

# MERCURY BAY OPTOMETRIST EYE TIMES



Please note : We are closed until 3:00pm Wednesday 26th April due to power shut down

ISSUE 55

## HOW SUNGLASSES PROTECT YOUR EYES!

**Safeguarding your vision**  
The ins and outs of how your sunglasses keep your eyes from harm

**Anti-reflective coating**  
Sits closest to the eye and reduces back-glare and internal reflections off the lenses.

**Lens (with UV coating)**  
Infused with organic dyes and metallic oxide pigments, which absorb and reflect harmful light.

**Mirror coating**  
The first line of defence; an ultra-thin coat of reflective molecules deflects the light in bright conditions.

**Polarising film**  
Eliminates glare from polarised light coming off horizontal surfaces like bodies of water and road surfaces.

**Scratch-resistant coating**  
A hard, durable polymer film that protects the surface of the lenses.

**UVA rays**  
They damage the eye's lens and can harm the sensitive retina at the back of the eyeball, causing macular degeneration and permanent blindness.

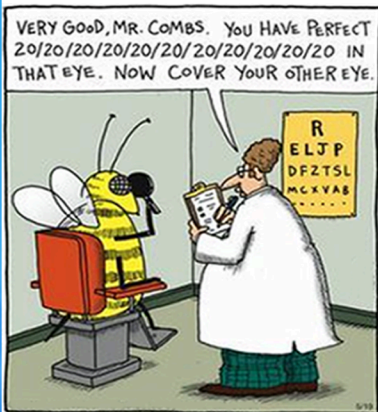
**UVB rays**  
These rays can destroy the outer cells of the cornea - the eye's protective surface - causing pain and blurred vision.

**Visible light**  
The portion of the electromagnetic spectrum that we can see.

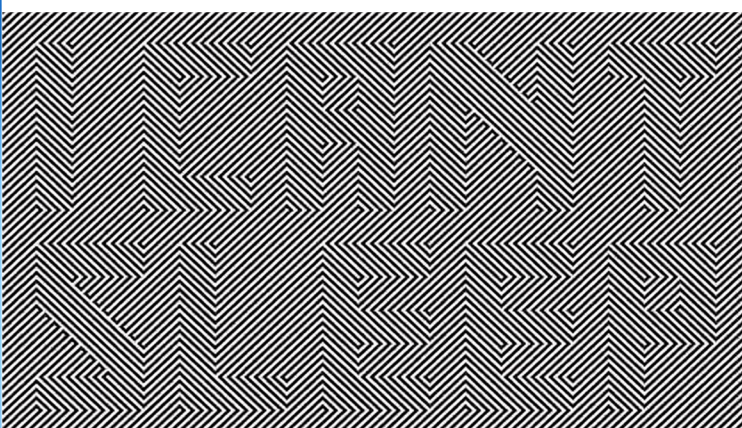
Sunglasses' prime function is to block the Sun's harmful ultraviolet (UV) rays. There are two types of UV rays: UVA (which cause skin cancer and premature ageing) and UVB (responsible for sunburn). Both types have higher frequencies than the visible light our eyes can perceive. They damage our eyes the same way they damage our skin, except that even in the shade reflected rays pose a threat to our eyes.

Sunglass lenses are made from glass, plastic or polycarbonate, with a special UV-absorbing coating. A good pair blocks more than 99 per cent of UV radiation from reaching your eyes. Tints and mirror coatings relieve you from squinting, by absorbing or reflecting intense, dazzling light in the visible part of the spectrum (the light we can actually see).

The highest-grade sunglasses also incorporate a polarising film to combat glare from reflective horizontal surfaces like water, sand and snow. Light waves vibrate just like sound waves do. There's a mish-mash of horizontal and vertical components to these vibrations, but when light waves strike a uniform horizontal surface they are reflected with a strong, horizontal polarisation. The glare we experience is the jam of light waves all vibrating in the exact same plane. Sunglasses fitted with a polarisation film eliminate this kind of glare by only enabling vertically polarised light to pass through. [Ask your Mercury Bay Optometrist about the right sunglasses for you \(07\) 866 5919.](#)



### THE EYE TIMES OPTICAL ILLUSION



What's the message?

Answer below...

FINISHED FILES ARE THE RESULT OF YEARS OF SCIENTIFIC STUDY COMBINED WITH THE EXPERIENCE OF YEARS.

How many times does the letter "F" appear in the above statement? ... Answer below

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The letter "F" appears six times  
The message is "I CAN'T SLEEP"