

# Looking SHARP

"Improving Safety & Health For SHARP Companies"



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Summer 2015

## New Confined Space in Construction Rules Issued

In August of this year, OSHA's new "Confined Space in Construction" standards will go into effect after two decades of work by OSHA, with input from stakeholders. According to Assistant Secretary of Labor, Dr. David Michaels, "This rule will save the lives of construction workers. Unlike most general industry work sites, construction sites are continually evolving, with the number and characteristics of confined spaces changing as work progresses. This rule emphasizes training, continuous work site evaluation and communication requirements to further protect worker's safety and health."

Construction workers often perform tasks in confined spaces – work areas that are 1) large enough for an employee to enter, 2) have limited means of entry or exit, and 3) are not designed for continuous human occupancy. People working in confined spaces face life-threatening hazards, including toxic substances, electrocutions, explosions and asphyxiation and this new standard could protect nearly 800 construction workers a year from serious injuries and reduce these life threatening hazards.

There are five key difference between the existing general industry standard and the new confined space standards. These five new requirements include:

1. More detailed provisions requiring coordinated activities when there are multiple employers at the work site. This will ensure hazards are not introduced into a confined space by workers performing tasks outside the space. An example would be a generator running near the entrance of a confined space causing a buildup of carbon monoxide within the space.

2. Requiring a competent person to evaluate the work site and identify confined spaces, including permit spaces.

3. Requiring continuous atmospheric monitoring whenever possible.

4. Requiring continuous monitoring of engulfment hazards. For example, when workers are performing work in a storm sewer, a storm upstream from the workers could cause flash flooding. An electronic sensor or observer posted upstream from the work site could alert workers in the space at the first sign of the hazard, giving the workers time to evacuate the space safely.

5. Allowing for the suspension of a permit, instead of cancellation, in the event of changes from the entry conditions list on the permit or an unexpected event requiring evacuation of the space. The space must be returned to the entry conditions listed on the permit before re-entry.

In addition, OSHA has added provisions to the new rule that clarifies existing requirements in the General Industry standard. These include:

1. Requiring that employers who direct workers to enter a space without using a complete permit system prevent workers' exposure to physical hazards through elimination of the hazard or isolation methods such as lockout/tagout.

2. Requiring that employers who are relying on local emergency services for emergency services arrange for responders to give the employer advance notice if they will be unable to respond for a period of time (because they are responding to another emergency, attending department-wide training, etc.).

3. Requiring employers to provide training in a language and vocabulary that the worker understands.

Finally, several terms have been added to the definitions for the construction rule, such as "entry employer" to describe the employer who directs workers to enter a space, and "entry rescue", added to clarify the differences in the types of rescue employers can use.

For more information on the new standard, visit the OSHA web site at: [www.osha.gov](http://www.osha.gov)





## Record Rainfall Jeopardizes Safety & Health in OK

Floodwaters inundated much of Oklahoma from the middle of May throughout much of June. The news told of hundreds of high-water rescues and at least five people died from drowning in flash flooding.

But flooding wasn't the only hazard created by all the rain. Boulders fell from the Arbuckle Mountains, striking a car and shutting down the roadway for days and ODOT and TXDOT engineers were monitoring the Red River bridge for possible failures as the flood waters reached the bottom of the bridge structure as the river flooded to 42.05 feet for the first time in recorded history, according to KFOR news.

Meanwhile, wildlife officials warned that flooding in Texas and Oklahoma is causing snakes, alligators and other reptiles to seek dry land in populated areas.

To avoid potential snake bites, be aware of your surroundings at all times. Watch where you place your hands and feet when removing debris. Wear heavy gloves and boots at least 10 inches high. If you see a snake, step back and allow it to proceed. Watch for snakes sunning themselves on river banks and tree limbs or other debris.

Another threat lurking in floodwaters is stinging fire ants. Fire ants will form a mat on the surface of the water, which might look like a brown rug floating on the water. Experts warn people to stay away from these floating nests. Ticks are also on the rise, as are mosquitoes. The risk of Rocky Mountain Spotted Fever, West Nile virus and other insect-borne illnesses may be on the rise.

To protect yourself from biting and stinging insects,

wear long-sleeved shirts, long pants and socks. Use an insect repellent that contains DEET.

In Purcell, 28 homes were evacuated after a nearby creek overflowed and caused significant flooding. But homes and business all across the state have been affected by flooding, and as the waters recede and the clean up efforts begin, the risk of mold and other fungi becomes an issue. Most are harmless, but some can cause respiratory and other disorders when people disturb them and inhale the spores. In addition, prolonged contact with floodwaters can cause skin disorders and fungal skin infections. These can be minimized or avoided by washing the skin with warm, soapy water and keeping it as dry as possible.

When performing flood clean-up, avoid breathing dust generated by moldy building materials and consider using an N-95 respirator. Consider discarding all water damaged materials and articles that are visibly contaminated with mold should be discarded. (When in doubt, throw it out.) Surfaces that have a light covering of mold should

be scrubbed with warm, soapy water and rinsed with a disinfectant made of 1/2 cup liquid household bleach, into one gallon of water. (Never mix bleach with products that contain ammonia!)

After working with mold-contaminated materials, wash thoroughly with soap and water.

For more information on flood-related hazards, visit OSHA's web site at [www.osha.gov/dts/weather/flood/response.html](http://www.osha.gov/dts/weather/flood/response.html)



*Photo provided by Oklahoma Office of Emergency Management*



## Avian Flu Outbreak Considered Worst in U.S. History

Experts have been accused of crying wolf for the past several years about a potential pandemic of avian flu. So far, the human outbreaks have been regional and there have been nearly 650 human cases reported in 15 countries since 2003.

However, avian strains of flu, including H2N2, H5N8 as well as H5N1 have been detected among U.S. bird populations and experts are calling this the worst U.S. bird flu outbreak since 1980.

Avian flu is highly pathogenic, and outbreaks in the bird populations have been recorded in 21 states. Nationwide, more than 46 million chickens and turkeys have been killed by the disease or culled to prevent its spread and the number of avian cases continues to rise.

So what does this mean for the U.S.? An increase in egg prices, as well as possible rationing of eggs are a couple of such outcomes.

Already, What-A-Burger Restaurants have been limiting the hours they serve eggs in their restaurants because an interruption in their supply chain due to an avian flu outbreak, and the average price of a dozen eggs has nearly doubled in recent months.

Human infections with the H5N1 have been reported to the World Health Organization in 15 countries. About 60% of those who contracted the H5N1 died from their illness. In 2011, 62 human H5N1 cases resulted in 34 deaths from five countries -- Bangladesh, Cambodia, China, Egypt and Indonesia. Six countries have ongoing wide-spread infection in their poultry population, according to the U.S. Department of Health & Human Services. According to the Centers for Disease Control, of the few avian flu viruses that have crossed the species barrier to infect humans, the H5N1 virus has caused the largest number of detected cases. The majority of the human cases have been in children and adults younger than 40 years-old. Mortality has been highest in people aged 10-19 years old and in young adults. Some clinically mild cases have been reported in children. However, most human H5N1 cases have presented for medical care late in their illness and often result in severe respiratory disease.

Symptoms of avian flu are similar to seasonal flu and may include: fever, cough, sore throat, muscle aches, but may also include eye infections, pneumonia, acute respiratory distress, and are sometimes accompanied by nausea, diarrhea vomiting and neurological changes.

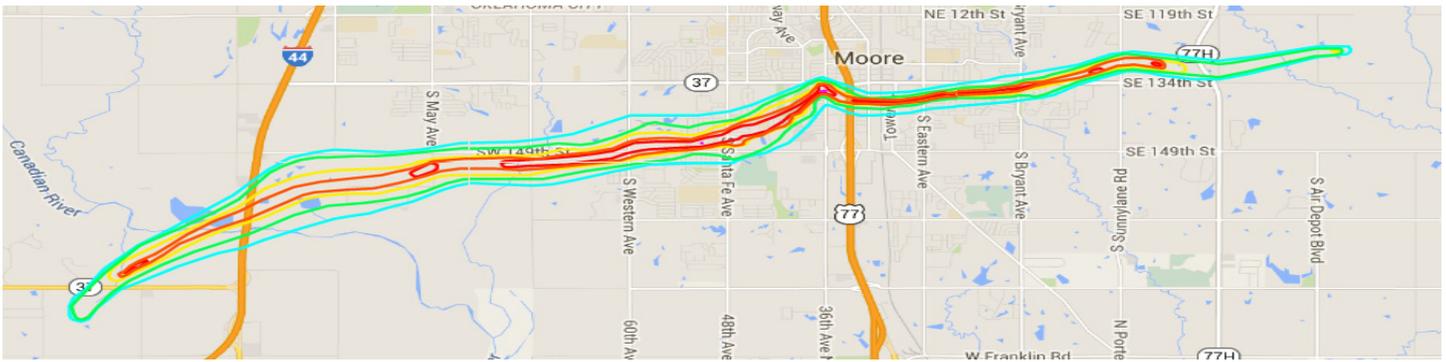
Avian flu cannot be diagnosed by the symptoms, however. Laboratory testing is required. Avian flu is generally diagnosed by collecting a swab from the nose or throat of the sick person during the first few days of the illness. This specimen is sent to a lab where it is analyzed.

The best way to prevent H5N1 is to avoid contact with infected poultry, which means workers in a variety of industries may be at risk. These may include: poultry growers and their employees; service technicians of poultry processing companies; caretakers, layer barn workers, and chick movers at egg production facilities; and workers involved in disease control and eradication activities, as well as inspectors and consultants, including state, federal, contract, and company employees. Poultry workers should know and follow biosecurity practices to prevent the introduction of avian influenza and other diseases into a poultry flock.

An understanding of how infection can be spread is important for both effective biosecurity and worker safety and health practices. Poultry processing companies should provide a written copy of biosecurity practices to each of their contract growers. A 2004 USDA fact sheet lists eight general biosecurity practices for poultry farms ([http://www.aphis.usda.gov/lpa/pubs/fsheet\\_faq\\_notice/faq\\_ahhpai.pdf](http://www.aphis.usda.gov/lpa/pubs/fsheet_faq_notice/faq_ahhpai.pdf)). Guidance is also available in the free biosecurity CD, Infectious Disease Risk Management: Practical Biosecurity Resources for Commercial Poultry Producers, which is available from the U.S. Poultry and Egg Association at <http://www.uspoultryegg.org/>.

Additional information on protecting workers from the risk of avian flu is available on OSHA's web site at [www.osha.gov/dsg/guidance/avian-flu.html](http://www.osha.gov/dsg/guidance/avian-flu.html)





## Learning From Joplin & Moore: A Tale of Two Storms

### *Joplin Tornado Summary*

**May 22, 2011.** In the late afternoon hours of that Sunday, Joplin experienced the single deadliest tornado that the US has experienced since 1947. The National Weather Service indicated the tornado appeared to be a “multivortex” tornado.

The storm was part of a larger late-May tornado outbreak

About 30% of the city of 50,000 people experienced extensive damage, with over 150 people left dead in the storm’s wake. The F5 twister left a swath of destruction  $\frac{3}{4}$  of a mile wide through the heart of Joplin, with radar signatures detecting debris lifted some 18,000 feet into the air.

St. John’s Regional Hospital suffered a direct hit, with materials from the building found over 60 miles away. Damage totals were \$2.8 billion.

There was some later debate over whether or not the tornado should have been rated as an EF5. An engineering study found no evidence of EF5 damage in Joplin due to poor quality construction of many buildings; however the National Weather Service stated their survey teams did find evidence of EF5 damage, including large vehicles such as buses, vans and semi-trucks being thrown hundreds of yards to several blocks from their point of origin, and removal of concrete parking stops and manhole covers. Thus, the rating stood.

This was the third significant tornado to strike Joplin since May of 1971. Along with the 1925 Tri-State Tornado and the 1896 St. Louis Tornado, it ranks as one of Missouri and America’s deadliest tornadoes.

### *Moore Tornado Summary*

**May 20, 2013.** It was an EF5 tornado that carved a 17-mile path of destruction through the Oklahoma City suburb at 2:56 in the afternoon, just about the time the school buses would normally run.

The weather forecasters had been talking for days about how conditions were setting up for a potentially devastating storm, with that fateful Monday afternoon in the cross hairs. By mid-afternoon, all the conditions were right and Moore, OK took it on the chin...again. The storm followed almost the same path as the previous 1999 tornado that killed 36 people.

In all, 24 people were killed, including seven school children. Over 377 were injured.

The Moore Medical Center was struck by the storm’s fury and suffered significant damage. Cars were stacked and crumpled beyond repair and piled into a heap in the hospital’s parking lot. One car was even found on the roof of the hospital. Residents and others came to the hospital seeking shelter – in total between 250 and 300 additional people. Fortunately, no staff or patients were injured in the hospital and only minor injuries were reported.

Tornadoes had already hit from Edmond to Carney and Little Axe to Shawnee the evening before, and the May 20th tornado wouldn’t be the last twister to cross through Oklahoma that month. More storms followed on May 31st through El Reno.

These two storms tell similar stories with one singular message. **Be prepared.** Tornadoes will strike again. For more on disaster preparedness, visit OSHA’s web site at:

[www.osha.gov/dts/weather/tornado/preparedness.html](http://www.osha.gov/dts/weather/tornado/preparedness.html)

Sources: The National Weather Service & Wikipedia





# PLAN . PROVIDE . TRAIN .

*Three simple steps to preventing falls.*

## Taking a Stand Against Falls From Heights

Falls are the number one killer in construction. According to the Bureau of Labor Statistics (BLS), in FY2013, out of the 796 total fatalities in construction, nationwide, 284 of those deaths were contributed to falls. Sadly, most of these accidents could have been prevented.

This is the message OSHA was *shouting from the roof-tops* in a National Safety Stand-Down which was held May 4-15 this year. The purpose of the National Fall Protection Stand-Down was to raise awareness of preventing fall hazards in construction. Anyone who wanted to prevent falls in the workplace was invited to participate in the Stand-Down.

**What is a “Stand-Down”?** A Stand-Down is a voluntary event for employers to talk directly to employees about safety. This year’s theme was “Fall Prevention.”

The Construction Stand-Down follows on the heels of last year’s Stand-Down in the Oil & Gas industry, which started in Oklahoma. The Oil & Gas Stand-Down reached more than 1 million workers, so the goal for this year’s Construction Stand-Down is to reach more than 3 million workers.

OSHA partnered with industry groups across the country to host events all across the nation. Companies were encouraged to conduct a Safety Stand-Down by taking a break to have a tool box talks or other safety activities such as conducting safety equipment inspections, developing rescue plans, or discussing job specific hazards. Managers were encouraged to plan a stand-down at their jobsites or workplaces any time during the May 4-15th time frame.

Several events were held in Oklahoma City on May 12th and 13th at the Oklahoma Safety Council’s Office

at 2400 S. Vermont.

Employers who participated in their own stand-down, were able to download a certificate of participation signed by the Secretary of Labor, Thomas E. Perez, in recognition of their efforts.

While the official event has now passed, employers are encouraged to continue the effort to protect workers from the hazards of falls. A wide range of resources created for the stand-down, remain available on OSHA’s website.

### **Planning & Preparation Keys To Preventing Falls**

Employers in construction are required to provide, and require the use of, fall protection devices (such as guardrails) or personal fall arrest systems, when working at heights greater than 6’. Too often, the fall protection devices are not utilized, or not utilized properly, which results in fatal falls.

Planning is the first step. Every job should be bid to include the costs associated with addressing falls in mind. Employers need to provide the right equipment for the job, including personal fall arrest systems, ladders and/or scaffolding.

Employees must be provided with training on the hazards of working at heights. Falls can be prevented when workers understand proper set-up and safe use of equipment. Employes must train workers in hazard recognition and in the care and safe use of ladders, scaffolds, fall protection equipment and other PPE.

For more on how to conduct your own safety stand-down or for more information on preventing falls, visit the OSHA web site at [www.osha.gov/StopFallsStand-Down/index.html](http://www.osha.gov/StopFallsStand-Down/index.html)

# Near Misses Offer Value in Lessons Learned

In 2013, a temp worker died after climbing inside a huge hopper to remove sugar clogs. The warehouse manager told OSHA that he had asked for a safety screen to be installed to prevent such an accident, but after one was installed, the plant manager decided to get rid of it because it was slowing down production.

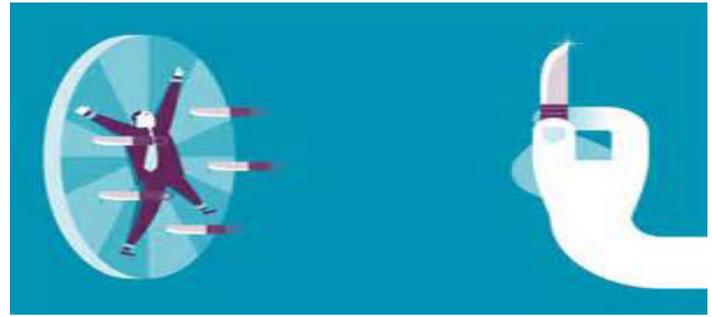
Sugar clumps had to be broken up every 30-40 minutes when the screen was in place. Without it, clogs only occurred two or three times per shift. A worker nearly met the same fate soon after the screens were removed, but investigators found the screens still weren't replaced, despite the near-miss.

This is just another tragic example of an employer who failed to learn from a near miss, at the cost of an employee's life. Near misses are often over-looked when they should be viewed as a screaming klaxon – a rallying cry, a call to arms.

Near-miss investigations, along with accident investigations are tools for uncovering hazards that were missed earlier or have managed to slip out of the controls planned for them. Such investigations are only useful when done with the aim of discovering every root cause and contributing factor that lead to the incident. The goal is not to place blame or find fault.

## Who should investigate?

The usual investigator for all incidents is the supervisor in charge of the involved area and/or activity. Accident investigations also offer an opportunity to involve employees in safety and health. Employee involvement will not only give you additional expertise and insight, but in the eyes of the workers, will lend credibility to the results. Employee involvement also benefits the involved employees by educating them on potential hazards, and the experience usually makes them believers in the importance of safety, thus strengthening the safety culture of the organization. The safety department or the person in charge of safety and health should participate in the investigation or review the investigative findings and recommendations. Many companies use a team or a subcommittee or the joint employee-management committee to investigate incidents involving serious injury or extensive property damage.



## Training for incident investigation

No one should investigate incidents without appropriate accident investigation training. Many safety and health consultants and professional organizations provide this type of training. OSHA Education Centers, Career Tech Centers and the Local Safety Council can also be good resources for such training in Oklahoma.

## The investigative report should answer six key questions

Once all the evidence is collected, six key questions should be answered: who, what, when, where, why, and how. Fact should be distinguished from opinion, and both should be presented carefully and clearly. The report should include thorough interviews with everyone with any knowledge of the incident. A good investigation is likely to reveal several contributing factors, and it probably will recommend several preventive actions.

You will want to avoid the trap of laying sole blame on the injured employee. Even if injured workers openly blame themselves for making a mistake or not following prescribed procedures, the accident investigator must ensure that all contributing causes have been identified. The error made by the employee may not be even the most important contributing cause. If the employee did make an error, what factors contributed to the choices they made that lead to the incident? The employee who has not followed prescribed procedures may have been encouraged directly or indirectly by a supervisor or production quotas to “cut corners.” The prescribed procedures may not be practical, or even safe, in the eyes of the employee(s). Sometimes where elaborate and difficult procedures are required, engineering redesign might be a better answer. In such cases, management errors -- not employee error -- may be the most important contributing causes.

## Implications of accident investigations

Recommended preventive actions should make it very difficult, if not impossible, for the incident to recur. The

# BLS Commemorates 20 Years of Collecting Injury/Illness Data

The Bureau of Labor Statistics (BLS) Census of Fatal Occupational Injuries (CFOI) is the federal government’s primary source for data on fatal injuries in the workplace. CFOI publishes demographic and employment information about deceased workers (referred to as “decedents” by CFOI) as well as detailed data on the fatal incidents.

On October 1, 1993, CFOI published the first comprehensive nationwide data on fatal occupational injuries in the United States. These data, which recorded fatal injuries for calendar year 1992, marked the beginning of a data series that has been used by governmental agencies, safety and health entities, academic institutions, and others to identify trends in workplace deaths and to work towards eliminating future work-related fatal injuries.

Over the years, CFOI has collected and published a wealth of information about on-the-job fatal injuries. This issue of Beyond the Numbers highlights some interesting facts and data from the first 20 years of the Census of Fatal Occupational Injuries.

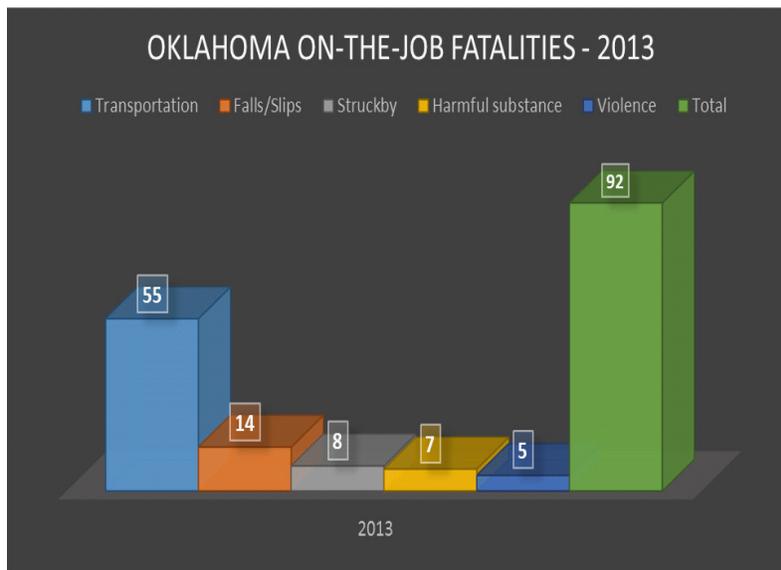
According to the CFOI, ninety-two Oklahoma workers lost their lives from work-related incidents in 2013 according to the recent Census of Fatal Occupational

Injury & Illness data released by the Bureau of Labor Statistics. Fifty-five (55) of those were the result of transportation incidents; fourteen (14) were falls, slips/trips; eight (8) were from contact with objects and equipment (struck by), seven (7) were exposure to harmful substances, while five (5) were the result of a work-place violence incident.

In 2012, 94 Oklahoma workers died from on the job accidents and incidents. There were fewer transportation accidents (51), and falls (9), however, there were four fatal accidents involving fire/explosions and more incidents involving contact with objects and equipment (struck by) (12), and exposure to harmful substances (11).

On average, ninety-one Oklahoma workers die in a workplace incident each year. Over the past nine years (2005-2013), 823 workers have lost their lives to an on-the-job accident.

For more information on the Census of Fatal Occupational injuries and illnesses in Oklahoma, visit our web site at [www.ok.gov/odol/Services/Statistics/Annual\\_Surveys.html](http://www.ok.gov/odol/Services/Statistics/Annual_Surveys.html)



Sources: Bureau of Labor Statistics

## Lessons Learned (Continued from page 6)

investigative report should list all the ways to “foolproof” the condition or activity. Considerations of cost or engineering should not enter at this stage. The primary purpose of accident investigations is to prevent future occurrences. Beyond this immediate purpose, the information obtained through the investigation should be used to update and revise the inventory of hazards, and/or the program for hazard prevention and control. For example, the Job Safety Analysis should be revised and employees retrained to the extent that it fully reflects the recommendations made by an incident report. Implications from the root causes of the accident need to be analyzed for their impact on all other operations and procedures.

For more information on near miss and accident investigations, visit OSHA’s web site at [www.osha.gov](http://www.osha.gov)

Sources: OSHA & ODOL

# Text Neck could be the Next “Epidemic”

The human head weighs about 12 pounds. But as the neck bends forward and down, the weight on the cervical spine begins to increase. At about a 15-degree angle, this weight is about 27 pounds; at 30 degrees its 40 pounds and at 45 degrees its 49 pounds...and it just goes up from there, up to 60 pounds.

That’s the burden that comes with staring at a smart phone, the way millions do for hours every day, according to research published by Kenneth Hansraj in the National Library of Medicine. The study will appear soon in Surgical Technology International. Over time, researchers say this poor posture, sometimes called ‘text-neck’ can lead to early wear and tear on the spine, degeneration, and even the need for surgery.

“It’s an epidemic, or at least it’s very common,” Hansraj, chief of spine surgery and New York Spine Surgery and Rehabilitation Medicine, told the Washington Post. “Just look around you, everyone has their heads down.”

Can’t grasp the significance of 60 pounds of weight bearing down on your neck? Imagine carrying an 8-year-old around your neck for several hours per day. Smartphone users spend an average of two to four hours per day hunched over, reading e-mails, sending texts, tweeting or browsing social media sites. That’s 700 to 1400 hours per year that people are putting significant stress on



their spines. High school age users might be the worst. They could conceivably spend an additional 5,000 hours in this position, Hansraj said.

“The problem is really profound in young people,” he said, we might start seeing young people needing spine care. “I would really like to see parents showing more guidance.”

Medical experts have been warning people for years. Some say for every inch the head tilts forward, the pressure on the spine doubles.

Speaking to TODAY, Hansraj gave smart phone users the following tips to avoid pain:

- Look down at your device with your eyes. No need to bend your neck.
- Exercise: Move your head from left to right several times. Use your hands to provide resistance and push your head against them, first forward, then back. Stand in a doorway with your arms extended and

push your chest forward to strengthen ‘the muscles of good posture’.

“I love technology. I’m not bashing technology in any way,” Hansraj told The Post. “My message is: be cognizant of where your head is in space. Continue to enjoy your smart phones and continue to enjoy this technology – just make sure your head is up.”

Source: The Washington Post

Looking SHARP is a quarterly publication by the Oklahoma Department of Labor, Safety Pays® OSHA Consultation Division. This publication is intended to assist employers with improving safety and health conditions in their workplaces. If you have questions and/or suggestions for future issues, contact the editor, Betsy Kulakowski or call (405) 521-6277. To subscribe to Looking SHARP, visit our website at [www.ok.gov/odol](http://www.ok.gov/odol) and click on the red envelope. You can also sign up for other news and information from the Department of Labor.

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## Things That Make You Go ‘Huh?’

**Where’s the remote?** A study by Logitech, the computer accessories and remote manufacturer, revealed that there’s a 50% chance that your lost remote is stuck in the sofa cushions. Meanwhile, 4% of lost remotes are found in the fridge or freezer, and 2% turn up somewhere outdoors or in the car.

**In a hurry?** Recent research by the Organization for Ergonomic Cooperation and Development found that Americans spend 1 hour and 14 minutes eating each day. We’re the 3rd fastest eaters among the 34 countries that were studied. Turks, the slowest eaters, spend an average of 2 hours and 42 minutes eating per day. The French also take their time at the table, spending an average of 2 hours and 15 minutes there daily.

**Feeling lucky?** There are approximately half a million pieces of space junk in orbit around Earth that measure at

least half an inch (1.27 cm) wide. Occasionally, one of these pieces re-enters Earth’s atmosphere, and if it doesn’t burn up on re-entry, it crash-lands somewhere. Heiner Klinkrad, head of the European Space Agency’s Orbital Debris Office, calculated that there’s a one-in-100 billion chance that you’ll be severely injured by a falling piece of space junk this year. In the course of a 75-year lifetime, then, the odds are a little less than one in 1 billion.

**Superstitious?** A group of medical researchers in Britain found that traffic accidents were 52% more likely to result in hospital-worthy injuries if they occurred on Friday the 13th, vs. Friday the 6th.

If that’s not bad enough, in 2010, a 13-year-old British teenager was struck by lightning at 13:13 on Friday the 13th.

Source: LiveScience

