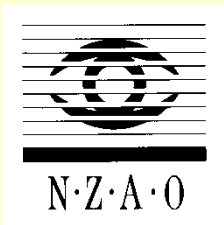


# Diabetes and the eye



**Approximately 105,000 people in NZ  
are diagnosed with diabetes but  
around the same number of people  
have not yet been diagnosed**

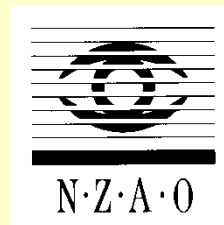
**1 in 32 Pakeha adults (3.1 %)**

**1 in 12 Maori (8.3 %)**

**1 in 12 Pacific Island adults (8.1%)**

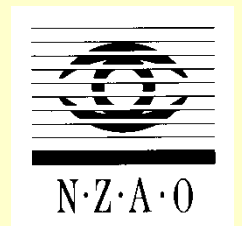
**Ref: [www.diabetes.org.nz](http://www.diabetes.org.nz)**

**About two thirds of diabetics  
have some retinal damage  
(retinopathy)**



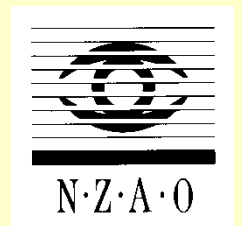
# Symptoms of diabetic eye changes

- Blurry vision
- Fluctuating vision
- Can occur quite early on in the disease
- An optometrist will often be the first person to pick up signs that someone may have diabetes

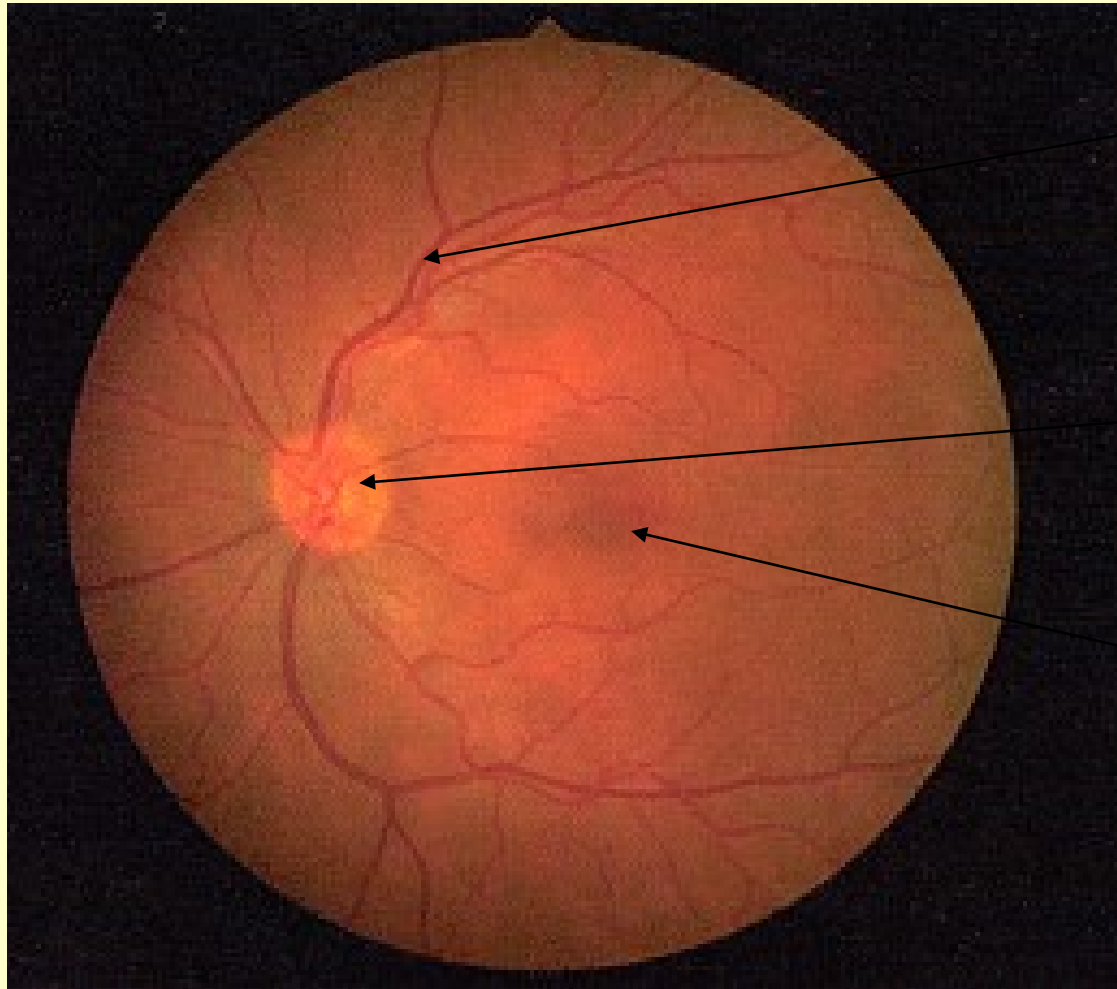


# Changes to the eyes with diabetes

- Changes to retinal blood vessels (retinopathy)
- Increased likelihood of
  - Cataract
  - Glaucoma
- Changes to refractive error



# Normal retina



retinal blood  
vessels

optic nerve

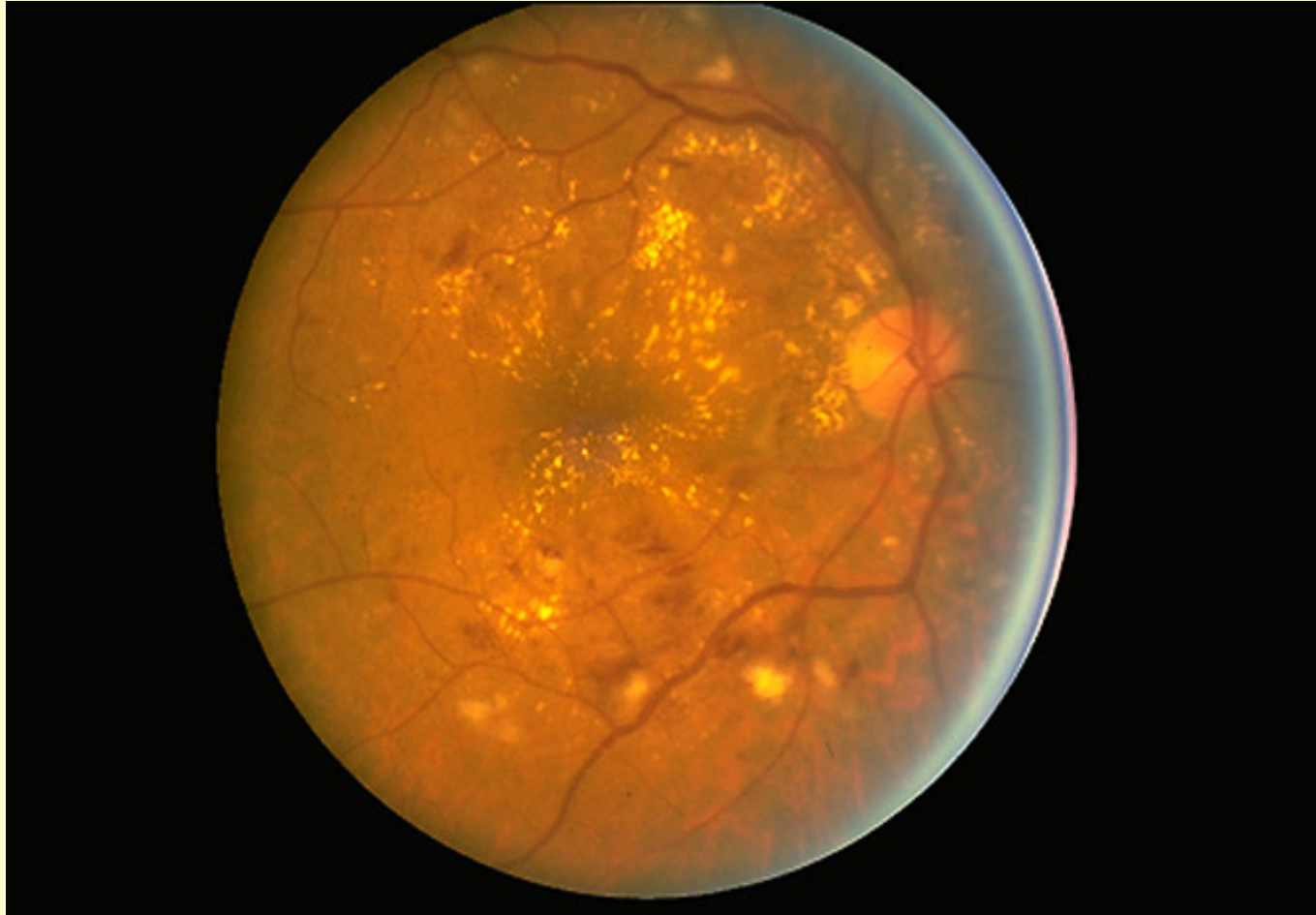
macula

# Diabetic retinopathy

## 1. Background retinopathy

- rarely causes loss of vision
- no treatment required
- need to monitor regularly

# Background retinopathy



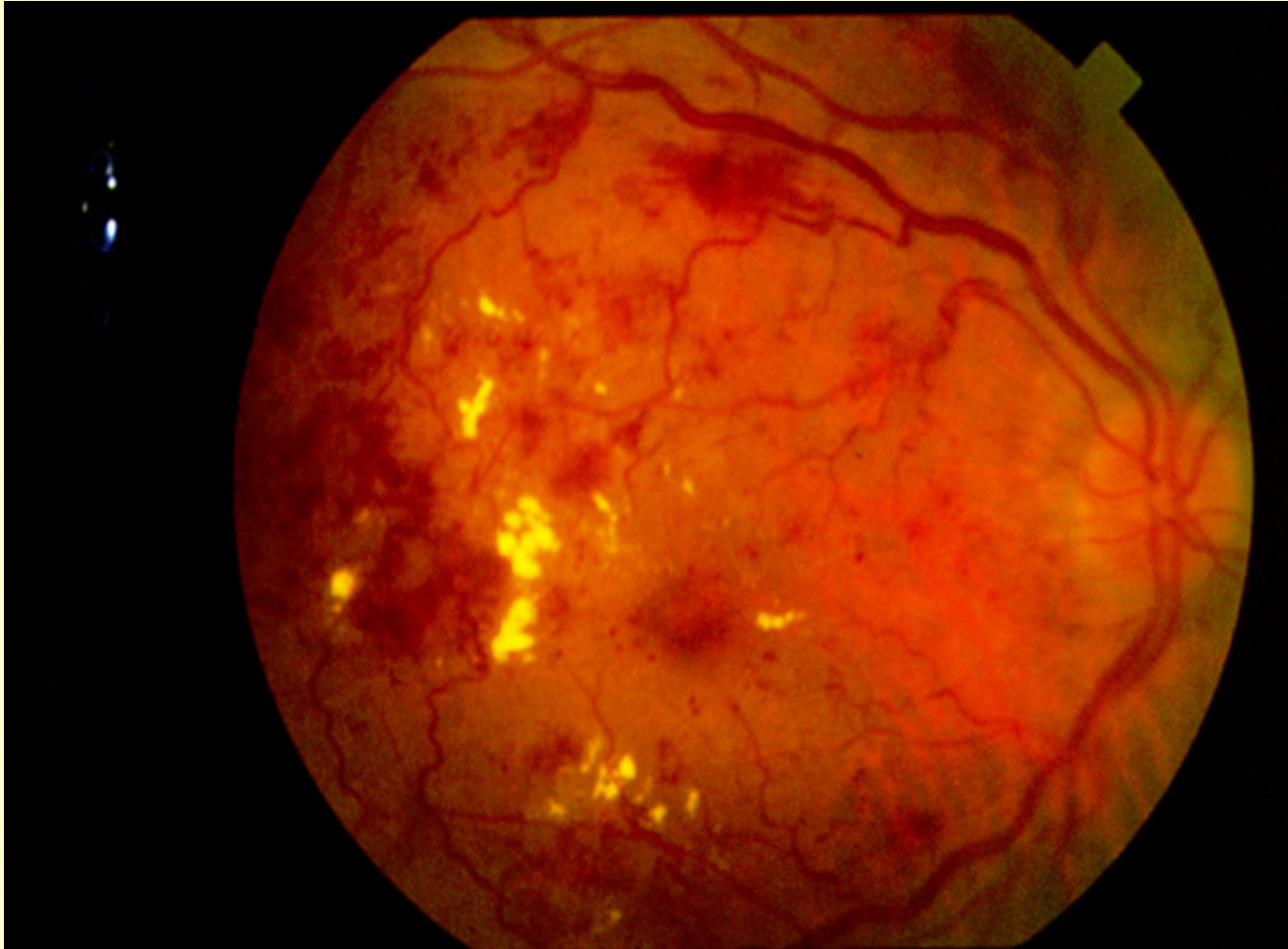
# Diabetic retinopathy

## 2. Proliferative retinopathy

- more serious
- requires early treatment
- significant loss of vision can occur

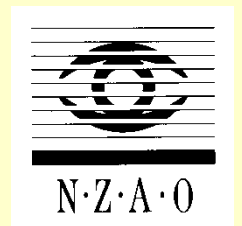


# Proliferative retinopathy



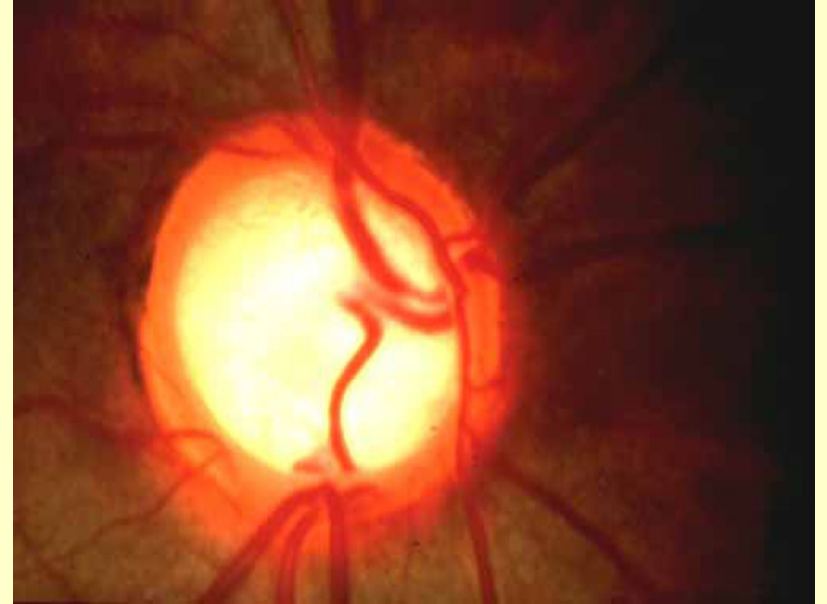
# What influences development of diabetic retinopathy

- Length of time you have had diabetes
- How well your blood glucose level is controlled



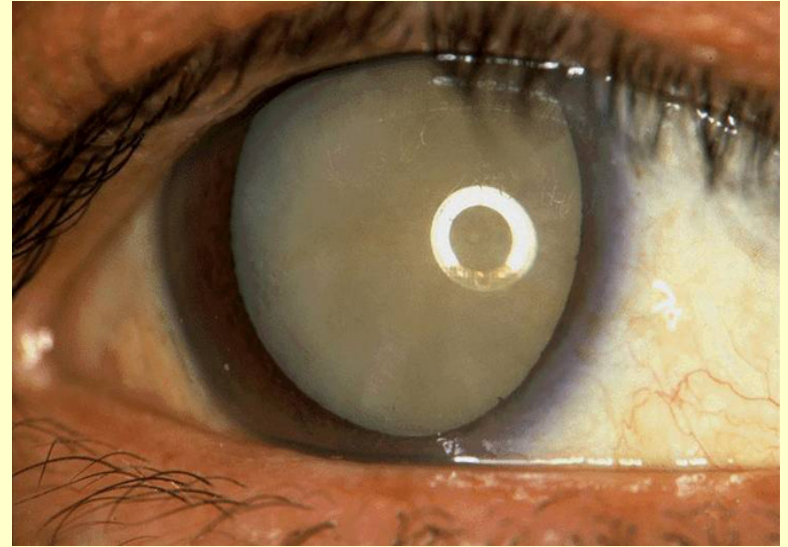
# Glaucoma

- Disease of the optic nerve
- Affects peripheral vision first
- Difficult to detect in the early stages
- Slightly more common with diabetes



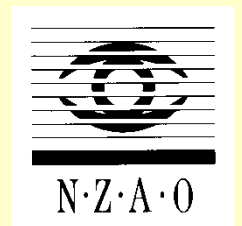
# Cataract

- Clouding of lens inside eye
- Gradual loss of vision
- Increased awareness of glare
- Occurs at an earlier age with diabetes



# Refractive errors

- Myopia
  - Short-sightedness
- Hyperopia
  - Long-sightedness
- Astigmatism
  - Corneal irregularity
- Presbyopia
  - Loss of close vision with age

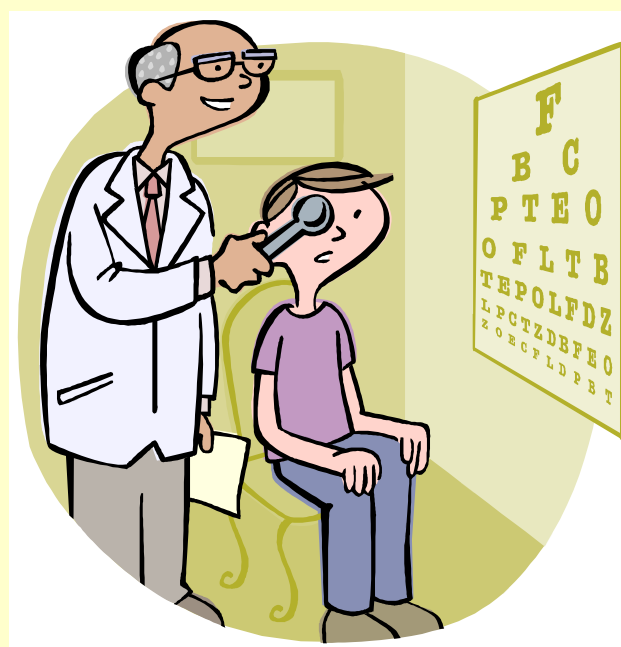


# Regular eye tests are vital if you have diabetes

- Every year

**OR**

- More often if you already have some form of retinopathy



# Optometrists

- Detect and diagnose eye conditions
- Provide referrals where needed
- Prescribe glasses or contact lenses, if required
- Participate in screening and early detection programmes



# How to find an optometrist

- Yellow pages
- NZ Association of Optometrists

Phone 0800 439 322

[www.nzao.co.nz](http://www.nzao.co.nz)

