



## What is age-related macular degeneration?

**Age-related macular degeneration (AMD)** is a disease associated with aging that gradually destroys sharp, central vision. Central vision is needed for seeing objects clearly and for common daily tasks such as reading and driving.

AMD affects the macula, the part of the eye that allows you to see fine detail. **AMD causes no pain.**

In some cases, AMD advances so slowly that people notice little change in their vision. In others, the disease progresses faster and may lead to a loss of vision in both eyes. AMD is a leading cause of vision loss in North Americans 60 years of age and older.



Normal vision



The same scene as viewed by a person with age-related macular degeneration

## Who is at risk for AMD?

The greatest risk factor is age. Although AMD may occur during middle age, studies show that people over age 60 are clearly at greater risk than other age groups. For instance, a large study found that people in middle-age have about a 2 percent risk of getting AMD, but this risk increased to nearly 30 percent in those over age 75.

Other risk factors include:

- **Smoking.** Smoking may increase the risk of AMD.
- **Obesity.** Research studies suggest a link between obesity and the progression of early and intermediate stage AMD to advanced AMD.
- **Race.** Whites are much more likely to lose vision from AMD than African Americans.
- **Family history.** Those with immediate family members who have AMD are at a higher risk of developing the disease.
- **Gender.** Women appear to be at greater risk than men.

Optometrist @ Steeles & Mavis

80 Clementine Dr., Unit #9B Brampton, Ont., L6Y 0L8

905.451.9982

[www.clearvueeyecare.com](http://www.clearvueeyecare.com)



## Can my lifestyle make a difference?

Your lifestyle can play a role in reducing your risk of developing AMD.

- Eat a healthy diet high in green leafy vegetables and fish.
- Don't smoke.
- Maintain normal blood pressure.
- Watch your weight.
- Exercise.

## How is AMD detected?

Our doctor may suspect AMD if you are over age 60 and have had recent changes in your central vision. To look for signs of the disease, she will use eye drops to dilate, or enlarge, your pupils. Dilating the pupils allows your eye care professional to view the back of the eye better.

## How can I take care of my vision now that I have AMD?

If you have early signs of AMD, you should have a comprehensive dilated eye exam at least once a year. Dr. Mezu can monitor your condition and check for other eye diseases, she may also suggest that you take some eye vitamins containing high levels of antioxidants and zinc. Dr. Mezu will also give you an Amsler's grid to monitor the progression of the disease. She will also check your eyes at regular intervals.

## What can I do if I have already lost some vision from AMD?

If you have lost some sight from AMD, don't be afraid to use your eyes for reading, watching TV, and other routine activities. Normal use of your eyes will not cause further damage to your vision.

If you have lost some sight from AMD, please contact our office at 905-451-9982 and ask about low vision services and devices that may help you make the most of your remaining vision.

## What is glaucoma?

Glaucoma is a group of diseases that can damage the eye's optic nerve and result in vision loss and blindness. Glaucoma occurs when the normal fluid pressure inside the eyes slowly rises. However, with early treatment, you can often protect your eyes against serious vision loss.

## What is the optic nerve?

The optic nerve is a bundle of more than 1 million nerve fibers. It connects the retina to the brain. (See diagram below.) The retina is the light-sensitive tissue at the back of the eye. A healthy optic nerve is necessary for good vision.



## Who is at risk for glaucoma?

Anyone can develop glaucoma. Some people are at higher risk than others. They include:

- African Americans over age 40.
- Everyone over age 60, especially Mexican Americans.
- People with a family history of glaucoma.

Among African Americans, studies show that glaucoma is:

- Five times more likely to occur in African Americans than in Caucasians.
- About four times more likely to cause blindness in African Americans than in Caucasians.
- Fifteen times more likely to cause blindness in African Americans between the ages of 45-64 than in Caucasians of the same age group.

A comprehensive dilated eye exam can reveal more risk factors, such as high eye pressure, thinness of the cornea, and abnormal optic nerve anatomy. In some people with certain combinations of these high-risk factors, medicines in the form of eye drops reduce the risk of developing glaucoma by about half.

## What can I do to protect my vision?

Studies have shown that the early detection and treatment of glaucoma, before it causes major vision loss, is the best way to control the disease. So, if you fall into one of the high-risk groups for the disease, **call our office today at 905-451-9982** to schedule an appointment for a comprehensive eye exam.

You also can help protect the vision of family members and friends who may be at high risk for glaucoma--African Americans over age 40; everyone over age 60, especially Mexican Americans; and people with a family history of the disease. Encourage them to have a comprehensive dilated eye exam at least once every two years. Remember: Lowering eye pressure in glaucoma's early stages slows progression of the disease and helps save vision.



## What are the symptoms of glaucoma?

At first, there are no symptoms. Vision stays normal, and there is no pain.

However, as the disease progresses, a person with glaucoma may notice his or her side vision gradually failing. That is, objects in front may still be seen clearly, but objects to the side may be missed.

As glaucoma remains untreated, people may miss objects to the side and out of the corner of their eye. Without treatment, people with glaucoma will slowly lose their peripheral (side) vision. They seem to be looking through a tunnel. Over time, straight-ahead vision may decrease until no vision remains. Glaucoma can develop in one or both eyes.



Normal vision



Same scene as viewed by a person with glaucoma

## How is glaucoma detected?

Glaucoma is detected through a comprehensive eye exam that includes:

1. **Visual acuity test.** This eye chart test measures how well you see at various distances.
2. **Visual field test.** This test measures your side (peripheral) vision. It helps your eye care professional tell if you have lost side vision, a sign of glaucoma.
3. **Dilated eye exam.** Drops are placed in your eyes to widen, or dilate, the pupils. Your eye care professional uses a special magnifying lens to examine your retina and optic nerve for signs of damage and other eye problems. After the exam, your close-up vision may remain blurred for several hours.
4. **Tonometry.** An instrument (right) measures the pressure inside the eye.
5. **Pachymetry.** A numbing drop is applied to your eye. Your eye care professional uses an ultrasonic wave instrument to measure the thickness of your cornea.



### Can glaucoma be treated?

Yes. Immediate treatment for early stage, open-angle glaucoma can delay progression of the disease. That's why early diagnosis is very important.

Glaucoma treatments include medicines, laser trabeculoplasty, conventional surgery, or a combination of any of these. While these treatments may save remaining vision, they do not improve sight already lost from glaucoma.

### What can I do if I already have lost some vision from glaucoma?

If you have lost some sight from glaucoma, **please call our office at 905-451-9982** and ask about low vision services and devices that may help you make the most of your remaining vision.

### What is a cataract?

A cataract is a clouding of the lens in the eye that affects vision. Most cataracts are related to aging. Cataracts are very common in older people. By age 80, more than half of all Americans either have a cataract or have had cataract surgery.

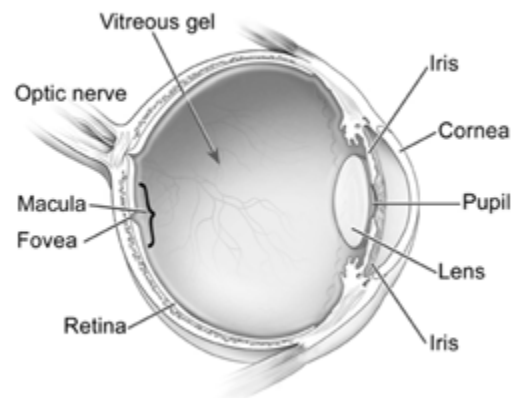
A cataract can occur in either or both eyes. It cannot spread from one eye to the other.

### What is the lens?

The lens is a clear part of the eye that helps to focus light, or an image, on the retina. The retina is the light-sensitive tissue at the back of the eye.

In a normal eye, light passes through the transparent lens to the retina. Once it reaches the retina, light is changed into nerve signals that are sent to the brain.

The lens must be clear for the retina to receive a sharp image. If the lens is cloudy from a cataract, the image you see will be blurred.





Normal vision



Cataract vision

### What causes cataracts?

The lens lies behind the iris and the pupil (see diagram). It works much like a camera lens. It focuses light onto the retina at the back of the eye, where an image is recorded. The lens also adjusts the eye's focus, letting us see things clearly both up close and far away. The lens is made of mostly water and protein. The protein is arranged in a precise way that keeps the lens clear and allows light pass through it.

But as we age, some of the protein may clump together and start to cloud a small area of the lens. This is a cataract. Over time, the cataract may grow larger and cloud more of the lens, making it harder to see.

Researchers suspect that there are several causes of cataract, such as smoking and diabetes. Or, it may be that the protein in the lens just changes from the wear and tear it takes over the years.

### When are you most likely to have a cataract?

The term "age-related" is a little misleading. You don't have to be a senior citizen to get this type of cataract. In fact, people can have an age-related cataract in their 40s and 50s. But during middle age, most cataracts are small and do not affect vision. It is after age 60 that most cataracts steal vision.

### Who is at risk for cataract?

The risk of cataract increases as you get older. Other risk factors for cataract include:

- Certain diseases such as diabetes.
- Personal behavior such as smoking and alcohol use.
- The environment such as prolonged exposure to sunlight.



### What can I do to protect my vision?

Wearing sunglasses and a hat with a brim to block ultraviolet sunlight may help to delay cataract. If you smoke, stop. Good nutrition can help reduce the risk of age-related cataract. We recommend eating green leafy vegetables, fruit, and other foods with antioxidants.

If you are age 60 or older, **call our office at 905-451-9982** to have a comprehensive dilated eye exam at least once every two years. In addition to cataract, Dr Mezu can check for signs of age-related macular degeneration, glaucoma, and other vision disorders. Early treatment for many eye diseases may save your sight.

### What are the symptoms of a cataract?

The most common symptoms of a cataract are:

- Cloudy or blurry vision.
- Colors seem faded.
- Glare. Headlights, lamps, or sunlight may appear too bright. A halo may appear around lights.
- Poor night vision.
- Double vision or multiple images in one eye. (This symptom may clear as the cataract gets larger.)
- Frequent prescription changes in your eyeglasses or contact lenses.
- These symptoms also can be a sign of other eye problems. If you have any of these symptoms, check with your eye care professional.

### How is a cataract detected?

Cataract is detected through a comprehensive eye exam that includes:

1. **Visual acuity test.** This eye chart test measures how well you see at various distances.
2. **Dilated eye exam.** Drops are placed in your eyes to widen, or dilate, the pupils. Your eye care professional uses a special magnifying lens to examine your retina and optic nerve for signs of damage and other eye problems. After the exam, your close-up vision may remain blurred for several hours.

Dr Mezu may do other tests to learn more about the structure and health of your eye.



## How is a cataract treated?

The symptoms of early cataract may be improved with new eyeglasses, brighter lighting, anti-glare sunglasses, or magnifying lenses. If these measures do not help, surgery is the only effective treatment. Surgery involves removing the cloudy lens and replacing it with an artificial lens.

A cataract needs to be removed only when vision loss interferes with your everyday activities, such as driving, reading, or watching TV. You and Dr Mezu can make this decision together. Once you understand the benefits and risks of surgery, you can make an informed decision about whether cataract surgery is right for you. In most cases, delaying cataract surgery will not cause long-term damage to your eye or make the surgery more difficult. You do not have to rush into surgery.

If you choose surgery, Dr Mezu will refer you to a cataract specialist to remove the cataract.

Many people who need cataract surgery also have other eye conditions, such as age-related macular degeneration or glaucoma. If you have other eye conditions in addition to cataract, please call our office at 905-451-9982 to talk to Dr. Mezu. Learn about the risks, benefits, alternatives, and expected results of cataract surgery.

## What can I do if I already have lost some vision from cataract?

If you have lost some sight from cataract or cataract surgery, **call our office at 905-451-9982** and ask about low vision services and devices that may help you make the most of your remaining vision.

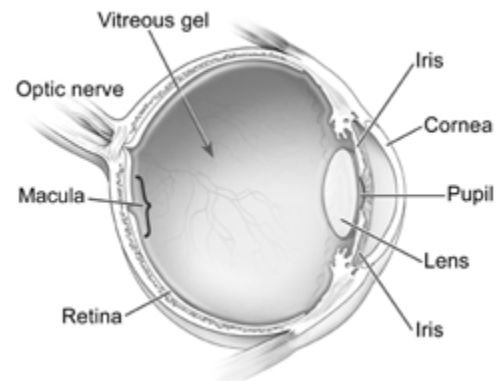
## Diabetic Retinopathy

### What is diabetic eye disease?

Diabetic eye disease refers to a group of eye problems that people with diabetes may face as a complication of diabetes. All can cause severe vision loss or even blindness.

Diabetic eye disease may include:

- Diabetic retinopathy—damage to the blood vessels in the retina.
- **Cataract**—clouding of the eye's lens. Cataracts develop at an earlier age in people with diabetes.
- **Glaucoma**—increase in fluid pressure inside the eye that leads to optic nerve damage and loss of vision. A person with diabetes is nearly twice as likely to get glaucoma as other adults.



Optometrist @ Steeles & Mavis

80 Clementine Dr., Unit #9B

Brampton, Ont., L6Y 0L8

905.451.9982

[www.clearvueeyecare.com](http://www.clearvueeyecare.com)



## What is diabetic retinopathy?

Diabetic retinopathy is the most common diabetic eye disease and a leading cause of blindness in American adults. It is caused by changes in the blood vessels of the retina.

In some people with diabetic retinopathy, blood vessels may swell and leak fluid. In other people, abnormal new blood vessels grow on the surface of the retina. The retina is the light-sensitive tissue at the back of the eye. A healthy retina is necessary for good vision.

If you have diabetic retinopathy, at first you may not notice changes to your vision. But over time, diabetic retinopathy can get worse and cause vision loss. Diabetic retinopathy usually affects both eyes.

## What are the stages of diabetic retinopathy?

Diabetic retinopathy has four stages:

1. **Mild Nonproliferative Retinopathy.** At this earliest stage, microaneurysms occur. They are small areas of balloon-like swelling in the retina's tiny blood vessels.
2. **Moderate Nonproliferative Retinopathy.** As the disease progresses, some blood vessels that nourish the retina are blocked.
3. **Severe Nonproliferative Retinopathy.** Many more blood vessels are blocked, depriving several areas of the retina with their blood supply. These areas of the retina send signals to the body to grow new blood vessels for nourishment.
4. **Proliferative Retinopathy.** At this advanced stage, the signals sent by the retina for nourishment trigger the growth of new blood vessels. This condition is called proliferative retinopathy. These new blood vessels are abnormal and fragile. They grow along the retina and along the surface of the clear, vitreous gel that fills the inside of the eye. By themselves, these blood vessels do not cause symptoms or vision loss. However, they have thin, fragile walls. If they leak blood, severe vision loss and even blindness can result.



## Causes and Risk Factors

### How does diabetic retinopathy cause vision loss?

Blood vessels damaged from diabetic retinopathy can cause vision loss in two ways:

1. Fragile, abnormal blood vessels can develop and leak blood into the center of the eye, blurring vision. This is **proliferative retinopathy** and is the fourth and most advanced stage of the disease.
2. Fluid can leak into the center of the macula, the part of the eye where sharp, straight-ahead vision occurs. The fluid makes the macula swell, blurring vision. This condition is called **macular edema**. It can occur at any stage of diabetic retinopathy, although it is more likely to occur as the disease progresses. About half of the people with proliferative retinopathy also have macular edema.



Normal vision



Same scene viewed by a person with diabetic retinopathy

### Who is at risk for diabetic retinopathy?

All people with diabetes--both type 1 and type 2--are at risk. That's why everyone with diabetes should get a comprehensive dilated eye exam at least once a year. The longer someone has diabetes, the more likely he or she will get diabetic retinopathy. Between 40 to 45 percent of [people diagnosed with diabetes have some stage of diabetic retinopathy.

During pregnancy, diabetic retinopathy may be a problem for women with diabetes. To protect vision, every pregnant woman with diabetes should have a comprehensive dilated eye exam as soon as possible.



## What can I do to protect my vision?

If you have diabetes call our office at 905-451-9982 to get a comprehensive dilated eye exam at least once a year and remember:

- Proliferative retinopathy can develop without symptoms. At this advanced stage, you are at high risk for vision loss.
- Macular edema can develop without symptoms at any of the four stages of diabetic retinopathy.
- You can develop both proliferative retinopathy and macular edema and still see fine. However, you are at high risk for vision loss.
- Dr. Mezu can tell if you have macular edema or any stage of diabetic retinopathy. Whether or not you have symptoms, early detection and timely treatment can prevent vision loss.

If you have diabetic retinopathy, you may need an eye exam more often. People with proliferative retinopathy can reduce their risk of blindness by 95 percent with timely treatment and appropriate follow-up care.

## Symptoms and Detection

### Does diabetic retinopathy have any symptoms?

Often there are no symptoms in the early stages of the disease, nor is there any pain. **Don't wait for symptoms.** Be sure to call our office at 905-451-9982 to have a comprehensive dilated eye exam at least once a year.

Blurred vision may occur when the macula—the part of the retina that provides sharp central vision—swells from leaking fluid. This condition is called macular edema.

If new blood vessels grow on the surface of the retina, they can bleed into the eye and block vision.

### What are the symptoms of proliferative retinopathy if bleeding occurs?

At first, you will see a few specks of blood, or spots, "floating" in your vision. If spots occur, call our office at 905-451-9982 as soon as possible. You may need treatment before more serious bleeding occurs. Hemorrhages tend to happen more than once, often during sleep.

Sometimes, without treatment, the spots clear, and you will see well. However, bleeding can reoccur and cause severely blurred vision. You need to be examined at the first sign of blurred vision, before more bleeding occurs.

If left untreated, proliferative retinopathy can cause severe vision loss and even blindness. Also, the earlier you receive treatment, the more likely treatment will be effective.



## How are diabetic retinopathy and macular edema detected?

Diabetic retinopathy and macular edema are detected during a comprehensive eye exam that includes:

1. **Visual acuity test.** This eye chart test measures how well you see at various distances.
2. **Dilated eye exam.** Drops are placed in your eyes to widen, or dilate, the pupils. This allows Dr Mezu to see more of the inside of your eyes to check for signs of the disease. Dr. Mezu uses a special magnifying lens to examine your retina and optic nerve for signs of damage and other eye problems. After the exam, your close-up vision may remain blurred for several hours.
3. **Tonometry.** An instrument measures the pressure inside the eye. Numbing drops may be applied to your eye for this test.

Dr. Mezu checks your retina for early signs of the disease, including:

- Leaking blood vessels.
- Retinal swelling (macular edema).
- Pale, fatty deposits on the retina--signs of leaking blood vessels.
- Damaged nerve tissue.
- Any changes to the blood vessels.

Once you have proliferative retinopathy, you always will be at risk for new bleeding. You may need treatment more than once to protect your sight.

## What can I do if I already have lost some vision from diabetic retinopathy?

If you have lost some sight from diabetic retinopathy, call our office at 905-451-9982 and ask about low vision services and devices that may help you make the most of your remaining vision.

## What is retinal detachment?

The retina is the light-sensitive layer of tissue that lines the inside of the eye and sends visual messages through the optic nerve to the brain. When the retina detaches, it is lifted or pulled from its normal position. If not promptly treated, **retinal detachment** can cause permanent vision loss.

In some cases there may be small areas of the retina that are torn. These areas, called retinal tears or retinal breaks, can lead to retinal detachment.



## What are the symptoms of retinal detachment?

Symptoms include a sudden or gradual increase in either the number of floaters, which are little "cobwebs" or specks that float about in your field of vision, and/or light flashes in the eye. Another symptom is the appearance of a curtain over the field of vision. **A retinal detachment is a medical emergency. Anyone experiencing the symptoms of a retinal detachment should call our office at 905-451-9982 or go to the emergency room at the nearest hospital.**

## Who is at risk for retinal detachment?

A retinal detachment can occur at any age, but it is more common in people over age 40. It affects men more than women, and Whites more than African Americans.

A retinal detachment is also more likely to occur in people who:

- Are extremely nearsighted
- Have had a retinal detachment in the other eye
- Have a family history of retinal detachment
- Have had cataract surgery
- Have other eye diseases or disorders, such as retinoschisis, uveitis, degenerative myopia, or lattice degeneration
- Have had an eye injury

## How is retinal detachment treated?

Small holes and tears are treated with laser surgery or a freeze treatment called cryopexy. These procedures are usually performed in the doctor's office. During laser surgery tiny burns are made around the hole to "weld" the retina back into place. Cryopexy freezes the area around the hole and helps reattach the retina.

Retinal detachments are treated with surgery that may require the patient to stay in the hospital. In some cases a scleral buckle, a tiny synthetic band, is attached to the outside of the eyeball to gently push the wall of the eye against the detached retina. If necessary, a vitrectomy may also be performed. During a vitrectomy, the doctor makes a tiny incision in the sclera (white of the eye). Next, a small instrument is placed into the eye to remove the vitreous, a gel-like substance that fills the center of the eye and helps the eye maintain a round shape. Gas is often injected into the eye to replace the vitreous and reattach the retina; the gas pushes the retina back against the wall of the eye. During the healing process, the eye makes fluid that gradually replaces the gas and fills the eye. With all of these procedures, either laser or cryopexy is used to "weld" the retina back in place.



With modern therapy, over 90 percent of those with a retinal detachment can be successfully treated, although sometimes a second treatment is needed. However, the visual outcome is not always predictable. The final visual result may not be known for up to several months following surgery. Even under the best of circumstances, and even after multiple attempts at repair, treatment sometimes fails and vision may eventually be lost. Visual results are best if the retinal detachment is repaired before the macula (the center region of the retina responsible for fine, detailed vision) detaches. That is why it is important to contact our office at 905-451-9982 immediately if you see a sudden or gradual increase in the number of floaters and/or light flashes, or a dark curtain over the field of vision.

## What is blepharitis?

**Blepharitis** is a common condition that causes inflammation of the eyelids. The condition can be difficult to manage because it tends to recur.

## What causes blepharitis?

Blepharitis occurs in two forms:

**Anterior blepharitis** affects the outside front of the eyelid, where the eyelashes are attached. The two most common causes of anterior blepharitis are bacteria (*Staphylococcus*) and scalp dandruff.

**Posterior blepharitis** affects the inner eyelid (the moist part that makes contact with the eye) and is caused by problems with the oil (meibomian) glands in this part of the eyelid. Two skin disorders can cause this form of blepharitis: acne rosacea, which leads to red and inflamed skin, and scalp dandruff (seborrheic dermatitis).

## What are the symptoms of blepharitis?

Symptoms of either form of blepharitis include a foreign body or burning sensation, excessive tearing, itching, sensitivity to light (photophobia), red and swollen eyelids, redness of the eye, blurred vision, frothy tears, dry eye, or crusting of the eyelashes on awakening.



## What other conditions are associated with blepharitis?

Complications from blepharitis include:

**Stye:** A red tender bump on the eyelid that is caused by an acute infection of the oil glands of the eyelid.

**Chalazion:** This condition can follow the development of a stye. It is a usually painless firm lump caused by inflammation of the oil glands of the eyelid. Chalazion can be painful and red if there is also an infection.

Problems with the tear film: Abnormal or decreased oil secretions that are part of the tear film can result in excess tearing or dry eye. Because tears are necessary to keep the cornea healthy, tear film problems can make people more at risk for corneal infections.

## How is blepharitis treated?

Treatment for both forms of blepharitis involves keeping the lids clean and free of crusts. Warm compresses should be applied to the lid to loosen the crusts, followed by a light scrubbing of the eyelid with a cotton swab and a mixture of water and baby shampoo. Because blepharitis rarely goes away completely, most patients must maintain an eyelid hygiene routine for life. If the blepharitis is severe, Dr. Mezu may also prescribe antibiotics or steroid eye drops.

When scalp dandruff is present, a dandruff shampoo for the hair is recommended as well. In addition to the warm compresses, patients with posterior blepharitis will need to massage their eyelids to clean the oil accumulated in the glands. Patients who also have acne rosacea should have that condition treated at the same time.



## Dry Eye

### What is dry eye?

Dry eye occurs when the eye does not produce tears properly, or when the tears are not of the correct consistency and evaporate too quickly.

In addition, inflammation of the surface of the eye may occur along with dry eye. If left untreated, this condition can lead to pain, ulcers, or scars on the cornea, and some loss of vision. However, permanent loss of vision from dry eye is uncommon.

Dry eye can make it more difficult to perform some activities, such as using a computer or reading for an extended period of time, and it can decrease tolerance for dry environments, such as the air inside an airplane.

Other names for dry eye include dry eye syndrome, keratoconjunctivitis sicca (KCS), dysfunctional tear syndrome, lacrimal keratoconjunctivitis, evaporative tear deficiency, aqueous tear deficiency, and LASIK-induced neurotrophic epitheliopathy (LNE).

### What are the types of dry eye?

1) Aqueous tear-deficient dry eye is a disorder in which the lacrimal glands fail to produce enough of the watery component of tears to maintain a healthy eye surface.

2) Evaporative dry eye may result from inflammation of the meibomian glands, also located in the eyelids. These glands make the lipid or oily part of tears that slows evaporation and keeps the tears stable.

Dry eye can be associated with:

- inflammation of the surface of the eye, the lacrimal gland, or the conjunctiva;
- any disease process that alters the components of the tears;
- an increase in the surface of the eye, as in thyroid disease when the eye protrudes forward;
- cosmetic surgery, if the eyelids are opened too widely.
- Can occur as a side effect of medications used to treat some systemic diseases.



## Symptoms

### What are the symptoms of dry eye?

Dry eye symptoms may include any of the following:

- stinging or burning of the eye;
- a sandy or gritty feeling as if something is in the eye;
- episodes of excess tears following very dry eye periods;
- a stringy discharge from the eye;
- pain and redness of the eye;
- episodes of blurred vision;
- heavy eyelids;
- inability to cry when emotionally stressed;
- uncomfortable contact lenses;
- decreased tolerance of reading, working on the computer, or any activity that requires sustained visual attention;
- eye fatigue.

*NOTE: If symptoms of dry eye persist, please call our office at 905-451-9982 to get an accurate diagnosis of the condition and begin treatment to avoid permanent damage.*

## Causes and Risk Factors

### What are the causes of dry eye?

Dry eye can be a temporary or chronic condition:

- Dry eye can be a side effect of some medications, including antihistamines, nasal decongestants, tranquilizers, certain blood pressure medicines, Parkinson's medications, birth control pills and anti-depressants.
- Skin disease on or around the eyelids can result in dry eye.
- Diseases of the glands in the eyelids, such as meibomian gland dysfunction, can cause dry eye.
- Dry eye can occur in women who are pregnant.
- Women who are on hormone replacement therapy may experience dry eye symptoms. Women taking only estrogen are 70 percent more likely to experience dry eye, whereas those taking estrogen and progesterone have a 30 percent increased risk of developing dry eye.
- Dry eye can also develop after the refractive surgery known as LASIK. These symptoms generally last three to six months, but may last longer in some cases.
- Dry eye can result from chemical and thermal burns that scar the membrane lining the eyelids and covering the eye.
- Allergies can be associated with dry eye.

Optometrist @ Steeles & Mavis

80 Clementine Dr., Unit #9B

Brampton, Ont., L6Y 0L8

905.451.9982

[www.clearvueeyecare.com](http://www.clearvueeyecare.com)



- Infrequent blinking associated with staring at computer or video screens, may also lead to dry eye symptoms.
- Both excessive and insufficient dosages of vitamins can contribute to dry eye.
- Homeopathic remedies may have an adverse impact on a dry eye condition.
- Loss of sensation in the cornea from long-term contact lens wear can lead to dry eye.
- Dry eye can be associated with immune system disorders such as Sjögren's syndrome, lupus, and rheumatoid arthritis. Sjögren's leads to inflammation and dryness of the mouth, eyes, and other mucous membranes. It can also affect other organs, including the kidneys, lungs and blood vessels.
- Dry eye can be a symptom of chronic inflammation of the conjunctiva, the membrane lining the eyelid and covering the front part of the eye, or the lacrimal gland. Chronic conjunctivitis can be caused by certain eye diseases, infection, exposure to irritants such as chemical fumes and tobacco smoke, or drafts from air conditioning or heating.
- If the surface area of the eye is increased, as in thyroid disease when the eye protrudes forward or after cosmetic surgery if the eyelids are opened too widely, dry eye can result.
- Dry eye may occur from exposure keratitis, in which the eyelids do not close completely during sleep.

### Who is likely to develop dry eye?

Elderly people frequently experience dryness of the eyes, but dry eye can occur at any age. Nearly five million Americans 50 years of age and older are estimated to have dry eye. Of these, more than three million are women and more than one and a half million are men. Tens of millions more have less severe symptoms. Dry eye is more common after menopause. Women who experience menopause prematurely are more likely to have eye surface damage from dry eye.



## Treatment

### How is dry eye treated?

Depending on the causes of dry eye, Dr. Mezu may use various approaches to relieve the symptoms.

Dry eye can be managed as an ongoing condition. The first priority is to determine if a disease is the underlying cause of the dry eye (such as Sjögren's syndrome or lacrimal and meibomian gland dysfunction). If it is, then the underlying disease needs to be treated.

Cyclosporine, an anti-inflammatory medication, is the only prescription drug available to treat dry eye. It decreases corneal damage, increases basic tear production, and reduces symptoms of dry eye. It may take three to six months of twice-a-day dosages for the medication to work. In some cases of severe dry eye, short term use of corticosteroid eye drops that decrease inflammation is required.

If dry eye results from taking a medication, your doctor may recommend switching to a medication that does not cause the dry eye side effect.

If contact lens wear is the problem, Dr. Mezu may recommend another type of lens or reducing the number of hours you wear your lenses. In the case of severe dry eye, Dr. Mezu may advise you not to wear contact lenses at all.

Another option is to plug the drainage holes, small circular openings at the inner corners of the eyelids where tears drain from the eye into the nose. Lacrimal plugs, also called punctal plugs, can be inserted painlessly by an eye care professional. The patient usually does not feel them. These plugs are made of silicone or collagen, are reversible, and are a temporary measure. In severe cases, permanent plugs may be considered.

In some cases, a simple surgery, called punctal cautery, is recommended to permanently close the drainage holes. The procedure helps keep the limited volume of tears on the eye for a longer period of time.

In some patients with dry eye, supplements or dietary sources (such as tuna fish) of omega-3 fatty acids (especially DHA and EPA) may decrease symptoms of irritation. The use and dosage of nutritional supplements and vitamins should be discussed with Dr. Mezu and your family doctor.



## What can I do to help myself?

- Use non-preserved artificial tears, gels, gel inserts, and ointments - available over the counter - as the first line of therapy. They offer temporary relief and provide an important replacement of naturally produced tears in patients with aqueous tear deficiency. Avoid artificial tears with preservatives if you need to apply them more than four times a day or preparations with chemicals that cause blood vessels to constrict.
- Wearing glasses or sunglasses that fit close to the face (wrap around shades) or that have side shields can help slow tear evaporation from the eye surfaces. Indoors, an air cleaner to filter dust and other particles helps prevent dry eyes. A humidifier also may help by adding moisture to the air.
- Avoid dry conditions and allow your eyes to rest when performing activities that require you to use your eyes for long periods of time. Instill lubricating eye drops while performing these tasks.

## What are floaters?

Floaters are little "cobwebs" or specks that float about in your field of vision. They are small, dark, shadowy shapes that can look like spots, thread-like strands, or squiggly lines. They move as your eyes move and seem to dart away when you try to look at them directly. They do not follow your eye movements precisely, and usually drift when your eyes stop moving.

Most people have floaters and learn to ignore them; they are usually not noticed until they become numerous or more prominent. Floaters can become apparent when looking at something bright, such as white paper or a blue sky.

## What causes floaters?

Floaters occur when the vitreous, a gel-like substance that fills about 80 percent of the eye and helps it maintain a round shape, slowly shrinks.

As the vitreous shrinks, it becomes somewhat stringy, and the strands can cast tiny shadows on the retina. These are floaters.

In most cases, floaters are part of the natural aging process and simply an annoyance. They can be distracting at first, but eventually tend to "settle" at the bottom of the eye, becoming less bothersome. They usually settle below the line of sight and do not go away completely.

However, there are other, more serious causes of floaters, including infection, inflammation (uveitis), hemorrhaging, retinal tears, and injury to the eye.



## Who is at risk for floaters?

Floaters are more likely to develop as we age and are more common in people who are very nearsighted, have diabetes, or who have had a cataract operation.

## How are floaters treated?

For people who have floaters that are simply annoying, no treatment is recommended.

On rare occasions, floaters can be so dense and numerous that they significantly affect vision. In these cases, a vitrectomy, a surgical procedure that removes floaters from the vitreous, may be needed.

A vitrectomy removes the vitreous gel, along with its floating debris, from the eye. The vitreous is replaced with a salt solution. Because the vitreous is mostly water, you will not notice any change between the salt solution and the original vitreous.

This operation carries significant risks to sight because of possible complications, which include retinal detachment, retinal tears, and cataract. Most eye surgeons are reluctant to recommend this surgery unless the floaters seriously interfere with vision.

## Floaters and Retinal Detachment

Sometimes a section of the vitreous pulls the fine fibers away from the retina all at once, rather than gradually, causing many new floaters to appear suddenly. This is called a vitreous detachment, which in most cases is not sight-threatening and requires no treatment.

However, a sudden increase in floaters, possibly accompanied by light flashes or peripheral (side) vision loss, could indicate a retinal detachment. A retinal detachment occurs when any part of the retina, the eye's light-sensitive tissue, is lifted or pulled from its normal position at the back wall of the eye.

**A retinal detachment is a serious condition and should always be considered an emergency.** If left untreated, it can lead to permanent visual impairment within two or three days or even blindness in the eye.

Those who experience a sudden increase in floaters, flashes of light in peripheral vision, or a loss of peripheral vision should **call our office at 905-451-9982** for a comprehensive dilated eye examination as soon as possible.



## Do You Have Low Vision?

Take this quiz and find out

There are many signs that can signal vision loss. For example, even with your regular glasses, do you have difficulty?

*Recognizing faces of friends and relatives?*

- Yes
- No

*Doing things that require you to see well up close, like reading, cooking, sewing, or fixing things around the house?*

- Yes
- No

*Picking out and matching the color of your clothes?*

- Yes
- No

*Doing things at work or home because lights seem dimmer than they used to?*

- Yes
- No

*Reading street and bus signs or the names of stores?*

- Yes
- No

**If you answered "yes" to any of these questions, vision changes like these could be early warning signs of eye disease.**

Regular eye exams should be part of your routine health care. However, if you believe your vision has recently changed, call our office at 905-451-9982 for a comprehensive eye examination as soon as possible. Usually, the earlier your problem is diagnosed, the better the chance of keeping your remaining vision.



### Eye-FAQs

**Myopia**: also known as nearsightedness. This means that you can see objects that are close to you more clearly than distant objects. About one in four people in North America are nearsighted.

**Hyperopia**: also known as farsightedness. This means you usually have trouble seeing up close, but may also have difficulty seeing far away as well. People with mild to moderate hyperopia are often able to see clearly because their natural lens can adjust to increase the eye focusing ability. But others who have severe hyperopia need glasses for distance vision as well as reading glasses or bifocals.

**Astigmatism**: Astigmatism is an optical defect that interferes with the eye's ability to focus sharply, so it can result in unclear vision at both distance and near. It occurs because the shape of the cornea is oval (football shape) instead of round (like a soccer ball). Almost everyone is born with some astigmatism, though the amount may be so small that it is insignificant. Many people with myopia and hyperopia have some degree of astigmatism. Astigmatism can be corrected with glasses or toric contact lenses.

**Presbyopia**: Presbyopia is part of a normal process of aging. It develops as the lens of the eye loses some of its flexibility. People experience the effects of presbyopia typically between the ages of 40 and 50. Presbyopic patient will require bifocals to read, for computer use and for distance vision. Soft and hard contact lenses are now available for presbyopic patients. Contact our office t 905-451-9982 or e-mail us at [appointment@clearvueyecare.com](mailto:appointment@clearvueyecare.com) to learn more about bifocal contact lenses.

### **What is Low Vision?**

People who develop impaired vision that cannot be corrected by surgery, medicine, conventional eyeglasses or contact lenses are said to be Low Vision patients.

### **What causes Low Vision?**

A variety of disorders that affect the eye may cause low vision including macular degeneration, diabetic retinopathy, cataracts, glaucoma, and retinitis pigmentosa.



### **What is Low Vision care/rehabilitation?**

Low Vision Care/rehabilitation is care provided to the visually impaired by trained professionals to help maximize their remaining vision. It incorporates the use of certain viewing techniques and optical non-optical devices that can help individuals who are visually impaired.

### **What are Low Vision Aids?**

Low vision aids are special lens system designed to magnify or illuminate images to improve visual acuity and include magnifiers, telescopes, high-powered spectacles or electronic devices. Non optical devices include large-prints reading materials, writing and signature guides and much more.

### **How do I get started?**

Call our office today at 905-451-9982 or e-mail us at [appointments@clearvueyecare.com](mailto:appointments@clearvueyecare.com) to schedule an appointment, and learn how we can help you enhance your quality of life through low vision care.

### **Amblyopia**

Amblyopia or Lazy eye occurs when an otherwise healthy eye seems to have lost the desire to see. Early detection and treatment of amblyopia is crucial before the age of nine, after which it becomes very difficult to improve vision.

### **What Causes Amblyopia/Lazy Eye**

Causes of amblyopia include undiagnosed refractive error, undetected congenital cataract or any undetected obstruction of the ocular media.

### **Treatment**

Once the basic cause of the amblyopia has been identified, treatment is begun. Proper corrective glasses or contact lenses are prescribed, and a vigorous program of "patching" (covering) the good eye is necessary to get the child to begin using the amblyopic eye.



### **What is Keratoconus**

Keratoconus is a condition in which the cornea, gradually over many years, weakens and becomes cone-shaped. This distorts its focusing ability and results in blurred vision.

Keratoconus usually (but not always) affects both eyes, though its severity may be different in each eye. It occurs in both sexes and all races. It is an inherited condition (recessive) that sometimes occurs as part of other hereditary conditions.

The first symptom of keratoconus may be frequent changes in vision and glasses, squinting, glare, eye rubbing and ocular surface dryness. A comprehensive eye exam will detect early signs of keratoconus.

### **Treatment**

As the keratonus progresses, glasses and soft contact lenses may not provide adequate vision. Rigid gas permeable lenses become necessary to optimize vision. If you suspect that you may have Keratoconus, please call our office at 905-451-9982 or at [appointments@clearvueyecare.com](mailto:appointments@clearvueyecare.com) to schedule an appointment to learn about the latest treatment options in Keratoconus.