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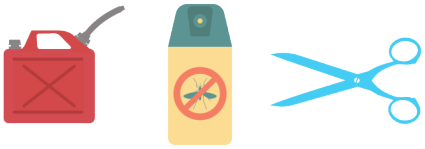
Celebrating a World of Vision

PATIENT NEWSLETTER MARCH 2018

INSIGHTS

Keeping an Eye on Safety



Everyone has heard of the joke about not running with scissors, but that cliché springs from the experiences of those who have done just that with unfortunate consequences. Common household products are the culprits in more than 125,000 eye injuries a year. Sport-related eye injuries arrive at hospital emergency rooms every 13 minutes—and about 43 percent of those patients are children ages 14 and younger.

The good news is most of these eye injures can be prevented with some simple precautions. So while you are ensuring your home is safe in other ways, you can add the following tips as well to reduce the chances of harm to your family's eyes.

Eye Safety Tips for Your Home

Adults

- Have at least one pair of protective eyewear, such as goggles, on hand for repair and other home projects: 90 percent of eye injuries can be prevented with this simple safety precaution. Anyone watching nearby should also have goggles on.
- Remove any loose objects on the ground or in outdoor areas that could be thrust in the air when mowing the lawn (small rocks, branches, toys, etc.).
- Install handrails and lighting on stairs and secure all rugs.
- Keep spray nozzles pointed away from you when spraying.
- Use grease shields on frying pans to avoid splattering hot oil.
- Wear appropriate sports protection gear such as face shields, helmets and eye guards.

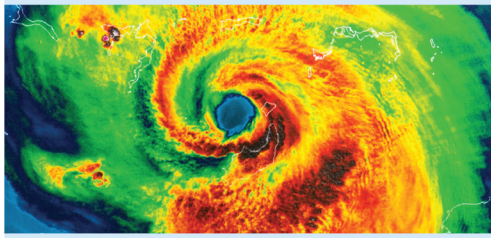
Children

- Make sure to pad sharp corners and edges of furniture and home fixtures.
- Place child safety locks on drawers and cabinets in the bathroom and the kitchen.
- Keep out of the reach of children any harmful items, including cosmetics, toiletry products, kitchen utensils, craft supplies and scissors.
- Put paints, pesticides, fertilizers and toxic products away in a secure area.
- Avoid toys with sharp or rigid points, shafts, spikes, rods, removable parts and dangerous edges.
- Do not let young children play with toys meant for an older age group.
- Do not let young children play with BB, air guns and projectile-firing toys.
- Keep play areas and playgrounds safe by getting rid of potential hazards.

These simple tips can help reduce your family's chances of eye injuries so they can enjoy the many beautiful sights life has to offer!

EYE CANDY

Eye of the Storm



Last year, storm trackers followed a record number of strong hurricanes—including Harvey, Maria and Nate—as they swept through the Atlantic into the Gulf Coast. Meteorologists' main concern was plotting where the eye of those hurricanes would pass because those areas would suffer the brunt of the storms.

The phrase "the eye of the storm" is often used to refer to the center of a controversy, assuming the middle of a storm is the most turbulent area. Oddly enough, the reverse is true. The eye is free from clouds and provides a short-lived calm space, which is typically 20 to 40 miles in diameter.

While this is not a good place for land dwellers to seek refuge, experienced sailors understand that the safest course to take as a storm approaches is, counter-intuitively, to sail directly into it in search of the "eye," which offers a temporary haven to plot a new course.

Any way you look at it, the storm surrounding the eye of a hurricane is a chilling reminder of just how truly powerful mother nature can be.

EYE-Q

Q: How long does it take for a corneal scratch to heal?

See answer on back.

Deciphering Eyeglass Prescription Codes

At the conclusion of an eye exam, your optometrist hands you a prescription (Rx) with some initials and numbers on it. Have you ever wondered what these medical codes mean? Well, here's your chance to find out!

What Do OD and OS Mean?

When it comes to understanding your Rx, a knowledge of Latin is helpful. If you never got around to learning the language, here is a simple guide:

- **OD** and **OS** are abbreviated terms, *oculus dexter (OD)* and *oculus sinister (OS)*, which just means your "right eye" and "left eye," respectively.
- Some practitioners are modernizing with abbreviations that are easier to guess: **RE** (right eye) and **LE** (left eye) instead of OD and OS.
- If you see **OU** on your Rx, it means *oculus uterque* or "each eye," so the same measurement applies to both of your eyes.

You will always see the information for your right eye (OD) come before the information for your left eye (OS). Why? When eye doctors face you, they see your right eye on their left (first) and your left eye on their right (second).

What Are Prisms and Bases?

Prism may be added to some Rxs to address eye-alignment problems. Eye doctors may prescribe prisms to help the eyes work together. Some eyes have a tendency to line up differently when in use, due to muscle imbalance. A prism—which looks like a triangle pointing upwards—can help ease the symptoms of these imbalances. Light goes in on one side, bends down toward the base, and then comes out the other side going in a different direction. "Base" refers to the location of the thickest edge of the prism.

What Do the Numbers Mean?

What most patients notice on their prescriptions are a set of numbers with pluses or minuses. A simple way of looking at the numbers is this:

- The further away from zero the number is, the worse your eyesight, and the more vision correction you may need.
- A "plus sign" in front of the number means that you are farsighted.
- A "minus sign" means that you are nearsighted.
- These numbers represent diopters, the unit that measures correction, or focusing power, that the lens of your eye requires. Diopter is often abbreviated "D".
- For people who have astigmatism, an imperfection in the curvature of your cornea, there will be three numbers in your prescription. The general form for writing these numbers is **S** x **C** x **A**.
  - The **S** refers to the "spherical" portion of the prescription or the degree of nearsightedness or farsightedness.
  - The **C** refers to the "cylinder" or astigmatism. It can be a negative or a positive number and measures the degree of astigmatism that you have. The bigger this number, the more astigmatism you have.
  - The **A** refers to "axis," which is a number between 0 and 180 degrees that helps describe the curvature of the eye causing the astigmatism.

What Else is on Your Rx?

If your doctor prescribes a bifocal or multifocal lens, an add power will be written at the bottom of your Rx. This represents the difference in magnification which you need between your distance Rx and your reading Rx. Your doctor may also include some additional directions along with your prescription, including a particular lens brand, a lens tint, an impact-resistant lens material such as a polycarbonate or an anti-reflective coating.

Who is Prescribing Your Rx?

Finally, you will see initials authorizing your prescription. Those initials mean the type of medical professional writing your Rx. They include:

- **OD**: an optometrist with a Doctor of Optometry degree
- **MD**: an ophthalmologist with a Doctor of Medicine degree
- **DO**: an ophthalmologist with a Doctor of Osteopathic Medicine degree

Now that you understand the code for your eyeglass Rx, when you receive your next Rx, you'll be in the know! Keep in mind that a contact lens Rx may differ in power from a regular eyeglasses Rx. In addition, the contact lens Rx must include the specifications and the parameters of the contact lens itself.

excellent eye care™

31 Main Street
Westfield, NJ 07090
908.789.7328

Patient: June Heintzman
Expiration Date: 3/15/2018

		SPHERE	CYLINDER	AXIS	PRISM	BASE
DISTANCE	O.D.	-4.00			0.5	Down
	O.S.	-5.00	-0.50	180	0.5	Up
ADD	O.D.	+2.00	ADDITIONAL INFORMATION			
	O.S.	+2.00				

Prescribed By: Richard Phelps, O.D.

Winter Wisdom for Your Eyes

Snowy winter days can offer as many challenges as the summer sun when it comes to eye protection. Here's how to protect your vision when the flakes start to fall.

1. **Keep eyes moist.** Air circulation from fireplaces or heaters can cause dryness that irritates the eye. To help reduce dryness, try sitting farther away from heat sources and use artificial tears or a humidifier.
2. **Get UV protection.** Snow doubles the sun's effect because ultraviolet (UV) rays can enter your eyes from above and are reflected off the snow into your eyes as well. To protect against UV damage, wear sunglasses that block 99 to 100 percent of UV light with a hat or visor.
3. **Wear goggles.** It's easy for loose objects—dirt, rocks, slush—to fly up into your eye during outdoor sports. Goggles protect your eyes from debris. To learn more, see Goggle Purchasing Tips located in the next column.

GOGGLE PURCHASING TIPS

1. **Be prepared.** Snow resorts have a limited selection and inflated prices, so buy goggles before you go.
2. **Test them.** Wear them outside to see how they work in natural light. Test night goggles in a dark room with one light bulb on.
3. **Tint matters.** A low visible light transmission (VLT) number such as 15 percent provides less eye fatigue on sunny days. A high VLT number such as 70 percent offers better color and depth perception on low-light days.
4. **Reduce glare.** Polarized lenses help reduce glare reflecting off bright slopes, but are not ideal at day's end because of their darker tint.
5. **Protect against UV rays.** Too much exposure to UV, short-term, can cause painful sunburn of the eyes, called photokeratitis. Long-term, UV rays can permanently damage your eyes.
6. **Ensure peripheral vision.** Make sure you have enough peripheral (side) vision—180 degrees from side to side—to avoid other skiers and riders.
7. **Fit is everything.** If the strap is too difficult to adjust, or if the buckle doesn't stay in adjustment, move on. Wider bands offer more comfort than narrower ones. Foam inserts keep out wind, slush and dirt.
8. **Anti-fogging features.** Double lenses reduce condensation when the warm air of your breath makes contact with the cold lens. Anti-fog coating also helps, while vents clear the warm air out of the inside of the goggles.
9. **Safety precautions.** Look for impact-resistant polycarbonate lenses. If you have prescription inserts, you'll want these to be made of polycarbonate as well.

Green Tea: A Cup of Health

Rich in powerful antioxidants called catechin polyphenols, green tea health benefits may include:

Reduces aging: Free radicals in the body are responsible for aging and its related symptoms. Antioxidants neutralize free radicals. Green tea is rich in antioxidants, which may help delay the signs and symptoms of aging.

Boosts immunity: Research shows those who regularly drink green tea, versus those who do not, experience less bacterial and viral infections.

Protects gums: A daily mouthwash with green tea can keep gums firm and tight on the teeth, thus preventing loosening and loss of teeth.

Prevents cancer: Free radicals are responsible for causing certain types of cancer. The catechins in green tea neutralize these free radicals, prevent formation of carcinogens and reduce the risk of cancer for people who regularly consume the drink.

Reduces cholesterol: Green tea is proven to be effective in reducing cholesterol levels to some extent, probably due to its alkalinity.

Improves cardiac health: Certain components in green tea prevent thickening of the blood, thereby reducing chances of arterial sclerosis, thrombosis, as well as cardiac and cerebral strokes.

Controls diabetes: The alkaline nature of green tea (if not taken with sugar) helps to reduce blood-glucose levels. Its antioxidant and astringent qualities contribute to better functioning of the pancreas. This increase in effective function can help prevent the onset of diabetes.

Have Astigmatism? Understand Your Options.

Your eye doctor told you that you have astigmatism, but what does that actually mean? Put plainly, it just means that you have blurry vision. And you're not alone: astigmatism affects nearly half of the population. Lucky for you, it is easily corrected not just with spectacles, but also with soft contact lenses for astigmatism. It all comes down to getting the best contact lenses to meet your eye-care needs.

All astigmatism means is that your eye surface has an irregular shape. Some patients have a rounded-shape eye surface, while in others the shape is irregular or oval. In such cases, even with regular spectacles or contact lenses, objects can often seem slightly blurred or fuzzy. A well-fitting pair of contact lenses can be a comfortable and convenient way for you to correct your astigmatism along with any near- or farsightedness.

The design of ACUVUE® Brand Contact Lenses harnesses your eyelids' natural movements, helping to realign your contacts with every blink. The result is clear, consistent, stable vision— whether you're relaxing on the couch or playing sports. Plus, the lens's symmetrical design allows for a comfortable fit, and hassle-free insertion and removal. They cannot be inserted upside down like most other soft contact lenses that are used for astigmatism.

Don't compromise on eye-care needs due to astigmatism. If you want to have clear, comfortable, stable vision, ask your eye doctor for ACUVUE®, the world leader in contacts.[1]

Ask your optometrist to help choose the right ACUVUE® contact lens for you!

1-Day Disposable Lenses:

- ACUVUE OASYS® Brand Contact Lenses 1-Day for ASTIGMATISM
- 1-DAY ACUVUE® MOIST Brand Contact Lenses for ASTIGMATISM

Two-Week Replacement Lenses:

- ACUVUE OASYS® Brand Contact Lenses for ASTIGMATISM

Monthly Replacement Lenses:

- NEW ACUVUE® VITA Brand Contact Lenses for ASTIGMATISM

Important information for contact lens wearers: ACUVUE® Brand Contact Lenses are available by prescription only for vision correction. An eye-care professional will determine whether contact lenses are right for you. Although rare, serious eye problems can develop while wearing contact lenses. To help avoid these problems, follow the wear and replacement schedule and the lens care instructions provided by your eye doctor. Do not wear contact lenses if you have an eye infection, or experience eye discomfort, excessive tearing, vision changes, redness or other eye problems. If one of these conditions occurs, remove the lens and contact your eye doctor immediately. For more information on proper wear, care and safety, talk to your eye-care professional and ask for a Patient Instruction Guide, call 1.800.843.2020 or visit www.acuvue.com.

1. Euromonitor, Retail Value company market share breakdowns, Global data, 2015. ACUVUE®, ACUVUE OASYS®, 1-DAY ACUVUE® MOIST, ACUVUE® VITA, LACREON®, HYDRACLEAR®, Hydramax™ and HydraLuxe™ are trademarks of Johnson & Johnson Vision Care Companies.

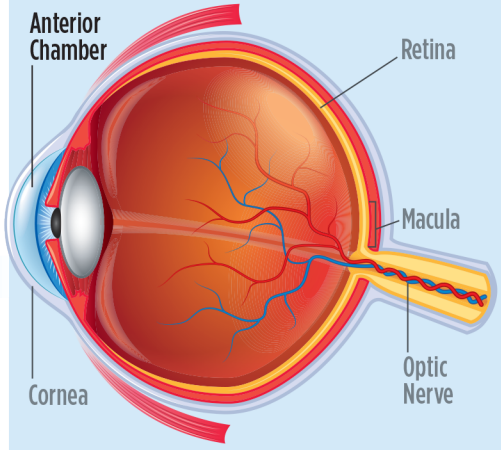
ACUVUE® BRANDS FOR ASTIGMATISM

What is the Anterior Chamber?

Sandwiched between the clear outer layer of the eye (cornea) and the alluring brown, blue, green or hazel part of the eye (iris) is a tiny space called the anterior chamber. This unsung part of the eye is filled with clear fluid, which in healthy eyes is responsible for maintaining eye shape.

This chamber can commonly be involved in eye infections, or fluid buildup that can cause glaucoma (and if glaucoma is not controlled, blindness). It is also an area of the eye that is operated on during some forms of cataract surgery.

When an accident causes impact against the eye, broken blood vessels can bleed into this area. It is usually painful, and if left untreated, can result in permanent vision damage. Immediate medical attention is required. The best way to prevent this type of eye injury is to wear protective goggles when playing sports. Also, never take an eye injury lightly. Even if there is no bleeding, check in with your optometrist to ensure the anterior chamber is undamaged. Keeping this little-known part of your eye healthy is important to preserving good eyesight.



How Blue Light Confuses Our Brains

Throughout history, the sun was the main source of light. At sunset, people accepted there would be darkness, save for a flickering candle or campfire. Then came artificial lighting—a source of confusion for our brains.

One spectrum of sunshine is blue light. As nature would have it, during the day, blue light is beneficial because it boosts attention, reaction times and mood. Unfortunately, it is not all that good for you at night. And that's a problem because today's computer, phone and television screens emit blue light. Blue light disrupts the natural—or circadian—rhythms of the body affecting wake/sleep cycles.

Several studies have linked working the night shift and exposure to light at night to cancer (including breast and prostate), diabetes, heart disease and obesity. No one knows why nighttime light exposure seems to be so bad for us. But it appears it suppresses the secretion of melatonin, a hormone that influences circadian rhythms. Some researchers suggest that lower melatonin levels may be associated with cancer.

A Harvard study found that people on a schedule that gradually shifted their circadian rhythms experienced an increase in blood sugar levels, throwing them into a pre-diabetic state. It also decreased levels of leptin, a hormone that leaves some people feeling full after a meal.

Even dim light affects circadian rhythm and melatonin secretion. This is important because researchers have linked short sleep to increased risk for depression, as well as diabetes and cardiovascular problems. Another study offered a solution for those exposed to blue light at night. It suggested that shift workers could protect themselves with eyewear that blocks blue light. The bad news: Glasses that block out only blue light can cost more than $80.

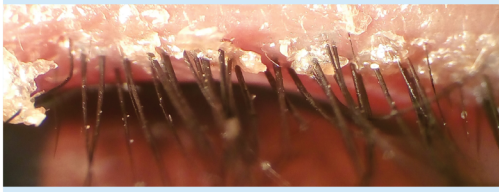
Unfortunately, environmentally friendly lighting may contribute to blue light exposure. Curlicue compact fluorescent lightbulbs and LED lights produce more blue light than old-fashioned incandescent light bulbs.

Here are some ways to help reduce nighttime blue light exposure:

- Choose dim red lights for night lights because they have the least effect on circadian rhythm and melatonin.
- Beginning three to four hours before bed, avoid looking at bright screens.
- If you work or use a lot of electronic devices at night, invest in a pair of blue-blocking glasses or install an app that filters the blue/green wavelength at night.
- Get sunshine during the day to boost your ability to sleep at night.

Avoid a Blue Light Overload
Americans spend an average of more than 9 hours a day looking at computer, phone, tablet and television screens.

What is Blepharitis?



Suffer from sore, red eyelids with crustiness at the base of your eyelashes? You may have a treatable condition called blepharitis.

Blepharitis is inflammation of the eyelids with several causes:

- Bacterial infection
- Meibomian gland dysfunction (glands around eyes that produce a moisturizing oil)
- Dry eyes
- Fungal eyelid infection
- Parasites (eyelash mites)

What are the symptoms?

- Burning eyes
- Crustiness at base of eyelashes
- Irritated, watery eyes
- Itchy eyelids (causing eye rubbing)
- Grittiness/foreign-body sensation

How is blepharitis treated?

- **Diagnosis.** An eye doctor can evaluate if you have blepharitis and determine the appropriate treatment.
- **Eyelid scrubs.** Doctors typically recommend a daily regimen of warm compresses and lid scrubs to clean eyelids and reduce bacteria and mites on your lids.
- **In-office procedures.** In-office eyelid hygiene procedures often are recommended.
- **Topical medication.** Your doctor can reduce excess bacteria on the eyelids with topical medications.

How To Keep Blepharitis Away

- Clean eyelids daily.
- Use doctor-recommended eyelid-cleansing products.
- Take nutritional supplements like omega-3 fatty acids to help keep your meibomian glands healthy and eyes moist and comfortable.

ASK THE DOCTOR

Dr. Daraius Unwalla
Guest Optometrist
Dulles, VA

Q: I sit in front of my computer all day and often end up with sore eyes and a headache. Should I worry about long-term damage to my eyes?

A: Heavy computer users have been known to suffer from anything from sore eyes and blurred vision to painful headaches. The term eye doctors use for this screen-induced condition is called Computer Vision Syndrome (CVS). There are many causes of CVS, from improper reading glasses to an overly bright digital screen. But in most cases, these eye issues stem from two root issues. Either the eyes are dried out, or they have become too fatigued to see properly.

Tiny muscles inside the eyeball change the shape of the eye's lens to bring whatever you're seeing into focus. After hours in front of your computer screen, those muscles can become tired from focusing on a single fixed point. Sometimes those muscles can become so tired that the eyes can no longer focus. In addition, research has shown that when reading or when working online, people tend to blink less. That can result in dry eyes, tearing or soreness.

These symptoms will usually go away within a few hours if you take a short break from the computer or mobile device. However, there is increasing evidence that high energy blue light from digital devices may cause damage to your retina.

Q: I can't stop using my computer. I need it for my job. Is there any way to reduce eye strain and prevent long-term damage to my eyes?

A: Fortunately, there are several ways to help counter the negative effects of heavy computer use.

First, follow the 20-20-20 rule. Every 20 minutes, take a 20-second break and focus your eyes on something at least 20 feet away.

Next, make sure you have the right lenses for computer work and to help protect against the blue light that shines from your digital screen. For my heavy computer users, I generally recommend progressive lenses with wide mid-distance zones. In addition, I prescribe anti-reflective coatings to cut down on glare and help with digital eye strain. Another important feature to consider in eyewear is anti-blue light lenses. Blue light from computer screens can harm the eyes and also disturb the sleep cycle if computers are used late in the day. Anti-blue light lenses screen out this light spectrum.

Many people work all day at computers and that's not going to change. But if you change your viewing behavior with the 20-20-20 rule and get the appropriate eyewear for computer use, your short-term eye strain should be greatly reduced and long-term damage can be avoided.

EYE DROPS

In Security, the Eyes Have It

If you saw Tom Cruise in the movie, *Minority Report*, you viewed a world where iris scans tracked everyone from birth to death. While this may have simplified law enforcement, the movie suggested an underside to this technology that is the stuff of nightmares.

The wholesale adoption of iris scans has not yet become a reality, but it is coming. Today, the law-enforcement community and government agencies use fingerprints to help identify individuals. However, the corporate world and some areas of government are shifting to iris identification. What makes this new technology so appealing?

- Highest accuracy rate according to tests compared to fingerprinting
- No false matches in over two million cross-comparisons
- Can handle large populations at high speed
- Convenient to obtain; individual simply looks into a camera for a few seconds
- Physical characteristics of the iris remain unchanged throughout a person's life
- Affordable technology with low maintenance costs

So keep an eye out...iris scans may be coming your way.

Answer to Eye-Q (from page 1)

A: With proper care, it takes about 48 hours for the eye to repair a corneal scratch.

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