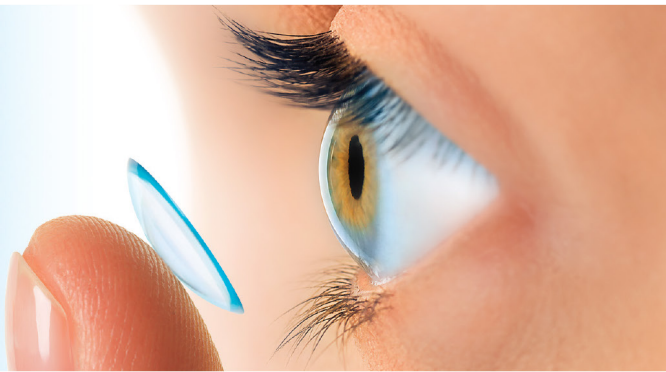


INSIGHTS

No Fuss, No Muss Daily Disposable Lenses

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Monday
Tuesday



More than 3 out of 10 people who walk into an optometrist's office are fitted with daily disposable contact lenses (DDCLs), and that number is growing every year. Here's why.

First, they're just easier to use. Unlike conventional lenses that require daily cleaning and disinfection, DDCLs need minimal care. Wearers simply pop the lenses out at the end of the day and discard them. This can be particularly useful for the occasional contact wearer. DDCLs are also a great option for travelers, such as frequent flyers, because they eliminate the need to pack contact lens solutions. And DDCLs are a favorite with teenagers and children, who can be less than perfectly compliant with contact lens care and hygiene.

Got allergies? DDCLs are a better option because wearers are not exposed to solutions and cleaners to which they may be sensitive.

Daily disposables also score high in performance. Studies have shown that patients wearing DDCLs performed

significantly better on vision tests than patients wearing conventional lenses. The lenses also feel better. In a comparison study of conventional and DDCL users, DDCL subjects found their lenses more comfortable.

DDCLs are ideal for people who are very active, athletes and those who have jobs that carry a high risk of infection, such as hospital staff and other medical professionals. Some studies have even shown that daily disposable contact wearers have a significantly lower rate of ocular complications, including eye infections and inflammation.

Thanks to the newest technologies, DDCLs have expanded to include toric lenses for astigmatism, multifocal lenses for presbyopia and cosmetic lenses. Currently, there are 18 different DDCL types available on the market. It's no wonder they're so popular. They provide a sterile lens in a saline-based solution on a daily basis so that each new contact lens is comfortable, safe, and convenient. No fuss, no muss.

EYE CANDY

Truth or Myth?

Eating carrots can help improve vision.

Truth: Carrots are quite high in beta carotene, which the body converts into vitamin A. Vitamin A contributes to maintaining sight, along with several other nutrients. If carrots are not to your liking, other sources of vitamin A include milk, cheese, egg yolk and liver.

Sitting close to a television can damage your eyes.

Myth: Sitting close to the television may give you a headache, but it will not damage your vision. If children do this to see the television more clearly, they may actually need glasses.

Reading in the dark can weaken your eyesight.

Myth: Reading in the dark will not weaken your eyes, but it may cause eye strain and headaches.

Looking into the sun can damage your eyes.

Truth: Looking directly into the sun can cause permanent damage. Any exposure to sunlight adds to the cumulative effects of ultraviolet (UV) radiation on your eyes. UV exposure has been linked to disorders such as macular degeneration and solar retinitis.

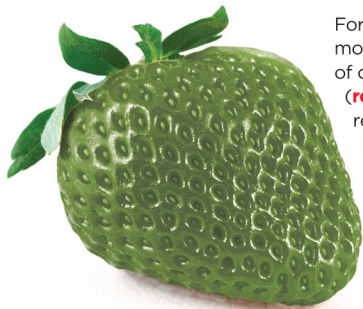
EYE-Q

Q: Is color blindness more common in men or women?

(See answer on back.)



Color Blindness: Seeing the World Differently



For a person with the most common type of color blindness (**red-green**), a ripe, red strawberry could look like this.

Color-blindness doesn't mean those affected are unable to see colors. Rather, they have problems seeing *certain* colors. That's because the parts of their eyes that sense specific ranges of light—red, green or blue—are either missing or don't work properly. These color sensors, called cones, are located in a nerve layer in the back of the eye. When cones are missing or malfunctioning, people may not see a basic color, may see a different shade of that color or may even see a completely different color.

Most color-vision problems are inherited. There is no cure and the condition doesn't change over time. A color-vision problem isn't always inherited. In some cases, it is acquired through aging, eye diseases, eye injury or the side effects of certain medicines.

How is it diagnosed?

Color blindness is diagnosed through routine tests performed during an annual eye exam. A typical test might involve

looking at sets of colored dots and trying to find a pattern in them, such as a letter or number. Because color-vision problems can have a big impact on a person's life, it's important to detect the problem as early as possible. In children, color-vision problems can affect learning abilities and reading development. Most experts recommend eye exams for children between ages three and five.

Can anything help with vision?

Some ways to help make up for a color-vision problem might include:

- Wearing colored contact lenses that may help the wearer see differences between colors. (Note: Lenses don't provide normal color vision and can distort objects)
- Wearing glasses that block glare. People with severe color-vision problems can see differences between colors better when there is less glare and brightness

Who is color blind?

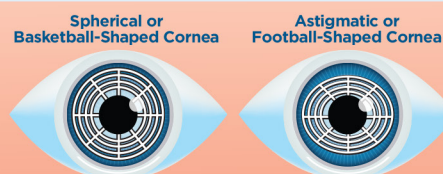
If you're color blind, you're in good company. Famous people, who are also color blind, include former president **Bill Clinton**, Facebook cofounder **Mark Zuckerberg**, Prince William of England, author **Mark Twain**, singer **Meatloaf**, golf professional **Jack Nicklaus**, actor **Keanu Reeves**, talk-show host **Matt Lauer** and comedian **Howie Mandel**.

What Are Toric Lenses?

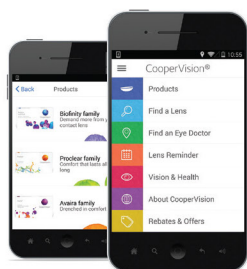
Toric contacts—most commonly made from soft, gas-permeable silicone hydrogel material—correct astigmatism. Astigmatism is when there is an irregularity in the shape of the eye. This affects how light enters the eye and can result in blurry vision and trouble seeing fine details. Sometimes, the vertical edges of objects will distort and appear tilted. Toric contact lenses are designed to correct for this.

Regular contact lenses are round in shape; toric lenses are oval. That's because a regular cornea is round and a cornea with astigmatism is oval. The oval shape of a toric lens alters how light enters the eye on both the vertical and horizontal planes, essentially correcting for the defective shape of the eye.

Until the invention of toric contact lenses, people with astigmatism had limited lens options to help correct their vision.



Watch an Exciting Video on Eye Health:
See Your Optometrist Once a Year
<https://vimeo.com/96959505>



APPpropo for Your Eyestyle

For the busy contact lens wearer, CooperVision has the app that makes finding and wearing contacts fast, smart and simple.

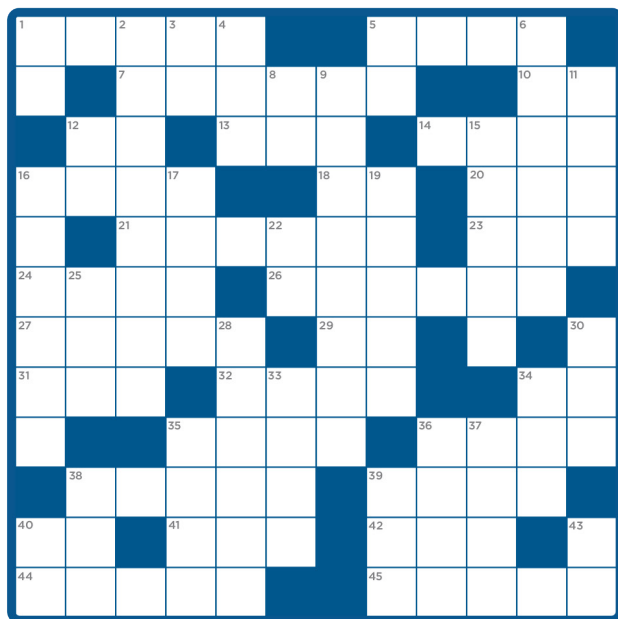
- Find contacts suitable for you and your lifestyle
- Search for an eye doctor near you
- Discover useful tips and info about eye health and vision care
- **Access valuable rebates and discounts**

<https://itunes.apple.com/us/app/coopervision/id687757892?mt=8>



The Eyes Have It

(See answers on back cover.)



ACROSS

1. Place to wear sunglasses for EYE protection
5. You may SEE this surrounding a castle
7. Someone with an EYE to books
10. "She" is often SEEN with him
12. LOOK ____ this!
13. 2,000 pounds (SEE if you can lift that!)
14. What you SEE is not what you get (hint: deception)
16. Death notice (abbrev.)
18. Respiratory disease seldom SEEN today (abbrev.)
20. French for "friend"
21. Type of writing that makes fun of something
23. Ready, ____, go!
24. Dorothy's little dog as SEEN in *Wizard of Oz*
26. You may SEE this insect praying
27. Make ____ (Charity)
29. LOOK north from SC to SEE this (abbrev.)
31. Initials SEEN at end of company name
32. Allergic EYES may do this
34. Mind's EYE of robot (abbrev.)
35. Monster you may SEE lurking under a bridge
36. A flower or a part of the EYE
38. If you smell, you should probably do this
39. Computer operator
40. ____ and fro
41. You may SEE a golf ball resting on one of these
42. Bad deed in the SIGHT of others
44. Great courage SEEN in the face of danger
45. SIGHT in the night sky (two words)

DOWN

1. ____ focal (EYEglasses with dual prescription)
2. VISUALLY creative
3. After B.C.E.—when VIEWING history
4. This is brimming to protect your EYES
5. Often SEEN keeping company with Mrs.
6. River SEEN in London
8. Monkey SEE, monkey ____!
9. LOOK for this if you want to get in
11. LOOK for this if you want to leave
12. SEEN at start of alphabet
15. A SIGHT for sore EYES in the desert
16. Old-fashioned soup (hint: ingredient as strong as an ____)
17. Kit Carson House SEEN in this New Mexico town
19. Seat for WATCHING pigeons
22. ____ LOOKING over a four-leaf clover
25. *A League of Their ____* (1992 movie)
28. Opposite of lower (hint: LOOK up)
30. Slang for female sibling
33. Climb one for a bird's-EYE view
34. You can't SEE it, but you breathe it
35. ____ Preminger (film director)
36. Egyptian goddess overSEEING health, marriage and wisdom
37. Tenants pay this
38. ____ constrictor (type of snake)
39. 50 stars are SEEN on its flag
40. People spend hours LOOKING at these (abbrev.)
43. Look east from OK to see this (abbrev.)



Why Is Vitamin C Important?

Vitamin C lowers the risk of developing cataracts, and when taken in combination with other essential nutrients, can help preserve eyesight and slow the progression of age-related macular degeneration (AMD).

Vitamin C helps to promote healthy capillaries, gums, teeth, cartilage and the absorption of iron. Virtually all the cells of the body depend on it, including those of the eye where it is actively concentrated in all tissues. Our bodies do not synthesize the vitamin C needed, which is why eating fruits and vegetables are essential to good nutrition. Daily intake of vitamin C through diet or nutritional supplements is important for the maintenance of good eye health.

The top ten foods that are the highest in vitamin C are: yellow bell peppers, guavas, dark green leafy vegetables (such as kale), kiwi, broccoli, berries, citrus fruits like grapefruit and oranges, tomatoes (cooked), peas and papaya.

Diabetes: Seeing Past the Disease

People with diabetes need to take special care of their eyes. That's because they are especially vulnerable to developing eye conditions such as glaucoma, cataracts and diabetic retinopathy.

People with Diabetes vs Those Without	
Disease	Frequency
Glaucoma	40% more likely
Cataracts	60% more likely
Retinopathy	Nearly 100% with type 1 diabetes, Most people with type 2 diabetes

Glaucoma and cataracts

Glaucoma threatens vision when pressure builds up in the eye that can damage the retina and optic nerve. There are several treatments for glaucoma. Some use drugs to reduce pressure in the eye, while others may involve surgery.

With cataracts, the eye's clear lens clouds up, blocking light. For mild cataracts, people can wear sunglasses and glare-control lenses. If they interfere with vision, surgery may be necessary.

Diabetic retinopathy

Retinopathy develops in two stages: **nonproliferative and proliferative**.

In nonproliferative retinopathy, the most common form, capillaries in the back of the eye swell, form pouches and blood vessels can eventually become blocked. As a result, fluid can leak into the part of the eye where focusing occurs, the macula. The macula swells, a condition called macula edema, and vision blurs or can be lost entirely. Fortunately if macular

edema is treated early, vision loss can be stopped and sometimes reversed.

In some people, retinopathy progresses after several years to a more serious form called proliferative retinopathy. At this stage, blood vessels are so damaged they close off. To compensate, new, weaker blood vessels start growing in the retina that can leak, block vision and can cause scar tissue to grow. Scar tissue eventually shrinks and can pull the retina out of place, a condition called retinal detachment.

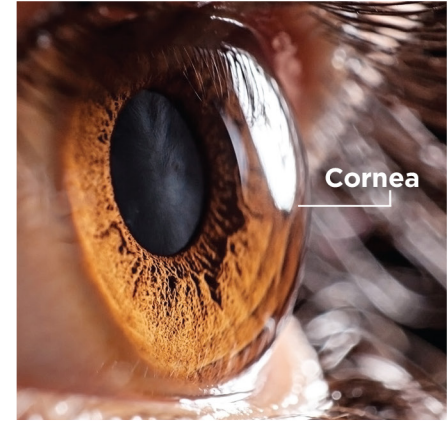
Unfortunately, diabetic retinopathy usually has no symptoms, even in its later stages. For this reason, as well as the other eye diseases mentioned earlier, it's essential to schedule regular eye examinations. Catching conditions early is key to preserving your eyesight.

Keeping an eye on diabetes

Optometrists take special care to screen patients with diabetes for glaucoma, cataracts and diabetic retinopathy.



What Is the Cornea?



The cornea is the clear, outermost layer that covers the front of the eye. Unlike most tissues, it contains no blood vessels. It must remain transparent to bend light properly.

The cornea has five basic layers:

Epithelium: Outermost region blocks debris and bacteria from the eye; absorbs oxygen and nutrients from tears.

Bowman's Layer: Transparent tissue made of strong, layered protein fibers called collagen.

Stroma: About 90 percent of the cornea's thickness, consisting of water (78 percent) and collagen (16 percent). Collagen gives the cornea its strength, elasticity and form.

Descemet's Membrane: Thin but strong tissue that acts as a barrier against infection and injuries.

Endothelium: Innermost layer. Normally, fluid leaks slowly from inside the eye into the stroma. The endothelium pumps this excess fluid out of the stroma, maintaining a balance between fluid moving into the cornea and fluid being pumped out.

When Your Eyes Feel Like the Sahara



If your eyes have ever felt gritty, scratchy or had a burning sensation, you may have a condition called Dry Eye. Other symptoms include a feeling of something in your eyes, excess watering or blurred vision. It's important to tell your eye doctor about these symptoms because advanced Dry Eye may damage the front surface of the eye and impair vision.

Dry Eye occurs when there are not enough tears to lubricate and nourish the eye. People with Dry Eyes either do not produce enough tears or have a poor quality of tears. It is a common and often chronic problem, particularly in older adults.

In addition to providing lubrication, tears reduce the risk of eye infection, wash away foreign matter and keep the surface of the eyes smooth and clear. Excess tears in the eyes flow into small drainage ducts in the inner corners of the eyelids, which drain into the back of the nose. Dry eyes can result from an improper balance of tear production and drainage.

What causes Dry Eye?

Dry Eye has many causes including

age, oral contraceptive use, hormonal changes as seen during pregnancy or menopause, certain medications, medical conditions such as diabetes or thyroid problems and environmental conditions such as exposure to smoke, wind or dry climates. Certain contact lenses may cause Dry Eye. In addition, failure to blink regularly, such as when staring at a computer screen for long periods of time, can contribute to drying of the eyes.

How is it treated?

Dry Eye can be diagnosed through an annual eye exam. Treatment approaches may include adding tears with eyedrops, increasing tear production with a prescription medication, or treating inflammation of the eye or eyelids. Nutritional supplements can also be used.

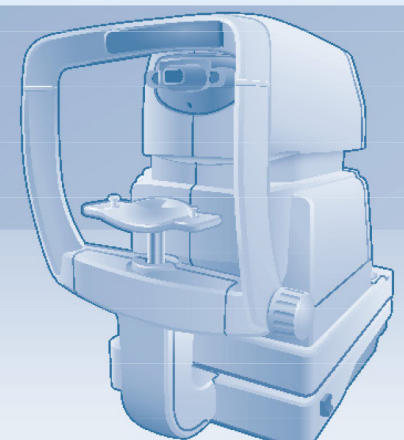
You can also reduce symptoms by remembering to blink regularly when reading or staring at a computer screen for long periods of time, increasing the level of humidity at work and at home, and wearing sunglasses outdoors to reduce exposure to drying winds and sun. Also, avoid becoming dehydrated by drinking plenty of water every day.

What Is the Tonometry Test?

A tonometer is a computer that is often used by optometrists to measure the pressure inside of the eye to determine the risk for developing glaucoma. Glaucoma is an eye disease that can cause blindness by damaging the optic nerve in the back of the eye. This can often happen when there is fluid buildup that does not drain properly out of the eye.

During the test, the chin rests on a padded support. Sometimes referred to as the "puff test," a puff of air is used to flatten the surface of the eye for a split second to measure eye pressure. The tonometer records the eye pressure from the change in the light reflected off the cornea as it is indented by the air puff. The test may be done several times for each eye.

It's important to share with your optometrist any family history of glaucoma.





Q: I've been diagnosed with diabetes. Are there any special precautions I should take in the care of my eyes?

A: Once you have been diagnosed with diabetes, it becomes imperative that you stay up to date with your doctor visits and your eye exams. The eyes reflect what is going on in the rest of your body, so maintaining proper blood-sugar levels will decrease your chances of serious eye complications.

Exercise is very beneficial for diabetics, but you do need to avoid sports and activities that can cause trauma to the head, because the blood vessels in diabetes can weaken and bleed into the retina.

It's important to keep in mind that Type 2 diabetes has been shown to be preventable and even reversible with proper diet and lifestyle changes. If you are on medicine for diabetes, take it as directed by your physician and check your blood sugar at home on a regular basis.

Q: What is diabetic retinopathy and how do I know if I have it?

A: Diabetic retinopathy is the most common diabetic eye disease and a leading cause of blindness in American adults. It is when the blood vessels in the back of the eye (the retina) begin to weaken and eventually could bleed.

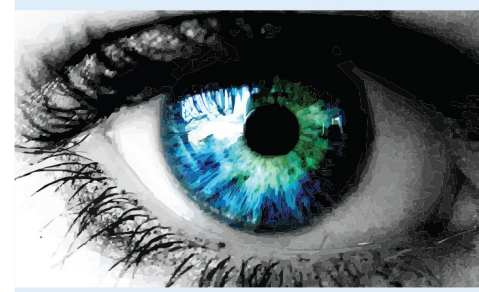
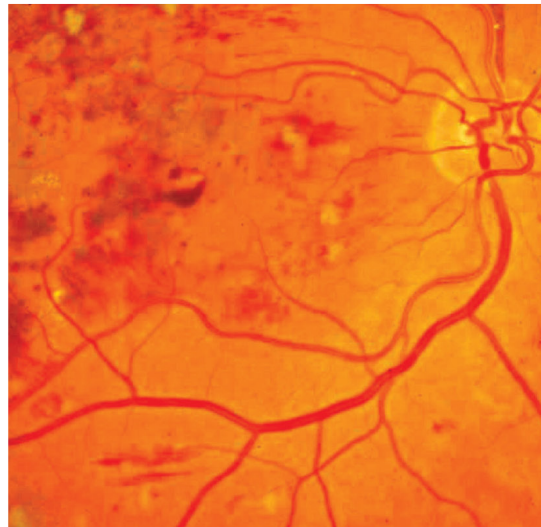
In the earliest stages of diabetic retinopathy, it is actually uncommon to have symptoms. The outer edges of the retina can begin to bleed, but you won't notice any visual changes

until it progresses to a more serious stage nearer the central part of the vision. Some of the symptoms as the condition progresses include spots or dark strings floating in your vision (floaters), blurred vision, fluctuating vision, dark or empty areas in your vision and vision loss.

The key to managing diabetic retinopathy is to control your diabetes and to have regular eye checkups. Early detection of diabetic retinopathy increases the chances that you won't lose vision, as it is much easier to reverse the damage to the retina at that stage. Proliferative diabetic retinopathy (the more advanced stage of diabetic retinopathy) can be harder to treat, and many times a laser is used to seal off the leaking blood vessels. The good news is that if diagnosed in time, almost 90 percent of people with late-stage diabetic retinopathy can be saved from blindness.

Studies have shown that better control of blood-sugar levels slows the onset and progression of the retinopathy. With proper checkups and strategies for dealing with your diabetes, you can live a normal life and preserve your eyesight.

Diabetic retinopathy as seen inside the eye.



How Do Eyes Get Their Color?

When nature shuffles our genes, the result is a mutation. That's how blue eyes happened, according to researchers at the University of Copenhagen. They tracked down a mutation from around 10,000 years ago they say is responsible for all blue-eyed humans alive today. Originally, all humans had brown eyes, says Professor Hans Eiberg. But a mutation reduced the eye's ability to produce enough melanin for brown eyes, resulting in blue eyes. Other eye colors, from brown to green, result from variations in the amount of pigment produced. This eye mutation has enabled researchers to trace everyone who has blue eyes back to one common ancestor.

Answer to Eye-Q (from page 1)

A: Color blindness is more common in men. About 1 out of 12 males and 1 out of 20 women are color blind.

Answers to puzzle (from page 3)



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