

By the Numbers – Spill Prevention – Spanish

Prevención De Derrames

¿LO SABÍAS?

En el 2015, el 18% de las 477 visitas al lugar de trabajo de la HSA constató que en las zonas de trabajo no expuestas a la intemperie, la evaluación de riesgos del STF no había identificado ni establecido precauciones razonables para evitar los derrames.

En el 2015, se adoptaron medidas oficiales, incluida la utilización de notificaciones de cumplimiento, en las visitas al lugar de trabajo de la HSA en las que el empleador no adoptó precauciones razonables para evitar los derrames.

Entre el 2015 y 2016, el 24% de las más de 2.000 visitas al lugar de trabajo de la HSA encontraron que el empleador no había identificado o tratado de identificar las fuentes de posibles derrames (por ejemplo, líquidos, material granulado, alimentos).

En el 2012, las alfombras no fueron relevantes en cerca de la mitad de las visitas de HSA que se examinaron. Esto es probablemente porque estos lugares de trabajo tienen áreas de trabajo húmedas y grandes áreas de trabajo externas.

En el 2012, el 35% de las 1.783 visitas al lugar de trabajo de la HSA encontraron que el empleador no tenía un procedimiento para que se utilizaran alfombras para reducir los riesgos de resbalones.

En el 2012, el 22% de 2.106 visitas al lugar de trabajo de la HSA encontraron que el empleador no tenía un procedimiento para que los derrames se eliminaran inmediatamente mediante la limpieza en seco.

En todas las industrias, se encontró un procedimiento para eliminar los derrames de inmediato mediante la limpieza en seco en el 46% de los lugares de trabajo y ausente o no aplicable en el 54%.

¿Qué porcentaje de los accidentes de trabajo son causados por resbalones, tropezones y caídas?

Más del **25%** de las lesiones sufridas en todas las industrias son causadas por resbalones, tropezones y caídas. De estos resbalones, tropiezos y caídas, el 16% de todos los accidentes de trabajo involucrados caen al nivel del suelo. Desafortunadamente, más del 5% de los accidentes en el lugar de trabajo son el resultado de una caída entre dos o más pisos.

Observen la interesante estadística relacionada con los resbalones y tropezones **sin caídas**. Más del **3%** de todos los accidentes de trabajo que resultaron en tiempo fuera del trabajo fueron causados por resbalones y viajes **sin caídas**.

Según [la OSHA](#), [el](#) 20% de todas las muertes en la industria privada estaban relacionadas con la construcción en 2017. De estas muertes, casi el 60% fueron causadas por cuatro eventos, conocidos en la industria como *Los Cuatro Fatales*.

1. **Caídas:** 39% de las muertes en la construcción
2. **Golpeado por el objeto:** el 8% de las muertes en la construcción
3. **Electrocuciones:** 7% de las muertes en la construcción
4. **Atrapado en o entre:** El 5% de las muertes en la construcción

Reducir o eliminar el riesgo de estas cuatro causas de muerte salvaría cientos de vidas cada año. De hecho, hubo [887 muertes en el lugar de trabajo en 2017 por caídas, resbalones y tropezones](#). exploremos algunas de las principales causas de caídas en el lugar de trabajo y las formas de prevenirlas.

Causas principales de los resbalones y caídas en el trabajo

Cualquier lugar de trabajo tiene su cuota de peligros y, por desgracia, nada puede eliminar completamente el riesgo de lesiones y enfermedades en el lugar de trabajo. Según el CDC, más de 300 trabajadores de la construcción mueren cada año y más de 10.000 más se lesionan gravemente por caídas desde las alturas.

El CDC también cita las escaleras, los tejados y los andamios como las principales causas de resbalones, tropiezos y caídas en las obras.

Aquí hay algunas otras estadísticas relacionadas con los resbalones, tropezones y caídas en el trabajo:

1. **El 57%** de las muertes por escaleras se producen en la industria de la construcción.
2. **El 43%** de las muertes por resbalones, tropiezos y caídas ocurren en la industria de la construcción.
3. **El 20%** de las caídas en el mismo nivel se deben a **viajes** y **el 13%** a deslizamientos.
4. **El 11%** de las caídas a un nivel inferior se producen cuando alguien cae **a través de una superficie o una abertura existente.**

En Canadá, más de 42.000 trabajadores resultan lesionados anualmente debido a incidentes de caídas. Esta cifra representa alrededor del 18% de las “lesiones con pérdida de tiempo” que fueron aceptadas por las juntas o comisiones de indemnización de trabajadores en todo el Canadá (según las estadísticas de la Asociación de Juntas de Indemnización de Trabajadores del Canadá, 2016).

Las estadísticas muestran que la mayoría (67%) de las caídas ocurren en el mismo nivel como resultado de resbalones y

tropezones. El 30% restante son caídas desde una altura.

TENGA EN CUENTA

- Analizar los deslizamientos anteriores para identificar cualquier problema en particular
- Utilice la [herramienta de mapeo](#) diseñada para ayudar a identificar las áreas donde se han producido resbalones, tropezones y caídas y también donde es más probable que se produzcan resbalones y tropezones
- Considere la posibilidad de preguntar al personal si está al tanto de algún problema o si ha sufrido algún desliz en el pasado
- Identificar [las fuentes de líquido](#), por ejemplo, equipos que utilizan agua/líquido, lavados, duchas, tiendas de limpieza, baños, uvas, flores, plantas, freidoras.
- Incluye áreas de autoservicio de bebidas, refrigeradores y congeladores, contenedores de líquido, líquido demasiado cerca de la parte delantera de los estantes, pequeños artículos de frutas y verduras y exhibidores de flores.
- No te olvides de las cestas colgantes
- Los derrames de líquidos viscosos pueden ser mucho más peligrosos. A medida que la viscosidad de un probable derrame aumenta, la rugosidad de la superficie requerida aumenta
- Asegúrate de considerar todo el material sólido/semisólido, por ejemplo, el polvo de lavar granulado, los insertos de las revistas de los periódicos, el contenido de las bolsas de desecante, etc.
- En el 2009, el Consorcio Slip STD propuso una [clasificación](#) para los suelos duros basada en la contaminación previsible

Prevenir los derrames para controlar los resbalones (tropiezos y caídas)

- Considere la posibilidad de utilizar paletas contorneadas/moldeadas para el almacenamiento y la exhibición de contenedores de líquidos – para reducir el

riesgo de que los contenedores sean derribados

- Mostrar/almacenar los líquidos para que no se derramen en los pasillos. No ponga recipientes de líquido demasiado cerca de la parte delantera de los estantes
- Almacenar los contenedores, particularmente de líquido, con la abertura en la parte superior – a menos que estén diseñados específicamente para ser almacenados con la abertura en el lado o en el fondo
- Considere el uso de alfombras de [piso](#) cerca de los contenedores de líquidos. Esto también puede ayudar a reducir las pérdidas por roturas
- El material de comercialización y los insertos de papel y revistas pueden ser resbaladizos.
- Proporcionar contenedores para que los clientes transporten sus mercancías
- Mantener el equipo y las tuberías en buen estado de funcionamiento con los sellos y válvulas adecuados
- Las frutas y verduras pequeñas, como las uvas y los tomates, pueden ser de alto riesgo. Proporcione [alfombras](#) o artículos de exhibición preempaquetados
- Use sólo la cantidad mínima de agua en los cubos de exhibición de flores y use alfombras de [piso](#) si es necesario.
- Deseche el material de embalaje y otros envoltorios con cuidado. No los deje tirados en el suelo

Eliminar los derrames para controlar los resbalones (tropiezos y caídas)

- Lidiar con los derrames de inmediato
- Los derrames deben ser limpiados y secados a fondo. **Un esfuerzo superficial que no limpie o seque la superficie puede crear un mayor riesgo** que el derrame original. Los pisos “secados con mopa” pueden ser muy resbaladizos.
- Proporcionar material para eliminar los derrames en las [zonas identificadas como de alto riesgo de derrame](#)
- Usar un material absorbente para absorber el derrame o posiblemente usar una aspiradora [de mano](#).

- La toalla de papel es efectiva para limpiar pequeños derrames
- Los derrames aceitosos o grasosos requieren una solución de detergente
- Considere el uso de kits de derrame – deben ser mantenidos completamente abastecidos
- El material absorbente debe ser removido tan pronto como se satura, y se debe usar más material absorbente – si es necesario.
- Considere la posibilidad de nombrar a una persona en cada turno para que sea responsable de los derrames. (Esto sólo funcionará si esa persona es avisada de cualquier derrame y está disponible para ocuparse de los derrames inmediatamente)

CONSEJOS PARA LIMPIAR LOS DERRAMES EN EL LUGAR DE TRABAJO

Cuando se derrama cualquier tipo de aceite o líquido, debe ser tomado muy en serio y limpiado rápidamente. En cada lugar de trabajo, hay diferentes tipos de sustancias que podrían causar un gran resbalón y caída, resultando así en una reclamación de compensación del trabajador.

UTILIZAR MATERIALES APROPIADOS

Encontrará diferentes derrames. Use los materiales adecuados para el trabajo para que puedas protegerte a ti mismo y a la gente que te rodea. Varios derrames pueden requerir diferentes equipos, pero es mejor estar preparado para cualquier cosa en el lugar de trabajo. Los derrames deben limpiarse, limpiarse y secarse antes de que el área se considere segura para las actividades relacionadas con el trabajo.

Trapear el área limpiará el derrame, pero puede crear un área más peligrosa para resbalones y caídas. La estación de derrames de su lugar de trabajo debe incluir:

- Materiales absorbentes (Trapos, toallas, paños, etc.)

- Toallas de papel para pequeños derrames
- Solución de detergente para derrames de aceite o grasa
- Kits de derrame
- Señales de piso mojado
- Mopas
- Escobilla de goma
- Aspiradora de mano con escobilla de goma

VIGILA QUE NO HAYA FUGAS.

A veces el líquido en el suelo no proviene de un derrame. Puede provenir de una fuga en una tubería, techo, plomería u otra cosa. Estén atentos a las fugas que vienen de debajo de los fregaderos o del techo. Revisando esto continuamente, podría evitar que los empleados o clientes se resbalen y caigan.

ACEITE VS. AGUA

Asegúrese de determinar si el derrame es de petróleo o de agua. El petróleo es inflamable a veces y puede ser más peligroso que los derrames de agua. El petróleo también puede producir gas, lo que causaría una situación peligrosa para su lugar de trabajo.

CONSIDERAR EL TAMAÑO DEL DERRAME

Al limpiar el derrame, tenga en cuenta el tamaño del mismo. Tendrá que tratar un gran derrame de manera diferente a un pequeño derrame. No tome una toalla de papel para limpiar 3 galones de agua derramada. Cualquiera que sea el tamaño del derrame, límpielo con el equipo apropiado.

USAR ZAPATOS ANTIDESLIZANTES

Por último, usa la pieza más importante de tu equipo de trabajo. Los [zapatos antideslizantes](#) te protegerán de resbalar mientras intentas hacer tu trabajo. Sus zapatos por sí solos pueden marcar la diferencia entre ir al hospital o volver a casa ese día. No intente limpiar un derrame sin zapatos antideslizantes. Todos nuestros zapatos han sido probados para

proporcionar una protección óptima contra los resbalones en los pies, para que pueda estar preparado para cualquier cosa que se le presente.

Aquí hay siete consejos de seguridad para los trabajadores de oficina para prevenir las lesiones en el lugar de trabajo:

▪ ASEGÚRATE DE QUE LA CONFIGURACIÓN DE TU ESCRITORIO SEA ERGONÓMICA

Para mantener una postura neutral, la cabeza debe estar centrada sobre el cuello y los hombros, las muñecas planas y los codos descansando cómodamente a los lados. Si sus pies no tocan el suelo a menos que se incline hacia adelante, use un reposapiés. Vea nuestro post sobre ergonomía [y postura neutral en el lugar de trabajo](#) para más información sobre la creación de una estación de trabajo ergonómica.

▪ TOMAR DESCANSOS REGULARES PARA LEVANTARSE Y MOVERSE

Estar sentado todo el día [pone a los oficinistas en riesgo de](#) numerosos problemas de salud. [Nuestra guía de calentamiento y estiramiento](#) le ofrece ejercicios fáciles de hacer en el trabajo, y puede encontrar más recursos en nuestra página Levántate [y muévete.](#)

▪ CUANDO ESTÁ RESBALADIZO DEBIDO AL HIELO Y LA NIEVE, CAMINA COMO UN PINGÜINO AL ENTRAR Y SALIR DE TU OFICINA

Los resbalones y caídas de invierno en los estacionamientos son muy comunes. Para evitarlos, camina como un pingüino, con los pies planos y dando pasos cortos y lentos. También es importante usar un calzado sensato y llevar sólo lo que puedas manejar. Para obtener más información y recursos descargables, visite nuestra [página de prevención de resbalones y caídas en invierno.](#)

▪ USAR UN AURICULAR PARA EL USO PROLONGADO O FRECUENTE DEL

TELÉFONO

Acunar el teléfono entre el hombro y el oído puede causar dolor de cuello y espalda.

▪ MANTENER TU LUGAR DE TRABAJO ORDENADO

Limpie los derrames inmediatamente, mantenga los pasillos libres de desorden y ate o asegure las cuerdas para que no representen un peligro de tropiezo.

▪ NO DEJES QUE LOS CABLES ELÉCTRICOS CREEN UN RIESGO DE INCENDIO

Evite pasar cables eléctricos bajo la alfombra o a través de ventanas y puertas. Además, no los sujeten con dispositivos no aprobados, como grapas.

▪ CONOCER LOS PROCEDIMIENTOS DE EMERGENCIA DE SU OFICINA

Asegúrese de saber qué hacer en caso de incendio, tormenta, intrusión violenta, problema médico u otra emergencia.

By the Numbers – Safe Lifting – Spanish

Levantamiento seguro

¿LO SABÍAS?

El levantamiento manual, es una fuente de muchas lesiones.

- El sobreesfuerzo al levantar puede resultar en torceduras, esguinces, desgarros de ligamentos o músculos, y ruptura o deslizamiento de discos. [La Oficina de Estadísticas Laborales](#) informa que 94.420 trabajadores de la industria privada sufrieron lesiones debido al sobreesfuerzo al levantar durante el año 2015. Estas lesiones fueron lo suficientemente graves como para requerir días de baja en el trabajo.
- Las caídas a un nivel inferior (que muchas personas consideran más peligrosas que el levantamiento) causaron 50.490 lesiones durante el año 2015.
- Según el Cónsul de Seguridad Nacional Laboure e Investigación Médica el 20% de los dolores de espalda se interpretan como una inflamación, como los escritores el 10% se deben a lesiones de espalda, el 70% son resultado de la degeneración de los discos espinales, que es el agente correcto de los criterios de los discos espinales que causa la mayor cantidad de problemas y puede causar dolor por tensión incluso de los movimientos corporales rutinarios.

HECHOS

- Las lesiones provienen de los trabajadores del terreno que levantan y bajan el equipo de corte de los camiones, los empleados que levantan a los estudiantes con necesidades especiales que se han caído o que los levantan o bajan de las sillas de ruedas, los trabajadores de los servicios de nutrición que recuperan los contenedores de alimentos de los estantes inferiores varias veces al día, o los conserjes que se lesionan al vaciar los botes de basura en la cafetería. Según la Oficina de Estadísticas Laborales, los trastornos músculo-esqueléticos relacionados con el trabajo, **incluidas las lesiones de espalda, representan más de una de cada tres lesiones relacionadas con el trabajo en los Estados Unidos.**
- Levantar y llevar objetos es común para muchos trabajadores en todo el país. Pero el entrenamiento es importante. Si se realiza de forma incorrecta, levantar y transportar objetos puede provocar lesiones. **El Consejo Nacional de Seguridad**

señala que la manipulación manual de objetos representa aproximadamente el 25 por ciento de todas las lesiones laborales. Entre las lesiones más comunes en la manipulación de materiales se incluyen esguinces y torceduras (específicamente en la espalda), cortes, fracturas y moretones.

Según la Oficina de Estadísticas Laborales, las lesiones de espalda son responsables de más tiempo de trabajo perdido que cualquier otra lesión musculoesquelético. Además, de las lesiones que ocurren en la parte baja de la espalda, 3 de cada 4 ocurrieron mientras el empleado estaba levantando. Se espera que la frecuencia y el impacto económico de las lesiones y trastornos de la espalda en la fuerza de trabajo aumenten en las próximas décadas a medida que la edad promedio de la fuerza de trabajo aumente y los costos médicos suban.

MODELO NIOSH

NIOSH ha desarrollado un modelo matemático que ayuda a predecir el riesgo de lesiones relacionadas con la vida. La ecuación de levantamiento define un límite de peso recomendado (RWL) para tareas específicas de levantamiento que la mayoría de los trabajadores podrían realizar durante un día de ocho horas sin aumentar el riesgo de desarrollar dolor en la parte baja de la espalda.

El RWL se define por la siguiente ecuación:

$$RWL = LC \times HM \times VM \times DM \times AM \times FM \times CM$$

La ecuación se basa en un modelo que proporciona un valor unitario para seis variables de tareas:

LC = Peso del objeto levantado

HM = Distancia horizontal de las manos desde el punto medio entre los tobillos

VM = Distancia vertical de las manos desde el suelo

DM = Distancia de viaje vertical entre el origen y el destino del ascensor

AM = Ángulo de asimetría – desplazamiento angular de la carga desde el plano sagital

FM = Tasa de frecuencia media de elevación medida en elevaciones/minuto

CM = Un valor derivado de la frecuencia de elevación y el desplazamiento vertical del ascensor

El índice de levantamiento (LI) proporciona una estimación relativa del estrés físico asociado con un trabajo de levantamiento manual. La ecuación para el LI es:

LI = Peso de la carga (peso de la carga en libras o kilogramos)/RWL

El LI puede ser usado para estimar la magnitud relativa del estrés físico para una tarea o trabajo. Cuanto mayor es el LI, menor es la fracción de trabajadores capaces de mantener con seguridad el nivel de actividad. Por lo tanto, dos o más diseños de trabajo podrían ser comparados.

Cuando se trata de rediseñar una tarea o estación de trabajo, se pueden probar varios escenarios utilizando diferentes variables de la tarea antes de hacer ajustes o gastar los escasos recursos. Variando los valores individuales de la fórmula, puedes anticipar los efectos de la modificación de la tarea antes de implementar cualquier cambio. El hecho de poder cambiar los factores causales permite, en teoría, que el empleador aborde más rápidamente los factores que más contribuyen a las lesiones ergonómicas.

La LI también puede ayudar a priorizar el rediseño ergonómico. Por ejemplo, una serie de trabajos sospechosos de ser peligrosos podrían clasificarse según el LI y se podría desarrollar una estrategia de control según el orden de clasificación (es decir, los trabajos con índices de elevación superiores a 1,0 o más se beneficiarían más del rediseño).

Sin embargo, la ecuación tiene limitaciones. Sólo se refiere a los ascensores de dos manos, por ejemplo.

Las tareas de manipulación de materiales deben ser diseñadas para minimizar el peso, el rango de movimiento y la frecuencia de la actividad, y el uso de la ecuación permite acercarse al óptimo desde el principio.

TENGA EN CUENTA

La ergonomía y las prácticas seguras de levantamiento van “mano a mano”. La ergonomía puede definirse como el estudio de las personas en su entorno de trabajo. La espalda es un punto de partida adecuado en el estudio de la ergonomía. ¿Por qué? Porque las lesiones de espalda son una de las principales causas de la pérdida de días de trabajo y representan casi un cuarto del tiempo perdido y la mitad de todos los costes de compensación tanto a largo como a corto plazo.

Su espalda no es como otras herramientas que puedes reemplazar cuando se dañan.!!! La espalda es una red de ligamentos, discos y músculos frágiles que pueden ser fácilmente desordenados.

Hay 33 vértebras en la espalda que están separadas por discos y unidas por ligamentos. La espalda tiene muchos músculos diferentes para mantener todas las vértebras juntas. Tres curvas conforman la espalda: cervical (cuello), torácica (parte media de la espalda) y lumbar (parte baja de la espalda). A menos que estés de pie en una posición natural, con las orejas, los hombros y las caderas alineadas, tu columna vertebral está bajo algún tipo de estrés.

Casi todo el mundo ha sufrido dolor de espalda en algún momento. Las causas comunes incluyen pero no se limitan a sentarse incorrectamente, levantar cosas pesadas, caídas, incidentes con vehículos de motor y vibración de todo el cuerpo. Para entender la frecuencia con la que se usa la espalda, sólo piense que cada vez que se dobla, su espalda levanta aproximadamente el 70% de su peso corporal, incluso cuando no está levantando nada.

Es importante recordar que no es necesariamente el peso de la

carga lo que causa las lesiones, sino más bien la frecuencia y la duración de la manipulación. Si la carga es pesada, la frecuencia y la duración de la elevación tendrá que disminuir. El cuerpo humano está hecho para una variedad de tareas, por lo que es importante tener variedad en las tareas que se realizan para prevenir el estrés repetitivo y mantener el cuerpo activo y flexible.

Después de estar sentado o agachado durante un largo período de tiempo, no debe levantarse inmediatamente, ya que esto supone un gran esfuerzo para los músculos, ligamentos y tendones de la espalda.

El sobreesfuerzo y el trauma acumulativo fueron los mayores factores de estas lesiones. La flexión, seguida de los giros, fueron los movimientos más citados que causaron lesiones en la espalda. Las torceduras y esguinces por levantar cargas de forma inadecuada o por llevar cargas demasiado grandes o pesadas son peligros comunes asociados con el movimiento manual de materiales.

La NSC establece que no existen reglas de “fuego seguro” para el levantamiento seguro: “La manipulación manual de materiales es una combinación muy compleja de mover segmentos del cuerpo, cambiar los ángulos de las articulaciones, apretar los músculos y cargar la columna vertebral”. Sin embargo, la NSC recomienda seguir una serie de consejos y advertencias en relación con el levantamiento.

Haga lo:

- Elimine el levantamiento manual siempre que sea posible para ayudar a reducir las lesiones.
- Mantenga en buena forma física si levantar objetos es parte de su trabajo.
- Mantenga los materiales al alcance de la mano y ten a mano ayudas de manejo en caso de que las necesites.
- Asegúrese de tener un buen agarre en cualquier objeto que intente levantar. Pruebe el peso y el equilibrio de los artículos antes de moverlos. ¿Demasiado pesado? Consiga una ayuda mecánica para levantar o pida ayuda a un compañero de

trabajo.

- Mantenga el objeto que estás levantando cerca de tu cuerpo. Asegúrate de que tus pies estén cerca de la carga, póngase en un estable posición con los pies apuntando en la dirección en la que te mueves, y levantar principalmente enderezando las piernas.

No lo haga:

- Gire la espalda o inclínese hacia los lados.
- Intente levantar o bajar un objeto si estás en una posición incómoda.
- Sentirse obligado a levantar un objeto que es demasiado pesado – buscar ayuda en su lugar.
- Levante o baje un objeto si sus brazos están extendidos.
- Continúe levantando un artículo si se da cuenta de que es demasiado pesado.
- Levante por encima de tus hombros o por debajo de tus rodillas.

Factores que contribuyen al riesgo de lesiones

El peso de la carga es obviamente un factor que influye en si el material puede ser levantado con seguridad o no:

- La fuerza necesaria para realizar el levantamiento.
- La frecuencia del levantamiento.
- La duración de las actividades de levantamiento.
- Posturas y movimientos corporales durante el levantamiento.

En cuanto a la fuerza necesaria para realizar el levantamiento, puede haber un mayor riesgo de lesiones si:

- El levantamiento implica pellizcar para sostener el objeto.
- El trabajo pesado se hace con una mano.
- Los objetos muy pesados se levantan sin la ayuda de un dispositivo mecánico.
- Los objetos pesados se levantan mientras se agachan,

alcanzan la altura de los hombros o se tuercen.

Las siguientes posturas y movimientos también pueden contribuir al riesgo:

- Doblar o torcer la espalda mientras se levantan o sostienen objetos pesados.
- Levantar objetos de, o poniéndolos en espacios reducidos.
- Inclinar, inclinarse hacia adelante, arrodillarse o ponerse en cuclillas durante las actividades de levantamiento.
- Levantar o transportar materiales con las manos por debajo de la cintura, por encima de los hombros o a los lados del cuerpo.
- Llevar o sostener materiales levantados con los brazos o las manos en la misma posición durante largos períodos de tiempo sin cambiar de posición ni descansar.

Cómo los controles de ingeniería reducen el riesgo.

La forma más eficaz de prevenir las lesiones es rediseñar el entorno y las tareas de trabajo para reducir los riesgos de levantamiento. Estos controles de ingeniería, administrativos y del lugar de trabajo observan de cerca los trabajos de levantamiento y los rediseñan para que sean más seguros.

Los controles de ingeniería se usan para rediseñar un trabajo para que los empleados hagan un levantamiento manual menos agotador. A menudo implican el uso de equipos de elevación mecánica.

Los controles de ingeniería incluyen

- Reducir el peso o el tamaño de la carga.
- Añadir asas al material de embalaje para que los trabajadores puedan tener un agarre fuerte y cómodo.
- Ajustar el ambiente de trabajo para que los trabajadores puedan mantener las cargas cerca del cuerpo y entre la altura de los hombros y las rodillas, sin tener que girar.

- Instalación de ayudas mecánicas de elevación y equipos de manipulación de materiales (transportadores, toboganes, rampas, elevadores, mesas elevadoras ajustables y carretillas).

Utilización de controles administrativos y de prácticas laborales

La implementación de controles administrativos y de prácticas laborales implica seleccionar y capacitar cuidadosamente a los trabajadores para que sepan cómo realizar con seguridad las tareas de levantamiento.

Los controles administrativos y de la práctica laboral incluyen:

- Realizar un control médico de la fuerza de los empleados/capacidades de levantamiento.
- Establecer límites de peso, tamaño y frecuencia en las tareas de levantamiento manual.
- Proporcionar acondicionamiento físico a los empleados.
- Entrenar a los empleados para usar las técnicas de levantamiento adecuadas.
- Determinar la necesidad de utilizar equipos de elevación de dos personas cuando no se dispone de ayudas mecánicas de elevación.

By the Numbers – Powered

Industrial Trucks – Spanish

Camiones Industriales Motorizados

¿LO SABÍAS?

Estadísticas de accidentes de montacargas

No debería sorprender que un montacargas sea una máquina peligrosa. Hay algunas estadísticas de accidentes bastante sombrías para respaldar esa noción. En realidad, los montacargas representan sólo [el 1%](#) de todos los accidentes de almacén o fábrica. Pero los accidentes tienden a ser más graves que otros, representando el 10% de todas las lesiones físicas en esos lugares de trabajo.

Aquí hay [cinco estadísticas de accidentes](#) que deberían hacer que usted tenga extrema precaución al operar un montacargas:

1. Las carretillas elevadoras representan alrededor de 85 muertes cada año.
2. Los accidentes de montacargas que provocan lesiones graves suman 34.900 anuales.
3. Las lesiones no graves relacionadas con los accidentes de carretillas elevadoras llegan a 61.800 cada año.
4. El vuelco de una carretilla elevadora es el incidente más común, representando el 24% de todos los accidentes de carretillas elevadoras.
5. Si las empresas aplicaran políticas de capacitación más estrictas, la Administración de Seguridad y Salud Ocupacional (OSHA) estima que se podría prevenir alrededor del 70% [de los accidentes de montacargas](#) en los Estados Unidos.

MANTENGA EN CUENTA

Los montacargas pueden ser muy peligrosos.

- Pueden pesar hasta 000 libras, que es tres veces más pesado que muchos coches.
- Pueden viajar hasta 18 millas por hora.
- A diferencia de un coche, las carretillas elevadoras sólo tienen frenos en la parte delantera, lo que hace que sea más difícil de detener.
- Las carretillas elevadoras son más pesadas en la parte trasera para compensar las cargas pesadas que se llevan en la parte delantera. Esta distribución desigual del peso puede hacer que una carretilla elevadora sea difícil de manejar.
- Una carretilla elevadora es girada por las ruedas traseras, causando que la parte trasera se balancee hacia afuera. Esto aumenta la posibilidad de volcar durante los giros cerrados.
- Las cargas se llevan en la parte delantera de un montacargas, lo que puede obstruir la vista del conductor.
- Los montacargas se utilizan a menudo para elevar cargas pesadas a alturas considerables, una combinación que siempre es peligrosa.

Entrenamiento, pruebas, certificación

Conducir un camión industrial motorizado, o una carretilla elevadora, puede ser difícil. No se conduce o maneja como un coche, pero como un coche en el que tienes que practicar, pasar un examen y obtener una licencia para conducir, debes estar entrenado, probado y certificado para operar una carretilla elevadora.

- Las carretillas elevadoras son menos estables porque tienen una suspensión de 3 puntos en comparación con la suspensión de 4 puntos de un automóvil.
- Las ruedas traseras hacen el giro a diferencia de las ruedas delanteras de un automóvil.
- La dirección requiere mayor criterio y capacidad operativa.

- Los patrones de tráfico no son tan uniformes y predecibles cuando se conduce un montacargas como cuando se conduce un automóvil.
- Puede parecer difícil de creer, pero un montacargas completamente cargado puede pesar cientos o incluso miles de libras más que un vehículo estándar.

Fundamentos operacionales de las carretillas elevadoras

- Sólo utilice un montacargas u otra carretilla elevadora si ha sido entrenado y autorizado para hacerlo. Recuerde, no todos los montacargas son iguales – debe estar entrenado en cómo operar con seguridad el tipo específico que está usando. No permita que una persona no autorizada opere el montacargas. Nunca transporte pasajeros a menos que el montacargas esté equipado con asientos seguros y nunca eleve a los trabajadores en horquillas, paletas o cargas.

Inspección

- Haga siempre una inspección previa a la operación y haga arreglar los defectos que encuentre inmediatamente o ponga la carretilla elevadora fuera de servicio y no la utilice.

Velocidad segura

- Obedecer los límites de velocidad y operar a una velocidad segura – esto podría estar por debajo del límite de velocidad indicado en algunos casos.

Defectos

- No utilice la carretilla elevadora si las horquillas presentan alguno de los defectos que se retirarán del servicio y se desecharán o desecharán adecuadamente.
- Grietas en la superficie

- La cuchilla o el mango no están rectos.
- El ángulo de la horquilla de la cuchilla al mango no es recto.
- Diferencia de altura de las puntas de los tenedores.
- El bloqueo de posición no funciona.
- El uso de la cuchilla del tenedor o del mango.
- Los ganchos del tenedor se usan.
- La marca de la horquilla no es legible.

ADJUNTOS

Los operadores deben ser entrenados en el uso adecuado de los accesorios porque alteran el rendimiento de la carretilla elevadora. Los aditamentos afectan el rendimiento del camión al cambiar su centro de gravedad, visibilidad y capacidad. El peso del accesorio reduce la capacidad de elevación del camión. Volcar y hacer caer las cargas. El accesorio aumenta el centro de carga al alejar la carga del punto de equilibrio o de fulcro.

- Fijaciones de hojas de deslizamiento que evitan el uso de paletas.
- Los desplazadores desplazan las horquillas a derecha e izquierda.
- Manipuladores de contenedores diseñados para levantar los contenedores de transporte.
- Abrazaderas de cartón equipadas con una válvula de presión para apretar la carga.
- Pinzas para balas de algodón o pulpa que agarran y sostienen las balas.
- Manipuladores de rollos de papel.
- Pinzas para barriles.
- Rotadores que agarran y giran la carga.
- Horquillas extensibles o telescópicas, como en las carretillas de alcance y de torreta.
- Plataformas de personal especialmente diseñadas para levantar personal.

Viajando con una carga – Actualización de los tenedores

Cuando se viaja con una carga, la carga debe apuntar hacia arriba de la inclinación, sin importar la dirección del viaje.

Subiendo la inclinación:

2. Mejora de la punta de los tenedores.
3. Use un observador si la carga bloquea la vista del conductor.

Bajando la pendiente:

1. Conduzca en reversa.
2. Gira la cabeza y mira hacia abajo.
3. Forks señaló el grado.

By the Numbers – Injury and Illness – Spanish

Lesiones y Enfermedades

¿LO SABÍAS?

En las décadas transcurridas desde que se promulgó la Ley de *Seguridad y Salud Ocupacional* (Ley OSH), las muertes en el lugar de trabajo y las lesiones ocupacionales notificadas han disminuido en más del 60 por ciento. Sin embargo, los trabajadores de la

nación siguen enfrentando un número inaceptable de muertes, lesiones y enfermedades relacionadas con el trabajo, la mayoría de ellas prevenibles:

- Cada día, más de 12 trabajadores mueren en el trabajo – más de 4.500 al año.
- Cada año, más de 4,1 millones de trabajadores sufren una lesión o enfermedad grave relacionada con el trabajo.

OSHA reporta un dramático incremento en las lesiones ocupacionales fatales

El Censo de Lesiones Ocupacionales Fatales de la Oficina de Estadísticas Laborales de 2016 informa que hubo 5.190 muertes en el lugar de trabajo en 2016, un aumento del siete por ciento desde 2015, y señala que las muertes relacionadas con los opiáceos están aumentando en el lugar de trabajo.

Las lesiones fatales en el lugar de trabajo mostraron un dramático incremento en 2016, aumentando en un 7 por ciento con respecto al número de muertes en el lugar de trabajo contabilizadas en 2015. La tasa de lesiones fatales también aumentó de 3,4 por cada 100.000 trabajadores equivalentes a tiempo completo en 2015 a 3,6 en 2016.

En 2016, más trabajadores perdieron la vida en incidentes de transporte que en cualquier otro evento, lo que representa aproximadamente una de cada cuatro lesiones fatales. Las lesiones por violencia en el lugar de trabajo aumentaron en un 23 por ciento, convirtiéndose en la segunda causa más común de fatalidad en el lugar de trabajo. El informe del 19 de diciembre también muestra que el número de sobredosis en el trabajo aumentó en un 32 por ciento en 2016, y el número de muertes relacionadas con las drogas ha aumentado al menos un 25 por ciento anual desde 2012.

Los datos actuales de mortalidad laboral muestran una trágica tendencia con el tercer aumento consecutivo de muertes de trabajadores en 2016, el más alto desde 2008. Cuando 5.214 trabajadores perdieron la vida.

El aumento de las muertes en el trabajo en 2016 reportado por BLS muestra que para muchos grupos de trabajadores en este país el trabajo se está volviendo más peligroso y mortal. 5.190 muertes en el lugar de trabajo por lesiones significan que 14 trabajadores murieron en el trabajo al día, el número más alto desde 2008 y la tasa más alta desde 2010”.

El Consejo Nacional de Seguridad (NSC) emitió un comunicado indicando que “está muy desalentado al ver los últimos datos de la Oficina de Estadísticas Laborales que muestran un aumento del siete por ciento en las muertes en el lugar de trabajo desde 2015”. Las lesiones laborales fatales llegaron a 5.190 en 2016 – el tercer aumento anual consecutivo y la primera vez en casi una década que el número ha superado los 5.000”.

NSC, proporcionó más estadísticas.

- Las sobredosis por el uso no médico de drogas o alcohol en el trabajo aumentaron de 165 en 2015 a 217 en 2016, un incremento del 32 por ciento.
- Las muertes entre los trabajadores de 55 años o más totalizaron 1.848, un aumento del 9,9 por ciento.
- Las muertes entre los negros o afroamericanos, los no hispanos aumentaron un 18,6 por ciento, totalizando 587.
- Las muertes entre los trabajadores asiáticos no hispanos aumentaron en un 40,4%, totalizando 160 muertes.
- Las muertes por caídas, resbalones y tropezones aumentaron un 6 por ciento, totalizando 849 muertes.
- Los incidentes de transporte siguieron siendo el evento fatal más común, totalizando 2.083 muertes.
- Las muertes involuntarias en el lugar de trabajo aumentaron un 5 por ciento, totalizando 4.399 muertes.
- Los homicidios aumentaron un 19,9% y ahora suman 500 muertes.
- **Caídas:** Aproximadamente el 36,5% de todas las muertes en el lugar de trabajo ocurrieron por caídas de empleados. Esto incluye trabajadores que se han caído debido a lados desprotegidos o agujeros, superficies de trabajo o de paseo mal construidas, trabajadores que se han caído de escaleras,

techos, andamios, grandes áreas de construcción de rascacielos, etc., todo debido a la falta de uso de una protección adecuada contra las caídas. La incorporación de los requisitos de protección contra caídas de la OSHA resolvería estos problemas.

- **Golpeado por un objeto:** Se estima que el 10,1% de las muertes ocurrieron debido a objetos que se balanceaban, caían o se perdían. También se incluyen los objetos que caen debido a fallos en los aparejos, pérdida o desplazamiento de materiales, mal funcionamiento de los equipos y golpes de vehículos o equipos.
- **Electrocuciones:** Alrededor del 8,6% de los empleados murieron por electrocución. Los trabajadores se enfrentan a una serie de riesgos de electrocución en las obras de construcción, como cables expuestos, condiciones de humedad en las tomas de corriente, etc. Estos son causados por el contacto con líneas eléctricas aéreas o conductores energizados o partes de circuitos en paneles eléctricos y paneles de equipos, cables de extensión y herramientas eléctricas mal mantenidos, así como por rayos. La estricta adhesión a las normas OSHA 1910.331-.335, 1910.269 y NFPA 70E para la seguridad eléctrica en el lugar de trabajo evitaría estos accidentes.
- **Atrapado o atrapado en medio:** Los empleados atrapados en o entre máquinas, dispositivos o herramientas que causan la muerte representaron alrededor del 2,5% de las muertes. También se incluyen los colapsos de zanjas o excavaciones, así como los trabajadores atrapados entre equipos en movimiento o giratorios, o atrapados en estructuras o materiales que se derrumban.

OSHA 2017 Las primeras 10 citaciones proporcionan otra visión de las causas de las lesiones y muertes de los trabajadores.

(Muerte en el trabajo: El peaje del abandono)

1. Protección contra caídas – Requisitos generales (1926.501): 6.072 violaciones
2. Comunicación de peligro (1910.1200): 4.176 violaciones

3. Andamiaje (1926.451): 3.288 violaciones
4. Protección respiratoria (1910.134): 3.097 violaciones
5. **Lockout/Tagout (1910.147): 2.877 violaciones** – las violaciones frecuentes eran la formación inadecuada de los trabajadores y las inspecciones no completadas. Los procedimientos de bloqueo y etiquetado tienen como objetivo proteger a los empleados cuando la maquinaria se pone en marcha de forma inesperada o cuando se libera energía peligrosa durante las actividades de mantenimiento. El hecho de no capacitar a los trabajadores o de no realizar inspecciones periódicas explica muchas de las violaciones.
6. Escaleras (1926.1053): 2.241 violaciones
7. Camiones industriales motorizados (1910.178): 2.162 violaciones
8. Protección de máquinas (1910.212): 1.933 violaciones
9. Protección contra caídas – Requisitos de entrenamiento: 1.523 violaciones
10. **Eléctrico – Métodos de cableado (1910.305): 1.405 violaciones** – Las violaciones de esta norma se encontraron en la mayoría de los sectores de la industria general, incluyendo alimentos y bebidas, venta al por menor y fabricación. Los métodos de cableado eléctrico defectuosos fueron responsables de 1.405 violaciones, por debajo de las 1.937 de 2016. Las violaciones frecuentes incluyen el uso indebido de cables de extensión.

MANTENGA EN CUENTA

Un programa de prevención de lesiones y enfermedades, es un proceso proactivo para ayudar a los empleadores a encontrar y arreglar los peligros del lugar de trabajo antes de que los trabajadores se lastimen. Sabemos que estos programas pueden ser efectivos para reducir las lesiones, enfermedades y muertes. Muchos lugares de trabajo ya han adoptado estos enfoques, por ejemplo, como parte de los programas de cooperación de la OSHA. Estos empleadores no sólo experimentan disminuciones dramáticas en las lesiones en el lugar de trabajo, sino que a menudo informan de una cultura transformada en el lugar de trabajo que puede conducir a una mayor productividad y calidad, a una menor rotación, a una

reducción de los costos y a una mayor satisfacción de los empleados.

California ha liderado el camino para adoptar un programa de prevención de lesiones y enfermedades.

- Cada empleador de California está obligado por Cal/OSHA a establecer, implementar y mantener un Programa de Prevención de Lesiones y Enfermedades (IIPP) por escrito. Este plan escrito debe describir el programa de salud y seguridad de su lugar de trabajo y la manera en que usted implementará los siguientes ocho elementos que son requeridos por el estándar de Cal/OSHA:
- Asignación de la responsabilidad de la seguridad
- Evaluación de los peligros del lugar de trabajo
- Investigación de accidentes, lesiones y enfermedades profesionales
- Corrección de los peligros
- Comunicación con los empleados y métodos para hacerlos participar en actividades relacionadas con la seguridad
- Capacitación en materia de seguridad y salud en el trabajo
- Sistemas para asegurar el cumplimiento de los procedimientos de seguridad por parte de los empleados
- Registro y documentación de su programa y actividades de programa.

Treinta y cuatro estados y muchas naciones alrededor del mundo ya requieren o alientan a los empleadores a implementar tales programas. Los elementos clave comunes a todos estos programas son el liderazgo de la dirección, la participación de los trabajadores, la identificación y evaluación de los peligros, la prevención y el control de los mismos, la educación y la formación, y la evaluación y mejora de los programas.

Basándose en la experiencia positiva de los empleadores con los programas existentes, OSHA cree que los programas de prevención de lesiones y enfermedades constituyen la base de los cambios revolucionarios en la forma en que los empleadores identifican y controlan los peligros, lo que conduce a una mejora significativa de la salud y la seguridad en el lugar de trabajo. La adopción de

un programa de prevención de lesiones y enfermedades dará como resultado que los trabajadores sufran menos lesiones, enfermedades y muertes. Además, los empleadores mejorarán su cumplimiento de las reglamentaciones existentes y experimentarán muchos de los beneficios financieros de un lugar de trabajo más seguro y saludable citado en estudios e informes publicados por empresas individuales, incluidas reducciones significativas de las primas de compensación de los trabajadores.

Afortunadamente, con el paso de los años, las lesiones y muertes en el lugar de trabajo han disminuido sustancialmente. Desafortunadamente, hay muchas lesiones y fatalidades en el lugar de trabajo que continúan ocurriendo todos los días. OSHA informa que hay un promedio de 12 muertes relacionadas con el trabajo en los Estados Unidos todos los días.

By the Numbers – Hot Work – Spanish

Trabajo En Caliente

¿LO SABÍAS?

Industrial Safety & Hygiene News, usando cifras de estudios de **OSHA**, informa que 1 de cada 250 trabajadores de la construcción morirá por una lesión de soldadura. Con más de medio millón de soldadores americanos trabajando hoy, podemos esperar, conservadoramente, 2.000 muertes por soldadura en nuestra vida. Eso sin mencionar las muchas más lesiones permanentes que sufrirán los soldadores.

- Entre 2001 y 2018, cinco bomberos resultaron mortalmente heridos en cuatro incendios involuntarios iniciados con

antorchas.

La Junta de Investigación de Seguridad y Riesgos Químicos de los Estados Unidos (**CSB**) ha descubierto que el trabajo en caliente es una de las causas más comunes de muerte de trabajadores entre los incidentes investigados por la agencia. El **CSB** sigue observando incidentes de trabajo en caliente y ha encontrado un subconjunto significativo de ocurrencias-que involucran tuberías, tanques o contenedores donde están presentes los productos inflamables-que son particularmente peligrosos. Además, la **CSB** observa repetidamente incidentes de trabajos en caliente que involucran tanques o contenedores en instalaciones de alto riesgo como refinerías y plantas químicas que típicamente resultan en lesiones y muertes y tienen el potencial de resultar en accidentes catastróficos mayores.

Desde 2001, la **CSB** se ha desplegado e investigado 14 incidentes relacionados con el trabajo en caliente que han dado lugar a 25 muertes y 21 lesiones de empleados y miembros del público. La **CSB** sigue vigilando los incidentes de trabajos en caliente en los que la vigilancia continua podría haber alertado a los trabajadores sobre las condiciones cambiantes de las zonas en las que se realizaban los trabajos en caliente.

Entre 2010 y 2013, la **CSB** examinó 187 incidentes de trabajos en caliente, 85 de los cuales resultaron en un incendio o una explosión mientras se realizaban trabajos en caliente en o cerca de un tanque o contenedor. Estos incidentes resultaron en 48 muertos y 104 heridos importantes. El 23 por ciento de las lesiones y el 42 por ciento de las fatalidades involucraron a trabajadores de contratistas.

La **CSB** sigue siendo testigo de incidentes catastróficos que implican trabajos en caliente en tanques y contenedores que contienen vapores inflamables. Las investigaciones anteriores sobre estos incidentes demuestran una falta de conciencia de los peligros de realizar trabajos en caliente en contenedores que, en algunos casos, habían sido previamente limpiados. La **CSB** se desplegó recientemente a dos incidentes de trabajos en caliente, uno en la terminal LP de Sunoco Logísticas en Holanda, Texas, y el

otro en las instalaciones de PCA en DeRidder, Louisiana. En Sunoco, siete contratistas resultaron heridos en un incendio repentino mientras realizaban trabajos en caliente en un oleoducto el 12 de agosto de 2016. El 8 de febrero de 2017, tres contratistas resultaron mortalmente heridos en una explosión en las instalaciones de **PCA** mientras realizaban trabajos en caliente.

Según el informe de la Asociación Nacional de Protección Contra Incendios (**NFPA**) “Incendios de Estructuras Iniciados [por Trabajos en Caliente](#)”, publicado en septiembre pasado, los departamentos de bomberos de los Estados Unidos respondieron a un promedio de 4.400 incendios de estructuras al año que implicaron trabajos en caliente desde 2010 hasta 2014.

Hay otras estadísticas reveladoras.

Según estimaciones de la Comisión de Seguridad de los Productos de Consumo (**CPSC**) Sistema Nacional de Vigilancia Electrónica de Lesiones (**NEISS**), y se estima que 11.500 personas visitaron los departamentos de emergencia de los hospitales debido a lesiones asociadas a soldaduras y herramientas de corte consideradas productos de consumo en 2018.

Obsérvese que en muchos casos no se produjo ningún incendio.

- Las quemaduras de radiación en el globo ocular causaron 4.300 (58%) de estas lesiones.
- 300 (20%) de las heridas involucraban cuerpos extraños en los ojos.

Los siguientes ejemplos de los relatos de la **NEISS** muestran la **importancia de usar protección ocular**.

- Un hombre de 25 años que estaba soldando sin protección ocular sufrió quemaduras de radiación en sus ojos.
- Una mujer de 35 años estaba ayudando a alguien que estaba soldando y más tarde se despertó con “ardor, picazón, dolor en los ojos y fotofobia”. Se le diagnosticó queratitis del soldador.
- Los restos de soldadura causaron una abrasión corneal en un hombre de 69 años.

- Un hombre de 32 años fue a la sala de emergencias después de sufrir quemaduras de flash mientras soldaba la noche anterior.
- Un hombre de 43 años se quemó los ojos al soldar sin usar protección ocular.
- Un hombre de 55 años tenía un trozo de metal en el ojo. Creyó que esto ocurrió mientras soldaba la noche anterior.
- Un material extraño cayó en el ojo de un hombre de 51 años que estaba soldando debajo de un coche.

La **CPSC** estima que otras 1.800 (16%) de las lesiones asociadas a las herramientas de soldadura y corte fueron quemaduras térmicas. Algunas de ellas se debieron al contacto con metal caliente o con un soplete; otras se debieron a incendios reales.

- Un hombre de 25 años estaba soldando en casa cuando las chispas encendieron su chaqueta causando quemaduras de segundo grado en su antebrazo.
- Un hombre de 76 años estaba soldando cuando una chispa encendió sus pantalones causando quemaduras en la parte inferior de su pierna.
- Un hombre de 49 años se quemó la mano con metal caliente mientras soldaba.
- Un hombre de 18 años recogió un trozo de metal desnudo mientras soldaba con las manos desnudas.

MANTENGA EN CUENTA

Peligros / Peligros

El trabajo en caliente produce arcos eléctricos o llamas que pueden llegar hasta 10.000. Las altas temperaturas, las chispas y la escoria, son también un peligro siempre presente. Los equipos de trabajo calientes, como los circuitos de soldadura por arco, pueden causar una electrocución grave o fatal. La **soldadura por arco** produce una intensa luz que puede dañar la retina de los soldadores.

Peligros para la salud

Estos componentes del humo de la soldadura pueden afectar a los

pulmones, el corazón, los riñones y el sistema nervioso central del soldador. La [exposición a largo plazo al humo de la soldadura](#) puede causar problemas respiratorios crónicos, disminución de la capacidad pulmonar, enfermedades cardíacas, enfermedades de la piel, pérdida de la audición, daño renal, daño reproductivo y otras enfermedades.

Según la definición de la **NFPA 51B**, el trabajo en caliente es cualquier trabajo que implique “quemar, soldar o una operación similar que sea capaz de iniciar incendios o explosiones”. No es sólo el trabajo que implica llamas. Después de todo, no necesitas una llama para generar calor. Actividades como taladrar, soldar, soldar, golpear, moler, tratar con calor, astillar, descongelar tuberías y chorrear con abrasivos, a menudo conocido como chorro de arena, se consideran trabajos en caliente.

Según el informe de la **NFPA** sobre incendios de estructuras de trabajo calientes, la soldadura causa el 34 por ciento de los incendios de trabajo calientes iniciados en los hogares. Debido a que este trabajo debe realizarse normalmente cerca de materiales de construcción y aislamiento combustibles, puede ser un desafío significativo de seguridad en el trabajo en caliente.

La **NFPA 51B** y otras prácticas de seguridad en trabajos en caliente requieren que alguien -normalmente un vigilante de incendios entrenado- permanezca en el lugar de trabajo durante un mínimo de 30 minutos después de que el trabajo en caliente se haya detenido para vigilar el lugar en busca de cualquier condición de humo o reignición por brasas calientes o calor retenido. Y el calor tiene una forma de quedarse. Los datos del seguro indican que el calor retenido ha contribuido a las condiciones de reignición hasta cuatro horas después de que se haya realizado el trabajo en caliente.

La **NFPA 51B** exige que se establezca un equipo de seguridad para trabajos en caliente compuesto por tres personas: la persona encargada (denominada en la **NFPA 51B** como la persona que autoriza el permiso, o PAI); un operador de trabajos en caliente; y un vigilante de incendios. La norma define sus deberes como responsables de la seguridad en el lugar de trabajo e identifica

cualquier cambio en las condiciones para que el trabajo en caliente se detenga hasta que las condiciones sean reevaluadas. El mensaje en el lugar de trabajo para todos los trabajadores es que si ven algo que pueda ser un cambio inseguro en las condiciones, deben decírselo a alguien para que pueda ser comprobado.

Muchos tipos de trabajo en caliente, como la soldadura, el esmerilado y el corte con soplete, producen chispas, escoria o salpicaduras que pueden llegar mucho más allá del área de trabajo inmediata. Por esa razón, la **NFPA 51B** establece una distancia mínima segura de 35 pies en todas las direcciones desde la ubicación del trabajo en caliente. En otras palabras, los materiales combustibles deben ser movidos al menos 35 pies de distancia del trabajo para prevenir el contacto con los residuos del trabajo caliente, como chispas o escoria. Esa distancia es sólo un mínimo, y condiciones como el viento o la proximidad a la hierba seca podría requerir una distancia mayor. Mientras se trabaja en un lugar elevado, por ejemplo, donde las chispas pueden caer verticalmente.

By the Numbers – Head Protection – Spanish

Protección De La cabeza

¿LO SABÍAS?

Las lesiones en la cabeza cambian la vida. Las lesiones en la cabeza pueden provocar daños a largo plazo y la muerte, con lesiones que a menudo incluyen pérdida de memoria, huesos fracturados y daños en la columna vertebral, algunos de los cuales

no se pueden curar.

En 2012, se produjeron más de 65.000 casos de días de ausencia del trabajo debido a lesiones en la cabeza en el lugar de trabajo (según la edición de 2015 del libro de gráficos del Consejo Nacional de Seguridad "Injury Facts"). Ese mismo año, 1.020 trabajadores murieron por lesiones en la cabeza sufridas en el trabajo.

Las lesiones cerebrales traumáticas (TBI) son el principal tipo de lesiones en la cabeza. Las LCT son una causa significativa de muerte y discapacidad en los Estados Unidos, contribuyendo [a cerca del 30% de todas las muertes por lesiones.](#) A pesar de la seguridad que se da a los trabajadores desde la norma del casco de seguridad, todavía hay incidentes de lesiones cerebrales traumáticas, especialmente en la construcción, donde hubo [2.200 muertes entre 2003 y 2010.](#)

Sin embargo, según una encuesta sobre accidentes y lesiones en el lugar de trabajo realizada por la Oficina de Estadísticas Laborales (BLS), el 84% de todos los trabajadores que sufrieron lesiones en la cabeza no usaban protección para la cabeza.

Una lesión leve en la cabeza, como una conmoción cerebral, puede [costar a una empresa más de 100.000 dólares,](#) mientras que [las lesiones moderadas se estima que cuestan 941.000 dólares y las lesiones graves hasta 3 millones de dólares,](#) y eso sin incluir el costo de los problemas emocionales y físicos.

Las lesiones relacionadas con el trabajo son problemas de salud pública a escala mundial, y conllevan costos médicos y sociales exorbitantes, así como una pérdida de vida sana y de productividad. La caída relacionada con el trabajo fue la segunda causa de muerte entre las lesiones relacionadas con el trabajo, después de los accidentes automovilísticos. Por el mecanismo de la lesión, las lesiones mortales por caídas relacionadas con el trabajo representaron el 14% en los Estados Unidos entre todos los casos fatales después de las lesiones relacionadas con el trabajo. El coste económico de las lesiones por caídas no mortales relacionadas con el trabajo en los EE.UU. fue de casi 16.000

millones de dólares al año, y más del 25% de las lesiones por caídas dieron lugar a la pérdida de 31 o más días de trabajo.

Según los datos de los CDC, entre 2006 y 2014 aumentaron las tasas de visitas al departamento de emergencias (ED) de las LCT:

- 80% como resultado de las caídas
- 60% como resultado de una auto-daño intencional
- 58% como resultado de ser golpeado por o contra un objeto
- 24% como resultado de accidentes de vehículos de motor
- 18% como resultado de un asalto

Entre los 1.651 pacientes que sufrieron lesiones por caídas relacionadas con el trabajo, se inscribieron 1.298 (78,6%) en este estudio. Se excluyeron los casos en los que no se disponía de información sobre la altura de la caída ($n = 305$, 22,7%) y el casco de seguridad ($n = 48$, 2,9%).

MANTENGA EN CUENTA

El propósito de la protección de la cabeza en cualquier programa de EPP de un empleador es ayudar a controlar lo incontrolable – que es mitigar y/o eliminar los peligros y la exposición a las lesiones mientras se está en el trabajo.

Peligros comunes para proteger su cabeza contra

El riesgo de sufrir una lesión en la cabeza depende del entorno de trabajo y sus peligros asociados, ya que no todos los entornos de trabajo requieren protección para la cabeza. Sin embargo, cuando se requiere, un trabajador debe usar protección incluso cuando no hay signos aparentes de peligro. Industrias como la construcción, la energía, el petróleo y el gas, la minería, la silvicultura y

otras hacen cumplir tales normas, ya que el riesgo de lesiones en la cabeza de los trabajadores está continuamente presente.

Los empleadores deben asegurarse de que sus trabajadores usen protección en la cabeza si están en riesgo de estos peligros comunes:

1. Ser golpeado por objetos que caen
2. Golpeando sus cabezas en objetos fijos
3. Al entrar en contacto con los peligros eléctricos

Estos peligros comunes abarcan la mayoría de las formas en que podría ocurrir una lesión potencial, y pueden tener diferentes significados según el entorno de trabajo. Comprender los peligros potenciales en su lugar de trabajo es imperativo para evaluar el tipo de EPP necesario para mantener a raya las lesiones.

La lesión cerebral traumática (LCT) es una causa común de fatalidad, deterioro cognitivo y discapacidad funcional posterior a la lesión. Además, incluso una LCT leve puede tener consecuencias a largo plazo. La LCT grave es un evento catastrófico que puede resultar potencialmente en una vida socioeconómica devastadora, ya que las secuelas afectan múltiples aspectos de la vida diaria; sin embargo, no hubo evidencia que mostrara que las intervenciones terapéuticas después de sufrir una LCT grave puedan mejorar efectivamente el resultado funcional. Por lo tanto, se hace hincapié en los esfuerzos dirigidos a la concienciación sobre el peligro y la prevención de lesiones para reducir la carga de salud pública de la LCT. Las LCT relacionadas con el trabajo son causadas principalmente por caídas, accidentes de vehículos de motor y asaltos en las industrias manufactureras y de la construcción, y pueden evitarse mediante el desarrollo de medidas preventivas. Sin embargo, las intervenciones con el objetivo de prevenir las LCT resultantes de lesiones por caídas no están disponibles en el actual entorno laboral.

Los cascos de seguridad son equipos de protección útiles, que

reducen el riesgo de sufrir una lesión cerebral traumática y la muerte resultante de actividades deportivas, así como de accidentes de motocicleta y bicicleta. Sin embargo, no se ha verificado el efecto preventivo de los cascos de seguridad en los resultados de salud resultantes de lesiones por caídas relacionadas con el trabajo, principalmente porque los cascos de seguridad se han utilizado sobre todo para evitar que los trabajadores sufran lesiones en la cabeza causadas por objetos que caen o vuelan.

Las precauciones de seguridad que se centran en la reducción del riesgo de LCT resultante de lesiones por caídas son limitadas en el entorno laboral actual. Además, los estudios de investigación que se centran en el efecto de los cascos de seguridad en la reducción del riesgo de LCT resultante de lesiones por caídas relacionadas con el trabajo son poco frecuentes.

Protección de la cabeza en el lugar de trabajo

Hay muchas maneras en que un trabajador puede sufrir una lesión en la cabeza en el lugar de trabajo, algunas de las cuales pueden tener consecuencias devastadoras. Si bien algunos accidentes por resbalones y caídas suelen ser bastante fáciles de evitar manteniendo el área de trabajo libre de derrames de agua o productos químicos, los accidentes causados por equipos defectuosos, los que se producen al operar maquinaria pesada o por la caída de objetos pueden ser difíciles de detectar.

Las lesiones en la cabeza pueden ser fatales y pueden afectar la capacidad de un individuo para trabajar por el resto de su vida natural. Sin embargo, cuando son importantes, aunque a menudo se ignoran, las medidas de seguridad que se observan regularmente, como el uso de un casco para protegerse **la cabeza**, pueden evitar millones de las lesiones no mortales en el lugar de trabajo que los trabajadores experimentan cada año.

Según el reglamento de **protección de la cabeza de la** Administración de Seguridad y Salud Ocupacional (OSHA), los

empleadores están obligados a proporcionar cascos duros a los empleados que trabajen cerca de conductores eléctricos expuestos que puedan entrar en contacto con la cabeza para reducir el riesgo de descargas eléctricas. Los trabajadores también deben usar equipo de **protección de la cabeza** cuando trabajen en lugares donde puedan golpearse fácilmente la cabeza, como cuando trabajen cerca de tuberías expuestas, alrededor de cintas transportadoras u otra maquinaria que pueda hacer que los objetos se desplacen y caigan, incluido el trabajo en alturas.

La Asociación Canadiense de Normalización (CSA) y el Instituto Nacional de Normalización de los Estados Unidos (ANSI) han establecido normas para los cascos.

Los cascos deben proteger la cabeza del portador contra los impactos y contra los pequeños objetos voladores o que caen. Debe ser capaz para soportar un contacto eléctrico igual a 20.000 voltios de fase a tierra.

El portador y el empleador necesitan saber el uso y cuidado de los cascos de los empleados.

- Inspecciona la carcasa, la suspensión y el revestimiento todos los días antes de usarlos. Busque grietas, abolladuras, cortes o gubias. Reemplace inmediatamente los sombreros y revestimientos dañados o desgastados.
- Si un casco es golpeado por un objeto, no lo siga usando.
- No guarde su casco bajo la luz directa del sol, envejecerá más rápido y puede volverse quebradizo.
- Limpie la cáscara, la suspensión y el revestimiento regularmente con agua y jabón suave.
- Nunca altere su casco pintándolo, haciendo agujeros en él, etc.
- No lleves cosas dentro de tu casco.
- No lleves una gorra de béisbol bajo tu casco.

- Use un casco con un barbijo cuando trabaje en las alturas o en condiciones de viento.
- Compruebe la vida útil de su casco poniéndose en contacto con el fabricante o leyendo las instrucciones.
- Coloque pegatinas retro reflectantes o cinta adhesiva en un casco puede ayudar a que los trabajadores sean vistos por los vehículos y equipos en movimiento en condiciones en las que la visibilidad es reducida.

Sin embargo, las pegatinas o la cinta deben ser compatibles con el material de la superficie, no deben afectar negativamente al material y no deben interferir con la capacidad de inspeccionar el casco para detectar defectos. Colóquelas al menos a 13 mm (1/2 in) por encima del borde del ala.

- Los cascos deben absorber con seguridad el choque de un objeto que cae.
- Debe evitar que un objeto lo penetre.
- Debe encajar bien en la cabeza de un trabajador.
- Debe ser resistente al agua.
- Debe arder lentamente al contacto con el fuego.

Hay formas en que una empresa puede mantenerse en el cumplimiento de la Administración de Seguridad y Salud Ocupacional. Una forma sencilla es asegurarse de que cada trabajador lleve el equipo de protección personal (PPE) adecuado en todo momento. Los empleadores también deben asegurarse de que sus trabajadores se mantengan al día con la educación y la capacitación de la OSHA y asegurarse de que dicho material educativo esté fácil y regularmente disponible para todos los miembros de la organización.

Por lo tanto, todo trabajador debe asegurarse de llevar siempre el EPP adecuado, especialmente la **protección de la cabeza** cuando exista la posibilidad de que los objetos caigan desde arriba o de que la cabeza entre en contacto accidental con peligros eléctricos, a fin de reducir al mínimo las lesiones a sí mismo y a los que le rodean.

By the Numbers – Head Protection

PPE HEAD PROTECTION

DID YOU KNOW?

Injuries to the head are life-changing. Head injuries can result in long-term damage and death, with injuries often including memory loss, fractured bones, and spine damage – some of which cannot be cured.

In 2012, more than 65,000 cases involving days away from work occurred due to head injuries in the workplace (according to the 2015 edition of the National Safety Council chartbook “Injury Facts”). That same year, 1,020 workers died from head injuries sustained on the job.

Traumatic brain injuries (TBI) are the primary type of head injuries. TBI is a significant cause of death and disability in the United States, [contributing to about 30% of all injury death.](#) Despite the security given to workers from the safety helmet standard, there are still incidents of traumatic brain injury, especially in construction, where there were [2,200 fatalities between 2003 and 2010.](#)

However, according to a survey about worksite accidents and injuries conducted by the Bureau of Labor Statistics (BLS), 84% of all workers who suffered head injuries were not wearing head protection.

A mild head injury, such as a concussion, can [cost a company over \\$100k,](#) whereas [moderate injuries are estimated to cost \\$941,000 and severe injuries up to \\$3 million](#) – and that’s not including

the cost of emotional and physical issues.

Work-related injuries are public health issues on a global scale, and they lead to exorbitant medical and social costs as well as to a loss of healthy life and productivity. Work-related fall was the second leading cause of death among work-related injuries after motor vehicle crashes. By the mechanism of injury, the fatal work-related fall injuries accounted for 14% in the US among all case-fatality after work-related injuries. The economic cost from nonfatal work-related fall injuries in the US was nearly 16 billion USD per year, and over 25% of fall injuries resulted in 31 or more workdays being lost.

Based on CDC data, between 2006 and 2014, rates of TBI emergency department (ED) visits increased:

- 80% as a result of falls
- 60% as a result of intentional self-harm
- 58% as a result of being struck by or against an object
- 24% as a result of motor vehicle crashes
- 18% as a result of assault

Among 1651 patients who suffered from work-related fall injuries, 1298 (78.6%) patients were enrolled for this study. Cases who had unavailable information regarding the height of fall ($n = 305$, 22.7%) and safety helmet ($n = 48$, 2.9%) were excluded.

KEEP IN MIND

The purpose of head protection in any employer's PPE program is to help control the uncontrollable – which is to mitigate and/or eliminate hazards and exposure to injury while on the job.

Common Hazards to Guard your Head

Against

Being at risk for a head injury is dependent on your work environment and its associated hazards, as not all working environments require head protection. However, when it is required, a worker must wear protection even when

there are no apparent signs of danger. Industries like construction, power, oil and gas, mining, forestry, and others enforce such standards as the risk of head injury to workers is continuously present.

Employers must ensure their workers wear head protection if they are at risk of these common hazards:

1. Being struck by falling objects
2. Bumping their heads on fixed objects
3. Coming into contact with electrical hazards

These common hazards encompass most ways in which a potential injury could occur, and they can have different meanings depending on the work environment. Understanding the potential hazards at your workplace is imperative in assessing the type of PPE needed to keep injuries at bay.

Traumatic brain injury (TBI) is a common cause of case-fatality, cognitive impairment, and post-injury functional disability. Furthermore, even mild TBI can have long-term consequences. Severe TBI is a catastrophic event that can potentially result in a devastating socioeconomic life since the sequelae affects multiple aspects of daily life; however, there was no evidence showing that therapeutic interventions after suffering severe TBI can effectively improve the functional outcome. Therefore, efforts directed towards awareness of hazard and injury prevention are emphasized to reduce the public health burden of TBI. Work-related TBI is caused mainly by falls, motor vehicle crashes, and assaults in manufacturing and construction industries, and it is avoidable

by developing preventive measures. However, interventions with the goal of preventing TBI resulting from fall injuries are not available in the current workplace environment.

Safety helmets are useful protective equipment, which reduce the risk of TBI and death resulting from sports activities as well as motorcycle and bicycle accidents. However, the preventive effect of safety helmets on health outcomes resulting from work-related fall injuries has not been verified mainly because safety helmets have been primarily used to prevent workers from experiencing head injuries caused by falling or flying objects.

Safety precautions that focus on reducing the risk of TBI resulting from fall injuries are limited in the current workplace environment. In addition, research studies that focus on the effect of safety helmets on reducing the risk of TBI resulting from work-related fall injuries are rare.

Head Protection in The Workplace

There are many ways in which a worker can sustain a head injury within the workplace some of which can have devastating consequences. While some slip and fall accidents are often quite easy to avoid by keeping the work area free of water or chemical spills, accidents caused by defective equipment, those incurred when operating heavy machinery, or from falling object can be hard to detect.

Head injuries can be fatal and may affect an individual's ability to work for the rest of their natural life. However, when important, yet often ignored, safety measures are regularly observed, such as wearing a hard hat for **head protection**, may avert millions of the nonfatal workplace injuries that workers experience each year.

Under Occupational Safety and Health Administration's (OSHA) **head protection** regulation, employers are required to provide hard hats for employees who work near exposed electrical conductors that may contact the head to decrease the risk of electrical shock. Workers must also wear **head protection** gear when working in places where

they can easily bump their head, such as when working near exposed pipes, around conveyor belts or other machinery that may cause objects to dislodge and fall including working at heights.

Hard Hat Standards have been established by Canadian Standards Association (CSA) and the American National Standards Institute (ANSI).

Hard Hats must protect the wearer's head against impact and against small flying or falling objects. It must be able

to with stand an electrical contact equal to 20,000 volts phase-to-ground.

The wearer and the employer need to know the use and care of employee hard hats.

- Inspect the shell, suspension, and liner every day before you use it. Look for cracks, dents, cuts, or gouges. Replace damaged or worn hats and liners
- If a hard hat is struck by an object, do not keep using
- Don't store your hard hat in direct sunlight—it will age quicker and can become
- Clean the shell, suspension, and liner regularly with mild soap and
- Never alter your hard hat by painting it, making holes in it,
- Don't carry things inside your hard
- Don't wear a baseball cap under your hard
- Use a hard hat with a chinstrap when working at heights or in windy
- Check the service life of your hard hat by contacting the manufacturer or reading the manufacturer's

instructions.

- Putting retroreflective stickers or tape on a hard hat can

help workers be seen by moving vehicles and equipment in conditions where visibility is low. However, the stickers or tape must be compatible with the surface material, not adversely affect the material, and not interfere with the ability to inspect the hard hat for defects. Place them at least 13 mm (1/2 in) above the edge of the brim.

- Hard hats must safely absorb the shock of a falling object
- It must prevent an object from penetrating
- It must fit a worker's head
- It must be water resistant
- It must burn slowly when in contact with fire.

There are ways that a business can stay in Occupational Safety and Health Administration compliance. One simple way is to ensure that each worker is wearing the proper Personal Protective Equipment (PPE) at all times. Employers should also ensure that their workers stay up to date with OSHA education and training and make sure that such educational material is readily and regularly available to everyone within the organization.

Every worker must, therefore, ensure that they are wearing the right PPE at all times, especially **head protection** where there is a potential for objects falling from above or accidental head contact with electrical hazards so as to minimize injuries to themselves and those around them.

By the Numbers – Hot Work

Hot Work

DID YOU KNOW?

Industrial Safety & Hygiene News, using figures from OSHA studies, reports that 1 in 250 construction workers will die from a welding

injury. With over half a million American welders working today, we can conservatively expect 2,000 welding fatalities in our lifetime. That's not even mentioning the many more permanent injuries that welders will incur.

- From 2001-2018, five firefighters were fatally injured in four unintentional fires started by torches.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) has found that hot work is one of the most common causes of worker deaths among incidents investigated by the agency. The CSB continues to see hot work incidents and has found a significant subset of occurrences—those involving piping, tanks, or containers where flammables are present—to be particularly dangerous. In addition, the CSB repeatedly observes hot work incidents involving tanks or containers at high-hazard facilities such as refineries and chemical plants that typically result in injuries and fatalities and have the potential to result in major catastrophic accidents.

Since 2001, the CSB has deployed to and investigated 14 hot work-related incidents that have resulted in 25 fatalities and 21 injuries to employees and members of the public. The CSB continues to monitor hot work incidents where continuous monitoring could have alerted workers to the changing conditions in areas where hot work activity was conducted.

Between 2010 and 2013, the CSB reviewed 187 hot work incidents, 85 of which resulted in a fire or explosion while hot work was being conducted on or near a tank or container. These incidents resulted in 48 fatalities and 104 significant injuries. Twenty-three percent of injuries and 42 percent of fatalities involved contractor workers.

The CSB continues to see catastrophic incidents involving hot work on tanks and containers containing flammable vapors. Past investigations into these incidents demonstrate a lack of awareness of the hazards of conducting hot work on containers that in some cases had previously been cleaned. The CSB recently deployed to two hot work incidents, one at the Sunoco Logistics LP

terminal in Nederland, Texas, and the other at the PCA facility in DeRidder, Louisiana. At Sunoco, seven contractors were injured in a flash fire while conducting hot work on a pipeline on August 12, 2016. On February 8, 2017, three contractors were fatally injured in an explosion at the PCA facility while conducting hot work.

According to the NFPA report "[Structure Fires Started by Hot Work](#)," issued last September, fire departments in the United States responded to an average of 4,400 structure fires a year involving hot work from 2010 to 2014.

There are other revealing statistics.

According to estimates from the Consumer Product Safety Commission (CPSC's) National Electronic Injury Surveillance System (NEISS), and estimated 11,500 people visited hospital emergency departments because of injuries associated with welding soldering, and cutting tools considered consumer products in 2018.

Note that in many cases, no fire occurred.

- Radiation burns to the eyeball caused 4,300 (58%) of these injuries.
- 2,300 (20%) of the injuries involved foreign bodies in the eyes.

The following examples from the **NEISS narratives show the importance of wearing eye protection.**

- A 25-year-old man who was welding without eye protection suffered radiation burns to his eyes.
- A 35-year-old female was assisting someone who was welding and later woke with "burning, itching, eye pain, and photophobia". She was diagnosed with welder's keratitis.
- Welding debris caused a corneal abrasion in a 69-year-old man.
- A 32-year-old man went to the ED after suffering flash burns while welding the night before.
- A 43-year-old man burned his eyes while welding without wearing eye protection.
- A 55-year-old man had a piece of metal in his eye. He

believed that this occurred while soldering the night before.

- Foreign material fell into the eye of a 51-year-old man who was welding under a car.

CPSC estimates that another 1,800 (16%) of the injuries associated with welding, soldering, and cutting tools were thermal burns. Some of these were due to contact with hot metal or a blow torch; others involved actual fires.

- A 25-year-old man was welding at home when sparks ignited his jacket causing second-degree burns to his forearm.
- A 76-year-old man was welding when a spark ignited his pants causing burns to his lower leg.
- A 49-year-old man burned his hand on hot metal while welding.
- An 18-year-old man picked up a piece of bare metal while welding barehanded.

KEEP IN MIND

Hazards / Dangers

Hot work produces electrical arcs or flames that can reach up to 10,000. High temperatures, sparks and slag, are also an ever-present danger. Hot work equipment, such as arc welding circuits, can cause serious or fatal electrocution. **Arc welding** produces [intense UV light](#) that can damage welders' retinas.

Health Dangers

These components in welding smoke can affect the welder's lungs, heart, kidneys and central nervous system. [Long-term exposure](#) to welding smoke can cause chronic respiratory problems, decreased lung capacity, heart disease, skin disease, hearing loss, kidney damage, reproductive harm, and other diseases.

As defined by NFPA 51B, hot work is any work that involves "burning, welding, or a similar operation that is capable of initiating fires or explosions." It's not just work that involves

flames. After all, you don't need a flame to generate heat. Activities such as drilling, soldering, brazing, tapping, grinding, heat treating, chipping, thawing pipes, and abrasive blasting—often referred to as sand blasting—are all considered hot work.

According to the NFPA report on hot work structure fires, soldering causes 34 percent of hot work fires started in homes. Because this work must usually be performed close to combustible construction materials and insulation, it can be a significant hot work safety challenge.

NFPA 51B and other hot work safety practices require someone—normally a trained fire watch—to remain at the work site for a minimum of 30 minutes after hot work has stopped to monitor the site for any smoldering conditions or reignition from hot embers or retained heat. And heat has a way of sticking around. Insurance data indicates that retained heat has contributed to reignition conditions up to four hours after the hot work was performed.

NFPA 51B requires establishing a hot work safety team consisting of three individuals: the person in charge (referred to in NFPA 51B as the permit authorizing individual, or PAI); a hot work operator; and a fire watch. The standard defines their duties as being responsible for safety on the work site and identifying any change in conditions so that hot work stops until the conditions are reevaluated. The message on the job site for all workers is if they see something that might be an unsafe change in condition, they need to tell someone so it can be checked.

Many types of hot work, such as welding, grinding, and torch cutting, produce sparks, slag, or spatter that can reach well beyond the immediate work area. For that reason, NFPA 51B establishes a minimum safe distance of 35 feet in all directions from the location of the hot work. In other words, combustible materials must be moved at least 35 feet away from the work to prevent contact with the hot work residue, such as sparks or slag. That distance is only a minimum, and conditions such as wind or proximity to dry grass might necessitate a greater distance. While

working at an elevated location, for instance, where sparks can fall vertically.

By the Numbers – Injury and Illness

injury & illness

DID YOU KNOW?

In the decades since the *Occupational Safety and Health Act* (OSH Act) was signed into law, workplace deaths and reported occupational injuries have dropped by more than 60 percent. Yet the nation's workers continue to face an unacceptable number of work-related deaths, injuries and illnesses, most of them preventable:

- Every day, more than 12 workers die on the job – over 4,500 a year.
- Every year, more than 4.1 million workers suffer a serious job-related injury or illness.

OSHA Reports Dramatic Increase in Fatal Occupational Injuries

The Bureau of Labor Statistics' Census of 2016 Fatal Occupational Injuries reports there were 5,190 workplace fatalities in 2016, a seven percent increase from 2015, and notes that opioid-related deaths are on the rise in the workplace.

Fatal workplace injuries showed a dramatic uptick in 2016, rising by 7 percent over the number of workplace fatalities tallied in

2015. The fatal injury rate also increased from 3.4 per 100,000 full-time equivalent workers in 2015 to 3.6 in 2016.

More workers lost their lives in transportation incidents than any other event in 2016, accounting for about one out of every four fatal injuries. Workplace violence injuries increased by 23 percent, making it the second-most common cause of workplace fatality. The Dec. 19 report also shows the number of overdoses on the job increased by 32 percent in 2016, and the number of drug-related fatalities has increased by at least 25 percent annually since 2012.

Today's occupational fatality data show a tragic trend with the third consecutive increase in worker fatalities in 2016 – the highest since 2008. When 5,214 workers lost their lives.

The increase in job fatalities in 2016 reported by BLS shows that for many groups of workers in this country work is becoming more dangerous and deadly. 5,190 workplace deaths from injuries means that 14 workers were killed on the job a day, the highest number since 2008 and the highest rate since 2010."

The National Safety Council (NSC) released a statement indicating it "is very disheartened to see the latest data from the Bureau of Labor Statistics showing a seven percent rise in workplace deaths since 2015. Fatal work injuries reached 5,190 in 2016 – the third consecutive annual increase and the first time in nearly a decade that the number has surpassed 5,000."

NSC, provided more statistics.

- Overdoses from the non-medical use of drugs or alcohol while on the job increased from 165 in 2015 to 217 in 2016, a 32 percent increase.
- Deaths among workers aged 55 or older totaled 1,848 – a 9.9 percent increase.
- Deaths among black or African-American, non-Hispanics increased 18.6 percent, totaling 587.
- Deaths among Asian, non-Hispanic workers increased 40.4 percent, totaling 160 deaths.

- Fall, slip and trip deaths increased 6 percent, totaling 849 deaths.
- Transportation incidents remained the most common fatal event, totaling 2,083 deaths.
- Unintentional workplace deaths increased 5 percent, totaling 4,399 deaths.
- Homicides increased 19.9 percent now totaling 500 deaths.
- **Falls:** Approximately 36.5% of all deaths in the workplace occurred due to employees falling. These includes workers who have fallen due to unprotected sides or holes, improperly constructed walking or working surfaces, workers who have fallen off ladders, roofs, scaffolding, large skyscraper construction areas, etc., all due to failure to use proper fall protection. Incorporating the OSHA fall protection requirements would resolve these issues.
- **Struck by an Object:** An estimated 10.1% of deaths occurred due to swinging, falling, or misplaced objects. These also include falling objects due to rigging failure, lose or shifting materials, equipment malfunctions, and vehicle or equipment strikes.
- **Electrocutions:** About 8.6% of employees died due to electrocution. Workers face a number of electrocution risks on construction sites, such as exposed wiring, wet conditions while outlets are exposed, etc. These are caused by contact with overhead power lines or energized conductors or circuit parts in electrical panels and equipment panels, poorly maintained extension cords and power tools, as well as lightning strikes. Strict adherence to OSHA 1910.331-.335, 1910.269, and NFPA 70E Standard for Electrical Safety in the Workplace would prevent these accidents.
- **Caught-in or Caught-between:** Employees caught in or between machines, devices, or tools causing death accounted for about 2.5% of deaths. These also include trench or excavation collapses, as well as workers caught between moving or rotating equipment, or caught in collapsing structures or materials.

The 2017 OSHA Top 10 Citations provide another insight into the causes of worker injuries and fatalities.

(Death in the Job: The Toll of Neglect)

1. Fall Protection – General Requirements (1926.501): 6,072 violations
2. Hazard Communication (1910.1200): 4,176 violations
3. Scaffolding (1926.451): 3,288 violations
4. Respiratory Protection (1910.134): 3,097 violations
5. **Lockout/Tagout (1910.147): 2,877 violations** – frequent violations were inadequate worker training and inspections not completed. Lockout/tagout procedures are meant to safeguard employees when machinery starts up unexpectedly or when hazardous energy is released during maintenance activities. Failing to train workers or conduct periodic inspections account for many of the violations.
6. Ladders (1926.1053): 2,241 violations
7. Powered Industrial Trucks (1910.178): 2,162 violations
8. Machine Guarding (1910.212): 1,933 violations
9. Fall Protection – Training Requirements: 1,523 violations
10. **Electrical – Wiring Methods (1910.305): 1,405 violations**– Violations of this standard were found in most general industry sectors, including food and beverage, retail, and manufacturing. Faulty electrical wiring methods accounted for 1,405 violations–down from 1,937 in 2016. Frequent violations include improper use of extension cords.

KEEP IN MIND

An *injury and illness prevention program*, is a proactive process to help employers find and fix workplace hazards before workers are hurt. We know these programs can be effective at reducing injuries, illnesses, and fatalities. Many workplaces have already adopted such approaches, for example as part of OSHA's cooperative programs. Not only do these employers experience dramatic decreases in workplace injuries, but they often report a transformed workplace culture that can lead to higher productivity and quality, reduced turnover, reduced costs, and greater employee satisfaction.

California has Lead the Way for Adopting an Injury and Illness Prevention Program.

- Every California employer is required by Cal/OSHA to establish, implement and maintain a written Injury and Illness Prevention Program (IIPP). This written plan must describe your workplace's health and safety program and how you will implement the following eight elements that are required by the Cal/OSHA standard:
- Assignment of the responsibility for safety
- Assessment of workplace hazards
- Investigation of accidents, occupational injuries and occupational illnesses
- Correction of hazards
- Communication with employees and methods for involving them in safety-related activities
- Occupational safety and health training
- Systems for ensuring employee compliance with safety procedures
- Recordkeeping and documentation of your program and program activities.

Thirty-four states and many nations around the world already require or encourage employers to implement such programs. The key elements common to all of these programs are management leadership, worker participation, hazard identification and assessment, hazard prevention and control, education and training, and program evaluation and improvement.

Based on the positive experience of employers with existing programs, OSHA believes that injury and illness prevention programs provide the foundation for breakthrough changes in the way employers identify and control hazards, leading to a significantly improved workplace health and safety environment. Adoption of an injury and illness prevention program will result in workers suffering fewer injuries, illnesses and fatalities. In addition, employers will improve their compliance with existing regulations, and will experience many of the financial benefits of a safer and healthier workplace cited in published studies and reports by individual companies, including significant reductions in workers' compensation premiums.

Fortunately, over the years, injuries and fatalities in the workplace have decreased substantially. Unfortunately, there are many workplace injuries and fatalities that continue to occur every day. OSHA reports that there is an average of 12 work-related fatalities throughout the United States every day.

By the Numbers – Powered Industrial Trucks

POWERED TRUCKS

INDUSTRIAL

DID YOU KNOW?

Forklift Accident Statistics

It shouldn't come as any surprise that a forklift is a dangerous piece of machinery. There are some pretty grim accident statistics to back up that notion. In reality, forklifts account for only [1%](#) of all warehouse or factory accidents. But the accidents tend to be more serious than others, accounting for 10% of all physical injuries in those workplaces.

Here are [five accident statistics](#) that should cause you to exercise extreme caution when operating a

forklift:

1. Forklifts account for around 85 deaths every
2. Forklift accidents that result in serious injury total 34,900
3. Non-serious injuries related to forklift accidents reach 61,800 each
4. A forklift overturning is the most common incident, accounting for 24% of all forklift
5. If companies implemented more stringent training policies, the Occupational Safety & Health Administration (OSHA) estimates that about 70% of forklift accidents in the US could be

KEEP IN MIND

Forklifts can very dangerous.

- They can weigh up to 9,000 pounds, which is three times heavier than many
- They can travel up to 18
- Unlike a car, forklifts only have brakes in the front, making them harder to
- Forklifts are heavier in the rear to compensate for the heavy loads being carried in the front. This uneven weight distribution can make a forklift difficult to
- A forklift is turned by the rear wheels, causing the rear end to swing outward. This increases the chance of tipping over during tight
- Loads are carried in the front of a forklift, which can obstruct the view of the
- Forklifts are often used to raise hefty loads to considerable heights, a combination that is always

Training, Testing, Certifying

Driving a powered industrial truck, or forklift, can be tricky. It does not drive or handle like a car, but like a car where you have

to practice, pass a test and get a license to drive, you must be trained, tested, and certified to operate a forklift.

- Forklifts are less stable because they have 3-point suspension versus an automobile's 4-point
- The back wheels do the turning as opposed to an automobile's front
- Steering requires greater judgement and operating
- Traffic patterns are not as uniform and predictable when driving a forklift as when driving an
- It may seem hard to believe but a fully loaded forklift can weigh hundreds or even thousands of pounds more than a standard

Operational Basics of Forklifts

- Only operate a forklift or other lift truck if you have been trained and authorized to do so. Remember, not all lift trucks are the same – you must be trained on how to safely operate the specific type you are using. Don't let an unauthorized person operate the forklift. Never carry passengers unless the lift is equipped with safe seating and never elevate workers on forks, pallets, or

Inspection

- Always do a pre-operation inspection and have defects you find fixed immediately or tag the forklift out of service and do not use it.

Safe Speed

- Obey speed limits and operate at a safe speed – this could be under the posted speed limit in some cases.

Defects

- Do not operate the forklift if the forks show any of the

defects which shall be withdrawn from service and discarded or properly

- Surface cracks
- Blade or shank are not straight.
- Fork angle from blade to shank is not
- Difference in height of fork
- Positioning lock not in working
- Fork blade or shank wear.
- Fork hooks wear.
- Fork marking not legible.

ATTACHMENTS

Operators must be trained in the proper use of attachments because they alter the performance of the forklift. Attachments affect the truck's performance by changing its center of gravity, visibility, and capacity. The weight of the attachment reduces the lifting capacity of the truck. Tip over and falling loads. The attachment increases the load center by moving the load further away from the balance or fulcrum point.

- Slip-sheet attachments which avoid the use of
- Sideshifters shift the forks right and
- Container handlers designed to lift shipping
- Carton clamps equipped with a pressure valve to squeeze the
- Cotton or pulp bale clamps that grab and hold
- Paper roll
- Barrel
- Rotators that grab and rotate the
- Extending or telescoping forks such as in reach and turret
- Personnel platforms specially designed for lifting

Traveling with a Load – Forks Upgrade

When traveling with a load, the load should point up the incline, regardless of direction of travel.

Going up the incline:

1. Drive
2. Forks pointed
3. Use a spotter if load blocks the driver's

Going down the incline:

1. Drive in
 2. Turn head and face
 3. Forks pointed up the grade.
-

By the Numbers – Safe Lifting

SAFE LIFTING

DID YOU KNOW?

Manual lifting, is a source of many injuries.

- Overexertion while lifting can result in strains, sprains, torn ligaments or muscles, and ruptured or slipped The [Bureau of Labor Statistics](#) reports that 94,420 workers in private industry suffered injuries due to overexertion while lifting during 2015. These injuries were serious enough to require days away from work.
- Falls to a lower level (which many people consider to be more hazardous than lifting) caused 50,490 injuries during
- According to the National Safety Consul Laboure and Medical Research 20 % of back aches are interpreted to inflammation such as writers 10 % are due to actually about back injuries and other mexolide causes, 70 % result from degeneration of spinal discs that's right agent of spinal discs criteria causes the most trouble and can cause strain pain even from routine body

FACTS

- Injuries come from grounds workers lifting and lowering mowing equipment off trucks, employees lifting special needs students who have fallen or lifting/lowering them to and from wheelchairs, nutrition services workers who retrieve food containers from bottom shelves multiple times a day, or custodians who are injured from emptying trash cans in the cafeteria. According to the Bureau of Labor Statistics, work-related musculoskeletal disorders (WMSDs), **including back injuries, account for more than one out of every three work-related injuries in the United**
- Lifting and carrying objects is common for many workers across the country. But training is important. If performed improperly, lifting and carrying items can lead to **The National Safety Council notes that manual handling of objects accounts for an estimated 25 percent of all occupational injuries.** Common materials-handling injuries include strains and sprains (specifically to the back), cuts, fractures, and bruises.

According to the Bureau of Labor Statistics, back injuries are responsible for more lost work time than any other musculoskeletal injury. Moreover, of injuries occurring to the lower back, 3 out of 4 occurred while the employee was lifting. The frequency and economic impact of back injuries and disorders on the workforce are expected to increase over the next several decades as the average age of the workforce increases and medical costs go up.

NIOSH MODEL

NIOSH has developed a mathematical model that helps predict the risk of lifting-related injuries. The lifting equation defines a recommended weight limit (RWL) for specific lifting tasks that most workers could perform over an eight-hour day without increasing the risk of developing lower back pain.

The RWL is defined by the following equation:

$$RWL = LC \times HM \times VM \times DM \times AM \times FM \times CM$$

The equation is based on a model that provides a unit value for six task variables:

LC = Weight of the object lifted

HM = Horizontal distance of hands from midpoint between the ankles

VM = Vertical distance of the hands from the floor

DM = Vertical travel distance between the origin and the destination of the lift

AM = Angle of asymmetry – angular displacement of the load from the sagittal plane

FM = Average frequency rate of lifting measured in lifts/minute

CM = A value derived from lifting frequency and vertical displacement of the lift

The lifting index (LI) provides a relative estimate of the physical stress associated with a manual lifting job. The equation for the LI is:

$$LI = \text{Load weight (weight of load in pounds or kilograms)} / RWL$$

The LI can be used to estimate the relative magnitude of physical stress for a task or job. The greater the LI, the smaller the fraction of workers capable of safely sustaining the level of activity. Thus, two or more job designs could be compared.

When it comes to redesigning a task or workstation, you can test several scenarios using differing task variables before making adjustments or spending scarce resources. By varying the individual values in the formula, you can anticipate the effects of job modification prior to implementing any changes. Being able to change the causal factors theoretically allows the employer to address the largest contributing factors to ergonomic injuries more quickly.

The LI can also help prioritize ergonomic redesign. For example, a

series of suspected hazardous jobs could be ranked according to the LI and a control strategy could be developed according to the rank ordering (i.e., jobs with lifting indices above 1.0 or higher would benefit the most from redesign).

The equation does have limitations, however. It only addresses two-handed lifts, for instance.

Material handling tasks should be designed to minimize the weight, range of motion and frequency of the activity, and using the equation allows you to get closer to optimal from the beginning.

KEEP IN MIND

Ergonomics and safe lifting practices go “hand in hand”. Ergonomic can be defined as the study of people in their working environment. The back is an apt starting point in the study of ergonomics. Why? Because back injuries are a major cause of lost workdays and represent nearly a quarter of lost time and half of all compensation costs both long – term and short – term.

Your back is not like other tools that you can replace when they are damaged.!!! The back is a network of fragile ligaments, discs and muscles which can easily be thrown out of order.

There are 33 vertebrae in your back that are separated by discs and held together by ligaments. The back has many different muscles to hold all the vertebrae together. Three curves make up your back – cervical (neck), thoracic (mid-back) and lumbar (lower back)). Unless you are standing in a natural position, with your ears, shoulders and hips all aligned, your spine is under some type of stress.

Almost everyone has suffered back pain at some time. Common causes include but are not limited to sitting improperly, heavy lifting, falls, motor vehicle incidents and whole-body vibration. To understand how often the back is used, just think that every time you bend, your back lifts approximately 70% of your body weight even when you aren't lifting anything.

It is important to remember that it is not necessarily the weight of the load that causes the injuries, but rather the frequency and duration of handling. If the load is heavy, the frequency and duration of the lift will have to decrease. The human body is made for a variety of tasks, so it's important to have variety in the tasks you do to prevent repetitive stress and keep your body active and flexible.

After you have been sitting or stooping for a long period of time you should not lift immediately, as this puts a great deal of stress on your back muscles, ligaments and tendons.

Overexertion and cumulative trauma were the biggest factors in these injuries. Bending, followed by twisting and turning, were the more commonly cited movements that caused back injuries. Strains and sprains from lifting loads improperly or from carrying loads that are either too large or too heavy are common hazards associated with manually moving materials.

NSC states that no "sure-fire" rules exist for safe lifting: "Manual materials handling is a very complex combination of moving body segments, changing joint angles, tightening muscles and loading the spinal column." However, NSC does recommend following a number of do's and don'ts pertaining to lifting.

Do:

- Eliminate manual lifting whenever possible to help reduce
- Stay in good physical shape if lifting items is part of your
- Keep materials within easy reach and have handling aids around in case you need
- Make sure you have a good grip on any item you attempt to lift. Test the weight and balance of items before moving them. Too heavy? Get a mechanical lifting aid or ask a co-worker for
- Keep the item you are lifting close to your Ensure your feet are close to the load, stand in a stable

position with your feet pointed in the direction you're moving, and lift mostly by straightening your legs.

Don't:

- Twist your back or bend in a sideways
- Attempt to lift or lower an object if you're in an awkward
- Feel compelled to lift an item that is too heavy – get help
- Lift or lower an object if your arms are
- Continue to lift an item if you realize it's too
- Lift above your shoulders or below your knees.

Factors that contribute to the risk of injury

The weight of the load is obviously a factor in whether or not material can be lifted safely, Other lift factors include:

- The force needed to perform the
- The frequency of lifting.
- The duration of lifting
- Postures and body motions during the

Concerning the force needed to perform the lift, there may be increased risk for injury if:

- The lift involves pinching to hold the
- Heavy lifting is done with one
- Very heavy items are lifted without the assistance of a mechanical
- Heavy items are lifted while bending over, reaching above shoulder height, or The following postures and motions can contribute to the risk, as well:
- Bending or twisting the back while lifting or holding heavy
- Lifting objects out of, or putting them into, cramped
- Leaning, bending forward, kneeling or squatting during lifting
- Lifting or carrying materials with the hands below the waist, above the shoulders, or to the sides of the
- Carrying or holding lifted materials with the arms or hands in the same position for long periods of time without changing positions or

How engineering controls reduce the risk.

The most effective way to prevent injury is to redesign the work environment and work tasks to reduce lifting hazards. These engineering, administrative and workplace controls take a close look at lifting jobs and redesign them so they are safer.

Engineering controls are used to redesign a job so employees do less-strenuous manual lifting. They often involve the use of mechanical lifting equipment.

Engineering controls include

- Reducing load weight or
- Adding handles to material packaging so that workers can get a strong, comfortable
- Adjusting the work environment so workers can keep loads close to the body and between shoulder and knee height, without having to twist.
- Installing mechanical lifting aids and material handling equipment (conveyors, slides, chutes, hoists, adjustable lift tables, and hand trucks).

Use of administrative and work-practice controls

Implementing administrative and work-practice controls involves carefully selecting and training workers so they know how to safely perform lifting tasks.

Administrative and work-practice controls include:

- Conducting medical monitoring of employee strength/lifting
- Setting weight, size, and frequency limits on manual lifting
- Providing physical conditioning for

- Training employees to use proper lifting
 - Determining the need for using two-person lift teams when mechanical lifting aids are not
-

By the Numbers – Spill Prevention

SPILL PREVENTION

DID YOU KNOW?

In 2015, 18% of 477 HSA workplace visits found that in work areas not exposed to the weather, the STF risk assessment had not identified/ put in place reasonable precautions to prevent spills.

In 2015, formal action including use of enforcement notices occurred in HSA workplace visits where the employer failed to put in place reasonable precautions to prevent spills.

From 2015 to 2016, 24% of over 2,000 HSA workplace visits found the employer had not identified or tried to identify sources of potential spills (for example, liquids, granular material, food).

In 2012, floor mats were not relevant in about half the HSA visits where examined. This is probably because these workplaces have wet-working areas and large external working areas.

In 2012, 35% of 1,783 HSA workplace visits found the employer did not have a procedure that floor mats are used to reduce slip risks.

In 2012, 22% of 2,106 HSA workplace visits found the employer did not have a procedure that spills should be removed straight away by dry cleaning.

Across all industries, a procedure to remove spills straight away by dry cleaning was found in 46% of workplaces and absent or not applicable in 54%.

What Percentage of Workplace Accidents are Caused by Slips, Trips, and Falls?

More than 25% of all injuries sustained across all industries are caused by slips, trips, and falls. Of these slips, trips, and falls, 16% of all workplace accidents involved falls on the ground level. Unfortunately, more than 5% of workplace accidents resulted from a fall between two or more stories.

Note the interesting statistic related to slips and trips **without falls**. More than 3% of all workplace accidents that resulted in time away from work were caused by slips and trips **without a fall**.

According to [OSHA](#), 20% of all fatalities in private industry were related to construction in 2017. Of these deaths, nearly 60% were caused by four events, known in the industry as *The Fatal Four*.

1. **Falls:** 39% of deaths in construction
2. **Struck by Object:** 8% of deaths in construction
3. **Electrocutions:** 7% of deaths in construction
4. **Caught in or between:** 5% of deaths in construction

Reducing or eliminating the risk from these four causes of death would save hundreds of lives every single year. In fact, there were [887 workplace fatalities in 2017 due to falls, slips, and trips](#). Let's explore some of the leading causes of falls on the job site and ways to prevent them.

Leading Causes of Slips and Falls on

the Job

Any job site has its share of hazards and unfortunately, nothing can entirely remove the risk out of workplace injuries and illnesses. According to the CDC, more than 300 construction workers die each year and more than 10,000 more are seriously injured by falls from heights.

The CDC also cites ladders, roofs, and scaffolding as leading causes of slips, trips, and falls on job sites.

Here are some other statistics related to slips, trips, and falls while on the job:

5. **57%** of deaths from ladders occur in the construction
6. **43%** of deaths from slips, trips, and falls occur in the construction
7. **20%** of falls on the same level are due to **trips** and **13%** are due to
8. **11%** of falls to a lower level happen when someone **falls through a surface or existing opening**.

In Canada over 42,000 workers get injured annually due to fall incidents. This number represents about 18% of the “time-loss injuries” that were accepted by workers’ compensation boards or commissions across Canada (based on statistics from Association of Workers’ Compensation Boards of Canada, 2016).

Statistics show that the majority (67%) of falls happen on the same level resulting from slips and trips. The remaining 30% are falls from a height.

KEEP IN MIND

- Analyze previous slips to identify any particular issues
 - Use the [Mapping tool](#) designed to help identify areas where slips, trips and falls have happened and also

where slips and trips are more likely to happen

- Consider asking staff if they are aware of any problems or if they have slipped in the past
- Identify [sources of](#) e.g. equipment using water/ liquid, wash-up, showers, cleaning store, toilets, grapes, flowers, plants, deep fat fryers
 - Include self-service drinks areas, walk-in chiller and freezers, liquid containers, liquid too close to the front of shelves, small fruit and vegetable items and flower displays
 - Don't forget hanging baskets
- Viscous liquid spills can be much more hazardous. As the viscosity of a likely spill increases, the surface roughness required increases
- Ensure you consider all solid/ semi-solid material, e.g. granular washing powder, inserts from newspapers magazines, desiccant sachet contents,
- In 2009, the Slip STD Consortium proposed a [classification](#) for hard floors based on foreseeable contamination

Prevent Spills to Control Slips (Trips and Falls)

- Consider using contoured/molded pallets for liquid container storage and display – to reduce the risk of containers being knocked over
- Display/ store liquids so spill not likely to get onto walkways. Do not put containers of liquid too close to the front of shelves
- Store containers, particularly of liquid, with the opening on top – unless specifically designed to be stored with the opening on the side or bottom
- Consider the use of [floor mats](#) near liquid containers. This may also help reduce losses through breakages
- Merchandising material & paper/ magazine inserts can be slippery
- Provide containers for customers to carry their goods
- Maintain equipment and pipework in good working order with

proper seals and valves

- Small fruit/vegetable items such as grapes and tomatoes, may be high Provide [floor mats](#) or display items pre-packed
- Use only the minimum amount of water in flower display buckets and use [floor mats](#) if required
- Dispose of packing material and other wrappings carefully. Do not leave them lying around the floor

Remove Spills to Control Slips (Trips and Falls)

- Deal with spills straight away
- Spills should be thoroughly cleaned and dried. **A superficial effort that does not clean or dry the surface may create a greater risk** than the original spill. “Mop-dry” floors can be [very slippery](#)
- Provide material to remove spills at identified [high spill risk areas](#)
- Use absorbent material to soak up the spill or possibly use a [hand-held squeegee vacuum](#)
- Paper towel is effective to clean up small spills
- Oily or greasy spills require detergent solution
- Consider using spill kits – they must be kept fully stocked
- Absorbent material must be removed as soon as it becomes saturated, and more absorbent material used – if needed
- Consider nominating one person each shift to be responsible for spills. (This will only work if that person is advised of any spills and is available to deal with spills immediately)

TIPS FOR CLEANING UP SPILLS IN THE WORKPLACE

When any type of oil or liquid is spilled, it should be taken very seriously and cleaned up promptly. In every workplace, there are different types of substances that could cause a major slip and fall, thus resulting in a worker’s comp claim.

1. USE APPROPRIATE MATERIALS

You will encounter different spills. Use the right materials for the job so you can protect yourself and the people around you. Various spills may require different equipment, but it is best to be prepared for anything in the workplace. Spills should be wiped up, cleaned, and dried before the area is considered safe for work-related activities.

Mopping the area will clean the spill, but it may create a more dangerous area for slip and falls. Your workplace spill station should include:

- Absorbent materials (Rags, towels, cloths)
- Paper towels for small spills
- Detergent Solution for oil or grease spills
- Spill Kits
- Wet floor signs
- Mops
- Squeegee
- Hand-held Squeegee Vacuum

2. KEEP AN EYE OUT FOR LEAKS

Sometimes liquid on the floor doesn't come from a spill. It may have come from a leak in a pipe, ceiling, plumbing, or something else. Keep an eye out for leaks coming from underneath the sinks or from the ceiling. By continually checking this, you could prevent employees or customers slipping and falling.

3. OIL VS. WATER

Make sure that you determine whether the spill is oil or water. Oil is flammable at times and can be more dangerous than water spills. Oil also can produce gas, which would cause a dangerous situation for your workplace.

4. CONSIDER THE SIZE OF THE SPILL

While cleaning the spill, take the size of the spill into consideration. You will have to treat a large spill differently

than a small spill. Do not take a paper towel to clean 3 gallons of spilled water. Whatever the size of the spill, clean it with the appropriate equipment.

5. WEAR SLIP RESISTANT SHOES

Lastly, wear the most important piece of your work outfit. [Slip resistant shoes](#) will protect you from slipping while you are trying to do your job. Your shoes alone can lead to the difference between going to the hospital or going home that day. Do not try to clean a spill without slip resistant shoes on. All of our shoes have been tested to provide optimal slip protection for your feet, so you can be prepared for anything that comes your way.

Here are seven safety tips for office workers to prevent workplace injuries:

6. MAKE SURE YOUR DESK SETUP IS ERGONOMIC

To maintain a neutral posture, your head should be centered over your neck and shoulders, wrists flat and elbows resting comfortably at your side. If your feet won't touch the ground unless you lean forward, use a footrest. See our post on [workplace ergonomics and neutral posture](#) for more information on setting up an ergonomic workstation.

7. TAKE REGULAR BREAKS TO GET UP AND MOVE AROUND

Sitting all day [puts office workers at risk](#) for numerous health problems. [Our warm up and stretching guide](#) gives you easy exercises you can do at work, and you can find more resources on our [Get up and Move page](#).

8. WHEN IT'S SLIPPERY DUE TO ICE AND SNOW, WALK LIKE A PENGUIN WHEN ENTERING AND LEAVING YOUR OFFICE

Winter slips and falls in parking lots are extremely common. To avoid them, walk like a penguin by walking flat footed taking short, slow steps. It's also important to wear sensible footwear

and carry only what you can handle. For more information and downloadable resources, visit our [winter slip-and-fall prevention page](#).

9. USE A HEADSET FOR PROLONGED OR FREQUENT PHONE USE

Cradling the phone between your shoulder and ear can cause neck and back pain.

10. KEEP YOUR WORKPLACE TIDY

Clean up spills immediately, keep aisles free of clutter, and tie up or secure cords so they don't pose a trip hazard.

11. DON'T LET ELECTRICAL CORDS CREATE A FIRE RISK

Avoid running electrical cords under carpet or through windows and doorways. Also, don't fasten them with

unapproved devices, such as staples.

12. KNOW YOUR OFFICE EMERGENCY PROCEDURES

Make sure you know what to do in the event of a fire, storm, violent intruder, medical problem or other emergency.

By the Numbers – Working Alone

WORKING ALONE

DID YOU KNOW?

There are [53 million lone workers](#) in the United States, Canada, and Europe combined. To put that statistic into perspective, it represents about [15% of the overall workforce](#). In fact, the International Labor Organization estimates that 2.3 million work-

related fatalities happen each year. Are you doing everything possible to protect the safety of your organization's most valuable assets – your employees? Here are some stats that will make you want to take additional steps to protect your workers:

- 44% of workers say they face personal safety issues in their primary employment
- OSHA states that 48% more assaults occur in the healthcare and social services industries more than any
- 62% of social workers have been subject to psychological aggression in the past year, with 86% experiencing this at some point in their
- 15% of social workers have been physically assaulted by clients in the past year, with 30% having experienced this at some point in their
- [Employee turnover rate is as high as 75%](#) among home healthcare
- 50% of retail workers that are killed are employed alone at late night establishments, such as liquor stores or gas
- An HSE report found that of the workplace fatalities reported between 2012 and 2017, 22 percent were individuals working in the manufacturing
- In 2014, the Occupational Safety and Health Administration (OSHA) reported multiple Oil & Gas-related fatalities in the United In fact, the organization reports the Oil & Gas fatality rate is seven times greater than the rate for all U.S. industries
- 600,000 Americans work in the utilities sector as of March

Many of these utility workers work at water treatment plants. These facilities are often in remote locations away from the base of operations. Often these utility workers at these remote locations have shifts where they are alone.

KEEP IN MIND

Lone workers can make up a large percentage of a workforce, particularly in the manufacturing industry. Many workers in factories, plants, and warehouses can find themselves working

alone, even if it usually isn't considered part of their normal duties. There can be times where employees may need to work unsupervised or without assistance, to meet demands in the fast-paced industry. Regardless of the period of time an individual is working alone, health and safety managers need to implement robust and reliable safety systems. Managers must ensure that any lone worker can receive quick emergency assistance should they require it.

Working in remote areas

Working and travelling to remote areas is an inherent part of working in the oil and gas industry. Offshore oil and gas fields, onshore gas pipelines which are remotely located and other characteristics of the oil and gas work make it very common for workers to be working alone and/or working remotely.

A lone worker can be anyone who works alone in a fixed facility or away from his or her typical base. At times, the definition applies to those who work alone in factories or warehouses on nights or weekends. It also applies to traveling workers in construction, utilities, maintenance and repair, agriculture, and other fields.

DANGERS

Working in remote areas introduces a number of safety concerns and hazards that need to be addressed.

In these remote areas, workers face harsh conditions and environments. They must drive/travel long distances and frequently off-road, and if an incident does occur, they are effectively stranded and must find a way to communicate the issue.

These and other nuanced elements of remote or lone worker safety like how much water to carry (more than you think) make for good safety discussions.

Thousands of incidents occur annually that put lone workers on

disability—sometimes short-term and often for life.

In 2014, the Occupational Safety and Health Administration (OSHA) reported multiple Oil & Gas-related fatalities in the United States. In fact, the organization reports the Oil & Gas fatality rate is seven times greater than the rate for all U.S. industries.

Lone workers are an integral part of the oil and gas industry and safeguarding these staff is vital in delivering good service. Businesses are responsible to their employees and to their customers. Shutdowns, incidents and production issues can affect other businesses and large-scale leaks can also be disastrous for the environment. Improving safety in the oil and gas industry is good for everyone and good for the planet.

At Risk

The risks that affect lone workers in most industries affect those in oil and gas too – trips, slips and falls account for 37% of injuries in the sector – though there are additional risks generated by the often remote or offshore nature of the work and exposure or inhalation of hazardous materials. When things do go wrong in oil and gas, they can be devastating, resulting in huge loss of life, product and infrastructure.

Risks include:

- Remote location working, whether off-shore, on the road or along pipelines increases the impact of potential incidents and difficulties in raising alarm and maintaining communication
- Working at
- In confined
- Alongside high – risk machinery and equipment.
- Accidents including trips, falls, slips
- Toxic and inflammable gases

Lone worker hazards in Oil and Gas Sector

- Hydrocarbon releases
- Fires or Explosions
- Dropped objects

The safety situation for a lone worker is worse than for a worker who is surrounded by fellow workers.

Why? If working alone and immediate medical assistance was not provided in time, the result could be deadly.

Most oil refineries, factories and offshore rigs are also considered as [Explosive Hazardous Areas](#), where the atmosphere could be filled with flammable gases, mists, dusts, liquids or vapors that could lead to huge explosions. Due to the Explosive hazardous working environment, the lone working employees within these sectors are not allowed to carry their smartphone devices, as it could be a source of ignition.

By the Numbers – Workplace Stress

WORKPLACE STRESS

DID YOU KNOW?

The workplace was the fifth leading cause of death in the US, responsible for some 120,000 deaths and approximately \$190 billion

in additional costs each year (Centers for Disease Control and Prevention). Work is [one of the leading causes of stress](#), and the [physiological effects of stress](#) on blood chemistry, including cholesterol levels, the immune system, and metabolic functioning have been well-established.

This represents 5% to 8% of national health care spending derived primarily from high demands at work (48 billion) lack of insurance (10 billion) and work – family conflict (24 billion)

The Centers for Disease Control and Prevention research:

- From 2000 to 2016, the U.S. suicide rate among adults ages 16 to 64 rose 34 percent, from 12.9 deaths for every 100,000 people in the population to 17.3 per 100,000.
- The highest suicide rate among men was for workers in construction and mining jobs, with 43.6 deaths for every 100,000 workers in 2012 and 53.2 deaths per 100,000 in
- The highest suicide rate among women was for workers in arts, design, entertainment, sports and media, with
- 11.7 fatalities for every 100,000 workers in 2012 and 15.6 deaths per 100,000 in 2015.

Here are 15 statistics unearthed by a survey conducted by Harris Poll in August of 2017. Not surprising work and money are the main sources for stress.

- 8 in 10 Americans are afflicted with
- 79% of Americans feel stress sometimes or frequently in their daily lives
- 17% say they rarely feel stressed and 4% say they never feel stress
- 4 in 10 U.S Adults (41%) say they lack sufficient time to do all they want
- 80% of working people feel stress on the job and half of them need help in managing stress
- 65% of working people said that workplace stress had caused difficulties and more than 10% described these as having major effects
- 10% said they work in a violent atmosphere due to workplace

stress

- 42% of working people reported that yelling and verbal abuse is common
- 29% had yelled at co-workers due to workplace stress
- 14% said they work in those environments where machinery or equipment has been damaged
- 1 in 5 respondents had quit their earlier jobs and 1 in 4 had been driven to tears due to workplace stress
- 62% working people end their day with work-related neck pain, 44% with stressed out eyes, 38% complained of hurting hands and 34% with difficulty in sleeping due to stressed-out condition
- \$300 billion in lost productivity annually to employers due to workplace stress
- Well-being Index among U.S adults have dropped from 62.1 to 61.5 from the year 2016 to 2017
- Americans stress level, on a 10-point scale has increased from 4.8 to 5.1 between August 2016 and January 2017

KEEP IN MIND

Work-related stress has been around for a long time. But recognition of stress as an occupational hazard is a product of modern times. Unfortunately, not all companies have gotten the message. That leaves it to safety directors and supervisors to persuade management that stress really is a problem to take seriously. The best way to do that is to relate the problem to dollars.

Workplace stress hurts profits because it increases absences and cuts productivity. According to a press release from the World Congress on Health and Safety at Work, of the 40.2 million working days annually lost by businesses worldwide, 13.4 million are from stress, anxiety, and depression.

In the U.S. alone, stress is creates a workplace hazard every bit as damaging as chemical and biological hazards. How does workplace stress hurt business?

This is tricky because stress isn't a line item cost listed on the typical profit and loss statement. It's a bundle of

hidden costs. There are five elements in this bundle that you should point to:

- **Higher Injury & Illness Rates**

The more stress workers experience at work, the more likely they are to engage in unsafe behavior. The result is more incidents involving personal injury and/or damage to equipment and machinery. The link between stress and incidents isn't just a matter of common sense; it's well documented.

- **Increased Absenteeism**

Studies confirm that workers under stress are more apt to call in absent—either because they're genuinely ill

or they're feigning illness to avoid having to go to work.

- **Higher Turnover**

Stress at work also causes people to leave the company. In addition to losing good people, companies incur high administrative costs in seeking replacements. And, replacement costs tend to rise to the extent that the company gains a reputation for being a stressful place to work.

- **Premature Retirement**

Stress causes older and more senior workers to retire before they're ready. Result: High replacement costs and in many cases lump sum and pension payments.

- **Reduced Productivity**

Workplace stress harms workers' productivity and performance. The effect of stress on productivity is hard to

measure; but it is real.

Conclusion

There's nothing mystical about workplace stress. It can be managed. The only way to secure the necessary resources is to persuade your CEO that workplace stress poses a serious threat to your workers and your company's bottom line.

By the Numbers – Workplace Violence

WORKPLACE VIOLENCE

DID YOU KNOW?

The prestigious New England Journal sets out interesting facts and statistics. Their review concludes healthcare is the most dangerous profession for women to work. Almost entirely are women the objects of assault and violence in their profession. The review included data from the (B.L.S) showing healthcare workers are nearly four times as likely to require time away from work as a result of violence. The (B.L.S.) keeps a grim list, the Census of Fatal Occupational Injuries. In 2014, homicides accounted for 8 percent of all workplace deaths and 8 percent of workplace death for men. They accounted for 19 percent of workplace deaths for women, a very close second behind transportation accidents at 20 percent. When men are murdered at work, it's most commonly in the course of a robbery, but for women, it's more likely to be someone they know that is husbands, boyfriends and exes. The review also reported that, although employees in the healthcare and social

assistance sectors account for 12.2% of the working population (and despite there being the potential for underreporting in other industries), nearly 75% of workplace assaults occurred in a healthcare setting.

There are other notable statistics:

- 80% of Emergency Medical Services personnel have been attacked by
- Homicide is the second leading cause of workplace death for home healthcare
- 78% of Emergency Department physicians and 100% of Emergency Department nurses have experienced violence from patients within the last
- The annual incidence of physical assault in a psychiatric setting is 70%.
- Among nursing homes with dementia units, 59% of nursing aides reported being assaulted by patients weekly and 16%
- 46% of nurses reported some form of workplace violence during their five most recent
- Between 2000 and 2011, there were 154 shootings with injury either inside or on the grounds of American hospitals.
- The healthcare industry makes up 9% of the U.S. workforce, yet healthcare professionals experience more workplace violence injuries than all other industries
- The third leading cause of death for workers in the healthcare and professional services industries (education, law and media) is due to workplace

According to OSHA:

- About 2 million people each year report some type of workplace
- It is estimated that 25 percent of workplace violence goes

The impact on Business is enormous and like the perpetration of homicides itself, the trend is going up, not down. A half-million employees miss an estimated 1.8 million work days each year due to workplace violence – resulting in more than \$55 million in lost wages on 2018. The annual comprehensive cost to businesses,

including estimated losses, was \$130 billion compared to \$36 billion in 1995.

- Workplace violence crimes also extend beyond victims to co-workers, clients, executives, shareholders and even out to the community. There are also direct losses reflected in diminished productivity, low morale and negative publicity – which can all damage a company's reputation in the long-term.
- What's more, incidents are often followed by lawsuits charging organizations with negligent retention, negligent supervisor and inadequate security. The average out-of-court settlement is around \$500,000 and the average jury award is \$3

KEEP IN MIND

Workplace violence is front and center one of the most vexing issue in our society. It is trending upwards!!! Domestic violence morphs into our workplace. Sadly, women are more often the victims in the home and in the workplace. There are two scenarios. One where the victim has some family or personal connection to the assailant, and one where the victim does not know or have any family or personal connection to the assailant.

70% of U.S. workplaces do not have formal programs or policies that address workplace violence. Homicide is a leading cause of workplace death for women.

Why is that?

Abusers shoot women at work because it's easy to find them there!!!

The most dangerous time for victims of domestic abuse is when they try to leave. A woman who leaves her partner

can find a new living arrangement and change her phone number, but she'll probably keep going to the same job.

Workplace violence is defined by the Occupational Safety and

Health Administration (OSHA) as any act or threat of physical violence harassment, intimidation or other threatening disruptive behavior that occurs at the worksite.

Workplace violence is one of the major causes of death in the corporate world, second only to transportation. This growing issue can have very damaging effects on morale, reputation and revenue; making it something business have to address now.

There are steps to take to counterattack the alarming trend of workplace violence, such as:

- Develop, publicize, and enforce a workplace violence prevention
- Conduct a risk assessment in the workplace to determine the types of violence that might most impact your workplace and to identify where in the workplace and/or at what time of day employees might be most vulnerable to
- Enforce a no-weapons policy for employees, as allowed by
- Take administrative and environmental precautions; initiate prevention activities, conduct trainings on workplace
- Take security measures to mitigate the threat of violence, create a workplace culture that supports victims and holds perpetrators of violence
- Take time to address these concerns before an incident occurs. Take proactive measures now to protect your employees. ensure a safer, more supportive environment for victims of domestic violence by taking these preventative

4 Steps to Implementing a Safe Health Culture for Remote Work

4 Steps to Implementing a Safe Health Culture for Remote Work

Thanks to the ongoing pandemic, many companies and professionals

have resorted to working from home. However, just because everyone is indoors doesn't mean all health risks are eliminated. In fact, [Thrive Global has outlined some of the most common health problems remote workers face daily](#) such as lower back pain, eye strain, and lack of sleep. Additionally, [a separate study on The Conversation](#) informs that remote workers also face a lot more stress, anxiety, and burnout.

For managers and team leaders, the challenge lies in taking care of your workers' well-being, especially now. Otherwise, it could lead to lower productivity and morale. That being said, here are four steps to implementing a safe health culture for remote work.

Ensure they follow ergonomic practices

Posture is something that can easily go unnoticed when you're working, especially if you're just at home. [As noted on Pain Free Working's article on the importance of ergonomics](#), keeping a healthy posture while at work helps prevent serious injuries in the long run. To start, monitors should be at eye level, feet should be flat on the floor, and chairs must have back rests for support. Reminding your team of these necessary cues shows that you continue to look out for them, despite the physical distance.

Give them the opportunity to socialize

Faced with limited avenues for social interaction, [Buffer's 2020 State of Remote Work report found that 1 in 5 remote workers](#) often feel lonely. To prevent this from happening, give them an avenue to socialize. While dinner nights and weekly hangouts are temporarily out the picture, you can still do some fun bonding activities online, like playing online games, streaming a film together, or even having virtual coffee breaks via video conferencing software. It's a nice reminder that they aren't alone, and that colleagues are there if anyone needs someone to talk to.

Set strict working hours

One of the downsides to remote working is the tendency to work longer hours. To this end, it helps to set strict working hours in

a day. This doesn't have to mean sticking to a 9-to-5 schedule like traditional office settings, but simply ensuring that they don't work more than the required hours is enough. Time tracking software such as Hubstaff and Clockify lets you monitor timestamps. This way, you can gently remind them to take a break when they go overboard. Moreover, [one of our 9 Steps To Improving Safety Culture](#) is to 'practice what you preach'. If your team sees you faithfully clocking-out when it's time, then they are more likely to follow your example.

Host live exercise classes

One of the biggest challenges of working at home is staying active. To promote the importance of physical activity in the virtual workspace, it's recommended that you introduce an exercise program to help them get started. You don't always need to enlist the help of a professional trainer. For instance, [one of OH Partners' 'most athletic teammates' leads a 30-minute workout](#) every week. You can also refer to free online [fitness classes offered by gyms like Planet Fitness](#) and Movati Athletic to conduct your own session. It's always more motivating to exercise with peers, than by yourself.

Building a safe health culture in the virtual office takes time, but it's definitely an investment every remote company should be making. Your team will be more productive and happier in the long run.

Post written for [safetynow.com](#)

By Therese Manzie



Therese Manzie is a freelance writer with more than five years worth of remote working experience. Her dream is to one day start her own business and become a fully-fledged digital nomad.

Re-Opening Manufacturing

How Re-Opening Will Happen Post-COVID-19

In part of reducing infection spread, governments are expecting businesses to take certain precautions as they begin to re-open. Governments want to speed up the pace of economic, educational, and community recovery while also protecting public health. As you come to understand best re-opening practices, it is important to keep in mind the following goals in re-opening.

- **SAFETY FIRST:** re-opening will be done safely and securely to protect vulnerable residents, continue physical distancing, and provide clear rules for businesses deemed safe to re-open.
 - **SCIENCE-DRIVEN:** re-opening will rely on scientifically validated public health interventions. Testing, tracing, field studies, and public health guidance will be used to contain infection.
 - **CHOICE:** businesses within sectors cleared for re-opening can decide when they will re-open. When they do, they must comply with regulations to protect employees and customers.
 - **DYNAMIC:** expect re-opening plans to be adaptive and responsive to real-time concerns such as infection spread or public health guidance.
 - **PREPARED:** governments will work closely with health care systems to ensure PPE is secured and...
-

RE-Opening Offices

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Re-Opening Food Services

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Protecting Against Electrical Hazards – Spanish

¿QUE ESTÁ EN RIESGO?

Cada año se producen miles de lesiones no discapacitantes e incapacitantes por el trabajo con electricidad y, en promedio, una persona muere cada día por un incidente eléctrico en el trabajo. Las lesiones eléctricas pueden causar lesiones inmediatas y graves, lesiones discapacitantes permanentes y sufrimiento de por vida en forma de dolor, sensibilidad y otras restricciones a la movilidad y las actividades.

¿CUÁL ES EL PELIGRO?

Los cuatro tipos principales de riesgos relacionados con la electricidad son: choque, electrocución, quemaduras y caídas.

Primero es shock. El resultado de una descarga eléctrica incluye cualquiera de los siguientes: quemaduras; paro cardíaco; contracción muscular involuntaria; daño a los órganos; hemorragias internas; y destrucción de tejidos, nervios y músculos.

El choque puede ocurrir cuando una persona entra en contacto con ambos conductores en un circuito; proporciona un camino entre un conductor sin conexión a tierra y el suelo; o proporciona un camino entre el suelo y un material conductor que está en contacto con un conductor sin conexión a tierra.

La extensión de la lesión depende de:

- **Fuerza de la corriente.** Cuanto más fuerte es la corriente, más grave es el

- **Duración del contacto.** Cuanto más largo es el contacto, más intenso es el impacto y mayor es la posible lesión.
- **Humedad en el cuerpo.** El sudor y la humedad hacen que el cuerpo sea un mejor conductor y más propenso a golpes y lesiones; y el
- **Camino de la corriente.** Los dos caminos más peligrosos que la corriente puede tomar a través de su cuerpo son de mano a mano y de la mano izquierda a cualquiera de los pies.

El segundo peligro es la electrocución, que es el resultado fatal del contacto con la electricidad. La electrocución es siempre fatal.

El tercer peligro de la electricidad es el fuego y la explosión. Los arcos eléctricos producen algunas de las temperaturas más altas que se sabe que ocurren en la tierra, hasta 35,000 grados Fahrenheit o 19,500 grados centígrados, cuatro veces más altas que la temperatura en la superficie del Sol. El intenso calor de un arco provoca una expansión repentina del aire que produce un estallido. Es posible que una explosión produzca suficiente energía para impulsar a una persona de 170 libras a través del aire a 330 pies por segundo.

El cuarto peligro es la caída. Las caídas pueden ser causadas por contracciones musculares, o una reacción de sobresalto cuando una persona se sorprende. Esto puede hacer que una persona se caiga de una escalera, andamio o balde aéreo. La caída puede causar lesiones graves o la muerte.

COMO PROTEGERSE

Protegerse de estos riesgos eléctricos es tan fácil como seguir prácticas de trabajo seguras, usar los dispositivos y equipos correctos y usar un EPP diseñado para trabajos eléctricos.

- Todo el equipo energizado debe estar bloqueado y etiquetado antes de comenzar a trabajar en él, siguiendo los procedimientos para una des energización segura.
- Nunca pase por alto los bloqueos y las etiquetas.

- Siempre obedezca todos los límites de aproximación y los márgenes de separación.
- Use el equipo de protección eléctrica adecuado para el trabajo, incluyendo herramientas aisladas, mantas, guantes, mangas, protectores faciales y ropa con arco eléctrico cuando corresponda.
- Inspeccione el equipo aislado antes de su uso e inmediatamente después de un incidente por agujeros, rasgaduras, cortes, perforaciones, corte de ozono, objetos extraños incrustados, hinchazón, ablandamiento, endurecimiento o cualquier otro defecto. Coloque el equipo defectuoso fuera de servicio.
- Use los cables de extensión de tamaño adecuado y los fusibles para equipos y máquinas.
- Asegúrese de que el equipo eléctrico no se encuentre en un entorno peligroso, como un área de almacenamiento inflamable o donde quede expuesto a la humedad.
- Sepa dónde están los cierres de emergencia en el equipo y las herramientas.
- Nunca use escaleras de metal al hacer trabajos eléctricos.
- Retire todas las joyas de metal antes de comenzar cualquier trabajo eléctrico.
- Tenga en cuenta las líneas eléctricas aéreas y subterráneas.

CONCLUSIÓN

La electricidad puede ser tan dañina como poderosa. Puede mantenerse a sí mismo y a otros seguros al seguir prácticas de trabajo seguras y usar el equipo adecuado.

How To Re-Open Your Office from COVID-19 Lockdown

How Re-Opening Will Happen Post-COVID-19

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Quiz: Recordkeeping/Reporting

QUESTION

What are some of the reasons why incidents of property damage, near/misses/close calls spills go unreported?

- A. Fear discipline, only first aid was required, no property damage or injury.
- B. Do not want to admit mistakes, minor injuries do not need reporting, do not want to admit mistakes.
- C. Repercussions from incident, do not want to admit mistakes, supervisor do not want to bother.
- D. Repercussions from accident, fear of discipline, do not want to admit mistakes.

ANSWER

- D. Repercussions from accident, fear of discipline, do not want to admit mistakes.

WHY IS IT RIGHT

Many employers with more than 10 employees are required to keep a record of serious work-related injuries and illnesses. ([Certain low-risk industries are exempted](#).) Minor injuries requiring first aid only do not need to be recorded.

This information helps employers, workers and OSHA evaluate the safety of a workplace, understand industry hazards, and implement worker protections to reduce and eliminate hazards –preventing future workplace injuries and illnesses.

Maintaining and Posting Records

The records must be maintained at the worksite for at least five years. Each February through April, employers must post a summary of the injuries and illnesses recorded the previous year. Also, if

requested, copies of the records must be provided to current and former employees, or their representatives.

Updated Electronic Submission of Records

The Injury Tracking Application (ITA) is accessible from the [ITA launch page](#), where you can provide the Agency your 2017 OSHA Form 300A information. The date by which **certain** employers are required to submit to OSHA the information from their completed 2017 Form 300A is July 1, 2018.

Severe Injury Reporting

Employers must report any worker fatality within 8 hours and any amputation, loss of an eye, or hospitalization of a worker within 24 hours.

Basic recording requirement

Every employer is required to keep records of work-related fatalities, injuries and illnesses that meet one or more of the general recording criteria, including:

- Death,
- Days away from work,
- Restricted work,
- Transfer to another job,
- Medical treatment beyond first aid,
- Loss of consciousness, or
- A significant injury/illness diagnosed by a physician or other licensed health care professional.

Recordkeeping: It's More Than Just Compliance

There are many good reasons for keeping thorough and up-to-date records of accidents and injuries that occur on the job. The primary reason, of course, is compliance with the law. But a thorough reporting and recordkeeping system can also provide you with valuable information concerning accident patterns and prevention. Being able to observe injury and illness trends in the workplace over a span of time helps identify shortfalls or

omissions in training, and allows an opportunity to strengthen the overall safety of the workplace.

When to Record

The Occupational Safety and Health Administration (OSHA) requires most employers to maintain OSHA records for all “[OSHA recordable](#)” injuries and illnesses. Employers meeting the requirements for a [small-employer exemption](#) or who are engaged in what are known as a “[partially exempt industry](#)” may be exempt from maintaining these records. For employers who do not meet those exemptions, injuries and illnesses must be recorded if they:

- Involve an employee.
- Are work-related.
- Are a new case, meaning that the employee has not previously experienced a recorded injury or illness of the same type that affects the same part of the body or that the employee previously experienced such an injury or illness, but completely recovered?
- Result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness.
- Are a significant work-related injury or illness that is diagnosed by a physician or other licensed health care professional.
- Result from a needle stick injury or a cut from a sharp object that is contaminated with another person’s blood or other potentially infectious material.
- Result in the medical removal of an employee under the medical surveillance requirements of an OSHA standard.
- Involve occupational hearing loss.
- Involve an occupational exposure to tuberculosis and subsequent development of the infection.

Organizations regulated by OSHA are required to maintain a log ([OSHA Form 300](#)) and an annual summary (OSHA Form 300A) of occupational injuries and illnesses, as well as a supplementary record of each recordable injury or illness (OSHA Form 301). These records must be kept up to date and must be made available to OSHA

and the National Institute for Occupational Safety and Health (NIOSH) on request. You must retain them on file for at least five years.

State laws often also require you to keep safety and health records and to file reports. Workers' compensation laws, for example, may require accident reports.

Even if an employer is not required to maintain records, it is still a good idea to do so.

Importance of Reporting All Injuries Safety Talk

We are all trained to report any near misses, injuries, or incidents to a supervisor or safety representative. Often times however many of these incidents, especially first aid type injuries, are not reported. Injuries are not reported because of many different reasons, but it is important to understand why all of them need to be.

Reasons Why Incidents Go Unreported

There are many reasons why incidents such as property damage, near misses, spills, and injuries go unreported. A major reason is often the individual's pride. Most people do not want to admit their mistakes to others, especially at work. They may also fear the outcome from sharing what occurred with a supervisor. This fear may come from being afraid of being disciplined, what others think, or the repercussions from the incident. Another reason a person may not want to report an incident is because of the paperwork or energy involved in doing so. There are many other reasons why an individual may not want to share what happened to them, but this should never be the case.

Why it is Important to Report Injuries

There are many reasons why you should report any type of injury, no matter the severity. The most important reason is to make sure the situation or hazard is made safe for not only yourself, but the others at the worksite. Another reason is to further share your experience or the lessons learned from the incident with

others to prevent it from occurring in the future.

With injuries, even just minor ones, it is important to get them looked at by a supervisor or safety representative. While many injuries, such as a small cut or an insect sting, may not seem like a big deal they can turn into one. A quick example: You are bit by some type of insect on a Friday afternoon at work, but decide not to tell anyone for various reasons. You leave work and are home for a few hours when you notice that the bite area is beginning to swell up. Along with the swelling, you notice that you have hives and are having trouble breathing. You realize it is a serious [allergic reaction](#) and need medical attention. You tell the doctor you were bit or stung at work and the treatment he gives you ends up being considered “medical attention”. Because it happened at work and you needed medical attention beyond first aid it is now an OSHA recordable injury. In this situation there are a few problems since the injury was not reported to someone at work immediately.

1. There is no record or witness to it happening at work which could raise concern by the employer whether or not the injury occurred at work. This may end up in a drawn-out dispute since there has been many people in the past who have faked or had injuries off the job, but stated it occurred at work in an attempt for it to be paid through worker’s compensation.
2. If the injury was reported immediately someone may have been able to recognize that it may develop into an allergic reaction. There could have been [options for first aid instead of medical treatment](#) to treat the issue before it worsened which would have saved you a trip to the hospital and the company an OSHA recordable.

WHY IS EVERYTHING ELSE WRONG

Accident Reporting and Prevention

In addition to complying with the law, a thorough reporting and recordkeeping system can also help you prevent future accidents. For example, studying these records can reveal areas in which

accidents are on the increase, safety procedures that have brought the best results, and even new approaches to accident prevention.

Above all, the process of conducting an accident investigation and filling out a written accident report focuses attention on what has occurred, thus forcing your safety management team to consider what might have been done (or could be done) to avoid the incident.

Most accident reports focus on uncovering and recording the vital facts and circumstances surrounding an accident as soon as possible after it has occurred. These **“key facts”** usually include:

- Nature of the injury.
- Part of the body injured or affected by the injury.
- Source of the injury: the object, substance or bodily motion that produced the injury.
- Type of accident or manner in which the person was injured.
- Hazardous condition or circumstances surrounding the accident.
- Agency of the accident: the object, substance, or part of the premises in which the hazardous condition existed.
- Unsafe act that caused or permitted the accident to occur.

These items not only enable supervisors and safety committees to fill out the required report forms, but also help your organization evaluate the progress of your safety or accident-prevention program. If additional safety training or changes in procedures and equipment are needed, the investigation and reporting process usually makes it clear exactly what should be done.

Of course, in order to report or document workplace injuries and illnesses, the employer needs to be aware when they occur. Minor injuries often go unreported by employees for various reasons, such as embarrassment or fear of discipline.

Setting Recordkeeping Policy

Without an effective policy, your accident reporting procedures might fail to meet requirements, and be much less effective in

identifying trends or training needs. Your policy must be understandable, consistently applied and enforced in order to be effective.

The following elements are critical to an effective accident reporting policy:

Purpose. Stress not only legal compliance but also the value of reports in preventing future accidents.

Definition of “accident.” Be specific so that those responsible for reporting know exactly what types of accidents must be reported. Encourage the reporting of “near misses” as well, since such incidents are often the precursor to more serious accidents and injuries.

Reporting procedures. Include a brief summary of the information that should be reported (who, what, when, where, how, why), where forms can be obtained, how soon the report must be completed, and other relevant requirements. Consider “short form” methods for reporting safety concerns or near misses that result in no damage or injury, and would not otherwise require the completion of a more formal report.

Drug testing. If your drug-testing policy requires tests after certain accidents, your accident forms and policies should be coordinated with your drug-testing policy.

Documentation. Attach copies of accident report forms to the policy statement and describe any special certification required.

Responsibilities. Stress the importance of the supervisor’s role in reporting accidents, getting medical help for injured employees, filling out report forms, etc. If you have a safety committee, talk about its role in accident reporting and investigation.

Confidentiality. Make sure your policy sets out confidentiality requirements and procedures for employee medical information. Keep accident reports separate from personnel files to protect confidential information. In order to foster employees’

willingness to report minor injuries, accidents or near misses, it is very important that confidentiality of witness reports be protected as well. Anonymous reporting might be considered, but understand that follow-ups would be difficult, if not impossible, should insufficient information be provided.

Workers' compensation. Accident reports are often required for workers' compensation insurance. These forms should also be completed when accidents are reported.

Potential litigation. Be sure to also cover the manner in which the report should be maintained, distributed, and written if there is a potential for litigation. You want to avoid a situation in which an accident report admits liability and is used in future litigation against you. Include only known facts, and avoid inserting opinion, hearsay or conjecture.

Record keeping procedures

It is important to keep records, not only for your own use and reference but also because in some cases you are required by law to keep records for a certain amount of time.

Records you may keep include:

- attendance list
- feedback forms
- a copy of your presentation
- copies of all handouts
- self evaluation
- contacts list of other stakeholders
- display set-up
- list of where all the resources came from
- cost effectiveness of presentation / display
- referrals made

Records you will need to keep (check laws governing how long each item needs to be securely stored):

- hazard reports
- injury reports

- incident reports
- formal assessment details
- consent forms

Recordkeeping and Reporting

Every employer covered by the [Fair Labor Standards Act \(FLSA\)](#) must keep certain records for each covered, nonexempt worker. There is no required form for the records, but the records must include accurate information about the employee and data about the hours worked and the wages earned. The following is a listing of the basic records that an employer must maintain:

- Employee's full name and social security number.
- Address, including zip code.
- Birth date, if younger than 19.
- Sex and occupation.
- Time and day of week when employee's workweek begins. Hours worked each day and total hours worked each workweek.
- Basis on which employee's wages are paid.
- Regular hourly pay rate.
- Total daily or weekly straight-time earnings.
- Total overtime earnings for the workweek.
- All additions to or deductions from the employee's wages.
- Total wages paid each pay period.
- Date of payment and the pay period covered by the payment.

The Bottom Line

There is a lot more to recordkeeping and reporting of accidents than simply satisfying OSHA regulations. The reports serve to protect both the company and the employees when used as a tool for prevention and training. The information obtained is useful for follow-up training or the regular updating of safety procedures and policy. Maintaining an understandable, coherent reporting system that is used to enhance safety in the workplace can increase employee confidence that their safety matters to their leadership. This, in turn, fosters a greater buy-in and strong safety culture.

Summary

All injuries need to be reported, no matter how small. Not only does it protect you, but it also protects the company as a whole by possibly preventing a first aid injury developing into an OSHA recordable. You never know when something that seems minor in nature will develop into something more serious. There are also always lessons that can be learned, even from just minor injuries, to prevent others from occurring in the future.

Newsletter – May 2020

- 6 Tips to Respond to Employee Anxiety About COVID-19;
- Focus On Eye Safety,
- Developing a Return to Work Policy;
- Shiftwork Checklist;
- Respirator Infographic
- Supervisor Tips – Delivering a Great Safety Meeting;
- Safety Talks on Machine Safety, Inspections, Close Calls, and Trenching;
- and more...