

Event: HPAO Toronto – Macular Degeneration and Ai Chi Exercises Zoom Meeting	Event Date: Sep 19, 2025	Colin Erwin
Topic: Quick Summary and Post-Talk Resources	Revision Date: Sep 20, 2025	Page 1 of 9

Introduction

On September 19, 2025, our Hydro Pensioners Association of Ontario – Toronto District held our thirteenth Zoom talk, and tenth Zoom event of 2025.

In our first segment from 10:00 am to 11:00 noon, our Guest Presenter was Professor Shahina Pardhan. She is an OBE (Officer of the British Empire), an Optometrist, and Director of the [Vision and Eye Research Institute \(VERI\)](#) at the [Anglia Ruskin University School of Medicine](#) in Cambridge, England. Dr Pardham discussed common eye diseases: their underlying physiology, symptoms, and recommendations to avoid getting the disease. Specifically discussed were:

1. Age-related Macular Degeneration.
2. Glaucoma
3. Cataracts
4. Dry Eye Syndrome
5. Retinal Detachment

In our second segment from approx., 11:10am to 11:40am, our guest presenter was Diane Chadwick, who led our seniors in Ai Chi exercises. Ai Chi is an aquatic exercise used for recreation, relaxation, fitness, and physical rehabilitation.

A recording of the presentation is posted at our YouTube channel [@HydroPensionersToronto](#), or click the link: <https://www.youtube.com/@HydroPensionersToronto>.

Many Bell and Rogers television subscribers can watch the presentation from their television by giving the following voice command to their remote control: “*Hydro Pensioners Toronto on YouTube*”.

Event: HPAO Toronto – Macular Degeneration and Ai Chi Exercises Zoom Meeting	Event Date: Sep 19, 2025	Colin Erwin
Topic: Quick Summary and Post-Talk Resources	Revision Date: Sep 20, 2025	Page 2 of 9

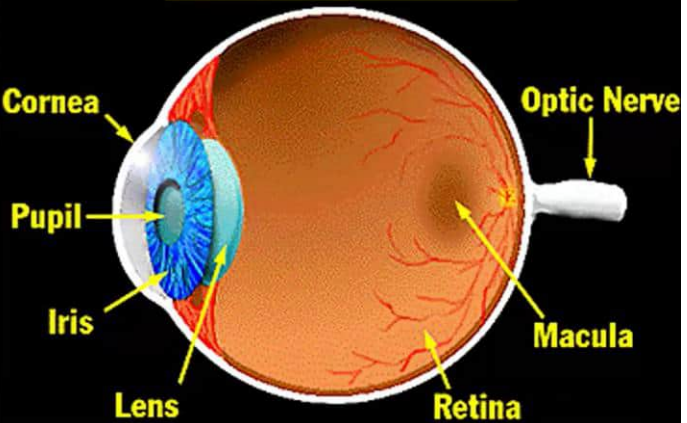
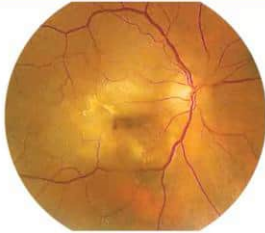
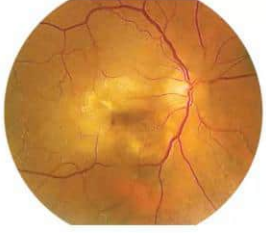
Resources

- Hydro Pensioners Toronto YouTube channel, with recordings of most Zoom events:
<https://www.youtube.com/@HydroPensionersToronto>.
- Link to Eye Health Literacy Improvement Videos from *Anglia Ruskin University · Vision and Eye Research Institute (VERI)*:
<https://www.aru.ac.uk/vision-and-eye-research-institute/our-research/diabetic-retinopathy/linguistically-and-culturally-appropriate-videos>
- What is Ai Chi?
https://en.wikipedia.org/wiki/Ai_Chi
- City of Toronto: Online registration for recreation programs. You will need to create a free Parks & Rec account to search the listings of available programs:
<https://www.toronto.ca/OnlineReg>
- City of Toronto: Search for available programs:
https://anc.ca.apm.activecommunities.com/toronto/activity/search?date_after=2025-09-20&viewMode=list
- City of Mississauga: Search for available programs:
https://anc.ca.apm.activecommunities.com/activemississauga/activity/search?onlineSiteId=0&activity_select_param=2&viewMode=list

Event: HPAO Toronto – Macular Degeneration and Ai Chi Exercises Zoom Meeting	Event Date: Sep 19, 2025	Colin Erwin
Topic: Quick Summary and Post-Talk Resources	Revision Date: Sep 20, 2025	Page 3 of 9

Discussion

Below are selected slides from the Presentation.

Commonly encountered eye diseases Professor Shahina Pardhan OBE Vision and Eye Research Institute  a.r.u. Anglia Ruskin University Vision and Eye Research Institute	Overview • Age-related macular degeneration • Glaucoma • Cataracts • Dry eye syndrome • Retinal detachment  a.r.u. Anglia Ruskin University Vision and Eye Research Institute Reducing risk of blindness
Age-related Macular Degeneration (AMD)  a.r.u. Anglia Ruskin University Vision and Eye Research Institute Reducing risk of blindness	Anatomy of a Normal Eye 
AMD Leading cause of blindness in the elderly. Damage to the macula – the central part of the retina – blurring of central vision.  a.r.u. Anglia Ruskin University Vision and Eye Research Institute Reducing risk of blindness 	AMD: Symptoms • Central vision affected. • One or both eyes. • Painless. • Increasing difficulty with ordinary tasks. • Reading Recognising faces Driving  a.r.u. Anglia Ruskin University Vision and Eye Research Institute Reducing risk of blindness 

AMD: Symptoms

Central vision becomes more difficult as condition progresses



Peripheral vision is not usually affected in AMD



Reducing risk impact blindness

AMD: Forms

Dry (or Nonexudative) AMD: majority of AMD cases

- Accumulation of drusen (fat) in retina.
- Gradual progression of symptoms- vision loss.
- No effective treatment (yet).

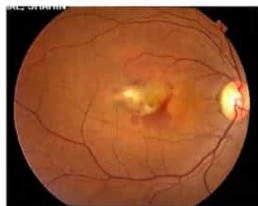


Reducing risk impact blindness

AMD: Forms

Wet AMD

- Blood leakage in the retina leading to scar formation.
- Rapid progression of symptoms – over days.
- Treatment may slow progress, but not curative.
- Early detection key to management.



AMD: Risk Factors

- Smoking.
- Increased BMI (Overweight).
- Prolonged UV light exposure.
- Poor diet



AMD: Recommendations

- Regular eye tests
- Use of sunglasses.
- Regular exercise/weight control Check each eye individually
- Green leafy vegetables



Reducing risk impact blindness

Glaucoma



Reducing risk impact blindness

Glaucoma: Vision changes

- Silent disease
- Optic nerve damage due to increased pressure inside the eye
- Leads to irreversible vision loss and blindness.
- Both eyes usually affected, although severity may be greater in one eye.



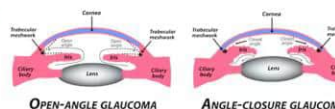
Reducing risk impact blindness

Glaucoma: Types

Primary Open Angle Glaucoma

- Most common.
- asymptomatic.
- Slow progressive loss of peripheral vision in later stages.

TYPES OF GLAUCOMA

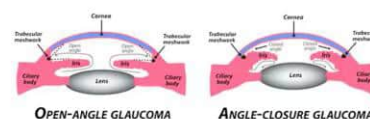


Glaucoma: Types

Acute Angle Closure Glaucoma

- Ophthalmic emergency.
- Symptomatic-painful red eye
- Sudden, rapid rise in intraocular pressure.

TYPES OF GLAUCOMA



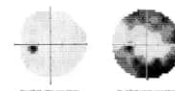
Closed Angle Glaucoma

- Rapid rise in pressure
- Headache and eye pain
- Rapid loss of vision
- May occur more slowly especially in Asians



Glaucoma: Recommendations

- Routine eye examination
- Check pressures:
- Visual fields
- OCT



Cataracts

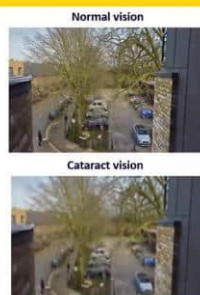
Cataracts

- Cloudiness of the lens of the eye.
- Blurred vision: often develop gradually
- May occur in one or both eyes simultaneously.



Cataracts: Symptoms

- Blurry or misty vision.
 - Difficulty with reading, driving, glare
 - Halos around light sources.
- Faded appearance of colours.
- Seeing double with one eye.
- Spectacle prescription changes.



Cataracts: Risk Factors

- Older age.
- Family history.
- Health conditions, e.g. diabetes.
- Lifestyle choices, e.g. smoking, alcohol intake.
- Certain medications.
 - Steroids (prolonged use).
- Eye trauma.
 - Blunt or penetrating eye injuries.
- Previous eye surgery.

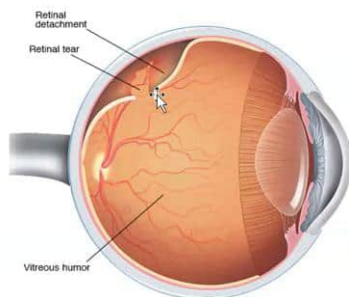
Cataracts: Recommendations

- UV protection – Use of hats and sunglasses.
- Balanced diet.
- Good control of diabetes if applicable.
- Smoking cessation.
- Alcohol reduction.

Retinal Detachment

Retinal Detachment

- Urgent referral



- "Dark curtain falling in line of vision".
- Sudden appearance spots (floaters).
- Flashes of light in one eye.



Retinal Detachment: Recommendations

- Check out eye after serious eye injury or sport injury.
- Use of safety goggles and other safety eyewear during sports, gardening, and other potentially hazardous activities.

Dry Eye Syndrome

Dry Eye Syndrome

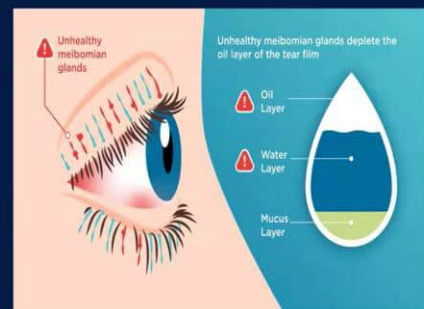
- Inadequate tears : discomfort/pink eye



Reducing risk of blindness



- "Tear film"
- Spreads across the eye during blinking Moisturises and protects the eye.
- Provides nutrients to the cornea.



Dry Eye Syndrome

- Problems with:
 - Production of tear film in the eye.
 - Drainage of tear film from the eye.
 - Quality of tear film produced.

Reducing risk of blindness



- Burning/Stinging sensation in eye.
- Sandy/gritty eye irritation.
- Blurred vision (intermittent).
- Red eye.
- Increased eye sensitivity: to light, to cigarette smoke.



Dry Eye Syndrome: Recommendations

- Frequent screen breaks.
 - The 20-20-20 rule
- Adequate body and eye hydration.
- Regular eyelid cleaning.
- Humidifiers in dry environments



Reducing risk of blindness



Dry Eye Syndrome: Recommendations

- Warm compresses to eye.
- Dry eye drops.
- Contact lens-related concerns- seek advice.



Reducing risk of blindness



Diabetic Retinopathy

DIABETES

3.7 MILLION

DEATHS DUE TO DIABETES AND HIGH BLOOD GLUCOSE

1.5 MILLION DEATHS CAUSED BY DIABETES



DIABETES IS ON THE RISE

2015 one in 11 adults has diabetes

2040 one in 10 adults will have diabetes

388 MILLION ADULTS HAVE DIABETES



THE GLOBAL PREVALENCE OF DIABETES AMONG ADULTS OVER 18 YEARS OF AGE HAS RISEN FROM 4.7% IN 1980 TO 8.5% IN 2014

VILLA MEDICA
CURING THE MODERN LIFESTYLE DISEASES

Major Complications of Diabetes

Microvascular

Eye
High blood glucose and high blood pressure can damage eye blood vessels, causing retinopathy, cataracts and glaucoma.

Kidney
High blood pressure damages small blood vessels and excess blood glucose overworks the kidneys, resulting in nephropathy.

Neuropathy
Hyperglycemia damages nerves in the peripheral nervous system. This may result in pain and/or numbness. Feet wounds may go undetected, get infected and lead to gangrene.

Macrovascular

Brain
Increased risk of stroke and cerebrovascular disease, including transient ischemic attack, cognitive impairment, etc.

Heart
High blood pressure and insulin resistance increase risk of coronary heart disease.

Extremities
Peripheral vascular disease results from narrowing of blood vessels increasing the risk for reduced or lack of blood flow in legs. Feet wounds are likely to heal slowly contributing to gangrene and other complications.

Complications in the eye- mostly due to uncontrolled diabetes



Blindness due to diabetes is largely preventable – if caught and treated on time

It can be prevented !!!!!

- Diabetic eye diseases can lead to vision loss if undiagnosed.
- Early detection is critical: early treatment can reduce the risk by 60-90%.

Risk factors for diabetic retinopathy?

Non-Modifiable

1. Age
2. Duration
3. Women
4. Lower socio-economic/education backgrounds
5. Ethnicity : South Asians and Black people : 3-6X higher risk Type 2 diabetes

Why ethnic differences?

Possible genetic factors:

1. Central or abdominal obesity- South Asians more likely to have excess fat stored around the abdomen
2. Lower rate of fat metabolism: do not burn fat as well as efficiently
3. Reduced sensitivity to insulin

Risk factors for diabetic retinopathy?

Modifiable

1. Retinal screening
2. Poor control (blood glucose, blood pressure, cholesterol)



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Topic: Quick Summary and Post-Talk Resources	Revision Date: Sep 20, 2025	Page 9 of 9

Solution: Meet unmet need : We have developed training videos in 15 different languages to improve literacy : • Diabetes control • Diabetic complications • Retinopathy screening • Life-style : physical activity, diet etc 	Developed training: • Videos in 15 different languages: culturally and linguistically appropriate • To improve health literacy, retinal screening uptake, promote healthier lifestyles  
Click to add title • Thank you	

Acknowledgements

Producing this event was again very much a Team Effort. Thanks to:

- Nazma Premji for initiating the idea for this event, arranging our speaker, and tabulating the registrations.
- Our Guest Presenters: Dr Shahina Pardhan, and Diane Chadwick.