Avoiding the dangers of summer heat, humidity

Heat-related illnesses can be deadly. Thousands of people become sick each year, and many die, due to preventable heat-related illnesses. With summer temperatures rising, now is the best time to prepare for working in excessive heat by following a few simple steps.

Know the signs, take action

It’s important to know the signs of heat-related illness; acting quickly can prevent more serious medical conditions and may even save lives.

- **Heat stroke** is the most serious heat-related illness and requires immediate medical attention. Symptoms include: confusion, fainting, seizures, very high body temperature, and skin that’s hot and dry or profusely sweating. Call 911 if a coworker shows signs of heat stroke.

- **Heat exhaustion** is also a serious illness. Symptoms include: headache, nausea, dizziness, weakness, thirst and heavy sweating.

- **Heat fatigue and heat rash** are less serious, but are still signs of too much heat exposure.

If you or a coworker have symptoms of heat-related illness, tell your supervisor right away. If you can, move the person to a shaded or cooler area, loosen their clothing, give them water (a little at a time) and cool them down with ice packs or cool water.

Heat-related-illness prevention programs

It is important for employers to implement programs to protect employees who are exposed to excessive heat from the dangers of heat-related illnesses. As with all safety and health hazard prevention programs, the hierarchy of controls dictates engineering controls be used first to reduce employee exposure to heat. The OSHA Technical Manual outlines elements of an effective heat-related-illness prevention program at [www.osha.gov/dts/osta/otm/otm_iii/otm_iii_4.html](http://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_4.html). The following suggested controls are taken from the OSHA Technical Manual.

Possible engineering controls may include:

- using air conditioning;
- increasing general ventilation;
- providing cooling fans;
- running local exhaust ventilation where heat is produced (such as laundry vents);
• using reflective shields to block radiant heat;
• insulating hot surfaces (such as furnace walls);
• stopping leaking steam; and
• providing shade for outdoor worksites.

If engineering controls are not feasible or are not effective in reducing employee exposures, administrative controls are another way to protect employees.

Possible administrative controls may include:
• acclimatizing workers starting the first day of working in the heat;
• re-acclimatizing workers after extended absences;
• scheduling work earlier or later in the day;
• using work/rest schedules;
• limiting strenuous work (such as carrying heavy loads); and
• using relief workers when needed.

When engineering and administrative controls are not enough, personal protective equipment (PPE) is a way to provide supplemental protection.

Possible supplemental protection may include:
• fire proximity suits;
• cooling vests;
• light-colored clothing; and
• water-cooled garments;
• wetted over-garments;
• air-cooled garments;
• sun hats;
• sunscreen.

An effective heat-related-illness prevention program should include a worker acclimatization program, heat alert program and medical monitoring program. It should also establish an effective training program that includes how to recognize heat-related illness symptoms and what to do when there is a heat-related illness emergency. OSHA recognizes it may not always be feasible to implement all elements in all workplaces; however, implementing as many elements as possible will make the program as effective as possible.

The National Institute for Occupational Safety and Health (NIOSH) also released its revised Criteria for a Recommended Standard: Occupational Exposure to Heat and Hot Environments in February 2016. The book is an in-depth analysis of heat-stress factors, including heat balance and heat exchange, biologic effects of heat, the different methods of measuring heat stress, control of heat stress, basis for a standard and further research needs. The book can be accessed at www.cdc.gov/niosh/docs/2016-106.
Felix ‘Hap’ Spooner receives MNOSHA’s Arthur E. McCauley, Jr. Award

Felix “Hap” Spooner was recognized with the Arthur E. McCauley, Jr. Award on May 7 at the Minnesota Safety and Health Conference in Prior Lake, Minnesota. Spooner has been the safety/environmental manager for Malco Products, SBC, in Annandale, Minnesota, for the past 26 years. Before taking on the safety role, Spooner worked as a supervisor at Malco.

The Minnesota Department of Labor and Industry (DLI) seeks to honor a safety or health professional each year who is an example of safety excellence. The award is named for former Minnesota Safety Council member Arthur E. McCauley, Jr., who is regarded for his work as a manager of the Minnesota Safety Council and a member of the Minnesota Occupational Safety and Health Advisory Council. McCauley is recognized for his dedication and tireless efforts to improve the safety and health of Minnesota’s workplaces.

At Malco, Spooner has led the organization to a level of safety excellence that few organizations achieve – earning Malco status as a Minnesota OSHA (MNOSHA) Minnesota Safety and Health Achievement Recognition Program (MNSHARP) worksite since 2004. In the past two cycles of MNSHARP recertification reviews, Malco got perfect scores on the Form 33 checklist.

Spooner has developed systems, procedures and processes that have instilled a commitment to safety in management, supervisors and hourly associates. He has built an effective and active safety committee that supports the safety effort and is involved in determining the safety goals and objectives for the organization. He has also developed an effective A Workplace Accident and Injury Reduction (AWAIR) program.

Spooner has been a consistent advocate for the Minnesota Safety Council, participating in its events and making use of the products and services the council offers. In addition to MNSHARP status, his efforts have been recognized through the council’s Governor’s Safety Award 10 times in the past 15 years. For two of those years, Malco received the Outstanding Achievement award.

In addition to his work, Spooner is well-respected for his positive attitude toward people and his concern for their wellbeing. He is a team player and much of his success can be attributed to his style of working collaboratively and motivating others through his positive attitude and relationship-building skills.

Minnesota OSHA participates at annual safety, health conference

Minnesota OSHA (MNOSHA) participated in the Minnesota Safety Council’s 85th annual Minnesota Safety and Health Conference, May 7 and 8, in Prior Lake.

MNOSHA Director James Krueger presented during the conference, giving an update about state’s OSHA program, including an overview of fatality trends and statistics, current MNOSHA staffing and the inspection process. Several enforcement standards MNOSHA is prioritizing were also discussed.

At right, representatives from MNOSHA Workplace Safety Consultation (near right) and MNOSHA Compliance talk with and answer questions for conference attendees from their booths in the Exhibit Hall.
MNOSHA sees increase in reports of amputations

Guarding, training, safety information available to prevent injuries

Recently, the Department of Labor and Industry (DLI) received an increase in reports of amputations. So far this federal fiscal year (beginning Oct. 1, 2018) Minnesota OSHA (MNOSHA) Compliance has received 15 reports of amputations. Many of these amputations have been to workers’ hands and fingers.

MNOSHA urges employers to take immediate steps to assess and reassess amputation hazards and risks in their workplaces and take needed corrective action to eliminate them. MNOSHA also encourages employers to redouble their efforts to train employees how to perform tasks safely.

Amputations are some of the most serious and debilitating workplace injuries. They are widespread and involve a variety of activities and equipment. Amputations are most common when employees operate unguarded or inadequately safeguarded machinery, mechanical equipment and power tools. Mechanical motions that involve rotating, reciprocating, traversing, cutting, punching, shearing and bending may increase the risk of a workplace amputation.

The proper installation of guards and devices to help prevent contact points with employees can be beneficial in preventing workplace amputation injuries. Proper training and safety information regarding the machines is also vital to the safety of employees.

Employer reporting requirements

Since 2015, Minnesota employers have been required to report all accidents resulting in any amputation to MNOSHA Compliance within 24 hours. The result has been an increased number of workplace inspections. MNOSHA now investigates an average of 13 amputation serious injuries each year.

Free assistance available

Besides enforcing regulations and conducting worksite inspections, MNOSHA Compliance provides education and technical assistance. Contact MNOSHA Compliance at osha.compliance@state.mn.us, 651-284-5050 or 877-470-6742.

MNOSHA Workplace Safety Consultation (WSC) offers free on-site consultation services, upon request, to help employers improve their safety and health record and lower accident costs. Contact WSC at osha.consultation@state.mn.us, 651-284-5060 or 800-657-3776.

More information

Minnesota OSHA (MNOSHA) Compliance recently signed five Level 3 Cooperative Compliance Partnerships on two projects. Level 3 is the peak level of MNOSHA Compliance partnerships, with applicants striving to be an industry leader with very comprehensive safety and health programs.

Four of the partnerships were signed under the Construction Health and Safety Excellence (CHASE) Minnesota program with Associated General Contractors (AGC) of Minnesota for one project, the Viking Lakes Hotel and Office in Eagan, Minnesota. The partnerships were with:

- Danny’s Construction Company;
- ECSI System Integrators;
- Hunt Electric Corporation; and
- Kraus-Anderson Construction Company.

The project is scheduled for completion June 15, 2020.

The fifth partnership was signed under the program with Minnesota Chapter of Associated Builders and Contractors (MN ABC) for the Phalen Village Project in St. Paul, Minnesota. The partnership is with:

- Shingobee Builders, Inc.

The project is scheduled for completion Nov. 1, 2019.

More information

Information about MNOSHA’s Cooperative Compliance Partnerships is online at www.dli.mn.gov/business/workplace-safety-and-health/mnosha-compliance-partnership-programs.
WSC co-sponsors Movement Matters networking event, Sept. 20

Minnesota OSHA Workplace Safety Consultation (WSC) is one of five co-sponsors for a regional networking event Friday, Sept. 20, at Methodist Hospital in St. Louis Park, Minnesota.

Movement Matters is a comprehensive, informative, hands-on course designed for safe-patient-handling professionals to apply neuroplasticity and exercise dosing principles for the most-challenging patients. These principles enhance functional independence outcomes with creative and innovative interventions while promoting safety for the patient and the therapist with safe-patient-handling mobility equipment.

This one-day course will allow participants to explore how equipment can be used to apply high repetitions, salient activities, engagement, aerobic exercise and error-allowance during rehabilitation activities without fearing patient or therapist injury. Participants will identify safe patient-handling solutions to challenging cases using a spectrum of equipment and devices across the continuum of care. Additional content will explore the process of obtaining equipment for a facility and the therapist’s role in safe-patient-handling programs.

The event is presented by Margaret Arnold, PT, CEES, CSPHP, a consultant and founder of Inspire Outcomes L.L.C. She has more than 20 years of experience as a physical therapist in acute care, inpatient rehabilitation and outpatient care, where she specialized in complex balance dysfunction, occupational health and ergonomics. She also has more than 10 years experience as a safe-patient-handling and early mobility program manager and consultant.

Co-sponsors of the event are Allina Health, The Association of Safe Patient Handling Professionals (ASPHP), Inspire Outcomes, Methodist Hospital and WSC.

• **Date:** Friday, Sept. 20, 2019
• **Time:** 7:30 a.m. to 4 p.m.
• **Location:** Methodist Hospital, 6500 Excelsior Blvd., St. Louis Park, MN

Complete information, registration


MNOSHA fatality, serious-injury investigations summaries online

Each month, Minnesota OSHA (MNOSHA) Compliance publishes current, updated summaries of its fatality investigations and serious-injury investigations.

For the federal-fiscal-year that began Oct. 1, 2018, MNOSHA Compliance has investigated 19 workplace fatalities through June 25.

The information provided about each investigation is: the inspection number, date of incident and worksite city; the type of business and number of employees; a description of the event; and the outcome of the MNOSHA Compliance investigation.

As part of its continual effort to improve customer service and provide needed information to employers and employees, Minnesota OSHA (MNOSHA) Compliance answers the most frequently asked questions from the previous quarter.

**Q.** It’s hot where I work and the building isn’t air conditioned. Doesn’t my employer need to install it?

**A.** No, there is no requirement that a workplace be air conditioned.

Minnesota Rules 5205.0110, Indoor Ventilation and Temperature in Places of Employment, establishes maximum temperatures depending on the type of work being performed. However, those temperatures are based on preventing heat-related illnesses, such as heat stroke and heat exhaustion, and not for personal comfort.

**Q.** Our employees do construction work on low-slope roofs (less than or equal to four vertical in 12 horizontal) using a warning line system and a safety monitoring system. Can I give the safety monitor some additional task to do while he or she is watching the other employees do their work?

**A.** No, under 1926.502(h)(1), Fall Protection Systems Criteria and Practices, the safety monitor cannot be given any responsibilities that would distract him or her from watching the other workers on the roof.

---

**Annual report about state-plan states published, available online**


The report describes the innovative approaches to creative partnerships, outreach and education, voluntary compliance, inspection targeting and settlement agreements that have been developed by the 28 states and territories, including Minnesota, that operate state occupational safety and health plans that are at least as effective as federal OSHA.

**Results of audit by federal OSHA available online**

Employers break for safety during annual Excavation Safety Stand-down

During Minnesota OSHA (MNOSHA) Compliance’s third annual statewide Excavation Safety Stand-down, April 15 through 19, at least 16 Minnesota employers designated work time to discuss the hazards employees may face when working in and around excavations. Since 2015, MNOSHA Compliance has responded to three work-related fatalities in this industry.

A critical part of excavation safety is the involvement of a competent person, defined as “one who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.” A daily inspection of excavations is required to be completed by a competent person before the start of work and as needed throughout the shift. These inspections are the key to making sure all hazards have been identified and adequate protective measures are in place.

The most significant hazard when working in any excavation is cave-ins. Every excavation greater than five feet deep requires a cave-in protection system. There are multiple methods of protection that an employer can implement to keep employees safe while working in an excavation, including sloping, shoring and shielding.

Employers were cited an average of 35 times a year for not providing employees working in an excavation with an adequate protective system. The competent person must ensure every employee working in an excavation, for any duration, is adequately protected from cave-in hazards. Other commonly cited hazards include the lack of access/egress and the placement of the spoil pile. The standards require that when working in an excavation greater than four feet deep, access/egress is provided and the spoil pile cannot be closer than two feet from the edge of the excavation.

Take time out of each workday, before the start of any excavation work, to identify the hazards that employees will face. Preplan your jobs to ensure appropriate equipment is readily available to address changing conditions and eliminate any potentially fatal mistakes.

Below and on the next few pages are photos from companies that participated, then submitted a photo and the number of total company participants, to receive a participation certificate from Minnesota OSHA Compliance.
D.J. Kranz Co., Bolander, Kelleher Construction, Reger Co. – 20 employees

NAC Mechanical tinners, fitters, plumbers, electricians – 326 total employees
Metro Transit – Southwest Light Rail Transit Project – 35 employees

U.S. Sitework – five employees
City of Rochester – Public Works Engineering and Infrastructure – 24 employees

Northland Concrete and Masonry, Hunt Electric, Ceco Concrete, Reger Companies, Metro Mechanical Contractors, Kraus-Anderson – 38 employees
Notes from the undercount: Survey results show need for training

There are many reasons why the number and types of cases captured in the Survey of Occupational Injuries and Illnesses (SOII) underestimate the true incidence and severity of work-related injuries and illnesses.

The Bureau of Labor Statistics (BLS) recently posted a report on its continuing research to improve the SOII estimates.¹ The focus of the research was SOII respondent knowledge of OSHA recordkeeping requirements.

This national survey built on the SOII respondent surveys conducted a few years earlier in Minnesota, Oregon, New York and Washington.²

BLS conducted the survey on a sample of private-sector participants in the 2013 SOII. Interviews were conducted with respondents for 1,852 of the 3,703 establishments in the survey sample. BLS collected OSHA logs from 777 of the respondents.

The interviews with SOII respondents showed:

- only half of the establishments maintained OSHA logs for the survey period;
- among establishments where OSHA logs were maintained, only 48% said the OSHA log recordkeeper received formal training;
- 51% of the respondents were participating in their first SOII;
- 43% of the establishments used workers’ compensation data to complete the SOII;
- 55% of OSHA log recordkeepers incorrectly specified that they counted work-shift days instead of calendar days to determine the number of days away from work; and
- only 37% of the establishments that used temporary workers said they were included in their establishment’s OSHA log (the recordkeeping requirements specify establishments need to record injuries and illnesses to temporary workers).

The survey results show the need for OSHA log training. The Minnesota Department of Labor and Industry offers free OSHA log training; the next sessions are Aug. 16 and Nov. 6 (see next page for details).

**Free on-site safety and health consultations available**

Minnesota OSHA (MNOSHA) Workplace Safety Consultation offers free consultation services, where employers can find out about potential hazards at their worksites, improve safety management systems and apply for grants to abate safety standards.

The program targets small, high-hazard businesses. It is separate from Minnesota OSHA Compliance inspection activities and no citations are issued as part of a consultation visit.

**Learn more and request a consultation**

Web: [www.dli.mn.gov](http://www.dli.mn.gov)  •  Email: osha.consultation@state.mn.us  •  Phone: 651-284-5060
Estimates from the Survey of Occupational Injuries and Illnesses (SOII) in Minnesota show that, among cases involving one or more days away from work, intentional injuries by people to workers has been increasing in recent years, after dropping from 2013 to 2014.

Figure 1 shows the number of intentional assault cases from 2011 through 2017 for total cases and separately by gender. The estimated 670 total cases for 2017 is the highest value in the period, 76% higher than the number of cases in 2011 and 60% higher than the number in 2014. Women averaged more than twice as many estimated cases as men each year. The number of intentional assaults to women increased by 113% from 2011 to 2017. The estimated number of intentional assaults to men peaked at 220 cases in 2013, and the peak year for intentional assaults to women was an estimated 490 cases in 2017.

The estimated rate of intentional assaults resulting in one or more days away from work was 3.0 cases per 10,000 full-time-equivalent (FTE) workers in 2017, up from a rate of 1.9 cases per 10,000 FTE workers in 2011. The 2017 rate for women was estimated at 5.0 cases per 10,000 FTE workers and the rate for men was estimated at 1.5 cases per 10,000 FTE workers.

Figure 1. Estimated number of intentional assault cases in Minnesota, cases with one or more days away from work, all ownerships
The Minnesota Star (MNSTAR) Program is a Minnesota OSHA Workplace Safety Consultation program that recognizes companies where managers and employees work together to develop safety and health programs that go beyond basic compliance with all applicable OSHA standards and result in immediate and long-term prevention of job-related injuries and illnesses. Key elements of this comprehensive program include: management leadership and employee involvement; an allocation of resources to address safety issues; systems that identify and control workplace hazards; and a plan for employee safety training and education.


Construction Seminars: Save the dates for 2019/2020 season

Minnesota OSHA (MNOSHA) Compliance’s free Construction Seminars feature a presentation about a specific construction safety or health topic – with time for questions, answers and input – plus an update from MNOSHA Compliance about what’s currently happening regarding investigations. There is no fee for the seminars, which start at 7 a.m. (doors open at 6:30 a.m.), and attendees are welcome to bring their own food and beverages. The seminars are at the MnDOT Training and Conference Center, 1900 W. Cty. Road I, Shoreview, MN.

Dates, topics for 2019/2020 season

- Sept. 24, 2019
- Nov. 12, 2019
- Jan. 21, 2020
- March 31, 2020
- May 19, 2020


Join our seminars mailing list

Get placed on our mail or email list by calling 651-284-5375 or emailing osha.compliance@state.mn.us.
## Minnesota OSHA’s calendar of events

### August 2019

**Aug. 2** Occupational Safety and Health Advisory Council  

**Aug. 16** OSHA recordkeeping training: Learn the basics  

### September 2019

**Sept. 6** Occupational Safety and Health Review Board  

### October 2019

**Oct. 17** LogSafe: CPR, first-aid certification; OSHA training – International Falls  

**Oct. 30** LogSafe: CPR, first-aid certification; OSHA training – Grand Rapids  

### November 2019

**Nov. 1** Occupational Safety and Health Advisory Council  

**Nov. 6** OSHA recordkeeping training: Learn the basics  

**Nov. 21** LogSafe: CPR, first-aid certification – Cloquet  

**Nov. 21** LogSafe: CPR, first-aid certification; OSHA training – Bemidji  

### December 2019

**Dec. 3** LogSafe: CPR, first-aid certification; OSHA training – Cloquet  

**Dec. 6** Occupational Safety and Health Review Board  

**Dec. 10** LogSafe: CPR, first-aid certification – Two Harbors  

**Dec. 13** LogSafe: CPR, first-aid certification; OSHA training – Grand Rapids  

---

See more at [www.dli.mn.gov/about-department/about-dli/events-minnesota-osha](http://www.dli.mn.gov/about-department/about-dli/events-minnesota-osha)