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The first article in this *Working Well* issue addresses signs and symptoms of post-traumatic stress disorder. It can be a devastating condition. Family, friends and co-workers can assist in recognizing symptoms. Early diagnosis and treatment can improve outcomes and return the person to full function.

The second article discusses older drivers. Statistically, older drivers practice safe-driving habits, but they are more likely to be injured if they are in an accident. Understanding age variations in ability can tailor management of driving routes, conditions and times to improve safety for older drivers.

The third article is on the herbicide glyphosate. Much information has been in the news about the International Agency for Research on Cancer finding that glyphosate may be carcinogenic. Information in this article may help ease some of the scare in using Roundup.[®]

Whitney Buckland, PA-C, submits a good article on opioids and the workplace. The workplace is not immune to the opioid crisis. Employers must address this issue and plan policy for its consequences. Donna Padgett, ACNP, provides interesting questions and answers regarding dietary supplement use in the last article.

It's spring and pollen is blanketing our cars and invading our noses. Hopefully, the annual golden event will pass with rain. Until then, use non-sedating antihistamines to help with allergy symptoms. I hope you enjoy this issue of *Working Well*. Take care of yourself and your family. Stay safe!

— Dana Rawl, MD, MPH

Post-Traumatic Stress Disorder

By Dana Rawl, MD, MPH

People who experience a highly emotional or terrifying event may develop post-traumatic stress disorder, which can cause prolonged psychological or physical symptoms.

Most people who experience traumatic, shocking, scary or emotionally upsetting situations or events will respond naturally. Fear is a normal emotion to a traumatic event and will generate a “fight-or-flight” response, an innate characteristic to protect the person from harm. Other emotions, such as anger, guilt, anxiety and depression, can affect the person after the event, but generally, with time, he or she heals emotionally and moves on with normal life experiences. Clinicians consider a PTSD diagnosis when symptoms last more than a month and are severe enough to interfere with relationships or work.

To be diagnosed with PTSD, an adult patient must have all these symptoms for at least one month:

- At least one re-experiencing symptom, such as flashbacks, bad dreams or frightening thoughts. Words, objects or situations may trigger these symptoms, and they may disrupt the person's daily routine.
- At least one avoidance symptom. They consciously stay away from locations, events or things that remind them of the trauma, such as not driving or riding in a vehicle after a bad accident.
- At least two arousal and reactivity symptoms, such as difficulty sleeping, being easily startled, feeling tense or having angry outbursts. These symptoms are usually constant and may make the person feel stressed and angry, adversely affecting daily tasks and concentration.
- At least two cognition and mood symptoms. Trouble remembering key features of the event, negative thoughts, distorted feelings of guilt or blame, or loss of interest in enjoyable activities that can cause alienation or a disengagement from friends and family.

Children with PTSD react differently than adults. Young children under age 6 may develop bedwetting or be unusually clingy with a parent. They may become silent or be unable to talk. They may act out the traumatic event during playtime. Older children and teens may show adult symptoms and may develop disruptive, destructive or disrespectful behavior or express thoughts of revenge.



Not every person who experiences a traumatic event will develop PTSD. Some people can develop PTSD months or years after an initiating event. PTSD can be acute or chronic. Acute PTSD usually lasts less than six months.

According to the National Center for PTSD, seven to eight out of every 100 people will experience PTSD at some point in their lives with women more likely to develop PTSD than men. Some factors that may increase risk for PTSD include: having a history of mental illness or substance abuse; having minimal or no social support after the event; having a history of childhood trauma; or seeing a corpse or someone seriously injured. Resilience factors that may reduce PTSD risk include seeking out support from friends and family, participating in a support group or having a positive coping strategy.

Treatment for PTSD is individualized and should be treated by a mental health provider with experience in the disorder. Treatment options include medications, such as antidepressants, psychotherapy or both; however, support from family and friends is an integral part of recovery. Self-help actions also improve coping and recovery from any

emotional trauma. These actions include participating in physical activity or exercise to reduce stress, setting realistic goals, prioritizing achievable tasks, confiding in a trusted friend or family member, seeking comforting situations and people, and maintaining an expectation of gradual symptom improvement.

Unfortunately, we don't live in Mayberry. It seems as if society is more violent than ever, and the risk of exposure to a horrifying event is probably high. Work-related traumatic events or injuries can be an initiating factor for PTSD. Multiple and prolonged wars have also taken a psychological toll on military servicemen and servicewomen. Recognizing the symptoms of PTSD in yourself, a co-worker, a friend or a loved one may lead to early diagnosis, treatment and recovery. 🌱

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<https://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml>

Older Drivers and Crash Prevention

By Dana Rawl, MD, MPH

Based on 2011 to 2013 data from the Bureau of Labor Statistics Census of Fatal Injuries, motor vehicle drivers 55 years old or older have twice the risk of dying in a work-related crash than younger workers. Even though older drivers are more likely to practice safe-driving behaviors such as wearing seat belts and conforming to speed limits, they are more likely to be injured in a crash. And they are more likely to succumb to their injuries due to underlying medical conditions and a relative decline in general health.

Age-related physical and mental changes can affect older workers' driving. Recognition and accommodation of these changes may decrease crash risk and, in turn, fatalities in older drivers. Some physical and mental abilities that naturally decline with age and can decrease driving safety include:

- Older eyes need more light and more time to adjust to changes in light intensity. As a result, seeing in low light and at night is more difficult. Older eyes are more sensitive to glare from headlights, street lights and sunlight.
- Peripheral vision declines with age, reducing the ability to see lateral movement.
- Eye diseases, such as cataracts, glaucoma and macular degeneration, increase with age and decrease the ability to see road signs and colors.
- Age-related hearing loss can impede one's ability to hear warning sirens and horns or noise from other cars.
- Motor skills, such as strength, range of motion, flexibility and coordination, can decline with age. The effect may impede safe driving tasks, such as pressing the brake pedal, turning to look for traffic or performing a combination of tasks.
- Processing inputs, memory, attention span, judgement and reactions can decline. Older drivers can feel overwhelmed with traffic, signs, signals and pedestrians.

Some medical conditions are also more prevalent with age and can adversely affect driving ability:

- Fluctuations in blood sugar can cause drowsiness, dizziness, confusion, loss of consciousness or seizures.
- Reduction in motion from arthritis can limit the ability to turn the steering wheel, fasten the seat belt or look for hazards.
- Sleep apnea can cause drowsiness and reduced reaction times.
- Parkinson's disease can affect balance and movement of arms, hands and legs.

Employers can mitigate some age-related driving issues by developing and enforcing comprehensive driver safety policies.

- **Require seat belt use** for all company vehicle drivers and occupants.
- **Plan and manage company travel.**
 - Reduce the amount of driving for work if possible. Can the work be done without travel?
 - Encourage planned driving schedules and routes to avoid high traffic, low light at dusk or dawn, night driving and complex directions.
- **Set policies** allowing drivers to consult with supervisors to adjust driving hours for drivers with issues such as poor night vision or drowsiness from medications.
- **Prevent distracted driving.**
 - Consider policies to ban texting or hand-held (or hands-free) phone use while driving.
- **Prevent driving drowsy.**

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- Design schedules that allow adequate rest for workers.
 - Promote awareness of sleep disorders, such as obstructive sleep apnea.
 - Promote a work environment where employee can self-identify drowsiness and refrain from driving without penalty.

- **Prevent impaired driving.**

- Enforce policies that prohibit driving under the influence of alcohol, illegal drugs or medications that could affect driving ability.
- Educate and identify over-the-counter medications that could cause impairment.

- **Assess driving ability.**

- Accommodate or restrict driving based on assessment of driving ability.

Workers are not without responsibility. They should implement precautions or actions to ensure they can drive safely as well.

- **Use seat belts** and require passengers to wear seat belts.
- **Do not text** or use a hand-held phone while driving.
- **Do not drive if under the influence** of alcohol, drugs or medications.
- **Know effects of prescription medications** and medical conditions on driving.
- **Maintain good health** with diet, regular exercise and routine health screenings. Stay well-rested.
- **Maintain eye health** and good vision with eye exams every year or two.
- **Consider using a driving self-assessment tool** to evaluate driving ability.
- **Speak up** if you know you are not safe to drive.



Aging is inevitable, and the ability to operate a motor vehicle safely declines with age.

Aging is inevitable, and the ability to operate a motor vehicle safely declines with age. That decline in ability is highly variable for each individual. It is difficult to regulate and, unfortunately, can lead to fatal consequences. The responsibility to ensure safe driving of company vehicles in older individuals is incumbent on the employer and the worker. We can all live with the idea of safe driving. 🌿

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<https://www.cdc.gov/niosh/docs/2016-116/pdfs/2016-116.pdf>

A Roundup on Glyphosate

By Dana Rawl, MD, MPH

In March 2015, the International Agency for Research on Cancer, the cancer-research arm of the World Health Organization, announced that glyphosate (Roundup®) is probably carcinogenic to humans. Glyphosate is the world's most widely produced herbicide and plays a vital role in the world's food production as many crops have been engineered to tolerate the weed-killer. Since the announcement, manufacturing companies, scientific agencies and farmer organizations have challenged IARC findings with Greenpeace supporting a ban of the herbicide.

When IARC evaluates a chemical agent or compound, it focuses on a "hazard assessment" as opposed to a "risk assessment." This process determines whether an agent could cause cancer not if it would be likely to cause cancer. IARC has classified many agents as cancer-causing; however, regulatory agencies (such as the U.S. Environmental Protection Agency) have deemed some of those agents safe because the weight of evidence for human exposure is not sufficient to impose restrictions.

Under IARC, compounds are classified on a scale of decreasing certainty of risk for developing cancer. Group 1 compounds are agents that are definitely carcinogenic to humans; group 2A is probably carcinogenic to humans; group 2B is possibly carcinogenic to humans; group 3 is not classifiable; and group 4 is probably not carcinogenic to humans. Some IARC group 2A determinations include consuming red meat, working as a hairdresser, wood combustion and shift work. Limited evidence for human carcinogenesis and sufficient evidence for animal carcinogenesis are the criteria to classify agents as IARC group 2A.

IARC has identified glyphosate as a probable carcinogen because it found "limited evidence" (one epidemiological study out of 21 reviewed) of carcinogenicity in farm workers exposed to glyphosate for non-Hodgkin's lymphoma and prostate cancer. But IARC is not a regulatory agency. The EPA and other regulatory agencies, including the European Food Safety Authority and the European Chemicals Agency, have not found glyphosate in its current uses to be harmful to humans from risk evaluation studies.

Since the classification of glyphosate by IARC in 2015, some product liability attorneys

have exploited the opportunity. In August 2018, a jury trial found in favor of a terminally ill school groundskeeper who blamed his non-Hodgkin's lymphoma on glyphosate exposure. The award was for \$289 million against the manufacturer Monsanto. (Bayer® recently bought Monsanto for \$66 billion.) Per a CNN report in November 2018, the plaintiff agreed to a reduced award of \$78 million. There are currently more than 4,000 similar cases awaiting trial with more to be revealed as legal advertisements recruiting more plaintiffs inundate TV broadcasts.

It appears the scientific evidence IARC reviewed may have identified a chemical hazard in glyphosate, but the scientific conclusions regarding detrimental risk of glyphosate exposure to humans does not seem to be founded. One comment described the lethal dose of glyphosate comparable to the lethal dose of table salt. Another comment likened the IARC conclusion to "saying a rock could kill you, but not pointing out it probably needs to be dropped on your head from a great height first."

Industrial societies are exposed to innumerable chemicals, toxins and hazards every day. It is not to say that a cumulative effect from chemical exposures cannot cause ill health, but current scientific evaluation methods are limited to predict future outcomes from low-dose, long-term, multi-agent exposures. Current toxicology evaluations and conclusions are based on the dose of toxicant, duration of exposure and response. Unfortunately, scientific studies on specific chemicals and compounds cannot keep up with the advancing discoveries of new agents. In this instance, regarding glyphosate, I have no reservation to use it as labeled. My advice is to be cautious of all chemicals and research the evidence and label for human and environmental risks. Make a determination based on relative environmental and health risks and sufficient product benefit, then use it only as recommended. ☺

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Opioid Misuse and Consequences in the Workplace

By Whitney Buckland, PA-C



The workforce is not immune to the opioid crisis running rampant throughout the United States. Opioid overdose now exceeds car crashes as the leading cause of unintentional death in the country. The Centers for Disease Control and Prevention has recently studied drug overdose deaths and found a correlation with death from overdose and certain job groups. The jobs noted for the most risk included construction and extraction personnel. These occupational areas were noted to have a greater likelihood of suffering from a serious work-related injury or chronic pain due to repetitive motion. These issues would lead to higher narcotic prescriptions and an increased risk of opioid addiction.

The Workers Compensation Research Institute estimated in 2014 that 65 to 85 percent of injured workers received a prescription for a narcotic medication during their visit with a medical provider. The Bureau of Labor Statistics quotes that there were 271 overdose deaths at work reported in 2016, which is an increase by 38 percent during a three-year period. The overall economic burden of opioid abuse was estimated in 2007 to be \$55.7 billion annually.

A recent article in the New York Times, published September 2018, depicts a masonry worker who had multiple heroin

overdoses while at work. A co-worker administered the life-saving antidote, naloxone, on numerous occasions. As prevalent as opioid abuse is in the U.S., it may be an unrecognized issue at most job sites. With possible serious injury and death, the effects of opioid misuse are great on the workforce. According to the New York Times article, employers are less than equipped to handle opioid addiction and drug use on the job.

The national workforce does not have the supply of workers needed to fill current employer demands. One theory attempting to explain this issue is based on the effects of the opioid epidemic. The most common age for opioid overdose also happens to be the average workforce age of 25 to 54 years old. In conjunction with high mortality, opioid abusers cannot pass a drug test to obtain employment or cannot maintain a job due to behavioral issues and/or illnesses associated with their drug abuse.

What can we do to combat the opioid crisis, specifically in the workplace? One place to start would be to avoid injuries that could possibly lead to narcotic use and addiction. Overhaul the job site to identify and mitigate serious injury risks and recognize job functions that have significant repetitive motions. The next step is for medical providers and

patients to exercise caution with narcotic prescriptions. Unfortunately, some injuries may require use of narcotics for pain control. Patients should talk to their doctor or seek support through their employee assistance program if they show signs of addiction, such as requesting more medication when no longer feeling pain, taking more than the recommended dose, or having withdrawal symptoms.

Noticing a problem before it spirals out of control is of utmost importance. For companies, it is important to recognize behaviors consistent with possible drug abuse and intervene for the safety of all employees. Reasonable suspicion of drug use should not be ignored, and prompt intervention should be mandated. Appropriate company procedures for these situations should be established and revisited frequently. Substance abuse can be a life or death situation, and everyone needs to be onboard with a zero-tolerance policy for drug misuse in the workplace. ☁

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Provider Pearls

Dietary Supplements: Do We Need Them?

By Donna Padgett, ACNP

Take a trip to any local pharmacy and check out the dietary supplement section. Are you overwhelmed by the shelves full of vitamins, minerals and herbal products to supposedly promote good health? Do you wonder if they work? Are they safe? What and how much should you take? Do you really need them at all?



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More than half of all Americans take some type of supplement regularly with the desire to improve and maintain health and/or to prevent diseases such as cancer and heart disease. With busy lifestyles, Americans know that eating a healthy diet regularly can be difficult.

Medical evidence suggests some supplements can be beneficial. Calcium supports bone health and vitamin D helps absorb calcium. Antioxidants, such as vitamin C and E, can help prevent cell damage. Fish oil promotes heart health based on scientific evidence. Women need iron during pregnancy and breastfeeding, and all women of childbearing age need folic acid. According to Dr. Craig Hopp, an expert in botanicals research at the National Institute for Health, "There's very little evidence any supplement can reverse the course of any chronic disease." He recommends not to take them with that expectation.

Some supplements may have side effects, especially if taken prior to surgery or with other medications. Vitamin K, for example, will cause blood thinners not to work effectively. Other supplements can cause problems if you have certain health problems. Many supplements have not been tested in children, pregnant women and other groups, so we don't know their effects. It is also important to know that just

because a supplement is labeled "natural" does not mean it is safe.

According to Dr. Paul Coates, director of NIH's Office of Dietary Supplements, "Deciding whether to take dietary supplements and which one to take is a serious matter." He recommends that we "learn about their potential benefits and any risks they pose first. Speak to your health care providers about products of interest and decide together what might be best for you to take, if anything, for your overall health."

To find reliable information, NIH has fact sheets on dietary supplements at <http://ods.od.nih.gov/factsheets/list-all/>. NIH also has a free online Dietary Supplement Label Database at www.dsld.nlm.nih.gov. This database includes information on dosage, health claims and cautions. 🌱

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