Protecting Workers who Wear Contact Lenses

More than 32 million American adults wear contact lenses. Of course, many of them are employees who wear lenses in a variety of industrial environments.

Here’s what the employee, employer and first responder should know about contact lenses in the workplace.

The Employee View

Contact lens materials and designs have advanced a long way in the past 30 years. Today’s contact lenses are cleaner and more comfortable to wear on the eyes. These advances have lead to a healthier use of contacts for the wearer.

Disposable soft contact lenses can be replaced daily, weekly, monthly or quarterly. Prescription options enhance the eye’s muscle coordination and offer a wider field of vision. There are even bifocal contacts.

Contact lenses can be used cosmetically, for example, to change or enrich eye color. But it is important to remember that contact lenses are classified by the Food and Drug Administration as a medical device requiring a doctor’s prescription.

How the Workplace Affects Contact Lenses

Where contact lens use is permitted in the industrial workplace, employees must be sure to inform their eye doctor that they plan to wear their lenses at work. That’s because there are a number of critical variables that may affect the doctor’s final choice of a contact lens design. Besides the prescription itself, the variables associated with the employee’s industrial environment include:

- Dust and airborne debris levels;
- presence of vapors or gases; and

- Exposures to chemicals.

Based on the information supplied by the employee, the doctor's final choice of a contact lens may:

- Include a larger diameter to protect the eye from debris; or
- Consist of a plastic material which is more resilient to dirt and debris collecting upon the contact lens surface.

Or, the doctor may determine that contact lenses are not appropriate for the industrial environment and advise against providing a prescription for such an application altogether.

What to Tell Your Eye Doctor

To help the doctor make an appropriate decision, employees should provide the doctor a summary of information relating to how they use their eyes during work activity. In the summary, employees should explain to their eye doctor:

- What the work environment is like;
- The on-the-job visual demands it involves; and
- The unique distances involved with the work activity (this information is especially vital for wearers of bifocals).

Teaching Your Employees to Care for their Lenses

There are four things a person needs to properly care for contact lenses.

1. **Lubricants**

Contact lenses dry-out during use. We blink less when we tire. This causes the lens to dry. Dust and debris in the workplace also contribute to the drying process.

It's therefore necessary to use a contact lens lubricant to maintain the proper moistness level and maintain contact lens performance during the workday. It's important to use the right kind of lubricant. Long gone are the days when saliva could be used for lubrication. Drops designed for "getting the red" out of your eyes will permanently destroy a contact lens if used while

the contacts are on the eye.

2. **Carrying Case**

In my experience, most contact lens loss or damage can be traced to the fact that no case was available. When filled with fresh solution, a carrying case provides the safest way to store a contact lens. A glass of water is not a safe or sterile alternative.

3. **Back-up Contact Lenses**

Contact lenses are generally uncomfortable when debris builds up on the lens surface, a rip or tear develops along the lens edge or a crack occurs in the body of the lens. A back-up contact lens allows the employee to replace the uncomfortable lens with a fresh one. If the eye is still uncomfortable or irritated, the employee should remove the contact lens and consult the eye doctor.

4. **Safety Glasses**

What better way to continue your workday endeavors safely and comfortably than by using your safety glasses? They won't help you if they're at home on the dresser. The safety glasses prescription should also be up-to-date. If the prescription is over two-years-old, chances are you won't see as well as you should to perform your best on the job.

The Employer View

Let's now consider contact lenses from the employer's perspective.

Know the Regulations

There's only one OSHA standard that specifically addresses the wearing of contact lenses in an industrial workplace. This standard recommends against contact lens use when working with acrylonitrile, dibromo, chloropropane, ethylene oxide, ethylene chloride and ethylene dianiline chemicals.

Canada: In Canada, there are six jurisdictions with legislation on wearing contact lenses in the workplace: Federal, PEI, Ontario,

BC, Yukon and NT. In the remaining provinces, contact lens use would be encompassed under the so called “general duty” clause of the OHS laws—which requires employers to safeguard employees against known risks.

Develop a Contact Lens Policy

To address situations specific to your workplace, you should create a contact lens policy. Your first step should be to assess the requirements for protective eyewear by reviewing the work environments in accordance with OSHA 29 CRF 1910.132 (d). Next, you should conduct your own hazard assessment. (SafetyXChange members can download my company’s hazard assessment form from Tools.)

3 Danger Signs

When preparing your hazard assessment, these three questions will help you determine if contact lenses are inappropriate for any given area in an industrial environment.

1. Does this area already have a documented history of eye injuries and thus pose a potential hazard to the contact lens wearer? Note that chemical splashes currently account for 20% and flying debris 70% of eye injuries.
2. Does wearing contact lenses place the eye at greater risk of eye injury?
3. Do contact lenses conflict with any existing safety requirement or strategy?

What Your Policy Should Say

Once you have identified that contact lens usage is appropriate for your workplace, be sure your company’s contact lens policy:

- Sets out which, if any, areas of your workplace where the use of contact lenses by employees and visitors is prohibited and restricted;
- Requires employees who wear contact lenses to have the four kinds of support materials as detailed in last week’s article: lubricant, carrying case, back up contact and

safety glasses;
- Requires employees to fill out a form to ensure that their doctor has the information necessary to provide (or deny) an appropriate contact lens prescription;
- Requires employees to clearly indicate on their personal identifications if they are wearing contact lenses.

The First Responder View

Here's what first responders need to know about contact lenses in the workplace.

Training First Responders on Contact Lens Removal

If an employee wearing contact lenses suffers an eye injury, it's imperative to check the eye and remove the lens. If the lens is not removed, the eye can suffer serious injury. Ideally, injured employees can perform these functions themselves. But if for some reason, they are unable to remove their own contact lenses, a first responder might have to do it for them.

First responders need to be trained how to do this. Improper removal of a contact can make a bad situation worse and cause more serious damage to the eye. Training should cover both rigid and soft lens contacts since removal techniques differ for each.

First responders and safety personnel who wear or have worn contacts themselves may be best suited to do this. But even these individuals require training in the detection of injury and proper handling of contact lenses. My experience with contact lens wearers is that over time they tend to develop poor handling and maintenance techniques that could adversely influence their emergency techniques.

Keep the Appropriate First Aid Supplies

Your first aid center or kit should contain these five items to assist first responders:

1. Sterile gloves: Tears in the eye can lead to infections ranging from simple conjunctivitis (pink eye) to HIV. First

responders handling contact lenses must wear gloves to protect against these risks. Gloves should be sterilized to avoid infecting the victim.

2. Multipurpose solutions: You need solutions to help loosen a contact lens if bonding to the eye's epithelium has occurred and also for temporary storage of contacts. You need solutions for soft and rigid lenses. Caution:*Eye wash solutions contain a type of salt that make them inappropriate for contact lenses.*
3. DMV removal devices: These specially designed removal instruments, referred to as "plungers," are helpful in removing a rigid contact lens from the eye.
4. Glostrips: Available for both rigid and soft lenses, glostrips are used to detect a contact lens that has moved off center onto the eye's sclera (the white part of eye).
5. Temporary storage contact lens cases: Having temporary storage cases on hand will help prevent any loss or damage to the contact lenses once removed.

Keep Records

Your first responders should also have access to a data file that lists both office and plant employees who wear contact lenses and the type they wear (i.e., soft lens or rigid). This information may prove crucial to the rendering of appropriate first aid.

Conclusion

Employers who permit contact lens usage should have a clear contact lens policy in force; first aid responders should have proper training and resources; and employees who wear contact lenses in an industrial environment must follow their doctor recommendations for safe wearing and care. By implementing these protocols, contact lenses should not pose a risk to the employee, the first responders or the business.