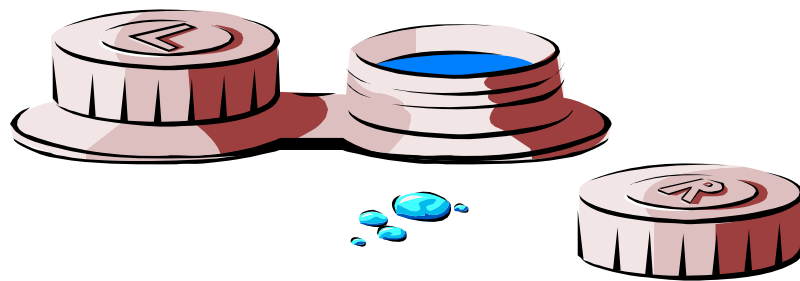


# Contact lenses



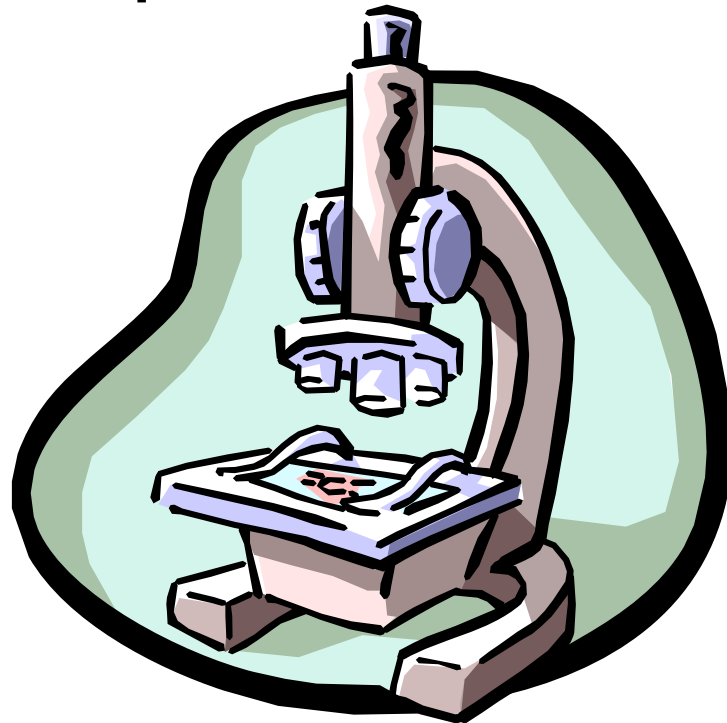
Contact lenses were thought of as early as 1508 when Leonardo da Vinci sketched and described several forms of them.



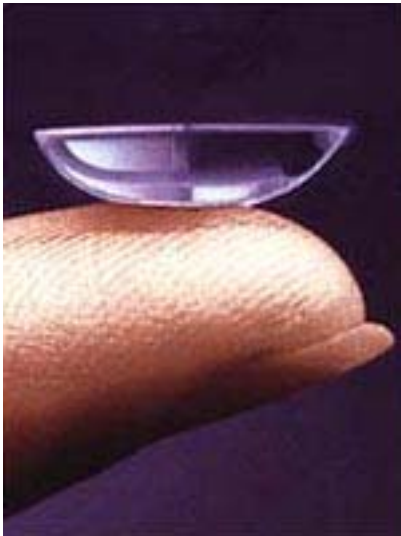
Leonardo da Vinci  
(1452-1519)

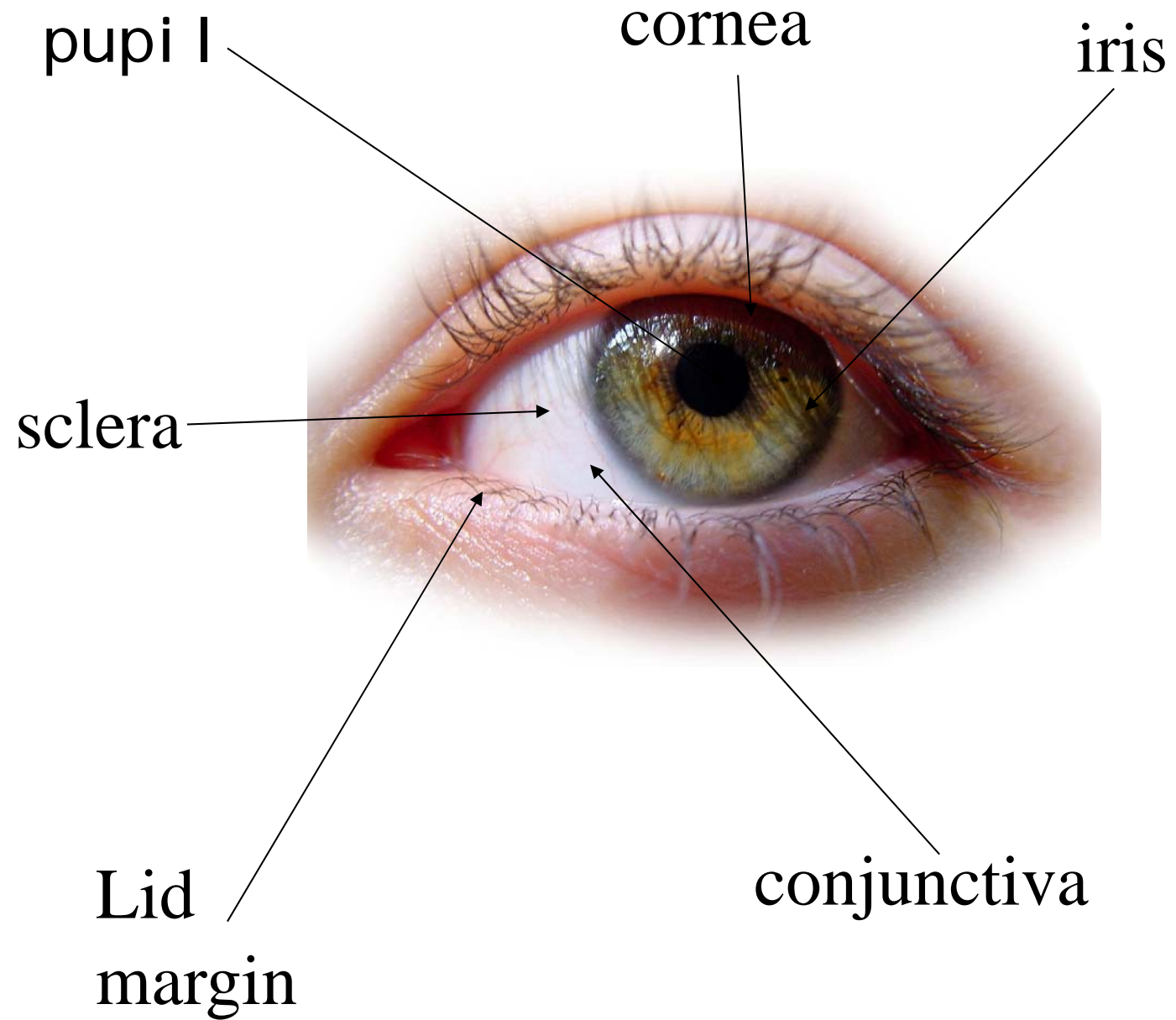


Contact lenses are a  
changing area of  
optometry with new lenses  
being constantly  
developed

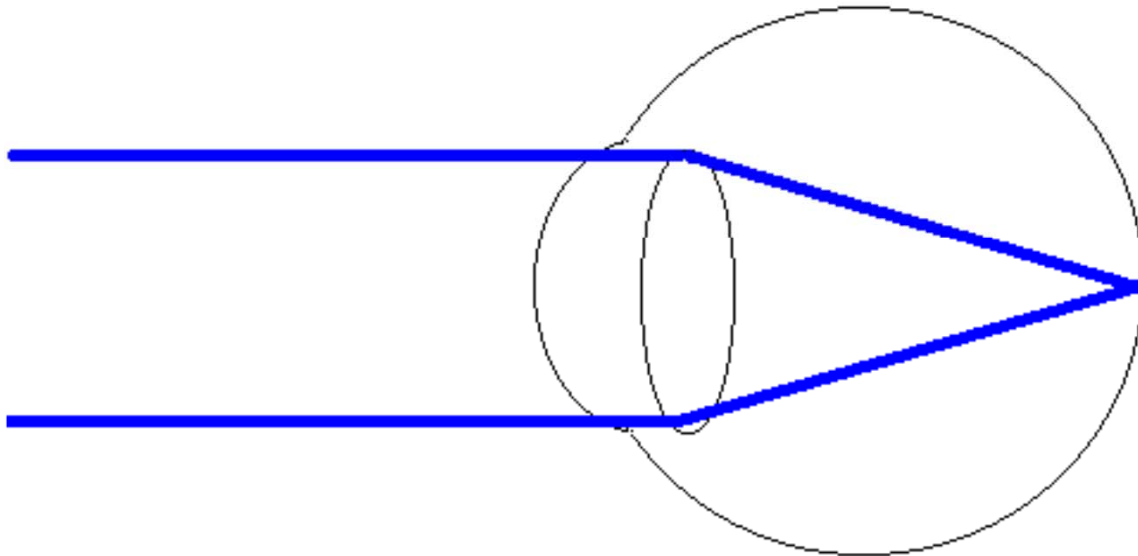


Refractive errors are corrected by contact lenses, which are placed directly on the cornea





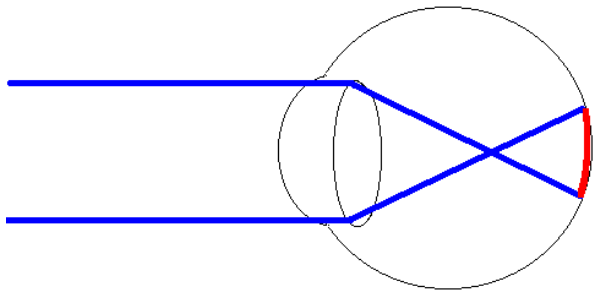
# Normal focus



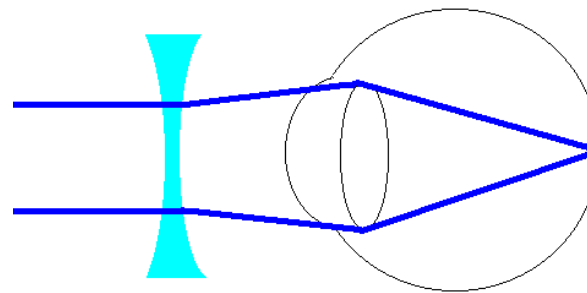
# Short sightedness (Myopia)

- Distance vision blurry, near usually OK.

Short-sighted  
focus



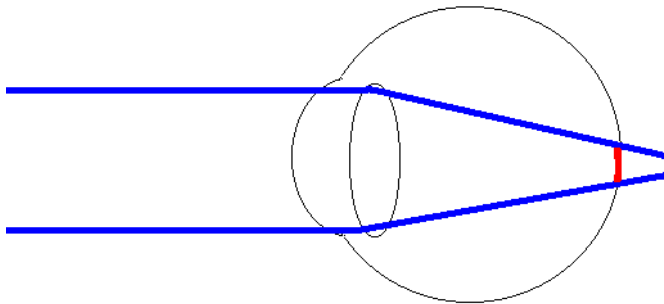
Short-sighted  
correction



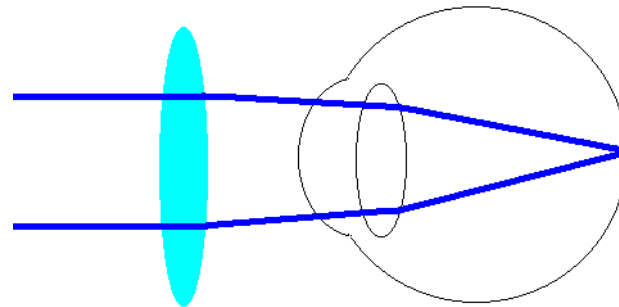
# Long-sightedness (Hyperopia)

- Difficulty seeing clearly and comfortably up close.

Long-sighted  
focus

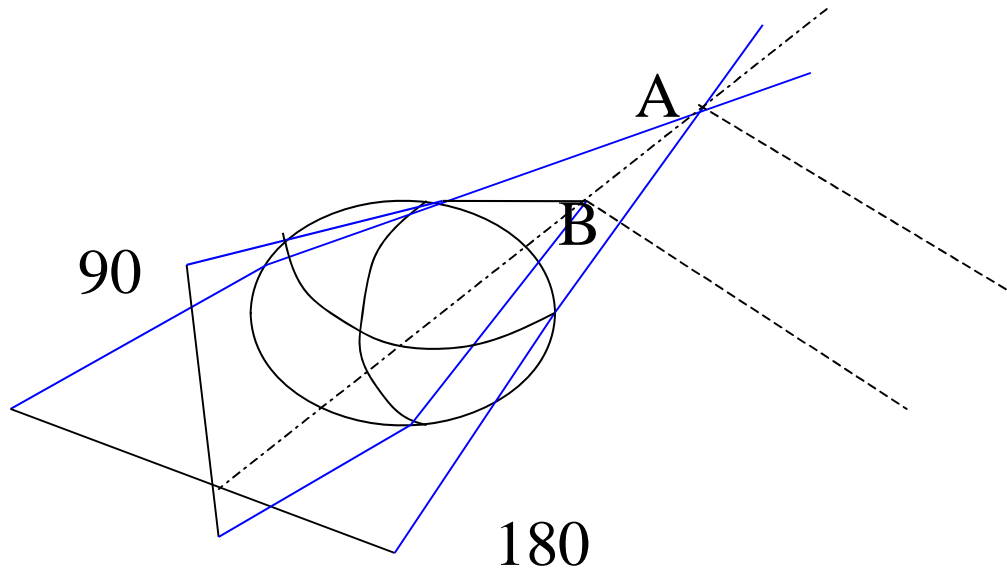


Long-sighted  
correction



# Astigmatism

- Irregular curvature of the eye (shaped more like a football than a basketball)
- Light in different planes focuses at different points



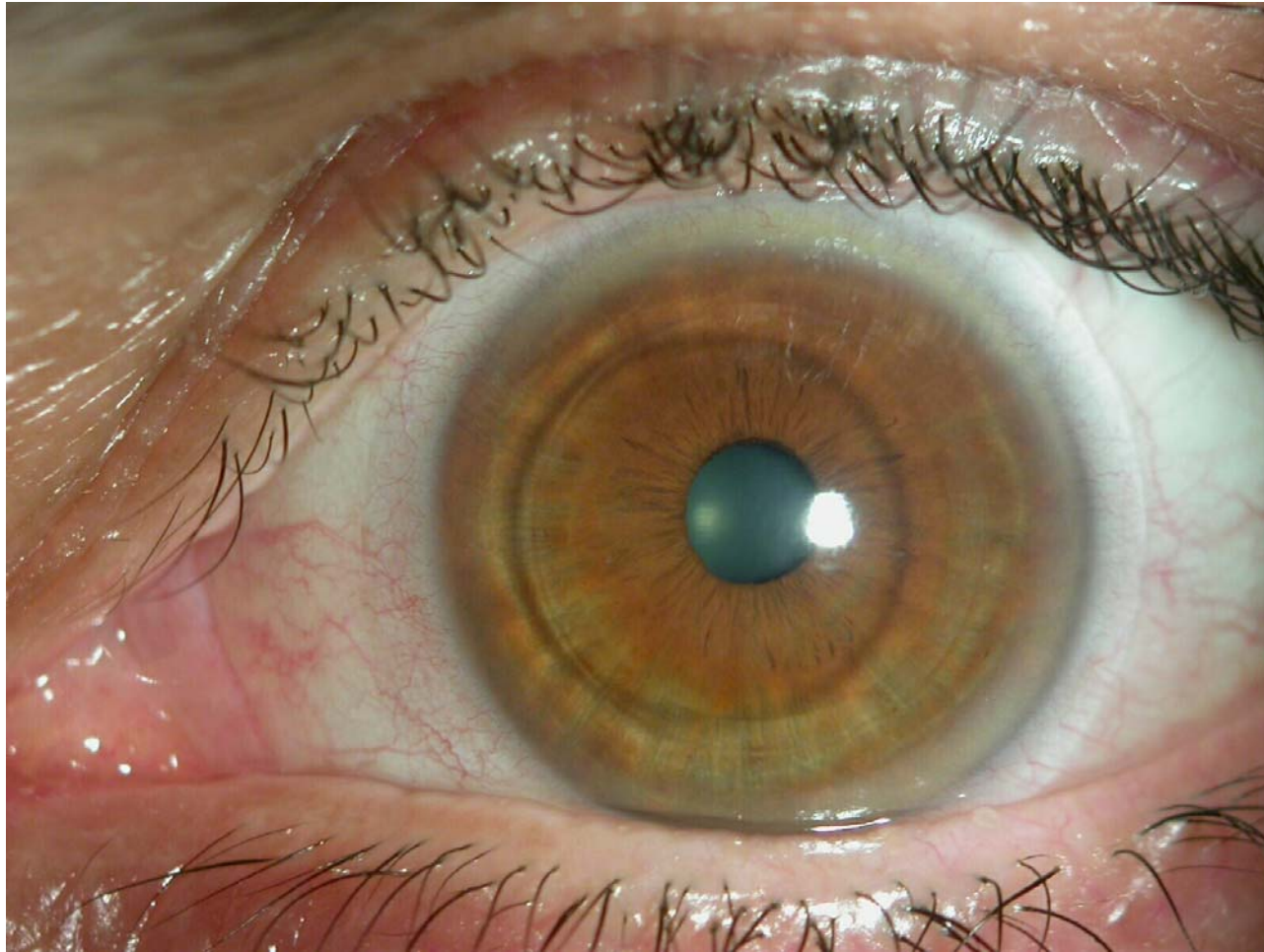
# There are many types of contact lenses

- RGP lenses
- Soft lenses
  - Disposable or non-disposable
  - Coloured or clear
  - Spherical or toric
  - Extended wear
  - Multifocal

# RGP lenses (rigid gas permeable)

- Smaller than size of cornea
- May be less comfortable than soft lenses initially
- Very effective in correcting astigmatism

# RGP contact lens



# Soft lenses

- Most commonly used (90%)
- Made from hydrogel plastic material containing water
- Are 1-2mm larger than cornea
- Easy to adapt to

# Soft contact lens



# Spherical lenses

- Correct short or long-sightedness
- Cheapest, most comfortable lenses
- Easy to get in disposable form

# Toric lenses

- Correct astigmatism
- Lens is specially weighted to conform to irregular cornea
- More expensive than spherical
- Some are available in disposable



# Disposable lenses

- Daily, two-weekly or monthly replacement
- Very simple cleaning (no cleaning for daily)
- Latest designs and materials
- Very popular

# Coloured lenses



- **Handling tint**
  - Useful when inserting or removing
- **Enhancing tint**
  - Makes light coloured eyes more vivid
- **Opaque tint**
  - Can change brown eyes to blue

# Extended wear lenses

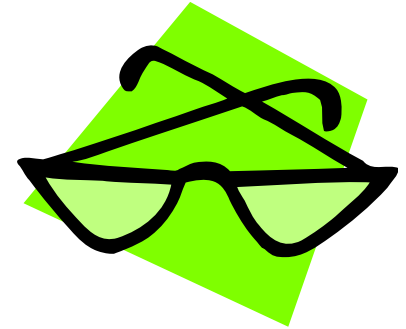
- New technology
- Made from silicone material which transmits oxygen well
- Can wear for up to thirty days without removing
- Will not suit all people – your optometrist will advise

# Multifocal contact lenses

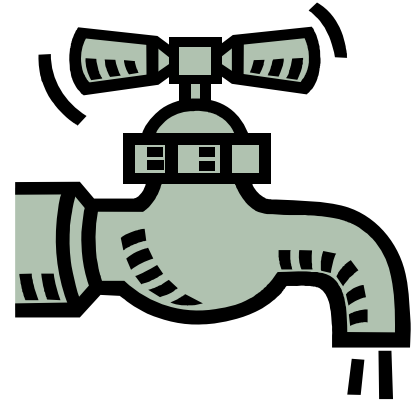
- Can wear one reading lens, one distance
- Can have dual focus lenses
- New technology – slightly more expensive
- Available as a disposable lens

# Advantages of contact lenses over glasses

- Better field of view
- No fogging up
- No one has to know you have refractive error
- No frames – eg, useful for sport
- Sometimes the vision is better



# Hygiene is extremely important with contact lenses

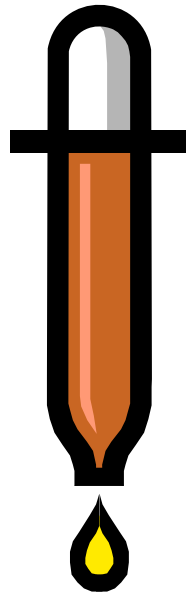


- Always wash your hands before touching lenses
- If lenses are not clean, bacteria can stick to them
- A tiny scratch on the eye can get infected

If you have a sore, red eye  
take your lenses out and  
go to see your optometrist  
ASAP



If properly looked after,  
the chance of having an  
infection with contact  
lenses is extremely low



# Consultations for contact lenses

- **Contact lenses need to be fitted to each individual eye**
- **Several tests are required for:**
  - measuring and trying the lenses
  - teaching insertion and removal
  - after care
- **Your optometrist can advise you about the tests are required**

# Optometrists

- Detect and diagnose problems with eye health
- Prescribe glasses or contact lenses, if required
- Diagnose and treat problems with focusing



# Optometrists

- Are university educated and regularly undertake continuing professional education
- No referral is required

# To find an optometrist

- Yellow pages
- NZ Association of Optometrists

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

0800 439 322