Control and Prevention (CDC), (November 2004). NARMS monitors antimicrobial resistance of human enteric bacteria, such as *Campylobacter*, *Salmonella*, *E. coli*, and
- [Foodborne Diseases Active Surveillance Network \(FoodNet\)](#). Centers for Disease Control and Prevention (CDC). Consists of active surveillance for foodborne diseases and related epidemiologic studies designed to help public health officials better understand the epidemiology of foodborne diseases in the United States.
- [Foodborne Outbreaks](#). Centers for Disease Control and Prevention (CDC). Provides outbreak reports and publications, outbreak reporting and report forms, and a outbreak investigation tool kit.
- [Food Irradiation: What You Need to Know](#). U.S. Food and Drug Administration (FDA). Provides answers to common questions about food irradiation, including a basic description of the process, foodborne diseases prevented with irradiation,

effects on food/packaging, and Food and Drug Administration (FDA)/U.S. Department of Agriculture (USDA) approval.

- [FDA Food Code](#). S. Food and Drug Administration (FDA). Guides retail outlets, such as restaurants and grocery stores, and institutions, such as nursing homes, in preventing foodborne illness.
 - [Food Safety from Farm to Table: A National Food Safety Initiative](#). U.S. Food and Drug Administration (FDA), U.S. Department of Agriculture (USDA), Environmental Protection Agency (EPA), Centers for Disease Control and Prevention (CDC), (May 1997). Provides recommendations for the public and private sectors to minimize the occurrence and consequences of foodborne disease incidents.
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Chemical Safety

What's at Stake?

Chemicals can cause burns to eyes, skin, and internally if swallowed or inhaled. Chemical burns can be deceiving with some chemicals causing damage deep within body tissue. The amount of damage a chemical can cause depends on many factors including the chemical, its strength, whether it was inhaled or swallowed and the time it was in contact with body tissues.

A liquid gas burn is a cold contact or a cryogenic burn, that damages the skin and underlying tissues, by freezing them rather than overheating them. This is commonly known as frostbite.

Most liquid gases are colorless and/or odorless and stored in a pressurized environment. This increases the chances of leaking gas getting into your eyes, mouth and throat as well as on the skin. There is also a high chance of damage to underlying structures such as nerve, muscle and bone.

What's the Danger?

The biggest danger of treating a chemical or liquid gas burn is using the wrong first aid approach. Prompt action to reduce the effect of the burn is also crucial. However, what this action is, depends on the chemical or gas and the route of exposure. In many cases, the person will be experiencing both internal and external damage. For this reason, most exposures to chemical or liquid gas do need medical help. First aid responders also run the risk of being exposed to the chemical or gas at the scene. It can be particularly dangerous because these hazards may not be obvious, visible, or detectable by smell.

How to Protect Yourself

First aid for chemical burns and liquid gas

1. Keep yourself safe

- Call 911.
- Put on gloves to avoid touching the chemical or gas.
- Check the container the chemical or gas was in for first aid advice.

2. General burn care

- **FOR ALL CHEMICAL OR LIQUID GAS BURNS – CALL 911 UNLESS:**
 - The chemical or liquid gas has touched only a small area of skin that is not the eyes, hands, feet, face, or genitals.
 - The chemical or gas has been quickly removed.
- If the person does not need medical help after providing first aid:
 - Don't break the blisters and cover the area with a sterile dressing.
 - Don't apply butters or ointments – these may cause infections.
 - A tetanus shot may be needed; booster shots are recommended every 10 years.

3. Signs and symptoms of chemical burns include the following:

- Redness, irritation, or burning where the chemical is in contact.

- Pain or numbness at the site.
- Blisters or black dead skin at the contact site.
- Vision changes.
- Cough or shortness of breath.
- Vomiting

In severe cases, or cases of hypersensitivity to the chemical, a person may develop any of the following symptoms:

- Low blood pressure
- Faintness, weakness, dizziness
- Shortness of breath or severe cough
- Headache
- Muscle twitching or seizures
- Cardiac arrest or irregular heartbeat

4. Treating a chemical burn

- Check the chemical container for first aid instructions.
- Brush off excess chemical if it reacts with water e.g.
 - Dry lime
 - Phenols
 - Elemental metals, e.g.
 - Sodium
 - Potassium
 - Calcium oxide
 - Magnesium
 - Phosphorous
- Move the person away from chemicals if safe to do so.
- Remove any contaminated clothing.
- Flood area with cool (not cold) water for at least 20 minutes.
- Do not let the water flow onto another part of the person's body or onto you.
- Don't use a strong stream of water.
- Remove any jewelry **while** you are rinsing the area – not before as this could spread the chemical.
- Do not give the person liquid to drink, unless you are told to do so by the 911 operative.

5. Treating a liquid gas burn/cryogenic burn

- Remove the person from the area if it is safe to do so.
- Remove clothing from affected area.
- **DO NOT** rinse the area with cool or cold water.
- Immerse the area in a bowl or tub of warm water.
- Keep the person warm with a blanket or similar.
- If eyes are affected, rinse under a warm running tap, with the eyelid open for at least 15 minutes.
- Do not give the person liquid to drink, unless you are told to do so by the 911 operative.

Final Word

Chemical and liquid gas burns may make only a small mark on the skin; however, they are very serious. The type of first aid given will depend on the type of chemical or gas involved and the extent of the injury.

TEST YOUR KNOWLEDGE

1. What are cold burns commonly known as?
2. All chemical burns should be flooded with water immediately.
fTrue fFalse
3. Remove jewelry while you are irrigating a chemical burn.
fTrue fFalse
4. Should you give a person who has inhaled liquid gas, lots of water to drink?

What Would You Do?

As you walk past workplace restroom, you hear a scream. When you go in, you see the cleaner clutching her face. There is a bottle of bleach overturned on the floor. What would you do?

BEFORE THE TALK

1 Print Attendance Sheet to pass around. 2 Prepare to discuss the types of hazardous chemicals and liquids in the workplace that may cause burning and how to work safely with them. 3 Have copies of relevant Safety Data Sheets – or at least one – to review and discuss.

Answers to T201809-54 Quiz:

1. Frostbite, 2. False, 3. True, 4. Only if told to do so by 911 operative.

New/Young Worker Safety – Checklist

PREAMBLE

Young/new workers have high rates of job-related injury. These injuries are often the result of the many hazards present in the places they typically work, such as sharp knives and slippery floors in restaurants. Limited or no prior work experience and a lack of safety training also contribute to high injury rates. Middle and high school workers may be at increased risk for injury since they may not have the strength or cognitive ability needed to perform certain job duties.

Fast Stats:

- In 2018, there were about 19.4 million workers under the age of 24. These workers represented 12% of the total workforce.
- In 2017, 377 workers under the age of 24 died from work-related injuries.
- In 2017, there were 22 deaths to workers under 18 years of age.
- In 2017, the incidence rate for non-fatal injuries for workers, ages 16–19, was 112.1 per 10,000 full-time employees (FTE) and 96.3 per 10,000 FTE for workers, ages 20–24.
- In 2017, the rate of work-related injuries treated in

emergency departments for workers, ages 15–19, was 1.25 times greater than the rate for workers 25 years of age and older.

New Employees Safety Talk

New employees often are [viewed as a liability](#) to a company or jobsite when it comes to working safely. One study found that employees with less than one month on the job are [three times more likely](#) to suffer a lost time injury than employees with more than a year on the job. While new employees are at higher risk at getting injured, much of that depends on the other employees and the work site itself.

Benefits of New Employees

A new employee often wants to follow all the safety rules especially if the majority of people onsite are following the rules as well. If a new employee observes the other employees working safely they will often want to do the same. New employees also have a fresh set of eyes towards hazards onsite and may have experiences of unique lessons learned from previous jobs. That being said, measures should still be taken to ensure these employees are able to and do perform work safely.

While training new workers is essential, this is not always enough by itself. To make a real reduction in injury, you need to do more—much more. This means developing a comprehensive health and safety program with clear, measurable goals. You also need to get senior management buy-in. Without their help, your program is likely to flop.

Employers need to allow employees to participate in making the workplace safer. Opening up communication channels between workers and management on safety issues is the first step. You also need to find out what safety issues exist at the worksite and eliminate them, showing that safety is your top priority. Near miss reporting also helps improve safety on site and involves all workers in the safety process.

Communicating effectively with workers is the goal of safety training. By repeating job task safety, you can ensure you get the most out of all your employees, reducing the risk of accidents. With [GoContractor's solution](#) you can start the process well in advance of an employee's first day, customizing any training to their needs. You can also create online paths so that workers complete forms and training relevant to their position in [their language choice](#). This effort boosts comprehension and learning, while reducing injuries, along with costs.

Additional training methods to incorporate, include mentoring by experienced workers; hosting apprentice programs; issuing clear, short, and concise written procedures; and providing worker practice time.

Workers of all ages can be injured at work, but young and new workers may be more at risk. Injuries can result from inadequate training, orientation, and supervision; inexperience; and lack of awareness of workplace rights and responsibilities. Whatever [your role](#), we have tools and resources that can help reduce the risk.

The [Occupational Health and Safety Regulation](#) defines a “young worker” as any worker under age 25. A “new worker” can be any age and includes those who are new to the workplace or location, or facing new hazards.

THE RISKS

Typical reasons why young and new workers are injured include:

- Inexperience
- Lack of training, orientation, and supervision
- Lack of understanding of their workplace
- Lack of preparation for the workplace
- Exposure to more dangerous jobs
- Hesitancy to ask questions

PREVENTION

Preventive Procedures and Protocols for all Employees

- Conduct periodic inspections and frequently remind equipment operators to use seat belts provided and never try to jump from an overturning sit-down type forklift.
- Check travel routes used by forklifts are free of obstacles and other unsafe conditions.
- Establish work policies that comply with child labor laws prohibiting youths less than 18 years of age from performing hazardous work, including operating power-driven hoisting equipment such as forklifts. All employees should be aware of this policy.
- Develop, implement, and enforce a comprehensive written safety program for all workers which includes training in hazard recognition and the avoidance of unsafe conditions.
- A written training plan should require training for all forklift operators that includes the equipment manufacturers' recommendations for safe equipment operation.
- Identify and label equipment not to be operated by workers under 18 and only provide keys to trained and authorized operators.

One strategy often overlooked strategy is telling workers what they can do to boost safety. While this effort on behalf of an employer is unusual, it's effective. Below are several effective activities that can be used to encourage workers to keep themselves and their colleagues safe—activities culled from CCHOS's infographic:

- Scrutinize potential employers – Workers should scrutinize potential employers regarding health and safety issues, looking for signs that their new employer takes safety seriously and follows the procedures and guidelines suggested. It is important to look for things like the availability of personal protective equipment, on-site safety posters that call attention to problem areas, and so on.
- Report all accidents and near misses – Remind your workers that they need to report accidents, near misses, and/or

unsafe areas, as soon as they notice them. They shouldn't wait for someone else to do it. Instead, they should go directly to their manager and raise the issue. Also remind them that they can ask other employees and supervisors about existing safety hazards.

- Ask employees for help reviewing procedures – Ask employees to go over any procedures or practices your guidelines focus on to see if they're appropriate. Remind them that they can ask their managers to observe as they carry out their jobs and provide them with any advice on safely executing the task, if appropriate.
- Ask for safety documentation – Remind workers that it's also their job to look out for their own safety and that they can always ask for copies of any safety rules and procedures. Also, remind them that it's their job to follow all safety precautions themselves and that providing documentation relating to your health and safety is helpful.

Employee Orientation

Orientation (sometimes called an induction) is the process of introducing **new, inexperienced, and transferred workers** to the organization, their supervisors, co-workers, work areas, and jobs, and especially to health and safety. Providing training and extra assistance during the initial period of employment is critical, regardless of the age of the employee, as they are not familiar with the hazards of the job or the workplace.

During this phase, each worker develops the knowledge, skills, and abilities that are necessary to work in a safe and healthy manner. While training (or refresher training) is always important, training should always be provided when employees are:

- transferred to jobs or work areas they are unfamiliar with
- returning from an extended period away from work
- who are new to the work force

Not all training can or should be done on the first day. Time the orientation sessions to best match the needs of the workplace and the work done, but be sure all areas are covered.

Safeguards for New Employees

- Training- Even if a new employee has many years of experience on the job at another company they still need comprehensive training on their job at the new company, jobsite, and the company's expectations.
- Mentoring- Many companies use some type of mentoring program to ensure that individuals who were recently hired have someone to ask questions and get guidance from. This allows these workers to be more comfortable approaching a more experience employee with any questions he or she might have.
- Supervision- Newer employees or even just workers completing new tasks need to be supervised. Proper supervision may not necessarily mean an employee's immediate supervisor. Depending on the task, a subject matter expert or a senior employee may be more beneficial for supervision of newer employees. Just like mentoring, a newer employee may feel more comfortable and get more out of being supervised by someone else other than their immediate supervisor.

Summary

While new employees can be a liability to a company, they also can serve as a great asset to everyone around them. The odds of a new employee avoiding an injury greatly depend on the individuals around them. Everyone starts somewhere and needs guidance in the beginning. Remember the struggles and important lessons learned as a new employee and pass that knowledge on. Safety on the job is everyone's responsibility. Watch out for those around you and never hesitate to help out a fellow employee.

Five Tips for Young Workers with Summer Jobs

Five workers under the age of 25 were killed on the job in Washington state last year. One worker only was 18. An average of 79 young men and women between the ages of 16 and 24 are hurt on the job every day across the state.

1. Always get proper training on how to complete a job or use equipment properly before you begin the work.
2. You have the right to say “no” to tasks you feel unsafe doing, such as climbing a ladder or operating a new piece of equipment. Your boss cannot retaliate against you for refusing hazardous work.
3. Look for hazards at work, like slippery floors, hot grease, dangerous machinery or ladders. If you see a hazard or a problem that needs fixing, don’t try to do it yourself; ask a supervisor for help.
4. There are [special laws that protect teens under 18](#). Make sure you know your rights on the job.
5. If you are injured at work, even a small cut, be sure to report it. That way you’ll be covered by workers’ compensation if the problem becomes more serious.

Employer Responsibilities for Keeping Young Workers Safe

Young workers are those new to the workforce, even up to age 24. Young workers can be an asset to your workforce. However, it may be their first job or the first time they are operating equipment.

[Protecting temporary workers](#): Many young workers are also temporary workers. Host employers must treat temporary workers as they treat existing workers, especially including adequate training to young temporary workers. Temporary staffing agencies and host employers share control over the employee, and are therefore jointly responsible for the temp employee’s safety and health.

You can prevent or reduce workplace injuries and make work safer for all workers, including youth. Under the Occupational Safety and Health Act of 1970 (OSH Act), employers have the responsibility to provide a safe and healthful work environment and comply with occupational safety and health standards. First-line supervisors have the greatest opportunity to protect young workers and influence their work habits.

Employer Responsibilities:

For Young Workers

- Understand and comply with the relevant federal and state child labor laws. For example, these laws prohibit youth from working certain hours and from performing dangerous/hazardous work.
 - Ensure that young workers receive training to recognize hazards and are competent in safe work practices. Training should be in a language and vocabulary that workers can understand and should include prevention of fires, accidents and violent situations and what to do if injured.
 - Implement a mentoring or buddy system for new young workers. Have an adult or experienced young worker answer questions and help the new young worker learn the ropes of a new job.
 - Encourage young workers to ask questions about tasks or procedures that are unclear or not understood. Tell them whom to ask.
 - Remember that young workers are not just “little adults.” You must be mindful of the unique aspects of communicating with young workers.
 - Ensure that equipment operated by young workers is both legal and safe for them to use. Employers should label equipment that young workers are not allowed to operate.
 - Tell young workers what to do if they get hurt on the job.
-

Needles and Sharps – Checklist

PREAMBLE

Once every 39 seconds, a nurse in this country sustains a needlestick injury. While most needlestick injuries result in nothing more than a good scare, far too many of them result in

serious, life-altering (and in some cases, life-ending) diseases.

Most nurses and health care workers accept accidental needlesticks as part and parcel of the job. Others are optimistic that it won't ever happen to them.

Needlestick incidents are not situations that affects one person. It affects entire families.

Most cases might be low-risk, but that doesn't negate the fact families are then frightened. The psychological impact is huge."

Close to 400,000 healthcare workers a year sustain an injury by used hypodermic needles and other sharp instruments such as a scalpel blade and suture needles.

Needlestick injuries

Needlestick injuries are wounds caused by needles that accidentally puncture the skin.

Needlestick injuries are a hazard for people who work with hypodermic syringes and other needle equipment. These injuries can occur at any time when people use, disassemble, or dispose of needles. When not disposed of properly, needles can hide in linen or garbage and injure other workers who encounter them unexpectedly.

Sharps

"Sharps" include needles, as well as items such as scalpels, lancets, razor blade, scissors, metal wire, retractors, clamps, pins, staples, cutters, and glass items. Essentially, any object that is able to cut the skin can be considered a "sharp".

Needlestick and sharps injuries are all too common in healthcare settings. They are a cause of pain and anxiety, though thankfully rarely serious complications. Care needs to be taken when working with sharps, including safe disposal to keep yourself, your colleagues and patients safe.

Hazards of needlestick and sharps injuries

These injuries transmit infectious diseases, especially blood-borne viruses. Concern includes the Human Immunodeficiency Virus (HIV) which leads to AIDS (Acquired Immune Deficiency Syndrome), hepatitis B, and hepatitis C.

Incidental punctures by contaminated needles can inject hazardous fluids into the body through the skin. There is potential for injection of hazardous drugs, but contact with infectious fluids, especially blood, is by far the greatest concern. Even small amounts of infectious fluid can spread certain diseases effectively.

Sharps can create a cut in the skin which allows contact between blood, or fluids.

The risk of infection after exposure to infected blood varies by bloodborne pathogen.

The Ontario Hospital Association/Ontario Medical Association (2016) estimate that after an injury in workplace situations from a needle contaminated with hepatitis B virus, there is a 6 to 30% chance that an exposed person will be infected. In a similar situation with HIV, there is about a 0.3% chance of infection, and there is about a 1.8% chance of infection for hepatitis C.

Note also that because the hepatitis B virus may survive on environmental surfaces for more than a week, indirect exposure can occur via contaminated inanimate objects.

Injuries have transmitted many other diseases involving viruses, bacteria, fungi, and other microorganisms to health care workers, laboratory researchers, and veterinarian staff. The diseases include:

- Blastomycosis
- Brucellosis
- Cryptococcosis
- Diphtheria
- Cutaneous gonorrhea

- Herpes
- Malaria
- Mycobacteriosis
- *Mycoplasma caviae*
- Rocky Mountain spotted fever
- Sporotrichosis
- *Staphylococcus aureus*
- *Streptococcus pyogenes*
- Syphilis
- Toxoplasmosis
- Tuberculosis

Many of these diseases were transmitted in rare, isolated events. They still demonstrate, however, that needlestick and sharps injuries can have serious consequences.

PREVENTION

Ways to stay safe around sharps

1. Training

- Know how to use specific sharp instruments correctly.
- Know how to safely discard or prepare sharp for reuse, if appropriate.
- Recognize safer needle devices and use according to instructions.

2. Discard correctly and walk away

- Never recap, bend, break or remove needles or other sharps after use.
- Discard in a sharps bin.
- Have the bin close to where you are using the sharp.
- Make sure the bin is not overfull.
- Do not put your fingers into the bin.
- Do not push or force items into the sharps bin.

3. Needle free

- Avoid using needles where safe and effective alternatives

are available, including:

- Needleless connectors for IV delivery systems.
- Sliding needle shields attached to disposable syringes and vacuum tube holders.
- Needles or sharps that automatically retract into the device.
- Self-blunting needles; and
- Hinged or sliding shields attached to phlebotomy needles, winged-steel needles, and blood gas needles.

4. Report injury

- Complete necessary documentation.
- Get details and blood samples from patient.
- Give your own samples promptly.
- Attend follow-up sessions.

What most employers and employees need to do to prevent injury from needlestick incidents in the workplace.

Employers:

- Implement the use of engineering controls to reduce needlestick injuries.
- Avoid the use of needles when there are other safe alternatives.
- Implement use of devices with safety features.
- Set priorities and strategies for needlestick injury prevention by examining local and national information about risk factors.
- Ensure proper training of employees on the safe use and disposal of needles.
- Modify work practices that have an increased risk of a needlestick injury.
- Promote safety awareness in the work environment.
- Establish procedures for and encourage the reporting of all needlestick and other sharps-related injuries.
- Evaluate the effectiveness of prevention efforts and provide feedback on performance.

Employees:

- Avoid recapping needles.
- Before beginning any procedure using needles, plan for safe handling and proper disposal.
- Help your employer select and evaluate devices with safety features.
- Use devices with safety features.
- Report all needlestick and other sharps-related injuries.
- Dispose of used needles in appropriate sharps disposal containers.
- Inform your employer of hazards from needles that you observe at work.
- Participate in bloodborne pathogen training and follow recommended infection prevention practices, including hepatitis B vaccination.

Employees who experience needlestick/sharps injuries.

They should **immediately**:

- Wash wound with soap and water
- Flush out mouth, nose, or skin with water
- Irrigate eyes with water, saline, or sterile irrigates
- Report the incident to your supervisor
- Immediately seek medical treatment at the nearest ER or treatment facility.

Needlestick and Sharps Injury Prevention

Preventing injuries is the most effective way to protect workers. A comprehensive sharps injury prevention program includes:

- Recommended guidelines.
- Improved equipment design.
- Effective disposal systems.
- Employee training.
- Safe recapping procedures, where necessary.
- Surveillance programs.

Preventing injuries from sharps and needlesticks is considered a

part of the “[routine practices](#)” used by healthcare workers.

Workers who use sharps require education and training as part of a sharps injury prevention program. Workers should be educated in how to protect themselves during use, and to protect others who may encounter the device during or after procedures.

The use of safety-engineered devices such as protected needle devices, or needle-free systems with self-sealing ports and syringes is encouraged. PHAC states that use of such safety devices is required by some jurisdictions. Using these devices must take into consideration both the safety of the health care worker and the patient.

PHAC recommends that:

- Needles should not be recapped. Used items should be placed immediately in a designated puncture-resistant container that is easily accessible at the point-of-care.
- Healthcare workers should cover open skin areas or lesions on hands and arms with a dry dressing at all times. Hand hygiene is still essential, so consultation is necessary if the dressing interferes with this procedure.
- Eyes, nose, and mouth should be protected if splashes with blood or body fluids are anticipated.
- Immediately perform first aid if someone has been exposed to blood or body fluids. First aid should include:
 - Thoroughly rinsing the injury site with running water, and gently cleaning with soap and water if possible.
 - Flushing the eyes, nose, or mouth with running water if they have been exposed.
 - Broken skin should be rinsed thoroughly.
- Report the incident and exposure immediately to your employer.
- Follow instructions for further treatment and follow-up from medical professionals, where necessary.

PHAC also refers to the CDC “[Workbook for designing, implementing and evaluating a sharps injury prevention program](#)” as an example of a program. This workbook uses a hierarchy of control approach,

including:

Elimination – find ways to eliminate or reduce needle use during procedures, medication delivery, and specimen collection.

Engineering controls – remove or isolate the hazard by using sharps disposal containers or other devices that have an integrated injury prevention feature. Safety devices must be chosen with care as no one device or strategy will work in every situation.

Work-practice controls – Steps that can be taken to reduce injuries include using instruments to grasp needles or load/unload scalpels, avoiding hand-to-hand passage of sharps, separating sharps from other waste, not carry garbage or linen bags close to the body, etc.

Personal Protective Equipment (PPE) – PPE should be used as the last control approach, where appropriate.

In situations where recapping is considered necessary, develop safe approaches which workers can follow. Workers should never move an exposed needle tip towards an unprotected hand. Recap by laying the cap on a flat surface and scoop it onto the tip of a syringe held in one hand. Keep the free hand away from the sheath and well behind the exposed needle.

In addition, all workers at risk should be aware that there is a vaccine available for Hepatitis B.

Near Miss – Checklist

PREAMBLE

A near miss is a chain of events that very nearly results in

property damage, serious injury, or death, but not quite. The official definition of a near miss is: “an unplanned event that had the potential to result in an injury or physical damage (but did not).”

A near miss is not a lucky break. A near miss is an indication of a problem, either systematic or mechanical, that has very real potential for hazard. It's a red flag calling for change to ensure that a similar situation in future doesn't result in worker injuries or deaths.

A near miss can occur in virtually every industry. Many incidents of property damage, injury or death can be predicted by near misses. Engaging a near miss as a preemptive problem-solving opportunity is crucial.

If an unsafe act or condition causes a near miss and it isn't corrected, the likelihood of a serious injury or incident occurring goes up. The danger is not from the near miss itself, but from:

- Not acting in the incident by not recognizing it as a near miss.
- Not following the correct reporting procedure.
- The relevant people not taking appropriate and timely action to remove the risk.

Hazards

- Staff not understanding what a near miss is.
- Inadequate reporting processes.
- Accepting the near miss was a lucky escape and taking no action.
- A **near miss**, “**near hit**”, “**close call**”, or “**nearly a collision**” is an unplanned event that has the potential to cause, but does not actually result in human injury, environmental or equipment damage, or an interruption to normal operation.
- [OSHA](#) defines a near miss as an incident in which no property was damaged and no personal injury was sustained, but where,

given a slight shift in time or position, damage or injury easily could have occurred. Near misses also may be referred to as close calls, near accidents, accident precursors, injury-free events and, in the case of moving objects, near collisions.

- A near miss is often an error, with harm prevented by other considerations and circumstances.^{[\[1\]](#)}
- The phrase “near miss” should not be confused with the phrase “nearly a miss” which would imply a collision.

PREVENTION

Near Miss Program

Environmental, health and safety departments at five Fortune 500 companies, created the following steps for setting up a successful **Near-Miss Program**:

- Create a clear definition of a near miss.
- Make a written disclosure and report the identified near miss.
- Prioritize reports and classify information for future actions.
- Distribute information to the people involved in the near miss.
- Analyze the causes of the problem.
- Identify solutions to the problem.
- Disseminate the solutions to the people impacted.
- Resolve all actions and check any changes.

Other Steps:

- A bulletin board reporting from is one way to increase awareness of near misses.

Workers fill out a simple form which gets posted on the bulletin board for all to see.

- Bring close call reports to your regular safety meetings. Have workers talk about how to prevent future incidents.

- Explain to your workers that the terms “close call” and “near miss” are used interchangeably. Ask them for their definitions of these terms and make sure everyone understands what they mean. Likewise, explain what is meant by “safety incident” which covers injuries and close calls.

A system of reporting of the near-miss/adverse incidents should be established to achieve a culture-based safety system:

- Define expectations that all employees report unsafe conditions or perceived risks.
- Provide employees with safety training.
- Provide measurement for how near-miss reporting has improved safety performance.
- Recognize and reward employees and crews for pro-active safety actions.
- Close call incidents trigger the fact that something is seriously wrong. They allow us the opportunity to investigate and correct the situation before the same thing happens again and causes an injury or death.
- Experience has proven that if the causes of accidents are not removed, the potential for an accident will occur again and again. Unfortunately, a typical story told after many accidents is; “Yeah, that happened to Jim as well – just last week!”
- Why are close call incidents not reported? Typical reasons are: fear of reprimand or repercussions, red tape, not being aware of their importance in controlling future accidents, embarrassment, the spoiling of a safety or production record or lack of feedback when similar issues have previously been raised.
- If you keep silent about a close call – you may avoid having to deal with it. But try to explain that to a co-worker who ends up in a wheelchair because of a hazard that you knew existed but were too proud to talk about.
- Controlling close call incidents is really the secret to reducing the overall frequency of accidents. One survey of 300 companies discovered that for every 600 close call incidents, they had 30 property damages, 10 minor accidents

and 1 very serious accident.

- Close call incident reporting is a very valuable tool in helping us all manage an effective safety program.
- But the vital part is to apply corrective action immediately. The only way this can be done is if a close call is reported immediately after it has occurred. This way we can learn as much as possible.

If you nearly run into material, such as carelessly stored products protruding into an aisle, deal with the hazard or notify your supervisor before the next worker or customer to come along gets hurt.

Make sure you understand each near-miss scenario you encounter, including what went wrong, each possible outcome of the incident and how to address the hazards. Be wary of how your co-workers conduct themselves and work together to prevent injury and safeguard one another from incidents. Compare your routines and habits with theirs and share tips.

Take responsibility for the equipment or machinery you use frequently. If this equipment or machinery causes you problems or appears to be broken, report it to your supervisor.

Ensure you understand and follow all safety procedures. If you want to review or brush up on your safety training, or if you are confused about a particular procedure, talk to your supervisor without delay.

Mine Safety – Checklist

PREAMBLE

Mine safety is a broad term referring to the practice of controlling and managing a wide range of [hazards](#) associated with

the life cycle of [mining](#)-related activities. Mine safety practice involves the implementation of recognised [hazard controls](#) and/or reduction of risks associated with mining activities to legally, socially and morally acceptable levels. While the fundamental principle of mine safety is to remove health and safety risks to mine workers, mining safety practice may also focus on the reduction of [risks](#) to plant (machinery) together with the structure and orebody of the mine.

Safety has long been a concern in the mining business, especially in underground mining. The [Courrières mine disaster](#), Europe's worst [mining accident](#), involved the death of 1,099 miners in Northern [France](#) on March 10, 1906. This disaster was surpassed only by the [Benxihu Colliery](#) accident in [China](#) on April 26, 1942, which killed 1,549 miners.[\[3\]](#) While mining today is substantially safer than it was in previous decades, [mining accidents](#) still occur. Government figures from China indicate that 5,000 Chinese miners die in accidents each year, while other reports have suggested a figure as high as 20,000. Mining accidents continue worldwide, including accidents causing dozens of fatalities at a time such as the 2007 [Ulyanovskaya Mine disaster](#) in Russia, the [2009 Heilongjiang mine explosion](#) in China, and the 2010 [Upper Big Branch Mine disaster](#) in the United States.

PREVENTION

Here are seven ways **Mine Operators** can make their facilities safer and more efficient.

1) Invest in wireless underground communications

Swap your hard-wired pagers for a mobile leaky-feeder communications system. This is a handheld radio which every worker who has one to communicate with colleagues underground and also allows miners (and equipment) to be quickly located. Effective communications and tracking technology is essential in case of an accident underground.

2) Automation can improve safety underground

[Carroll Technologies Group CEO Tom Bannister said](#): "If you take

human error out of it you can have a lot safer working environment, in most cases. I do [see automation becoming more prominent] and there are a lot of devices in mining that are that way. We're doing a lot of things with remote, wireless remote controls now, so the individual doesn't have to be on that piece of machinery to run it – he stays out of harm's way and doesn't have to get under unsupported top, or stay out of hazardous areas and check equipment remotely.”

3) Using data to improve mine safety

Atmospheric monitoring information collected through leaky-feeder devices can be used to provide mine managers with vital safety data.

Carroll Engineering president Allen Haywood said: “One of the things they use that data for, that they want to look at and serve operations, is air flow.

“It's critical for these operations to have proper ventilation to keep air flowing throughout the mines underground, and they can measure, on this system, the amount of air flow in particular areas.

“And that's recorded, in case they want to go back and look and see what that air flow is, they can go back and look at the history of that.”

4) How drones can improve mine safety

Joe Carr, of Inmarsat, told Mining Technology: “Freeport-McMoRan is already using drones to create steeper pit slope angles in its mines, reducing the stripping ratio and amount of waste rock hauled before ore can be extracted. These drones not only scan the mines from perspectives that are dangerous and near-inaccessible to humans, they also instantaneously communicate any information they pick up. This makes for a more rapid and detailed analysis of the mine slopes without having to deploy highly skilled geologists or geotechnical engineers into an inherently hazardous environment or affecting production by closing haul roads.

“With machines becoming progressively more capable of acting with little manual intervention, a future where adaptable and autonomous machines carry out the on-site, operational tasks of mining while human employees monitor them remotely looks probable and highly profitable.”

5) Kit miners out with self-contained rescuers

Self-contained rescuers are a portable device which provides a supply of breathable oxygen to miners should they become trapped underground, or should poisonous gases leak into mineshafts.

The standard SCSR features an oxygen scrubber, which can chemically remove impurities from the atmosphere to provide a miner with breathable oxygen.

Many of the most significant mining accidents occur due to a lack of oxygen or the presence of poisonous gases.

6) Consider switching from wire to synthetic rope

[According to Donna Poll of Samson rope:](#) “When wire rope breaks there’s a danger of damaging the surrounding area and people. Synthetic rope has much more predictable recoil properties.”

She said that because synthetic rope is much lighter than wire there is also less likelihood of strain and sprain injuries when handling it.

7) Put systems in place to avoid collisions underground

Collisions involving heavy vehicles are one of the major causes of injuries underground.

One way to reduce the risks is to install proximity detection devices which sound an alarm when a large piece of equipment is getting close to another one.

The introduction of strict safety legislation, as well as advances in safety equipment, the industry has seen its fatality rate drop over time.

The following steps will advance the safety of miners

1. Coal dust

- Dust inhalation or coal dust is one of the most common concerns for miners.
- The ongoing inhalation of coal dust can cause what is known as 'miner's lung' or 'black lung'. Miner's lung is a form of the occupational lung disease group pneumoconiosis. Symptoms include shortness of breath and scarring of lung tissue, which causes ongoing respiratory issues.
- Black lung has been legally enforced for many years now but new cases still occur among coal miners.
- Mining companies need to develop a dust control plan, and supervisors must ensure that dust control systems are working properly for every production shift.
- Mine workers must be trained on the hazards of over-exposure to coal mine dust.
- Respiratory protection should be used when dust control protection is being installed, maintained or repaired.

Noise

- The potential for hearing damage is serious with the constant drilling and heavy machinery.
- Many people don't notice the damage to their hearing until long after they were first exposed to the noisy environment, as most damage occurs very slowly.
- "Over-exposure to excessive noise can result in tinnitus (ringing in the ears), sleep disturbances, concentration problems and even permanent hearing loss.
- Mining companies need to evaluate working conditions and noise exposure through risk assessments.
- Avoiding and reducing exposure can be achieved by applying engineering controls at the noise source or along the noise path to reduce exposures.
- Regular maintenance of machines is essential to reducing noise.
- Employer must ensure proper use of personal hearing protection amongst noise-exposed employees.

- Provide necessary health and safety training and maintain up-to-date health surveillance records.

Whole body vibration

- Whole body vibration (WBV) is a slow forming physical hazard that occurs to mining workers.
- WBV can be caused either by spending a lot of time sitting on machinery, which is most of the time in mining extraction, or by standing, such as working on jumbo operators.
- Some forms of vibration are ok, but become dangerous when they involve uneven surfaces, vehicle activity such as ripping versus pushing material in a bulldozer, and engine vibrations.
- Symptoms of WBV include musculoskeletal disorders, reproductive damage in females, vision impairment, digestive problems and cardiovascular changes.
- Reducing exposure does reduce health risks and the first step that mining should companies take. This includes filling in potholes on unmade roads, minimizing the transport of goods or materials, or replacing manned with unmanned machines such as remotely controlled conveyors.
- Where risks cannot be avoided, supervisors need to reduce the time employees use the machine each day.
- Instruction and training are critical.
- Symptoms of back pain in employees must be closely monitored.

UV Exposure

- There is risk of over-exposure to UV (ultraviolet) radiation in sunlight for pit-miners.
- Over exposure of ultraviolet rays can put you at risk of skin cancer. UV rays cause melanomas to form, but they can cause serious damage to your eyes if you are not wearing protective eye wear.
- Overexposure to the sun can cause dehydration, headaches and nausea.
- Mine workers often spend whole days out in the baking hot

sun, and are at a very high risk of developing cancer and eye problems.

- Employers should conduct a risk assessment on outdoor work scheduled to assist in developing appropriate sun protection measures.
- The effective way to reducing UV exposure is to use a combination of re-organizing work to avoid the UV peak of the day.
- Provide natural or artificial shade.
- Provide appropriate protective clothing, and applying sunscreen.
- Employers must train employees to raise awareness of the risks associated with exposure to UV and the sun protection measures required.
- Employers can provide skin cancer checks as part of regular workplace medical examinations and in pre-employment medical checks.

Musculoskeletal disorders

- Musculoskeletal disorders (MSDs) refer to any problems affecting your bones, muscles, blood vessels and nerves.
- Musculoskeletal damage can occur due to a trip, fall or heavy lift, the more serious ones occur slowly over time due to ongoing heavy lifting or repetitive strains.
- Employers should identify and assess job-related MSDs hazards and put in place controls to reduce workers' exposure to MSDs hazards.
- Workers need be advised and trained about MSDs hazards in their job and workplace and encouraged to participate in health and safety programs.
- Employers need to follow up to ensure preventative measures are working.

Thermal stress

- A common health risk that miners face is thermal – or heat – stress.
- Overexposure to heat and humidity causes the body to become fatigued and distressed which results in heat stroke or more

serious ongoing health problems.

- Where there is a possibility of heat stress occurring, companies must carry out a risk assessment that considers the work rate, working climate, worker clothing and respiratory protective equipment.
- Control the temperature using engineering solutions, provide mechanical aids where possible to reduce the work rate, and regulate the length of exposure to hot environments.
- Personal protective equipment must be provided, such as specialized protective clothing that incorporates personal cooling systems or breathable fabrics.
- Companies must provide training for workers, especially new and young employees, and monitor the health of workers at risk.

Chemical hazards

- Mine workers are often exposed to harmful chemicals.
- The most common group of chemicals that cause concern in a coal mining environment are polymeric chemicals.
- Regardless of the chemicals you work in close proximity, appropriate safety wear and precautions need to be taken to minimize your body's exposure to them. Risks include chemical burns, respiratory problems and poisoning.
- Each chemical has a unique set of hazards and needs to be handled properly to ensure worker safety and employers according need to conduct risk assessments to establish best practices.
- A standard operating procedure (SOP) that addresses the use of correct personal protective equipment, safe handling, safe use, and proper disposal must be established.
- Thorough training and drills should be conducted regarding the company's spill response plans and chemical hygiene plans.
- Ventilation, general housekeeping and cleanliness are important factor to minimize exposure.

7 Steps to Safer, Healthier Mining Employees

Taking these seven steps can make your job easier and your

workplace safer.

1. Ensure compliance with safety and health standards. Make sure you're complying in every detail with every standard that applies to your operations and your workplace. Also check state regulations, which if they're stricter than federal standards, take precedence. And don't forget about your own safety policies. Ensure compliance with those rules, too.

2. Keep employees informed about hazards. Identify every hazard in every work area and in every job, and make sure employees who might be exposed to any hazards know:

- What the hazards are.
- How they are dangerous.
- How to protect against them.
- What to do in the event of exposure to a particular hazard.

3. Take appropriate steps to minimize risks. This involves many things including:

- Well-conceived and implemented workplace safety and health programs.
- Routine and thorough inspections and safety audits.
- Effective engineering, administrative, and work practice controls.
- Frequent and effective employee training.
- Appropriate PPE to protect employees from hazards when controls are not enough.
- Routine workplace maintenance.

4. Teach employees to work safely. Training is one of your most power accident-prevention tools. Teach the information, skills, techniques, and procedures employees need to know to be safe and healthy. Train frequently to keep workers up to date on workplace and regulatory changes and to keep them aware, alert, and prepared to work safely.

5. Monitor performance and provide feedback. Don't assume that workers will use what they learn in training or do what their supervisors tell them to do. For all kinds of reasons workers will

decide to take risks or ignore warnings and instructions. Make sure your supervisors monitor safety performance and provide positive or corrective feedback to maintain safe and healthy behavior.

6. Pay attention to employees' suggestions and complaints. You may not be able to use all the suggestions or be thrilled about the complaints, but listening to employees is essential if you want to get them to be on board with your safety and health programs and to follow your safety rules. The big plus here is that employee participation leads to employee ownership, which leads to employee-driven safety and a safer workplace.

7. Move quickly to correct problems. Foot-dragging over hazard abatement sends a bad message to employees. It says you don't care about their safety. So, take swift and effective action whenever a safety or health problem is brought to your attention.

Materials Handling and Storage – Checklist

PREAMBLE

There's hardly a workplace that doesn't handle or store materials. Whether your company has a large warehouse or a small storage room, whether you have loading docks and forklifts or just garages and pallet jacks, there's material that needs to be moved around. And you need to make sure you approach this common task with safety in mind.

Handling and storing materials involve diverse operations such as hoisting tons of steel with a crane; driving a truck loaded with concrete blocks; carrying bags or materials manually; and stacking palletized bricks or other materials such as drums, barrels, kegs, and lumber. The efficient handling and storing of materials are

vital to industry. In addition to raw materials, these operations provide a continuous flow of parts and assemblies through the workplace and ensure that materials are available when needed. Unfortunately, the improper handling and storing of materials often result in costly injuries.

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PREVENTION

Hazards involving material handling can lead to serious worker injuries and even death. In particular, workers are at risk of injuries resulting from being struck by, caught between, or crushed by materials, equipment, lifting devices or vehicles. Workers are also at risk of developing musculoskeletal disorders, such as low back or shoulder injuries.

OSHA recommends that employers establish a **Formal Training Program** to teach workers how to recognize and avoid **materials handling hazards**. Instructors should be well-versed in safety engineering and materials handling and storing.

The **Training** should reduce workplace **Hazards** by emphasizing the following factors:

- Dangers of lifting without proper training.
- Avoidance of unnecessary physical stress and strain.
- Awareness of what a worker can comfortably handle without undue strain.
- Use of equipment properly.
- Recognition of potential hazards and how to prevent or

correct them.

Here are some examples of the dangers of Materials Handling

1. Struck-by incidents

- An excavator-bucket swinging around and striking a person is a struck-by-incident.
- One of the biggest exposures for a fatality on a construction site is ground personnel being struck by moving equipment. OSHA states approximately 75% of struck by fatalities involve heavy equipment such as trucks or cranes
- Work areas where heavy equipment is should be clearly marked and barricaded.
- Ground personnel entering a work area where there is equipment operating need to make their presence known to all operators in the area.
- Operators should avoid backing whenever possible and need to stop their work task if they lose sight of any ground personnel.
- A spotter should be used if equipment is operating in a tight area or when operating around ground personnel.
- Plan work tasks accordingly and eliminate the need for a spotter if possible.

2. Caught-in or between incidents

- A caught – in or between incident is when there is an injury due to crushing between two objects.
- One important safeguard in protecting yourself from these incidents is to stay out of the line of fire.
- You should first always consider the safest place to be around equipment with regards to the line of fire.
- Never put yourself in a situation where you do not have an out to escape danger.

3. Other Hazards/Dangers

- Slips, trips, and falls are some of most common types of incidents that result in injuries to workers. Climbing into the cab of equipment or walking on the slick surfaces of a machine are two common occurrences that result in injuries.
- Door jams or equipment hoods are two common pinch point locations where operators injure fingers.
- Loose cargo can lead to injury due to an operator losing control of their equipment or when an object that is not secured gets stuck in a control or under a pedal of the equipment.
- Leaks on equipment can lead to multiple different types of injuries or property loss. Leaking can inject fluid underneath the skin of a worker which can result in amputation of the affected body part and also lead to a slip incident for those who step on the fluid.

4. Other Sources of injury that are problematic for operators and personnel

- Repairing and servicing equipment in dangerous positions.
- Unexpected violent tipping of the equipment.
- Uncontrolled traffic within or through the work area.
- Unexpected violent shocks or jars to the machine.
- Sudden movement of a power unit while it is being attached to earth moving equipment.
- Limbs if trees or overhead obstructions.
- Leaving earth moving or other equipment in dangerous positions while unattended.
- Failure of lifting mechanisms.

Using the following Personal Protective Equipment prevents needless injuries when manually moving materials

- Hand and forearm protection, such as gloves, for loads with sharp or rough edges.
- Eye protection.
- Steel-toed safety shoes or boots.

- Metal, fiber, or plastic metatarsal guards to protect the instep area from impact or compression.

Precautions when moving materials mechanically

- Using mechanical equipment to move and store materials increases the potential for employee injuries. Workers must be aware of both manual handling safety concerns and safe equipment operating techniques. Employees should avoid overloading equipment when moving materials mechanically by letting the weight, size, and shape of the material being moved dictate the type of equipment used.
- Employers must ensure that the equipment-rated capacity is displayed on each piece of equipment and is not exceeded except for load testing.

WORKERS SHOULD TAKE PRECAUTIONS WHEN STACKING AND STORING MATERIAL

When picking up items with a powered industrial truck, workers must do the following:

- Center the load on the forks as close to the mast as possible to minimize the potential for the truck tipping or the load falling.
- Avoid overloading a lift truck because it impairs control and causes tipping over.
- Do not place extra weight on the rear of a counterbalanced forklift to allow an overload.
- Adjust the load to the lowest position when traveling.
- Follow the truck manufacturer's operational requirements, and
- Pile and cross-tier all stacked loads correctly when possible.

Precautions to avoid STORAGE hazards

Stored materials must not create a hazard for employees. Employers should make workers aware of such factors as the materials' height and weight, how accessible the stored materials are to the user, and the condition of the containers where the materials are being stored when stacking and piling materials.

To prevent creating hazards when **STORING materials, employers must do the following:**

- Keep storage areas free from accumulated materials that cause tripping, fires, or explosions, or that may contribute to the harboring of rats and other pests.
- Place stored materials inside buildings that are under construction and at least 6 feet from hoist ways, or inside floor openings and at least 10 feet away from exterior walls.
- Separate noncompatible material.
- Equip employees who work on stored grain in silos, hoppers, or tanks, with lifelines and safety belts.

Safeguards when **STACKING materials**

Stacking materials can be dangerous if workers do not follow safety guidelines. Falling materials and collapsing loads can crush or pin workers, causing injuries or death.

To help prevent injuries when **STACKING materials, workers must do the following:**

- Stack lumber no more than 16 feet high if it is handled manually, and no more than 20 feet if using a forklift.
- Remove all nails from used lumber before stacking.
- Stack and level lumber on solidly supported bracing.
- Ensure that stacks are stable and self-supporting.
- Do not store pipes and bars in racks that face main aisles to avoid creating a hazard to passersby when removing supplies.
- Stack bags and bundles in interlocking rows to keep them secure.
- Stack bagged material by stepping back the layers and cross-keying the bags at least every ten layers (to remove bags from the stack, start from the top row first).

During materials **STACKING activities, workers must also do the following:**

- Store baled paper and rags inside a building no closer than

18 inches to the walls, partitions, or sprinkler heads.

- Band boxed materials or secure them with cross-ties or shrink plastic fiber.
- Stack drums, barrels, and kegs symmetrically.
- Block the bottom tiers of drums, barrels, and kegs to keep them from rolling if stored on their sides.
- Place planks, sheets of plywood dunnage, or pallets between each tier of drums, barrels, and kegs to make a firm, flat, stacking surface when stacking on end.
- Chock the bottom tier of drums, barrels, and kegs on each side to prevent shifting in either direction when stacking two or more tiers high.
- Stack and block poles as well as structural steel, bar stock, and other cylindrical materials to prevent spreading or tilting unless they are in racks.
- Stand with your feet about shoulder width apart to lift the object. Bend your knees, keep your back straight, grasp the item and raise it slowly.
- Set the load down by keeping your back straight and the load close to your body. Bend your knees and move slowly and smoothly.

Stack Materials Safely

There are three simple steps for stacking materials safely:

1. Start with a level, solid base for a stack.
2. Observe the maximum load limits for floors, shelving, elevators and other surfaces.
3. Materials should be stacked with weight, size and shape taken into consideration so they do not fall over. For example,
 - Heavy materials should never be stacked too high.
 - While bags or boxes may be stacked in layers, cylindrical objects must be racked on solid supports to prevent them from shifting and rolling.

Store Materials Correctly

1. Pay attention to what materials and other substances are

stored together. Some examples:

- A fire might occur if flammable materials and fuels or solvents are placed close to each other.
 - Incompatible chemicals might explode.
 - Do not store liquid chemicals above dry ones.
2. Know how to properly store chemicals and other potentially hazardous materials. Read the safety data sheet (SDS).
 3. Make sure there is adequate space in storage areas for an emergency escape route, emergency equipment and personnel.
-

Machine Guarding – Checklist

PREAMBLE

Thousands of workers across the country are injured each year by the machines they use every day. The risk of accidents from machinery is so high, lack of machine guarding is reported to be the second most frequent safety violation today.

Guards are:

Fixed guards, adjustable guards, self-adjusting guards, drive train guards, perimeter guards, drop probe devices, interlock devices, restrain and pullback devices, adjustment, inspection.

Machines are the Tyrannosaurus Rex of work hazards. They mangle flesh, crush bones, sever fingers, amputate limbs and end lives. There are so many ways for workers to suffer a machine-related injury.

Examples

- Being hit by the part of the machine that presses, punches, cuts, shapes, etc.
- Getting trapped between moving parts.

- Limbs, hair, clothes or jewelry entangled in a chain, belt, shaft, gear, blade, etc.
- Being burned or electrocuted after accidental startup.
- Being hit by material thrown from the machine.

PREVENTION

The general rule is: **Identify the Hazard.** “If it moves, guard it”

A wide variety of mechanical motions and actions may present **HAZARDS** to the operator. These can include the movement of rotating members, reciprocating arms, moving belts, meshing gears, cutting teeth, and any parts that impact or shear. These different types of hazardous mechanical motions and actions are basic in varying combinations to nearly all machines, and recognizing them is the first step toward protecting operators from the danger they present.

The basic types of hazardous mechanical motions and actions are:

Motions

- Rotating (including in-running nip points)
- Reciprocating
- Transversing

Actions

- Cutting
- Punching
- Shearing
- Bending

Safeguards Requirements

Prevent Contact: The safeguard must prevent hands, arms, and any other part of a operator’s body from making contact with dangerous moving parts. A good safeguarding system eliminates the possibility of the operator or another worker placing parts of their bodies near hazardous moving parts.

Secure: Operators should not be able to easily remove or tamper

with the safeguard, because a safeguard that can easily be made ineffective is no safeguard at all. Guards and safety devices should be made of durable material that will withstand the conditions of normal use. They must be firmly secured to the machine.

Protect From Falling Objects: The safeguard should ensure that no objects can fall into moving parts. A small tool dropped into a cycling machine could easily become a projectile that could strike and injure someone.

Create No New Hazards: A safeguard defeats its own purpose if it creates a hazard such as a shear point, a jagged edge, or an unfinished surface that could cause a laceration. The edges of guards, for instance, should be rolled or bolted in such a way to eliminate sharp edges.

Create No Interference: Any safeguard that impedes an operator from performing the job quickly and comfortably might soon be overridden or disregarded. Proper safeguarding may actually enhance efficiency since it relieves the operator's apprehensions about injury.

Types of Barrier Guards

Barrier Guards are appropriate safeguards for full revolution and part revolution mechanical power presses. They are designed to keep the operator's hands and arms from entering the "danger zone" as prescribed by the particular machine. Barrier guards are usually the first point-of-operation safeguard considered for machines.

Barrier Guard Regulations

- Barrier guards on power presses must prevent the entry of hands or fingers into the point of operation by reaching through, over, under or around the guard.
- The barrier guards must conform to maximum permissible openings tables.
- The barrier guard itself must not create pinch points between the guard and moving machine parts.

- The guard must not be easily removable.
- The guard must not interfere with machine inspection.
- The barrier guard must offer maximum visibility of the point of operation consistent with the other requirements.

Barrier Guard Types

Die Enclosure Guard

- Must be attached to the die shoe or stripper in a fixed position.

Fixed Barrier Guard

- Must be attached securely to the frame of the press or to the bolster plate.

Interlocked Press Barrier Guard

- Must be attached to the press frame or bolster and be interlocked with the press clutch so the clutch can not be activated unless the guard itself, or the hinged or moveable sections of the guard conform to listed requirements.
- The hinged or movable sections of an interlocked press barrier guard must not be used for manual feeding.
- The guard must prevent opening of the interlocked section and reaching into the point of operation prior to die closure or before the slide stops.

Adjustable Barrier Guard

- Must be securely attached to the press bed, bolster plate, or die shoe, and shall be adjusted and operated in conformity with instructions.

Types of Operator Safety Devices

Safeguarding devices – are designed to allow employees access to a danger zone, without having to remove physical guarding. These devices do not allow the machine to start operating, or they stop the machine from operating while an employee or part of an employee is in the danger zone. These types of controls include:

- **Presence-sensing Devices** – light curtains, pressure sensitive mats, and photoelectric devices.
- **Alternative Operating Modes** – limit the machine movement or travel at a safe range or speed. This option is ideal for machine set-ups or die changes.
- **Emergency Stop Devices** – sense when an operator is or has entered the danger zone and immediately stops the machine cycle.
- **Placement of Controls** – by placing controls in locations away from the danger zone, the employee is protected while the machine is operating. Controls that fall in this category include the “hold-to-run control”, “deadman”, or, “operator-maintained” control.

INSPECTION

After the **Risk** has been assessed and the **Guards** are selected, the **Inspection Process** must be implemented. There are general things to check including verifying that guards are:

- Effective in keeping the worker’s body, hair and clothing from contacting moving parts.
- Firmly secured so that workers can’t easily remove them.
- Free of jagged edges, shear points, unfinished surfaces and other hazards.
- Allowing workers to do their job quickly and comfortably – if they don’t, workers may try to remove them.

Finally, make sure your inspection covers:

- Guards used at the point of operation.
- Guards at the power source.
- Each continuous line of shafting.
- Pulleys, ropes, belts, chains and chain drivers, sprockets and gears.

The principle means of preventing machine injuries is the use of guarding devices. Your challenge is to decide which guards to use to control risks you identify in your hazard assessment.

There are four basic types of machine guarding methods you can use

alone or in combination, including:

1. Physical barriers that block workers' access to the danger area.
2. Automatic stopping devices – such as presence sensing devices and pullback devices.
3. Automatic or robotic feeding and ejection so that materials don't have to be manually fed into and taken out of the machine.
4. Locating/distance guarding – placing machines away from work areas and/or in locations that are impossible or difficult for workers to get to.

Don't forget, you'll likely need to supplement these engineering solutions with **safe work practices** and policies and PPE.

Work with your safety director to do a hazard assessment of each machine in the workplace.

Do the hazard assessment:

- When the machine is first installed.
- At least monthly or more often if the manufacturer recommends it.
- After injuries, near misses and other incidents.
- After the machine malfunctions or is moved.

Cover the four areas where machine injuries are most likely to occur:

- The point of operation, or machine part where the cutting, shaping, boring, forming or other operation is done on the material.
- Moving parts, including flywheels, pulleys, belts, couplings, chains, gears, conveyors, feed mechanisms, etc.
- In-running nip points, or spaces between rotating and/or slowly-moving parts.
- Primary power source, including engines, turbines and other equipment used to power the machine.

Responsibilities

Employers

Provide appropriate information, instruction and supervision to protect workers such as training in lockout and guarding procedures. Ensure equipment is maintained in good condition by replacing and/or repairing damaged machine components.

Ensure an appropriate machine guard or other device exists to protect workers when:

- A moving part may endanger workers.
- A machine has an in-running nip hazard.

Ensure an appropriate machine guard or other device exists to protect workers when:

- Cleaning, oiling, adjusting, repairing or having maintenance done on machines.
- Lock out control switches or other control mechanisms, or taking other effective precautions to prevent starting, when the starting of the machine could endanger a worker.

Supervisors

- Take every reasonable precaution in the circumstances for the protection of workers.
- Ensure workers comply with the OHSA and its regulations.
- Ensure workers use any equipment, protective devices or clothing required by the employer.
- Advise workers of any potential or actual health and safety dangers.

Workers

- Follow lockout and guarding procedures.
- Report machine hazards and other workplace hazards to their supervisor.
- Use or operating machinery in a safe manner.
- Use or wearing protective devices or clothing required by the employer.

Lockout Tagout – Checklist

PREAMBLE

Employees servicing or maintaining machines or equipment may be exposed to serious physical harm or death if hazardous energy is not properly controlled. Craft workers, machine operators, and laborers are among the 3 million workers who service equipment and face the greatest risk.

The four-page general industry standard (29 CFR 1910.147), published in September 1989, was designed to prevent the accidental start-up of machines or other equipment during maintenance and servicing. Under the rule, hazardous energy sources must be **“isolated and rendered inoperative”** before work can begin. **Hazardous energy sources include electrical, mechanical, hydraulic, pneumatic, chemical and thermal.**

Lockout / Tagout / is series of safety procedures designed to prevent accidents causing serious injuries including fatalities to employees on the unexpected startup of the equipment or energy while servicing.

Anyone who operates, cleans, services, adjusts, and repairs machinery or equipment should be aware of the hazards associated with that machinery. Failure to lock out or tag power sources on equipment can result in electrocutions, amputations, and other serious-sometimes fatal-accidents.

Causes of Accidents:

- The machine or piece of equipment was not completely shut off before a maintenance or repair operation. Not only must the machine be turned off but also the power source that goes to it.
- The machine was turned on accidentally, either out of carelessness or because the person who turned it on did not

realize that another worker was there and could get hurt.

- The machine was not working correctly but was not fixed, turned off, locked or tagged, and someone who did not know about the problem used it.
- Moving equipment was not blocked.
- Safety procedures were inadequate or had not been properly explained.

PREVENTION

According to OSHA, a lockout/tagout program must include three basic elements.

1. **Written procedures** for controlling hazardous energy releases from each piece of equipment. They should describe preparation for shutdown, actual shutdown, equipment isolation, steps for applying and removing lockout/tagout devices, requirements for testing that hazardous energy has indeed been isolated, and notification of employees.
2. **Training** for: “authorized” employees who do the maintenance and servicing work and must know how to safely isolate energy sources before beginning work; “affected” employees who might be working in the vicinity of a locked-out machine and must understand the hazards of attempting a start-up; and “other” employees who might be walking through part of a plant where a machine is locked out.
3. **Periodic audits**, at least once a year, of the overall program. This inspection must be done by an authorized employee who is not actively involved in the energy control procedures being inspected.

Lockout/tagout procedures apply in the following circumstances:

- Workers are servicing and maintaining equipment and unexpected startup of the machine or release of stored energy could o
- When, during normal production, workers must remove or bypass a guard or safety device.
- When, during normal production, workers place any part of their body into the danger zone or near the machine’s point

of operation.

- During all set up activities.

Employers:

NIOSH recommends that employers comply with the OSHA regulations outlined in 29 CFR* 1910.147, the control of hazardous energy (lockout/tagout). Results of NIOSH fatality investigations indicate that the following steps are particularly important:

- Develop and implement a written hazardous energy control program, including lockout/tagout procedures, employee training, and inspections before any maintenance or service work is done.
- Be sure that workers have a clear understanding of when hazardous energy control procedures apply and training on how to properly apply the procedures.
- Ensure that procedures on lockout/tagout are developed that are specific to each machine.
- Provide training to production workers in addition to maintenance workers in methods of energy isolation and control.

Workers:

- Follow the regulations contained in your employer's hazardous energy control program.
- Complete all employer-provided training on hazardous energy control procedures.
- Before beginning machine adjustment, maintenance, or servicing work, de-energize all sources of hazardous energy:
 - Disconnect or shut down engines or motors.
 - De-energize electrical circuits.
 - Block fluid (gas or liquid) flow in hydraulic or pneumatic systems.
 - Block machine parts against motion.

Manufacturers:

- Consider designing equipment that requires fewer and more

easily accessible disconnect points to facilitate the use of safe lockout/tagout procedures for maintenance and repair.

Employers Responsibilities

- Develop, implement, and enforce an energy control program.
- Use lockout devices for equipment that can be locked out. Tagout devices may be used in lieu of lockout devices only if the tagout program provides employee protection equivalent to that provided through a lockout program.
- Ensure that new or overhauled equipment is capable of being locked out.
- Develop, implement, and enforce an effective tagout program if machines or equipment are not capable of being locked out.
- Develop, document, implement, and enforce energy control procedures.
- Use only lockout/tagout devices authorized for the particular equipment or machinery and ensure that they are durable, standardized, and substantial.
- Ensure that lockout/tagout devices identify the individual users.
- Establish a policy that permits only the employee who applied a lockout/tagout device to remove it.
- Inspect energy control procedures at least annually.
- Provide effective training as mandated for all employees covered by the standard.
- Comply with the additional energy control provisions in OSHA standards when machines or equipment must be tested or repositioned, when outside contractors work at the site, in group lockout situations, and during shift or personnel changes.

Recommendations to improve Lockout / Tagout Procedures

1. Choose the Right Devices

Industrial machines, circuit breakers, plugs, switches, push buttons, and valves are just some of the items that often require lockout devices. There are two considerations that will help:

necessity (knowing exactly what you need) and organization (using standardized devices and tools to help keep your devices organized).

First, determine exactly what you need. Create a list of all machines or electrical components that may need lockout devices.

Second, standardize and organize your lockout devices. Lockout Stations are one effective way to store and organize necessary devices.

2. Thoroughly Document Procedures

Lockout procedures need to be formally documented. This will keep workers and management on the same page and help to eliminate any potential confusion. Formal documentation is required by OSHA but, given the differences in workplaces and machines, not every procedure will be the same.

Procedures should thoroughly detail the steps needed to shut down and isolate hazardous energy. The procedures also should describe how to safely place and remove all relevant lockout/tagout devices.

Procedures should be posted near the relevant machine. Machine-specific photographs detailing each step are highly recommended.

3. Clearly Mark All Isolation Points

All energy control points should be clearly and permanently marked with standardized tags or labels.

Tags and labels should be easily visible. It is also very important to make sure all energy isolation points are consistent with the machine-specific procedures.

4. Develop a Rigorous Training Program

Effective training is an indispensable part of a successful lockout program.

First, it is important for each worker to know exactly what his role is. Tasks should be clearly defined and clearly assigned to

the appropriate worker. There are three types of workers involved in lockout operation: authorized, affected, or other. An **authorized** employee is directly involved in locking out equipment or machinery. An **affected** employee means any employee whose work is affected by a lockout. Usually, this means an employee who is working on locked out equipment. An employee is classified as **other** if he or she does not work on the machine receiving maintenance or repair but still works in the same area.

Each worker needs to know what type of employee he is, and strong communication needs to be developed among all workers. **Authorized employees** must clearly alert all affected employees when a lockout device is placed or removed. In order to prevent unsafe removal of devices, only authorized employees can remove devices that they have placed. Lockout padlocks have room for workers to clearly write their names in permanent ink, which underscores the strong need for clear assignments and individual responsibility.

As with procedures and isolation points, **Documentation** is an important component of training. Recording exactly what types of training have occurred is helpful on several levels. **First**, it helps management make sure that all workers have been trained, as well as trained in the right tasks. Any gap in training can be easily found and corrected. **Second**, it documents when training took place. If you know when your last training session took place, it is easier to plan when the next one should take place. **Last**, looking at documentation of lockout training can help one see one's program from a new, more objective perspective. Suggestions can then be taken into account and improvements can be made.

OSHA requires that lockout/tagout training occur at least annually. Yearly training should be seen as a bare minimum rather than an ideal. In many cases, it would be helpful to revisit training exercises more frequently than yearly in order to ensure that critical repairs and maintenance are still being done safely. Also, repeat training helps workforces keep a "safety first" mentality.

5. Evaluate

Careful evaluation is an invaluable tool for improvement. Evaluation is necessary to make sure that the training exercises, procedures, and devices are working properly.

Inspections need to occur at least annually and should be performed by an **Authorized Employee** who is not involved in the procedure being inspected. Any and all deviations must be corrected and all roles must be thoroughly reviewed.

The date of inspection, procedures, the machines and equipment involved, and the names of all workers involved in the inspection must be recorded.

6. Evolve

A good lockout program should always be able to evolve; OSHA may introduce more requirements or more stringent guidelines.

SUMMARY

Lockout / Tagout Procedure

Lockout / tagout is a three-part procedure that is designed to protect you from accidental or unexpected start-up of equipment. This procedure serves four important purposes:

1. To protect the person working on the equipment.
2. To protect other workers in the area.
3. To protect the equipment.
4. To serve as a communication device for the above three. This is usually done in conjunction with a safe work permit.

The standards establish requirements that employers must follow when employees are exposed to hazardous energy while servicing and maintaining machinery and equipment. The **Most Critical Requirements** from these standards are outlined below and also **Prevent Injuries:**

- Develop, implement and enforce an energy-control plan.
- Use lockout/tagout devices for equipment that can be locked out. Tagout devices may be used in place of a lockout device only if the tagout program provides employee protection

equivalent to that provided through a lockout program.

- Ensure that the new or overhauled equipment is capable of being locked out.
 - Develop, implement and ensure an effective tagout program if machinery or equipment are not capable of being locked out.
 - Use only lockout/tagout devices authorized for the particular equipment or machinery and ensure that they are durable, standardized and substantial.
 - Ensure that the lockout/tagout devices identify the individual users.
 - Establish a policy that permits only the employee who applied a lockout/tagout device to remove it.
 - Provide effective training for all employees covered by the standard and offer periodic refresher training.
 - Comply with the additional energy control provisions under OSHA standards when machines or equipment must be tested or repositioned when outside contractors work at the site, in group lockout situations, and during shift or personnel changes.
 - Develop written procedures explaining how a lockout is done.
 - Use engineering and administrative controls as much as possible to eliminate the need for lockout.
 - Perform regular maintenance to prevent malfunctioning equipment.
-

5 Tips for Impactful Safety Observations

May 22, 2019 | Did you know employees forget 70% of their safety training within 24 hours of learning it? And that over the course of a month their retention decreases to almost 0? This can be prevented, but you need a strong understanding of how to train with retention in mind. In this webinar, learn how leading companies train their employees with methods that make safety

STICK. You'll leave with fresh ideas and strategies to ensure your next training session is a memorable one.

Returning to Work after Covid-19 – Ergonomics Considerations

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By the Numbers 10 Tips for Emergency Response Plans – Spanish

10 Consejos Para La Respuesta a Emergencias

Estar preparado para una emergencia es parte de sus empleadores y su responsabilidad. Para ayudar a desarrollar su plan de respuesta

a emergencias, [Ready.gov](https://www.ready.gov) ofrece la siguiente guía.

1. **Identificar los objetivos:** Revisar los objetivos de rendimiento de la planificación de la preparación y la respuesta para el programa de su empresa o sitio. Los objetivos pueden incluir el cumplimiento de la normativa, la prevención de peligros/detención, la mitigación de riesgos, la respuesta de emergencia y la continuidad del negocio.
2. **Realizar una evaluación de riesgos:** Examinar los escenarios de peligro o amenaza identificados durante una evaluación de riesgos.
3. **Identificar los recursos de respuesta:** **Identifique** la disponibilidad y capacidad de los recursos para ayudar a estabilizar la situación, incluyendo personas, sistemas y equipo dentro de su instalación, así como fuentes externas.
4. **Crear un equipo de gestión de incidentes:** Esto requiere conocimiento del plan de respuesta, capacitación específica para cada función y una sinergia efectiva entre los miembros del equipo y los respondedores externos.
5. **Evaluar la normativa aplicable:** Determine qué reglamentos de planificación de la respuesta corresponden a su instalación y cómo puede asegurar el cumplimiento dentro de su plan específico para el sitio.
6. **Desarrollar procedimientos de respuesta a las acciones de protección:** Evaluar e incluir procedimientos de acción de protección de la vida, como evacuación, refugio, refugio en el lugar, encierro.
7. **Establecer procedimientos de respuesta específicos para cada peligro:** Según la estructura de planificación de la respuesta y el contenido requerido, la información específica sobre el peligro puede incluirse en el plan de respuesta o crearse como un plan independiente.
8. **Coordinar con los servicios de emergencia pública:** **Trabaje con los servicios públicos de emergencia como los bomberos,** la policía, los equipos HAZMAT y los servicios médicos de emergencia para compartir el conocimiento de su instalación y sus peligros, comprender sus capacidades para estabilizar una emergencia y determinar el tiempo de respuesta a su instalación que sería necesario para estabilizar los

incidentes en su instalación.

9. **Entrenamiento de respuesta de emergencia:** El entrenamiento es esencial para que **todos en el sitio sepan** qué hacer en una emergencia o interrupción de las operaciones comerciales. El entrenamiento debe incluir, pero no limitarse a:

- Familiarización con el plan de respuesta
- Funciones y responsabilidades individuales
- La capacitación para la revisión de planes siempre que se realice un cambio o revisión sustancial del plan que afecte a la organización, los procedimientos, las funciones y las responsabilidades, o la capacidad de respuesta.
- Cursos de actualización, según sea necesario

10. **Ejercicios de respuesta:** Los ejercicios y simulacros de preparación corporativa, que pueden incluir simulacros de incendio y evacuación, deben diseñarse para poner a prueba los componentes del plan de respuesta y el conocimiento de los participantes sobre las expectativas y los deberes necesarios para desplegar las estrategias y tácticas de respuesta y restaurar las operaciones.

By the Numbers – Workplace Violence – Spanish

Violencia En El Lugar de Trabajo

¿LO SABÍAS?

El prestigioso **New England Journal** presenta hechos y estadísticas interesantes. Su revisión concluye que la asistencia sanitaria es

la profesión más peligrosa para las mujeres. Casi todas las mujeres son objeto de agresión y violencia en su profesión. La revisión incluye datos de La Oficina de Estadísticas Laborales (**B.L.S** por sus siglas en Ingles) que muestran que los trabajadores de la salud están cerca cuatro veces más propensos a requerir tiempo fuera del trabajo como resultado de la violencia. (**B.L.S.**) mantiene una lista sombría, el Censo de Lesiones Ocupacionales Fatales. En 2014, los homicidios representaron el 8% de todas las muertes en el lugar de trabajo y el 8% de las muertes en el lugar de trabajo de los hombres. Representaron el 19 por ciento de las muertes en el lugar de trabajo para las mujeres, un segundo lugar muy cercano detrás de los accidentes de transporte con un 20 por ciento. Cuando los hombres son asesinados en el trabajo, lo más común es que sea en el curso de un robo, pero para las mujeres, es más probable que se trate de alguien que conozcan que sea su marido, novio o ex. La revisión también informó que, aunque los empleados de los sectores de la salud y la asistencia social representan el 12,2% de la población activa (y a pesar de que existe la posibilidad de que no se denuncie en otras industrias), casi el 75% de las agresiones en el lugar de trabajo se produjeron en un entorno sanitario.

Hay otras estadísticas notables:

- El 80% del personal de los Servicios Médicos de Emergencia ha sido atacado por pacientes.
- El homicidio es la segunda causa de muerte en el lugar de trabajo para los trabajadores de la salud en el hogar.
- El 78% de los médicos y el 100% de las enfermeras de Urgencias han sufrido violencia por parte de los pacientes en el último año.
- La incidencia anual de agresiones físicas en un entorno psiquiátrico es del 70%.
- Entre las residencias de ancianos con unidades de demencia, el 59% de los ayudantes de enfermería informaron de ser asaltados por los pacientes semanalmente y el 16% diariamente.
- El 46% de las enfermeras reportaron alguna forma de violencia en el lugar de trabajo durante sus cinco turnos

más recientes.

- Entre 2000 y 2011, hubo 154 tiroteos con heridos dentro o en los terrenos de los hospitales americanos.
- La industria de la salud constituye el 9% de la fuerza laboral de los Estados Unidos, sin embargo los profesionales de la salud experimentan más lesiones por violencia en el lugar de trabajo que todas las demás industrias combinadas.
- La tercera causa de muerte de los trabajadores de la industria de la salud y de los servicios profesionales (educación, derecho y medios de comunicación) se debe a la violencia en el lugar de trabajo.

Según OSHA:

- Alrededor de 2 millones de personas cada año reportan algún tipo de violencia en el lugar de trabajo.
- Se estima que el 25 por ciento de la violencia en el lugar de trabajo no se denuncia.
- El impacto en los negocios es enorme y como la perpetración de los homicidios en sí, la tendencia es hacia arriba, no hacia abajo. Se estima que medio millón de empleados pierden 1,8 millones de días de trabajo cada año debido a la violencia en el lugar de trabajo, lo que resulta en más de 55 millones de dólares en salarios perdidos en 2018. El costo integral anual para las empresas, incluyendo las pérdidas estimadas, fue de 130 mil millones de dólares en comparación con los 36 mil millones de dólares en 1995.
- Los delitos de violencia en el lugar de trabajo también se extienden más allá de las víctimas a los compañeros de trabajo, clientes, ejecutivos, accionistas e incluso a la comunidad. También hay pérdidas directas que se reflejan en la disminución de la productividad, la baja moral y la publicidad negativa, todo lo cual puede dañar la reputación de una empresa a largo plazo.
- Además, los incidentes suelen ir seguidos de demandas judiciales en las que se acusa a las organizaciones de retención negligente, supervisión negligente y seguridad inadecuada. El acuerdo extrajudicial promedio es de alrededor de 500.000 dólares y el premio promedio del jurado

es de 3 millones de dólares.

TENGA EN CUENTA

La violencia en el lugar de trabajo es uno de los temas más preocupantes de nuestra sociedad. ¡Es una tendencia al alza!! La violencia doméstica se transforma en nuestro lugar de trabajo. Lamentablemente, las mujeres son más a menudo las víctimas en el hogar y en el lugar de trabajo. Hay dos escenarios. Uno en el que la víctima tiene alguna conexión familiar o personal con el agresor, y otro en el que la víctima no conoce o no tiene ninguna conexión familiar o personal con el agresor.

El 70% de los lugares de trabajo de EE.UU. no tienen programas o políticas formales que aborden la violencia en el lugar de trabajo. El homicidio es una de las principales causas de muerte en el lugar de trabajo para las mujeres.

¿Por qué?

¡Los abusadores agreden a las mujeres en el trabajo porque es fácil encontrarlas allí!!

El momento más peligroso para las víctimas de abuso doméstico es cuando tratan de irse. Una mujer que deja a su pareja puede encontrar una nueva vivienda y cambiar su número de teléfono, pero probablemente seguirá yendo al mismo trabajo.

La violencia en el lugar de trabajo está definida por la Administración de Seguridad y Salud Ocupacional (**OSHA**) como cualquier acto o amenaza de violencia física, acoso, intimidación u otro comportamiento perturbador amenazante que ocurra en el lugar de trabajo.

La violencia en el lugar de trabajo es una de las principales causas de muerte en el mundo corporativo, después del transporte. Este creciente problema puede tener efectos muy perjudiciales en la moral, la reputación y los ingresos, por lo que es algo que las empresas deben abordar ahora.

Hay medidas para contrarrestar la alarmante tendencia de la

violencia en el lugar de trabajo, como:

- Desarrollar, publicar y hacer cumplir una política de prevención de la violencia en el lugar de trabajo.
- Realizar una evaluación de riesgos en el lugar de trabajo para determinar los tipos de violencia que podrían tener un mayor impacto en su lugar de trabajo y para identificar en qué lugar del lugar de trabajo y/o a qué hora del día los empleados podrían ser más vulnerables a la violencia.
- Aplicar una política de no armas para los empleados, como lo permite la ley.
- Tomar precauciones administrativas y ambientales; iniciar actividades de prevención, realizar capacitaciones sobre la violencia en el lugar de trabajo.
- Tomar medidas de seguridad para mitigar la amenaza de violencia, crear una cultura en el lugar de trabajo que apoye a las víctimas y responsabilice a los autores de la violencia.
- Tómese el tiempo necesario para abordar estas preocupaciones antes de que ocurra un incidente. Tome medidas proactivas ahora para proteger a sus empleados. Asegure un ambiente más seguro y de mayor apoyo para las víctimas de la violencia doméstica tomando estas medidas preventivas.

By the Numbers – Workplace Stress – Spanish

Estrés En El Lugar De Trabajo

¿LO SABÍAS?

El lugar de trabajo es la quinta causa de muerte en los Estados Unidos, responsable de unas 120.000 muertes y de aproximadamente 190.000 millones de dólares en costos adicionales cada año (Centros para el Control y la Prevención de Enfermedades). El trabajo es [una de las principales causas de estrés](#), y los [efectos fisiológicos del estrés](#) en la química sanguínea, incluyendo los niveles de colesterol, el sistema inmunológico y el funcionamiento metabólico han sido bien establecidos.

Esto representa entre el 5% y el 8% del gasto nacional en atención de la salud derivado principalmente de las altas exigencias en el trabajo (48.000 millones), la falta de seguro (10.000 millones) y el conflicto entre el trabajo y la familia (24.000 millones).

La investigación de los Centros para el Control y la Prevención de Enfermedades:

- Entre 2000 y 2016, el índice de suicidio en EE. UU. entre los adultos de 16 a 64 años aumentó un 34 por ciento, de 12,9 muertes por cada 100.000 personas en la población a 17,3 por cada 100.000.
- La tasa de suicidio más alta entre los hombres se registró en los trabajadores de la construcción y la minería, con 43,6 muertes por cada 100.000 trabajadores en 2012 y 53,2 muertes por cada 100.000 en 2015.
- La tasa de suicidio más alta entre las mujeres fue para los trabajadores de las artes, el diseño, el entretenimiento, los deportes y los medios de comunicación, con
- 11,7 muertes por cada 100.000 trabajadores en 2012 y 15,6 muertes por cada 100.000 en 2015.

Aquí hay 15 estadísticas desenterradas por una encuesta realizada por Harris Poll en agosto de 2017. No es de extrañar que el trabajo y el dinero sean las principales fuentes de estrés.

- 8 de cada 10 estadounidenses están afectados por el estrés.
- El 79% de los estadounidenses sienten estrés a veces o con frecuencia en su vida cotidiana

- El 17% dice que raramente se siente estresado y el 4% dice que nunca se siente estresado
- 4 de cada 10 adultos de EE.UU. (41%) dicen que no tienen tiempo suficiente para hacer todo lo que quieren
- El 80% de los trabajadores sienten estrés en el trabajo y la mitad de ellos necesitan ayuda para manejar el estrés.
- El 65% de los trabajadores dijeron que el estrés en el lugar de trabajo había causado dificultades y más del 10% describió que éstas tenían efectos importantes
- El 10% dijo que trabajan en un ambiente violento debido al estrés en el lugar de trabajo.
- El 42% de los trabajadores informaron que los gritos y el abuso verbal son comunes
- El 29% había gritado a sus compañeros de trabajo debido al estrés en el lugar de trabajo
- El 14% dijo que trabajan en esos ambientes donde la maquinaria o el equipo ha sido dañado
- 1 de cada 5 encuestados había renunciado a su anterior trabajo y 1 de cada 4 se había puesto a llorar por el estrés en el lugar de trabajo.
- El 62% de los trabajadores terminan su día con dolor de cuello relacionado con el trabajo, el 44% con ojos estresados, el 38% se quejan de que les duelen las manos y el 34% tienen dificultades para dormir debido a la condición de estrés.
- 000 millones de dólares de productividad perdida anualmente por los empleadores debido al estrés en el lugar de trabajo
- El índice de bienestar entre los adultos de EE.UU. ha bajado de 62,1 a 61,5 del año 2016 al 2017
- El nivel de estrés de los americanos, en una escala de 10 puntos, ha aumentado de 4,8 a 5,1 entre agosto de 2016 y enero de 2017

TENGA EN CUENTA

El estrés laboral existe desde hace mucho tiempo. Pero el reconocimiento del estrés como un riesgo laboral es un producto de los tiempos modernos. Desafortunadamente, no todas las empresas han captado el mensaje. Eso deja a los directores y supervisores

de seguridad persuadir a la gerencia de que el estrés es realmente un problema a tomar en serio. La mejor manera de hacerlo es relacionar el problema con los dólares.

El estrés en el lugar de trabajo perjudica los beneficios porque aumenta las ausencias y reduce la productividad. Según un comunicado de prensa del Congreso Mundial sobre Salud y Seguridad en el Trabajo, de los 40,2 millones de días de trabajo que pierden anualmente las empresas en todo el mundo, 13,4 millones son por estrés, ansiedad y depresión.

Sólo en los EE.UU., el estrés crea un peligro en el lugar de trabajo tan perjudicial como los peligros químicos y biológicos. ¿Cómo afecta el estrés en el lugar de trabajo a los negocios?

Esto es difícil porque el estrés no es un costo de una partida que aparece en el típico estado de ganancias y pérdidas. Es un paquete de costos ocultos. Hay cinco elementos en este paquete que deberías señalar:

- **Mayores tasas de lesiones y enfermedades**

Cuanto más estrés experimentan los trabajadores en el trabajo, más probable es que se comporten de manera insegura. El resultado son más incidentes que implican lesiones personales y/o daños al equipo y la maquinaria. El vínculo entre el estrés y los incidentes no es sólo una cuestión de sentido común; está bien documentado

- **Aumento del ausentismo**

Los estudios confirman que los trabajadores bajo estrés son más propensos a ausentarse, ya sea porque están realmente enfermos o fingen estar enfermos para evitar tener que ir a trabajar.

- **Mayor volumen de negocios**

El estrés en el trabajo también hace que la gente deje la empresa. Además de perder buenas personas, las empresas incurren en altos costos administrativos en la búsqueda de reemplazos. Y, los costos de reemplazo tienden a aumentar en la medida en que la empresa gana la reputación de ser un lugar estresante para trabajar.

▪ Jubilación prematura

El estrés hace que los trabajadores mayores y más mayores se jubilen antes de estar listos. Resultado: Altos costos de reposición y en muchos casos pagos de suma global y pensión.

▪ Reducción de la productividad

El estrés en el lugar de trabajo perjudica la productividad y el rendimiento de los trabajadores. El efecto del estrés en la productividad es difícil de medida; pero es real.

Conclusión

No hay nada místico en el estrés en el lugar de trabajo. Puede ser manejado. La única manera de asegurar los recursos necesarios es persuadir a tu CEO de que el estrés en el lugar de trabajo representa una seria amenaza para tus trabajadores y para el balance final de tu compañía.

By the Numbers – Working Alone – Spanish

Trabando Solo

¿LO SABÍAS?

Hay [53 millones de trabajadores solitarios](#) en los Estados Unidos, Canadá y Europa juntos. Para poner esa estadística en perspectiva, representa alrededor [del 15% de la fuerza de trabajo total](#). De hecho, la Organización Internacional del Trabajo estima que cada año se producen 2,3 millones de muertes relacionadas con el trabajo. ¿Está haciendo todo lo posible para proteger la seguridad

de los activos más valiosos de su organización: sus empleados? Aquí hay algunas estadísticas que le harán querer tomar medidas adicionales para proteger a sus trabajadores:

- El 44% de los trabajadores dicen que se enfrentan a problemas de seguridad personal en sus principales prácticas de empleo.
- OSHA afirma que se producen un 48% más de asaltos en las industrias de la salud y los servicios sociales que en cualquier otra.
- El 62% de los trabajadores sociales han sido objeto de agresión psicológica en el último año, y el 86% lo ha experimentado en algún momento de su carrera.
- El 15% de los trabajadores sociales han sido agredidos físicamente por clientes en el último año, y el 30% lo ha experimentado en algún momento de su carrera.
- [La tasa de rotación de empleados es tan alta como el 75%](#) entre los trabajadores de la salud a domicilio.
- El 50% de los trabajadores de la venta al por menor que mueren son empleados solos en establecimientos nocturnos, como licorerías o gasolineras.
- Un informe de HSE encontró que de las muertes en el lugar de trabajo reportadas entre 2012 y 2017, el 22 por ciento eran individuos que trabajaban en la industria manufacturera.
- En el 2014, la Administración de Seguridad y Salud Ocupacional (OSHA) informó de múltiples muertes relacionadas con el petróleo y el gas en los Estados Unidos. De hecho, la organización reporta que la tasa de fatalidades de petróleo y gas es siete veces mayor que la tasa de todas las industrias de los Estados Unidos
- 000 estadounidenses trabajan en el sector de los servicios públicos a partir de marzo de 2015.

Muchos de estos trabajadores de servicios públicos trabajan en plantas de tratamiento de agua. Estas instalaciones suelen estar en lugares remotos, lejos de la base de operaciones. A menudo estos trabajadores de servicios públicos en estos lugares remotos tienen turnos en los que están solos.

TENGA EN CUENTA

Los trabajadores solitarios pueden constituir un gran porcentaje de la fuerza de trabajo, en particular en la industria manufacturera. Muchos trabajadores de fábricas, plantas y almacenes pueden encontrarse trabajando solos, aunque normalmente no se considere parte de sus tareas normales. Puede haber momentos en que los empleados pueden necesitar trabajar sin supervisión o sin asistencia, para satisfacer las demandas de la industria de ritmo acelerado. Independientemente del período de tiempo en que una persona trabaje sola, los encargados de la salud y la seguridad deben aplicar sistemas de seguridad sólidos y fiables. Los gerentes deben asegurarse de que cualquier trabajador solitario pueda recibir asistencia de emergencia rápida en caso de que la necesite.

Trabajando en áreas remotas

Trabajar y viajar a zonas remotas es una parte inherente del trabajo en la industria del petróleo y el gas. Los yacimientos de petróleo y gas en alta mar, los gasoductos en tierra firme que se encuentran en lugares remotos y otras características del trabajo en el sector del petróleo y el gas hacen que sea muy común que los trabajadores trabajen solos y/o a distancia.

Un trabajador solitario puede ser cualquiera que trabaje solo en una instalación fija o lejos de su base típica. A veces, la definición se aplica a los que trabajan solos en fábricas o almacenes durante las noches o los fines de semana. También se aplica a los trabajadores itinerantes de la construcción, los servicios públicos, el mantenimiento y la reparación, la agricultura y otros campos.

PELIGROSOS

El trabajo en zonas remotas introduce una serie de preocupaciones y peligros de seguridad que deben ser abordados.

En estas áreas remotas, los trabajadores se enfrentan a

condiciones y entornos muy duros. Deben conducir/viajar largas distancias y frecuentemente fuera de la carretera, y si ocurre un incidente, quedan efectivamente varados y deben encontrar una manera de comunicar el asunto.

Estos y otros elementos matizados de la seguridad de los trabajadores remotos o solitarios, como la cantidad de agua a transportar (más de la que se piensa), son buenos argumentos de seguridad.

Cada año se producen miles de incidentes que ponen a los trabajadores solitarios en situación de discapacidad, a veces a corto plazo y a menudo de por vida.

En el 2014, la Administración de Seguridad y Salud Ocupacional (OSHA) informó de múltiples muertes relacionadas con el petróleo y el gas en los Estados Unidos. De hecho, la organización reporta que la tasa de fatalidades de petróleo y el gas es siete veces mayor que la tasa de todas las industrias de los Estados Unidos.

Los trabajadores solitarios son una parte integral de la industria del petróleo y el gas, y salvaguardar a este personal es vital para prestar un buen servicio. Las empresas son responsables ante sus empleados y sus clientes. Los cierres, incidentes y problemas de producción pueden afectar a otras empresas y las fugas a gran escala también pueden ser desastrosas para el medio ambiente. Mejorar la seguridad en la industria del petróleo y el gas es bueno para todos y para el planeta.

En riesgo

Los riesgos que afectan a los trabajadores solitarios en la mayoría de las industrias también afectan a los del petróleo y el gas – los tropiezos, resbalones y caídas representan el 37% de los accidentes en el sector – aunque hay riesgos adicionales generados por la naturaleza a menudo remota o en alta mar del trabajo y la exposición o inhalación de materiales peligrosos. Cuando las cosas van mal en el sector del petróleo y el gas, pueden ser devastadoras, dando lugar a enormes pérdidas de vidas, productos e infraestructura.

Los riesgos incluyen:

- El trabajo en lugares remotos, ya sea en alta mar, en la carretera o a lo largo de oleoductos y gasoductos, aumenta el impacto de los posibles incidentes y las dificultades para dar la alarma y mantener la comunicación
- Trabajando en las alturas.
- En espacios confinados.
- Junto con maquinaria y equipo de alto riesgo.
- Accidentes incluyendo tropiezos, caídas, resbalones
- Gases tóxicos e inflamables

Peligros de los trabajadores solitarios en el sector del petróleo y el gas

- Liberaciones de hidrocarburos
- Incendios o explosiones
- Objetos caídos

La situación de seguridad de un trabajador solitario es peor que la de un trabajador rodeado de compañeros de trabajo.

¿Por qué? Si se trabaja solo y no se presta asistencia médica inmediata a tiempo, el resultado podría ser mortal.

La mayoría de las refinerías, fábricas y plataformas petrolíferas también se consideran [zonas peligrosas para los explosivos](#), donde la atmósfera podría llenarse de gases, nieblas, polvos, líquidos o vapores inflamables que podrían provocar enormes explosiones. Debido al ambiente de trabajo peligroso por explosivos, los empleados que trabajan solos en estos sectores no pueden llevar sus dispositivos de teléfonos inteligentes, ya que podría ser una fuente de ignición.

