

The Eyes



Education resource for Aboriginal Health Workers

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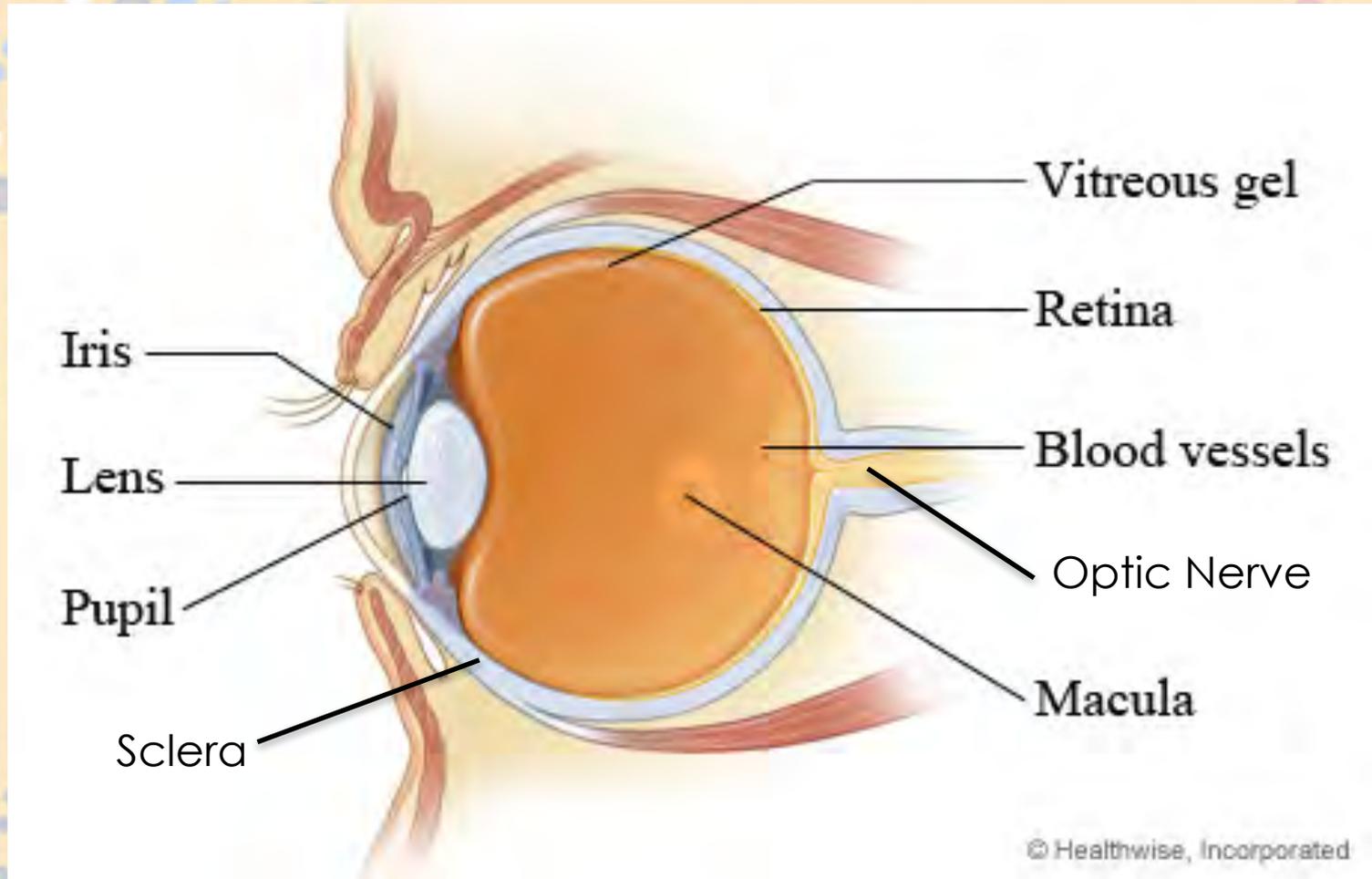
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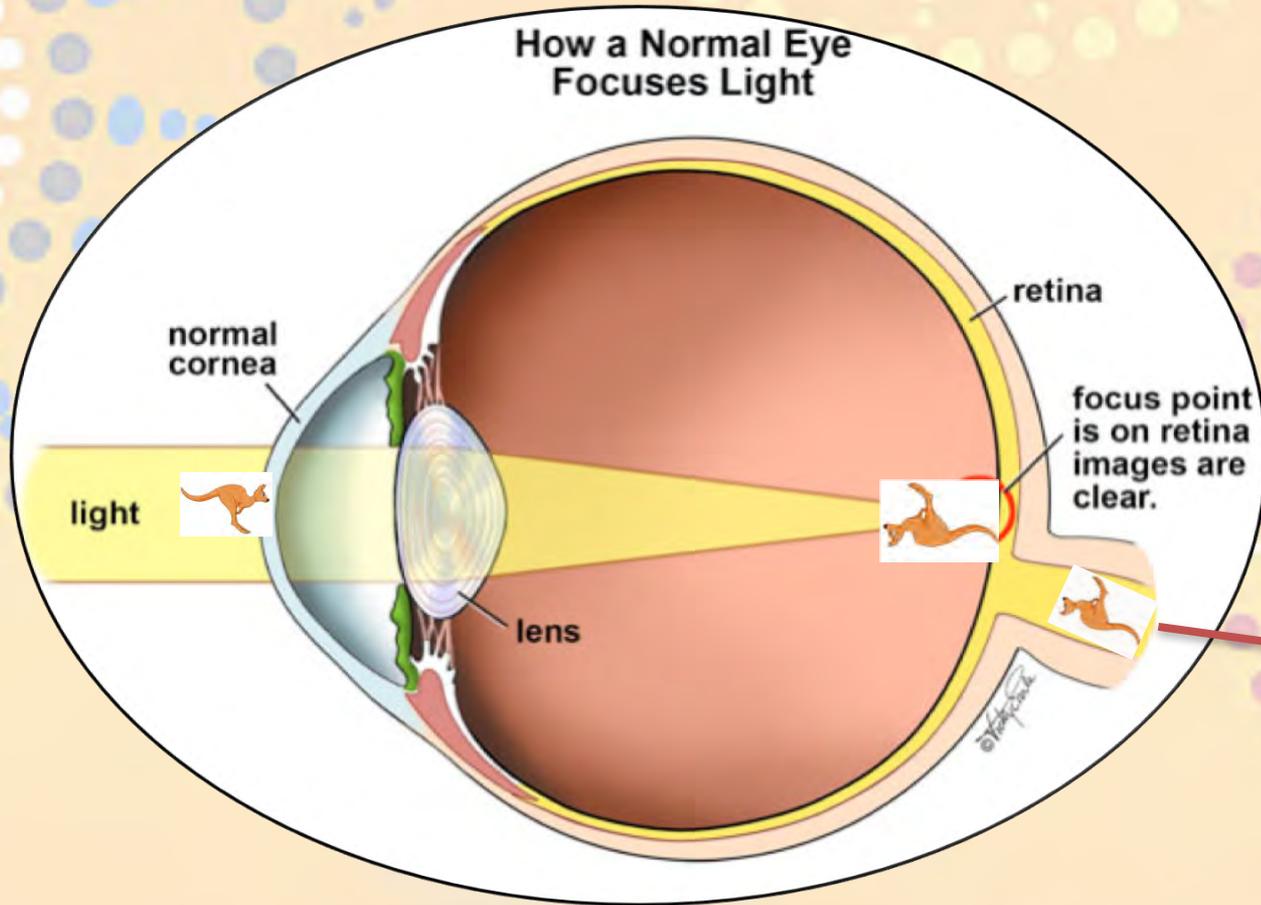
Pterygia

INSIDE YOUR EYE



- **Cornea** – Is like a window.
- **Iris** – Coloured part of your eye
- **Pupil** – Black hole in the iris
- **Sclera** – White part of the eye
- **Lens** – Focuses like a camera
- **Retina** – Is like a movie screen which shows you the picture
- **Optic nerve** – Transfers what your looking at to the brain
(Like a cord that carries the pictures from your DVD player to your TV)
- **Vitreous Gel** – Jelly-like fluid in the eyeball to keep it in shape.

Healthy eye



How the eye focuses

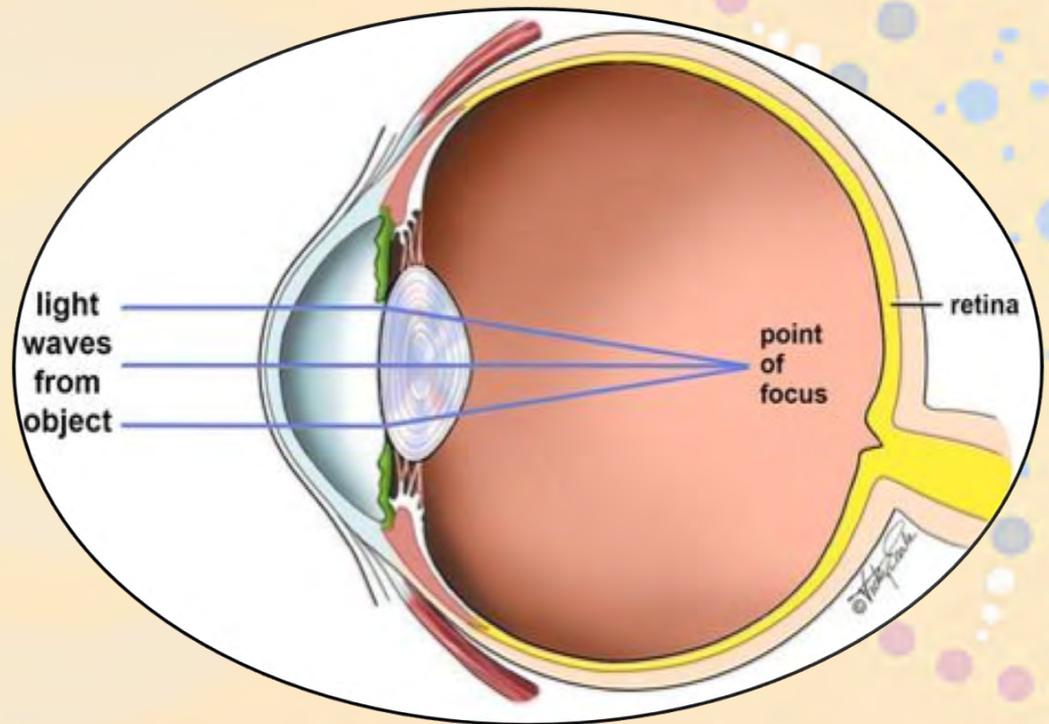
Eyes work in a similar way to a camera – light goes through the lens of your eye and is recorded on the back of your eye (retina).

The picture that your eye takes is upside down.

The picture is sent to your brain and your brain turns the picture the right way up and tells you what you are looking at.

Myopia

Short sighted



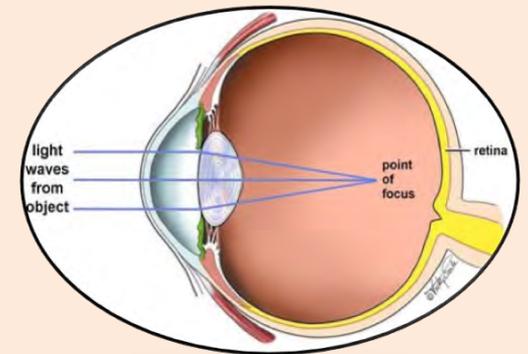
Myopia

Short Sighted

What is myopia? – the light rays focus at a point in front of the retina instead of directly on the retina.

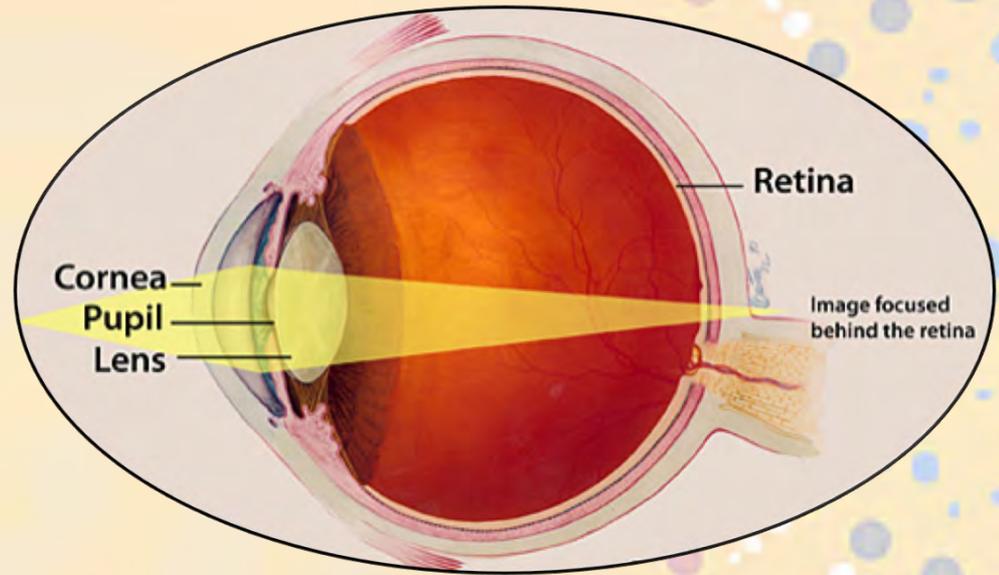
Close objects look clear but distant objects look blurred.

Treatment – see an Optometrist



Hyperopia

Long sighted



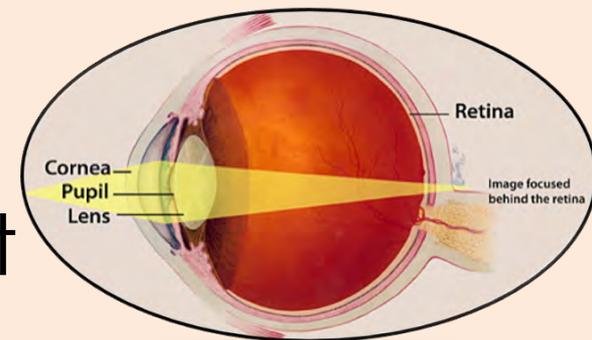
Hyperopia

Long sighted

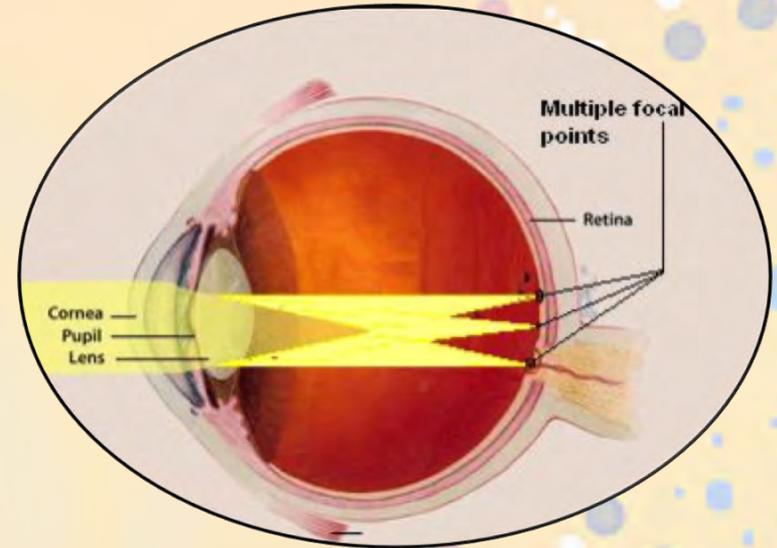
What is hyperopia? – the light rays focus behind the retina instead of directly on the retina.

You can see distant objects clearer but close objects are blurry.

Treatment – see an Optometrist



Astigmatism

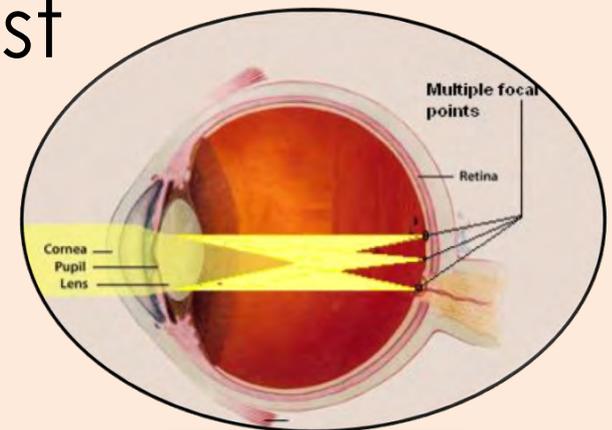


Astigmatism

What is Astigmatism? – the light rays entering the eye are not all focused on the retina.

Blurred vision at all distances

Treatment – see an Optometrist



What does an Optometrist do?



Optometrist

Optometrists examine the eyes for:

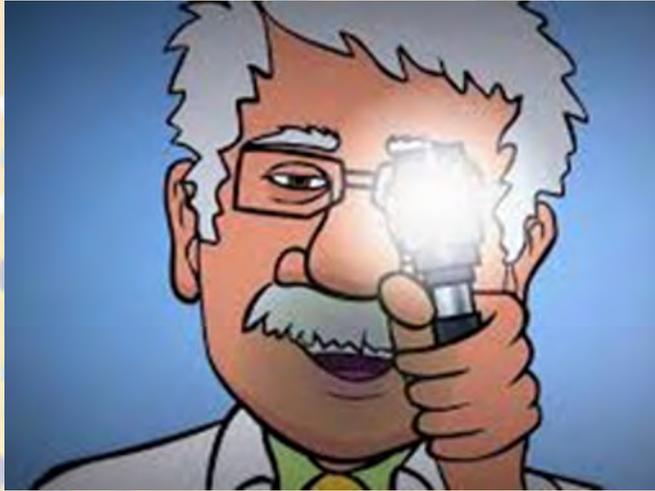
- Identify defects (see examples below) and correct vision by prescribing glasses
 - Myopia
 - Hyperopia
 - Astigmatism
- Signs of injury
- Eye Disease

When to refer to an Optometrist:

- If a patient comes in with eye problems
- For patients with newly diagnosed diabetes
- Once a year for patients with diabetes

Optometrists will refer patients to an Ophthalmologist for diseases of the eye for treatment and surgery.

What does an Ophthalmologist do?



Ophthalmologist

Ophthalmologists will treat diseases and injuries of the eyes.

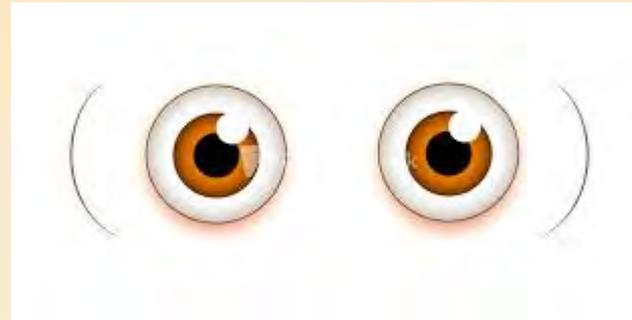
Ophthalmologists will do:

- Eye drops / medication
- Injections
- Laser
- Surgery

Ophthalmologists will numb the eye so the patient doesn't feel anything.

Patients need a referral from their doctor or Optometrist to see a Ophthalmologists

Saving your eyesight



Outback Vision



Saving your eyesight

High blood sugar levels from diabetes can cause a number of problems with your eyes, such as:

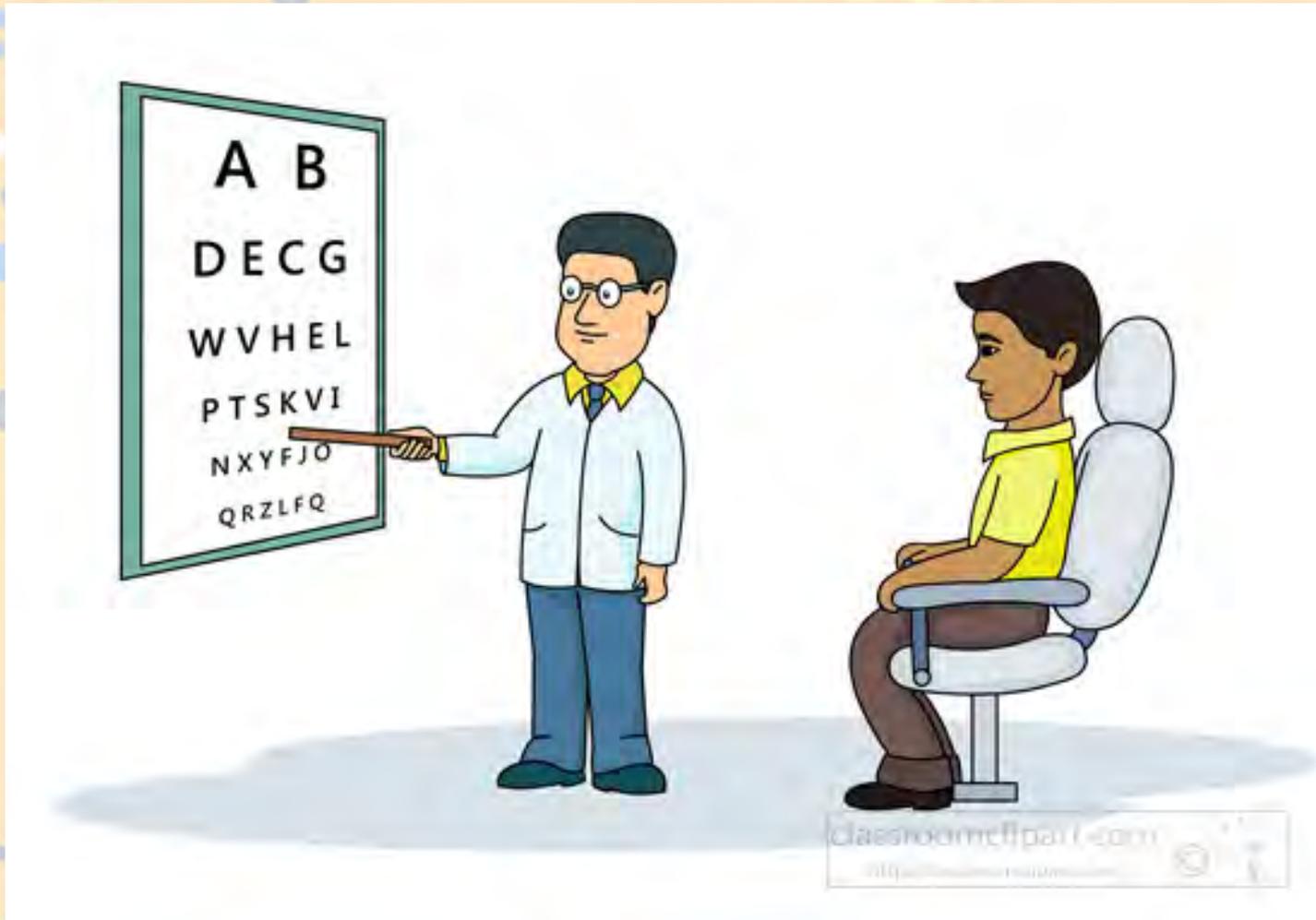
- Blurry vision
- Cloudy vision
- Increase in eye pressure
- Permanent vision loss

What can you do?

Prevent eye problems and keep your eyes healthy if you:

- Get a dilated eye exam once a year
- Keep your blood sugar and blood pressure under good control
- Eat well and exercise daily
- Take your prescribed medications as directed

Eye Check

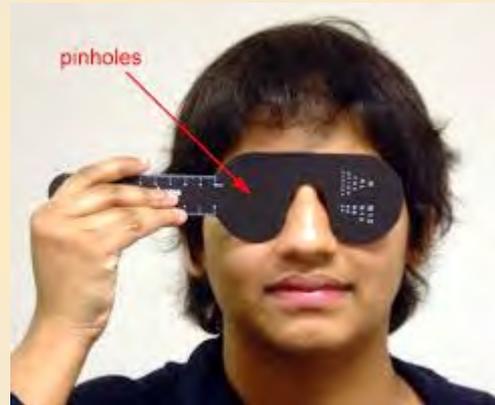


Eye Check

The eye check starts with a visual acuity

- The visual acuity test is a measurement of vision. It determines the smallest letters you can read on a chart 6 meters away.
- This information tells the specialist what is going on with your vision and what could be happening behind your eyes.

The Visual Acuity



Performing a Visual Acuity Assessment

- Measure the distance 6 meters
- If the patient wears glasses to see long distance keep these on
- Cover one eye – record the number as a fraction with 6 being the number on top (represents the distance, 6/18), the bottom number represents the size of the smallest letter seen by the patient.
- If the patient is having trouble seeing the letters, use pinhole (PH) glasses to see if the patient can read any better
- Record any improvement achieved with pinhole

Example:

RE 6/18 PH 6/6

LE 6/6

The Visual Acuity 2



Performing a Visual Acuity 2

If the patient is struggling to read the eye chart do the following:

- Hold up fingers and ask the patient how many fingers you are holding up and record what they see.



Example: RE CF@3m

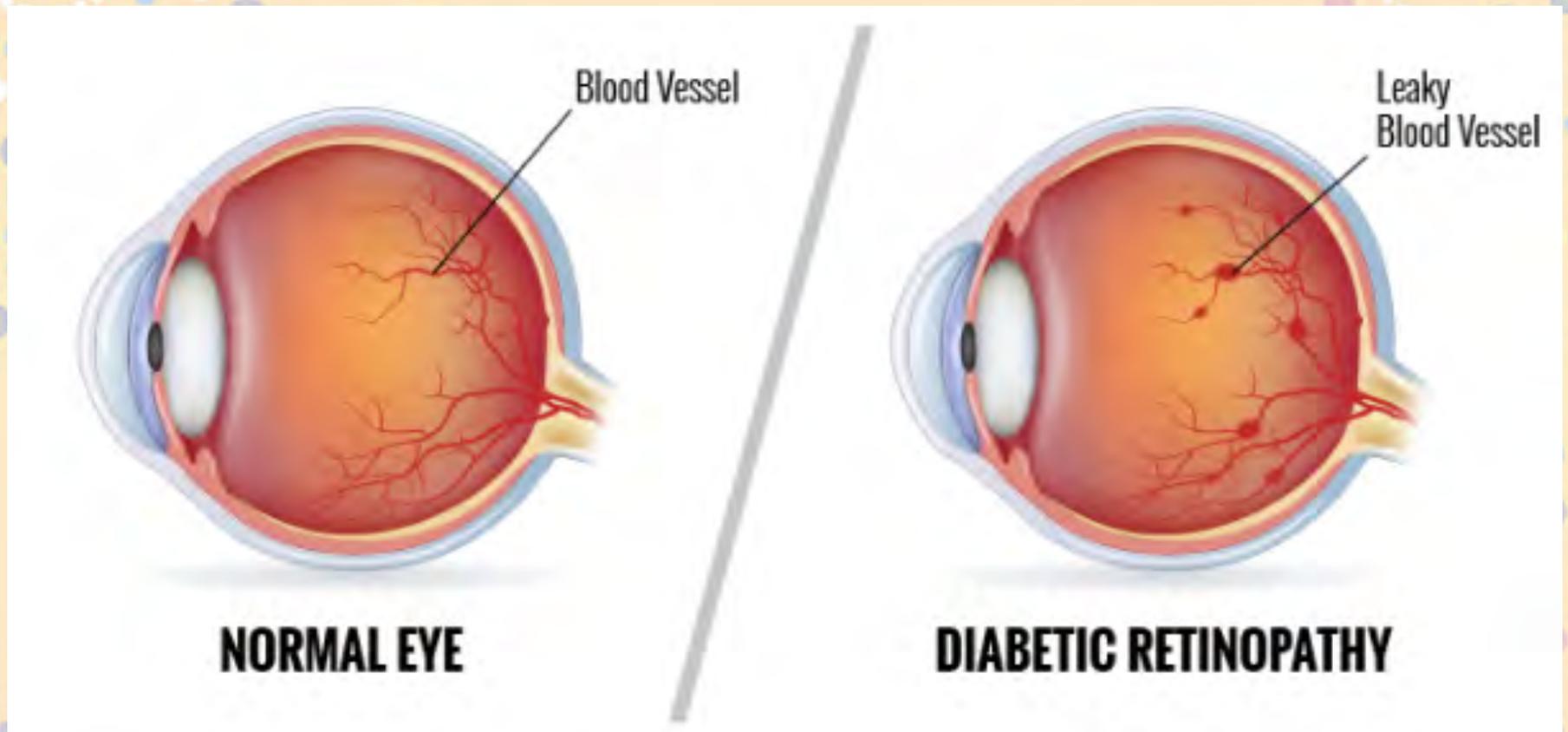
- If can't count fingers, then ask patient to identify hand movement and record what they see.



Example: LE HM@2m

CF = Count Fingers @ what distance
HM = Hand Movement @ what distance
m = metres

Diabetic Retinopathy



Diabetes in the eye

If you have bad sugars, this means you will have bad eyes.

The veins that carry the blood in your eyes are like rivers. Your diabetes has made lots of tiny rivers in your eyes, so these rivers are very weak. When they break blood spills into the back of your eyes. It doesn't hurt so you won't know that your eyes are bleeding. After sometime everything goes blurry and it keeps getting worse until you can't see anymore. Everything will go black.

The doctor can't help you see again once your vision is gone.

This is what you might see when looking at things



Floaters or Spots



Blurred Vision



Normal



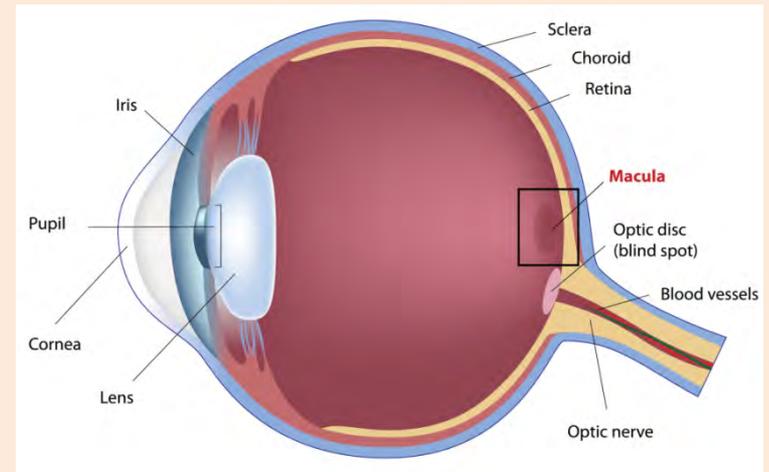
Dark or Empty Spots

Looking at things

SYMPTOMS: There are no early-stage symptoms of diabetic retinopathy and vision loss may not occur until the disease is advanced.

You may not notice that you have bad eyes until the bleeding gets into the central part of your eye (Macula)

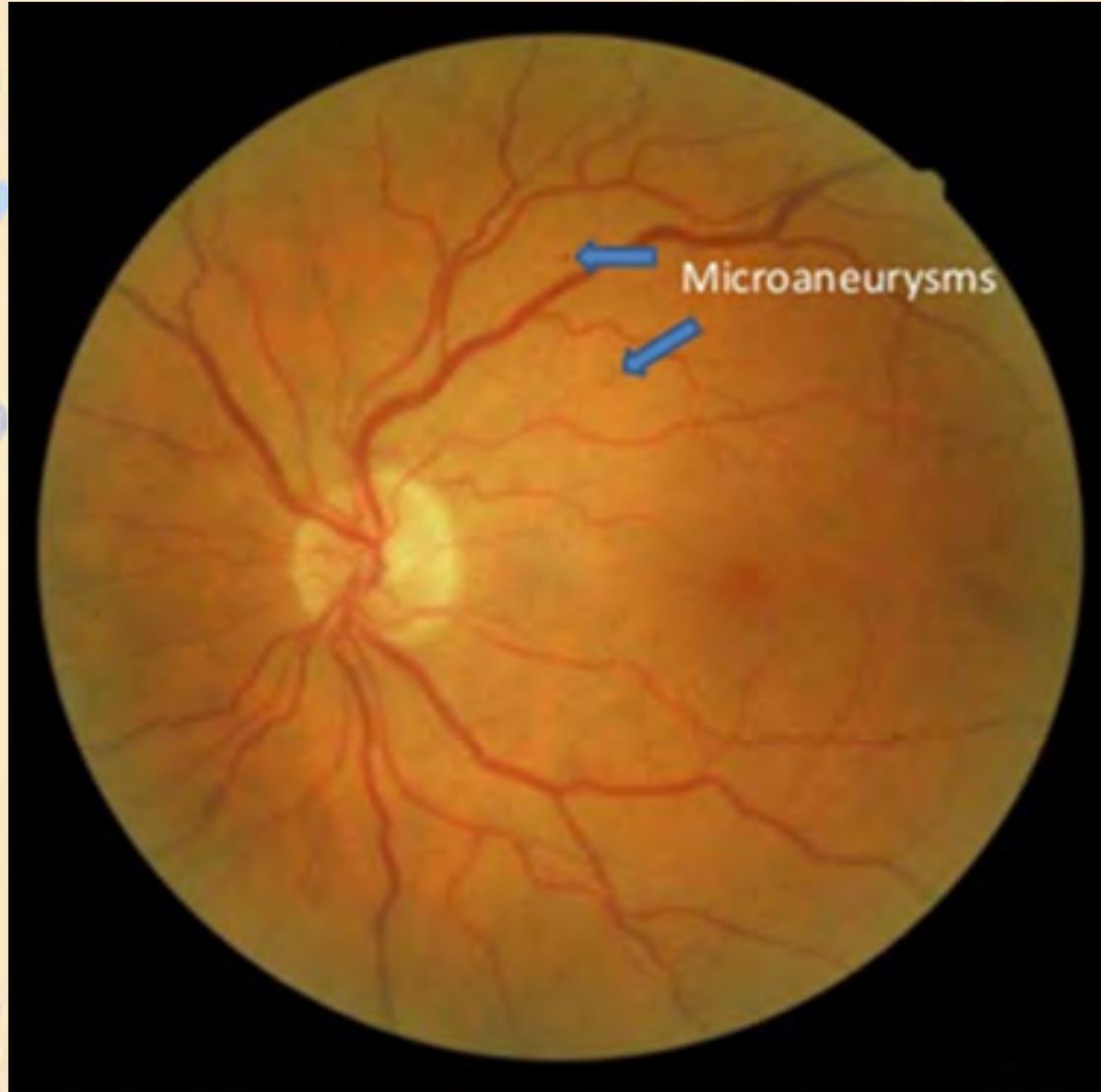
- Important to have yearly eye screening to monitor
- Control blood sugars (discuss exercise and nutrition)



Late stage diabetic retinopathy symptoms include:

- Blurred vision
- Floaters or spots
- Dark or empty spots

Mild Nonproliferative Retinopathy



Mild Non-pro-lif-er-at-ive Ret-in-op-athy

Tiny bulges (mi-cro-an-u-risms) have appeared in the blood vessels in the back of your eyes. They may leak small amounts of blood.

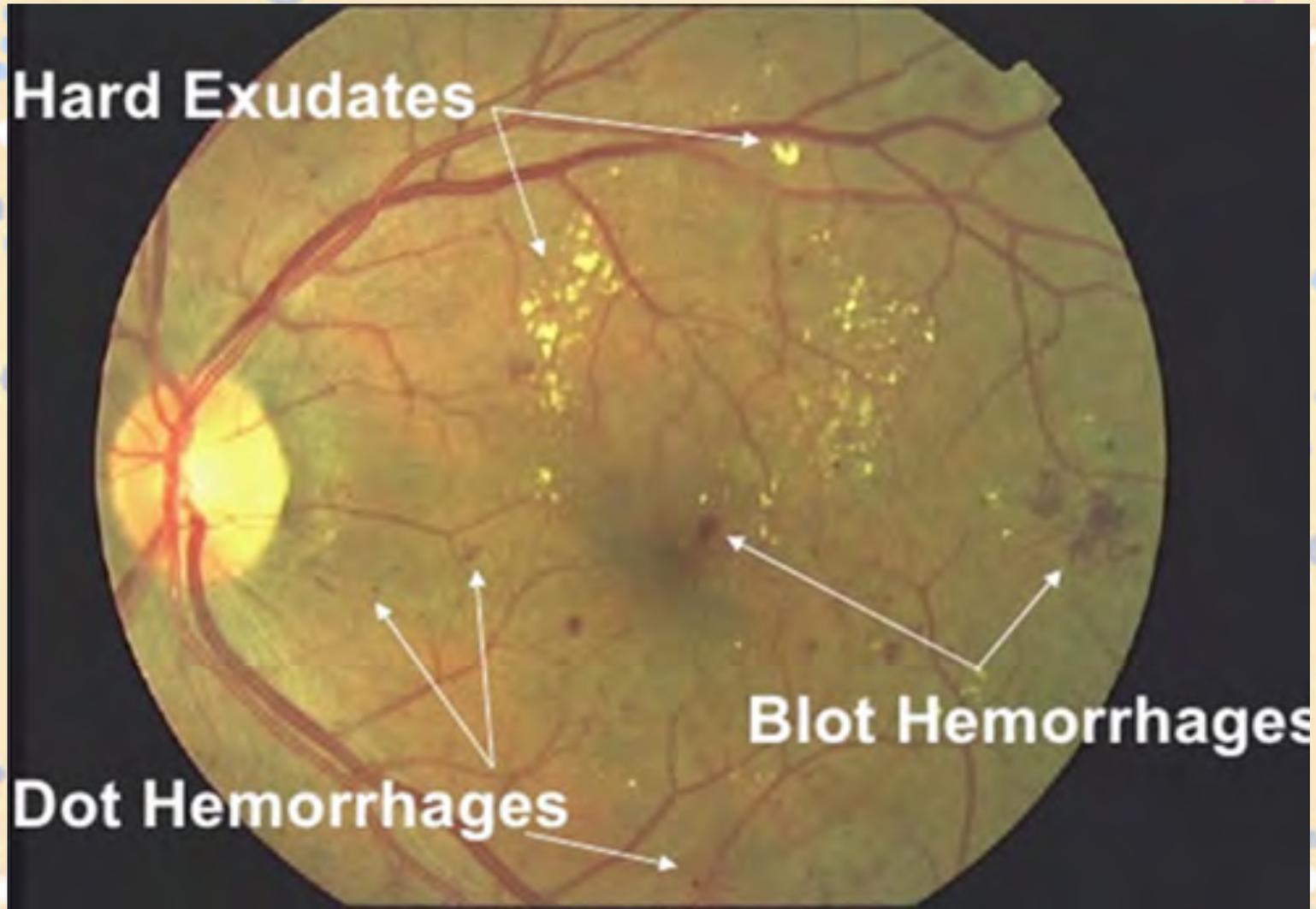
At this stage:

- Your sight isn't affected, but you are at a higher risk of developing problems with your vision.

What you can do:

- Keep your blood sugar levels, blood pressure and cholesterol levels under control. Have your eyes checked every year.

Moderate Nonproliferative Retinopathy



Moderate Non-pro-lif-er-at-ive Ret-in-op-athy

More severe and widespread changes are seen in the retina, including bleeding.

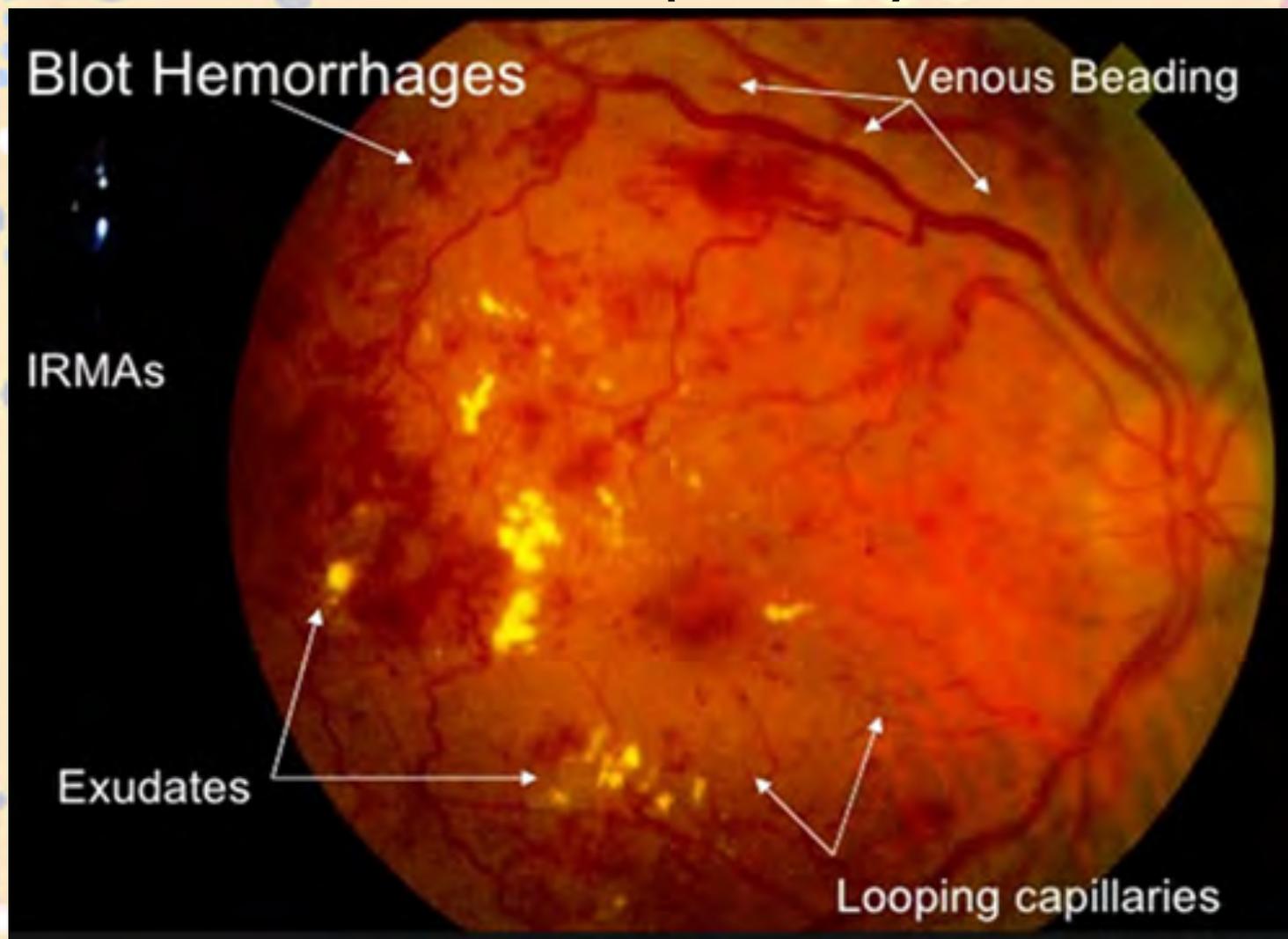
At this stage:

- There is a high risk that your vision could be affected.

What you can do:

- Keep your blood sugar levels, blood pressure and cholesterol levels under control.
- Attend your eye appointments recommended by the eye specialist

Severe Nonproliferative Retinopathy



Severe Non-proliferative Retinopathy

New blood vessels and scar tissue have formed on your retina, which can cause significant bleeding .

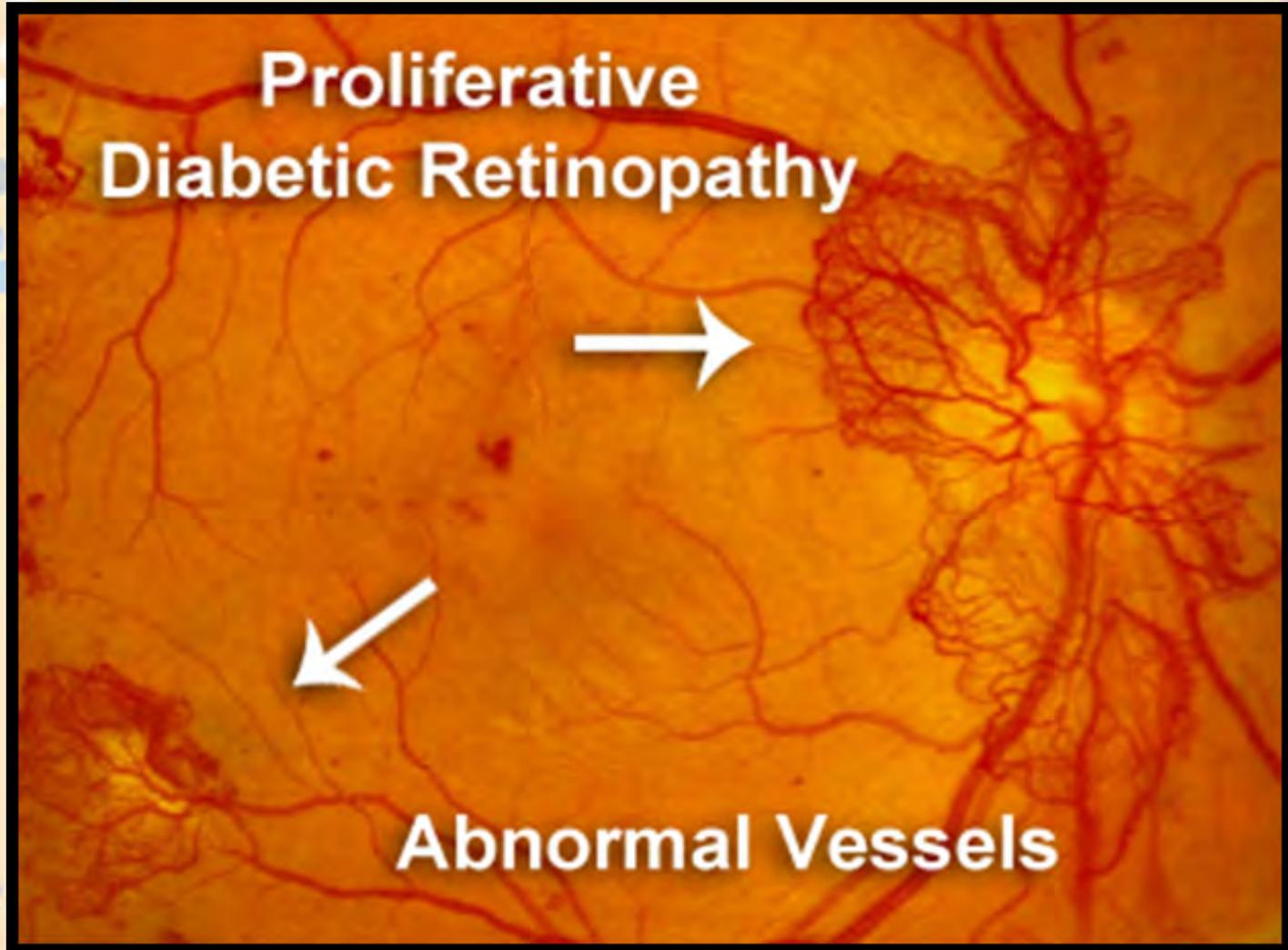
At this stage:

- There is a very high risk you could lose your vision.
- Treatment can stabilize your vision, but it won't give you back any lost vision.

What can you do:

- Get your blood sugar levels, blood pressure and cholesterol levels under control
- Attend the treatment regularly as recommended

Proliferative Diabetic Retinopathy



Pro-lif-er-at-ive Diabetic Ret-in-op-athy

This is an advanced stage of diabetic eye disease. The new blood vessels that are growing are weak and are more likely to bleed. The bleeding and the scar tissue can cause retinal detachment, pulling away the retina, a bit like wallpaper peeling away from the wall. Retinal detachment can lead to permanent vision loss.

You will need **urgent** treatment.

Treatment

Eyes are precious



We care for your eyes

Treatment

The doctor can use special equipment to stop you from going blind, they can't get your vision back but they can help you keep the sight you have now.

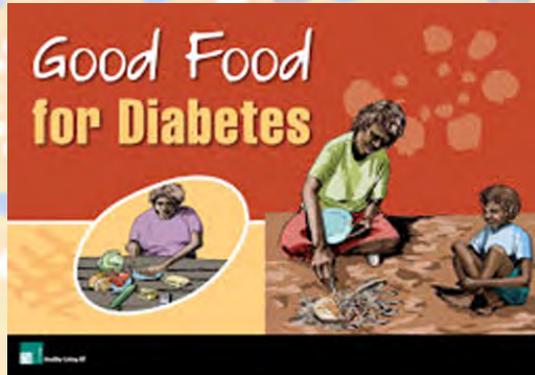
- Laser takes about 10 minutes, you will see a red light, you have to sit very still and look straight into that red light.
- Laser works by zapping the river banks in your eyes so the rivers don't overflow.
- Doesn't make you see any better but stops you from getting worse.

The eye specialist can help your eyes with regular injection treatment. Remember, he can't make you see any better but he can stop it from getting worse. So the sooner you have treatment the better you will be able to keep the sight you have.

- You will get drops in your eyes to numb them.
- Next you will be given an injection or laser treatment to stop the bleeding in your eyes. Sometimes you might need both injection and laser.

Just remember this is going to help you to keep seeing.

What can you do to keep good eyes



What can you do to keep good eyes

- Look after your health.
- Eat healthy and exercise.
- See your doctor regularly.
- Have an eye screening every year.
- Talk to your Health Worker.
- Take your medicine as directed.
- If you notice any changes in your vision, go to the medical centre/AMS.

Cataracts



Cataracts

A cataract is a clouding of the eye's natural lens, which lies behind the iris and the pupil.

Your eye will look like it has a cloud in it. When this happens you won't be able to see properly.

The lens inside the eye works like a camera lens, focusing light onto the retina for clear vision. It also adjusts the eye's focus, letting you see things clearly far away and up close.

A cataract is formed mainly by age.

Treatment for cataract is surgery. The eye specialist will replace the cloudy lens with an artificial lens which will help you see a long way but you will probably need glasses for reading.

Pterygium



Pterygium (Ter-ij-ee-um)

Is a growth of pink, fleshy tissue, which usually forms on the side closest to the nose and grows towards the pupil.

Symptoms might be:

- Burning
- Grittiness
- Itchiness
- Feels like something in your eye
- Looks red

Causes:

- Lots of exposure to ultraviolet light (sun)

Preventative:

Hat and sunglasses (Sun protection)

Treatment:

Surgery

Lions Outback Vision Outreach Eye Health Support program is *proudly supported by Quadrant Energy and Santos, Joint Venture Partners in the*
Devil Creek Gas Plant.

