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EYE INJURIES: HARD TO LIVE WITH, EASY TO PREVENT

I remember the time I saw my most memorable eye injury. A fellow was helping a neighbor, using a weed eater without eye protection. It was to be a quick job, but a rock was flung by the spinning strings, ricocheted off a tree and hit him squarely in the eye. He came in for evaluation and had significant eye damage requiring the care of an eye surgeon.

Can you imagine—very possibly, as much as HALF of all eye injuries happen not on the job, but in the home. What an amazing thing—people taking eye risks and not even getting paid for it! And, the number of eye injuries in the United States is large—perhaps 2.5 million, with 50,000 losing part or all of their vision—according to the American Academy of Ophthalmology.

I must admit, I was surprised to learn that statistic. In my mind, eye injuries would be most prevalent for those many instances of eye risks in the workplace; yet here I read that home eye injuries are almost as prevalent as workplace mishaps. I asked myself, “how could this be so?” Then I realized—in the workplace there are plenty of rules, published procedures, supervision, OSHA, and other entities which help to stave off injuries of all kinds. But, at home we are on our own. We usually have no one but ourselves to blame if eye injury occurs. Couple the lack of supervision with rationalizations like, “Nothing will happen, I’ve done this type of project many times;” “this job will just take a few seconds;” “I have quick reactions and can protect myself.” All, recipes for injury—possibly permanent.

Once, I was using a cutting torch. This tool cuts metal by heating it to about white hot, then injecting a stream of pure oxygen into the molten metal. A dramatic shower of white hot sparks results as the metal is cut. Well, I was in a hurry, and I only had a small cut to make. I had the flame struck, the metal ready to cut, and of course one or more of the above rationalizations to push me forward in a hurry. But, that little man on my shoulder—saying things like, “how about eye protection?” I put on the eyewear, got the torch on the metal and the metal cherry red, then hit the oxygen stream. POW! A shower of sparks quickly followed, but instead of the sparks dropping harmlessly to the floor, unfortunately they blew back on me. I had not heated the base metal thoroughly enough, and the oxygen stream had created a cauldron of molten metal with no exit path. So, the sparks blew back at me.

The American Academy of Ophthalmology estimates that fully 90 percent of eye injuries could be prevented by wearing proper protective eyewear. The right eye protection might consist of true safety glasses, safety glasses with side shields, or else full face shields. For certain low risk activities, even ordinary glasses could be considered protective.

Causes of injury include projectiles; chemical burns; impact from frontal blows or accidents (including sports); and exposure to ultraviolet or other rays. What are some examples of hazards we may encounter?

PROJECTILES

Power tool produced chips, particles, propelled rocks, ricocheted items, hot sparks, flecks off of galvanized hardware, and debris from overhead objects such as undersides of cars or beneath sinks. Don’t forget the risk of onlookers as well as the operator of power equipment.

CHEMICAL

Splashed chemicals such as solvents, oven cleaners, paints, bleach, oxidizers, paint strippers, and the like. Or, when cooking, spattering hot grease.

IMPACT

Sports injuries (like elbows to the eye); toys which are not suited to the age or maturity of the child; falls due to poor lighting, loose rugs, tripping hazards, or lack of hand rails; misuse of things such as paintball or BB guns; opening champagne bottles and the like improperly (I am acquainted with an individual who got a direct hit on the eye from a champagne cork he was removing with a pair of Channellock pliers).

LIGHT RAYS

High altitudes, reflective surfaces such as water, sand, or snow can do a number on your eyes due to ultraviolet. Sun and ultraviolet protection are essential for high exposure situations.

Prevention, in almost every case—proper eye protection—take that moment to do it!

EYE PROTECTION

Work around power equipment generally requires protective eyewear. That might be in the form of generic safety glasses, prescription safety glasses, or a face shield.

Safety glasses should have polycarbonate lenses. These lenses are safer since they tend to flex rather than shatter if hit by a significant projectile. Industrial safety eyeglass lenses are extra thick for added protection.

ANSI approved safety frames will have "Z87" somewhere on the frame or temple. It is best to have sideshields to protect the eye from the side. Some of these are clip on and some are permanently attached.

Sometimes we are baffled when we have worn protection but we still get foreign particles in our eyes. I think that sometimes particles drop onto our hair or brows; after that they fall to our eyes. I also wonder if when using a motor driven tool (such as an electric drill) if the air blast from the drill's cooling fan propels metal chips to our eye.

I really like a full face shield when doing some kinds of hazardous activities.

Always be cautious when working around strong chemicals, be they household cleaners, sprays, or solvents we do-it-yourselfers find so much use for. Safety glasses with sideshields and/or a face mask are needed for protection.

TREATMENT OF PROBLEMS

Particles in the eye: Usually wood chips had from chainsaws will lodge under the upper lid and bother you when you blink; metal chips usually lodge on the eye surface and produce a constantly worsening red eye and foreign body sense. If you think you have a foreign particle under the lid, you could try first aid by pulling the upper lid away from your eye, bring the upper lid over the lower lashes then reopening the lid. That will drag the upper lid's internal surface over the lower lashes and maybe dislodge the foreign particle.

If a metal foreign body is involved, get it taken care of right away. They almost never dislodge themselves, and the discomfort does nothing but worsen with time. That is because iron-containing foreign bodies will rust in the salt water tears. They stain the sensitive eye surface with rust, and that rust has to be removed for proper healing. The longer an iron foreign body has been there, the deeper the rust; it really can be complex to get all of that rusty tissue removed.

Wood particles are quite a bit more forgiving, although they sure are uncomfortable! Usually, wood foreign bodies lodge under the upper eyelid. So, every time you blink you feel it.

You can try first aid such as irrigation to get rid of it. A bottle of contact lens solution or similar spray is squirted under the upper eyelid. Sometime, it will flush the foreign particle out. Or, if you're good at eyelid manipulation you can grasp the UPPER lid lashes, pull the lid away from your eye, then down over the LOWER lashes. Then, as the upper lid returns to its position the lower lashes might dislodge the foreign particle.

If these methods fail, it's time to head to the eye doctor's office where equipment to view and remove the foreign particle is available. At the same time, the sensitive cornea (front of the eye) tissue can be checked for scratches or other damage.

Flashburn: Many of us who enjoy shop work have had the sad experience of flashburn, the accidental exposure of the cornea (front of the eye) to powerful ultraviolet rays from electric arc welding.

This damage is painful and debilitating. It is common to need an eye doctor's evaluation, since the damage can be hard to heal without medical treatment.

Sometimes, the sufferer will request, or have in their possession, anesthetic eyedrops to make them more comfortable. This should not be done. Anesthetic eyedrops are prescription for the reason that they RETARD healing. This, of course, is the very last thing you would want if you have flashburn. An over the counter or prescription oral pain killer is the only way to treat flashburn discomfort.

I will pass along one other thought which I have no proof of but multiple individuals have testified of. That is to pack grated or chunked raw potatoes around the flashburn eye. It is said that such relieves the pain of flashburn. I pass this story along not because I can prove it effective or not, but I see no way it could harm someone.

Chemicals in your eyes: The treatment is the same no matter what the chemical. Water rinse, and plenty of it—generally ten minutes of rinsing for chemical burns. Use tap water or a bottle of contact lens saline or multipurpose solution. My best advice is to have the eye subsequently checked at the office, urgent care, or even the ER to determine any eye damage.