Occupational HEALTH
A Lexington Medical Center Physician Practice

SPRING 2018

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Working Well

A HEALTH AND SAFETY INFORMATION PUBLICATION

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This edition of *Working Well* is our tenth issue! We hope you have enjoyed the previous issues and have gained useful information to enhance your company's health, wellness and safety programs.

In this issue, "Medical Causation" discusses the prerequisite for an injury or illness to be deemed work related. It is not a clearly defined determination, but it is necessary to engage the workers' compensation system. The article on "Workplace Eye Injuries" provides advice on initial care of eye injuries at work and what should or should not be done for specific conditions. The new Department of Transportation final rule is explained in the "New DOT Drug Testing" article. We explore the focused perspective and expectations from a physical examination performed by the family practitioner and the occupational health provider in the article "Perspective on the Physical Exam: Family Practice or Occupational Medicine." It provides insight into why the physical exam is the same but different. Finally, in the Nurse Practitioner Pearls section, Donna Padgett, ACNP, presents important information from the American Heart Association on the latest recommendations on blood pressure.

As mentioned previously, our goal for this publication is to present information on pertinent topics that can assist companies and employees improve health, wellness and safety. Further, *Working Well* can be used as a platform for client companies to share best practices or safety tips that may be beneficial to others. Please contact me at darawl@lexhealth.org if you have suggestions for specific topics for articles or if you wish to share safety tips.

– Dana Rawl, MD, MPH

Medical Causation

By Dana Rawl, MD, MPH

Is a medical injury or illness related to work? It sounds like a simple question, but the answer is not. Medical causation is an opinion on the cause of an injury or illness based on information gathered from clinical findings, workplace exposure and correlation with literature studies.

The Occupational Safety and Health Administration define an occupational injury as any injury that results from a work accident or from a single instantaneous exposure to an environmental factor associated with employment. An occupational illness is any abnormal condition or disorder caused by exposure to environmental factors associated with employment. An injury or illness is considered by OSHA to be "work related" if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing condition. Further, a causal relationship may be established "because the injury would not have occurred but for the conditions and obligations of employment that placed the employee in the position in which he or she was injured or made ill."

Cause and effect injuries, such as a laceration incurred from a razor knife while opening a product box or a foot injury from being struck by a warehouse forklift, are easy to determine. There is a direct action and a resulting injury. Introducing pre-existing injury or disease and normal age-related degenerative processes into the work-relatedness discussion creates medical and legal arguments on causation. Evidence-based studies, exposure data and research, and statistical determinations provide data to mediate a reasonable answer to medicolegal causation arguments.

Medical literature is well represented in evaluating causal relationships between non-occupational factors and disease. Evidence-based work and research has characterized non-occupational risk factors, such as age, genetics, diet and environmental factors, in the causation of disease. Recognizing and analyzing the weight of evidence with the strength of association for medical conditions between non-occupational factors and work-related factors or occupational exposure is the challenge in determining causation.

Cases are often legally disputed since there is a benefit liability involved in workers' compensation and causation determination is required for compensation eligibility. Each state has judicial and legislative rules and regulations that address workers' compensation. The threshold for causation requirements vary from "one iota to more probable than not." In South Carolina, S.C. Code §42-1-160 provides benefits for injuries or illnesses "arising out of and in the course of employment." The causation threshold by medical evidence is defined as "to a reasonable degree of medical certainty" and determines the medical cause for the injury or illness. A second part of causation analysis

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is "proximate cause" or "legal cause," which tries to correlate whether two events that are linked by a medical determination are also linked by law, but that's another discussion!

Medical causation can be obvious, or it can be obscure and contentious. It is an integral determinant that initiates the workers' compensation system. Legal representation for the employer and the employee use causation as an initial point of argument regarding a workers' compensation case. Whether an injury or illness was work-related is the necessary premise that activates the workers' compensation system. As providers, addressing and documenting the causal events of an injury or illness when seeing a patient on an initial visit may be the most important step in protecting the patient's workers' compensation benefits.

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Workplace Eye Injuries

By Dana Rawl, MD, MPH

One of the more terrifying injuries for a patient is sustaining a serious injury to the eye. Sight is probably the most dependent sense, and the thought of a painful penetrating eye injury and/or the loss of vision can induce a visceral, palm-sweating fear. Unfortunately, there are more than 20,000 workplace eye injuries each year according to the Bureau of Labor Statistics. These injuries cost an estimated $300 million in medical treatment, workers' compensation benefits and lost productivity. It is estimated that 90 percent of eye injuries could have been prevented with proper protection.

No matter what industry or service sector characterizes the workplace, every worker may be exposed to eye hazards. Construction and manufacturing commonly expose workers to flying objects from grinding or striking metal objects. I evaluated one patient injured on a construction site when a nail fell from above and bounced off the cement and up, striking the patient in the eye. It caused a penetrating injury to the globe.

Welding is also a high-risk setting for eye injuries to include arc welder burns from optical radiation injury and thermal burns to the eye. Foreign bodies in the eye are very common in all workplace settings from dust, product particulates and fibers, flying debris, and insects and often result in a corneal abrasion. Chemical burns to the eye usually result from a high or low pH chemical that penetrates the cornea, which can lead to severe corneal injury and scarring. Blunt trauma to the eye from a fall, a motor vehicle accident or an assault can potentially disrupt the lens of the eye or cause a retinal detachment. Outdoor workers may be exposed to excessive ultraviolet light from the sun that can lead to macular degeneration. Conjunctivitis can be work related as well: allergic conjunctivitis from exposure to outdoor allergens; bacterial and viral conjunctivitis from contact exposure to a foreign body; or transmission from an infected co-worker.

Recognizing an eye injury in a worker is easy – for the most part. The worker will usually present with a complaint of pain or irritation to the eye or change in vision with a history of something striking or getting into the eye. More rarely, the worker will have gross signs of an injury, such as a laceration to the lid, blood in the eye, a foreign object stuck in the eye,

When the work environment poses an eye hazard risk, the employer should not only engineer risk and provide adequate eye protection, he or she should also monitor the employee for proper wear of the protective equipment.

an asymmetric appearing eye globe, or an abnormal appearing pupil. Beginning first-aid treatment in the work setting can be sight-saving, but there are precautions that must be followed to reduce further injury to the eye.

For any general injury to the eye:

- Do not touch, rub or apply pressure to the eye.
- Do not try to remove any object that appears stuck in the eye.
- Do not apply ointment or medication to the eye.
- Seek medical treatment as soon as possible.

For eye or lid laceration or possible puncture:

- Do not rinse or irrigate the eye.
- Do not attempt to remove any object that appears to be stuck in the eye.
- Do not touch, rub or apply pressure to the globe of the eye.
- Shield the eye. The bottom of a paper cup taped to the orbital bones can protect the eye.
- Seek emergency medical treatment immediately.

For a chemical burn to the eye:

- Remove contact lens, but do not delay eyewash.
- Immediately flush the eye with clean water for at least 15 minutes.
- Seek medical treatment immediately.

For blunt trauma to the eye:

- Remove contact lens if possible.
- Do not apply pressure to the globe of the eye.
- Gentle application of a cool compress may reduce pain and swelling.
- Any bleeding or visual changes require immediate medical evaluation.

For dust or small debris in the eye:

- Do not rub the eye.
- Gently irrigate the eye with clean water.
- If foreign body sensation or pain persists or if there are visual changes, seek medical attention.

The eyes are a delicate organ and are continuously subject to a variety of hazards. Prevention is the universal answer to reduce eye injury in the workplace. Knowing the eye hazards in the work environment allows the employer to initially manage and eliminate risk through engineering controls. Abiding by Occupational Safety and Health Administration regulations for eye protection in certain workplace settings assures appropriate protective eye equipment for the employee. Impact-resistant safety glasses with side shields, goggles, face shields or helmets may be required for adequate protection from specific eye hazards.

When the work environment poses an eye hazard risk, the employer should not only engineer risk and provide adequate eye protection, he or she should also monitor the employee for proper wear of the protective equipment. Employers, supervisors and employees must buy into protecting the eyes through preventive measures.

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aao.org/eye-health/tips-prevention/injuries-work

New DOT Drug Testing

By Dana Rawl, MD, MPH

As of January 1, the Department of Transportation has added screening for four semi-synthetic opioids (hydrocodone, hydromorphone, oxymorphone and oxycodone) to its drug-testing program. This change is a new final rule detailed in 49 CFR Part 40 and parallels the recent changes made by the Department of Health and Human Services to the federal workplace drug-testing program. The Federal Motor Carrier Safety Administration explains the changes as a response to the national opioid epidemic that can affect transportation safety.

Other changes in the new final rule include clarification of the definition of prescription for the benefit of medical review officer verification determinations and MRO reporting. "Prescription" in the new rule only recognizes a "legally valid prescription consistent with the Controlled Substances Act." Medical marijuana is not a prescription consistent with the CSA and, therefore, is not valid in the DOT drug-testing program.

The new rule has also changed an MRO reporting procedure. Before the new rule change, if a positive or non-negative finding was downgraded to negative with a driver's valid prescription but, the MRO determined the driver was medically unqualified or posed a significant safety risk while taking the medication, the MRO would have issued a safety concern to the employer. Now, in the above circumstances, the MRO must allow the driver five business days after a verified negative drug test to have the prescribing physician contact the MRO to determine if the medication in question can be changed to one that does not pose a significant safety risk or makes the driver unqualified under DOT regulations. If there is no contact from the prescribing physician within the allotted time, the MRO can then report the safety concern to the employer. The employer will now receive the verified negative drug test result first and any safety concern, if necessary, later.

Further changes with the new final rule can be reviewed at https://www.gpo.gov/fdsys/pkg/FR-2017-11-13/pdf/2017-24397.pdf.

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Perspective on the Physical Exam: Family Practice or Occupational Medicine

By Dana Rawl, MD, MPH

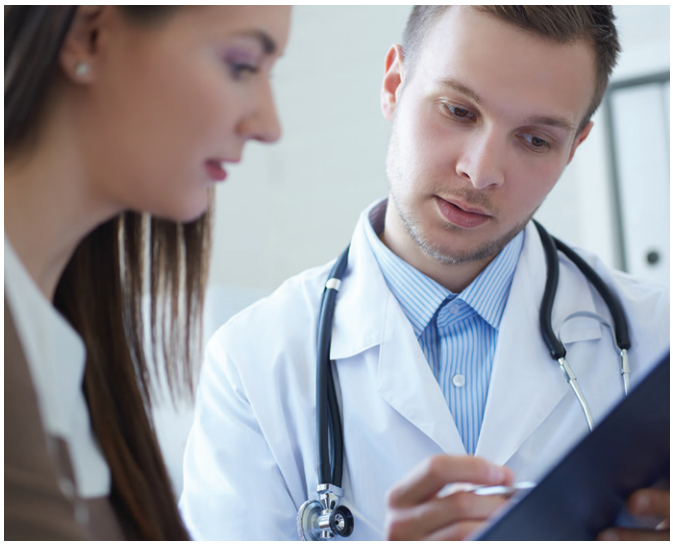
Performing a physical evaluation is not just checking blood work and vital signs, and listening for breath sounds and a heartbeat. When seeing a family provider for an annual examination, he or she will review the patient's history and any test results, and perform a physical examination to determine the patient's current health relative to any chronic or newfound disease. The provider puts the pieces of the puzzle together to identify and treat disease. He or she will guide the patient on disease risk and preventive measures that can be implemented to reduce those health risks. Family providers are trained on diagnosing, treating and preventing illness.

An occupational medicine provider has a different focus on an evaluation. Mostly, an examination by an occupational medicine provider either evaluates and treats a work-related injury or illness or examines and evaluates an employee to determine his or her fitness-for-duty for a designated job.

The occupational provider's concern during a physical examination, whether it is a return-to-work, a fit-for-duty, or an annual or a post-offer examination, is to determine if the employee is safe to perform the duties of the specific job without undue risk of injury to him or her or any co-worker. Like a family practice provider, gathering a medical history, interpreting test data and performing a thorough physical exam are mainstays of the evaluation.

Determining an employee's risk for injury or illness relative to the essential functions of the job is more of an art based on experience, medical knowledge and an understanding of the environmental stressors related to the workplace. Relative safety risk may be obvious, such as a person who has an uncontrolled seizure disorder applying for a commercial driver position. A seizure would incapacitate the driver, causing risk for crash and personal or public injury or death. Or the relative safety risk may be subtle, such as a person with asymptomatic underlying cardiovascular disease applying for a job as a fire fighter. The demanding physical and emotional stressors of the job could contribute to a sudden cardiac event and subsequent consequences.

The occupational provider is more sensitive to environmental, physical and emotional stressors that may



be unique to certain jobs. As such, some employees may be more at risk for injury or illness and not qualified for certain jobs relative to their physical, emotional or disease status. In these instances, the occupational provider's job is to mediate that safety risk by recommending work accommodations or not recommending medical clearance for the job if there is no accommodation available.

Determining if there is significant risk for injury or illness in a person for a specific job is a gray area. One physician's opinion may be very different from another's, but the goal is to place workers in jobs that they are medically able to perform without undue risk of injury or illness. If necessary, medical clearances and opinions from specialists are requested and are highly considered in evaluating the worker; however, the final decision to medically certify for the specified job is the responsibility of the occupational health provider.

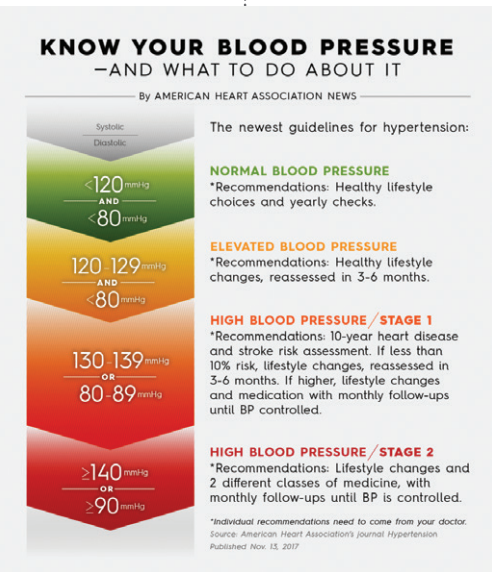
Nurse Practitioner Pearls

By Donna Padgett, NP

I Feel Fine:
A Common Non-Symptom of High Blood Pressure

The purpose of this article is not to warn readers about the signs and symptoms of high blood pressure. It is to inform them that high blood pressure, also known as hypertension, is called the "silent killer" because there are usually no symptoms.

Some people have claimed to have high blood pressure because they have a headache and don't feel well; however, medical evidence indicates that high blood pressure does not cause headaches or nosebleeds except in cases of dangerously high blood pressure levels (>180/120), which is considered a medical emergency. In fact, most people with high blood pressure feel fine. Since people can't rely on how they feel to determine their blood pressure, the best way to know if it's in a healthy range is to have it checked.



Checking blood pressure is especially important now that the guidelines for determining high blood pressure changed in late 2017. The new American Heart Association guidelines are designed to identify and control hypertension earlier to prevent complications like heart attack, stroke, heart failure, kidney disease or failure, vision loss, sexual dysfunction, angina or chest pain, and peripheral artery disease (narrowing of arteries in legs and arms, which causes pain and fatigue).

If you have high blood pressure, you are not alone. Nearly one-half of American adults have high blood pressure, and many don't even know they have it. Your best protection is knowledge (know your numbers), management (working with a medical professional) and prevention (lifestyle changes). For more information, see your doctor or medical provider.

Reference

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