

## Light sneeze

### Question:

I have noticed that many people tend to sneeze when they go from dark conditions into very bright light. What is the reason for this?

**D. Boothroyd**  
Harpenden, Hertfordshire, UK



### Reactions:

- 1 I think that the answer may be fairly simple: when the sun hits a given area, particularly one shielded or enclosed in glass, there is a marked rise in local temperature. This results in warming of the air and a subsequent upward movement of the air and, with it, many millions of particles of dust and hair fibres. These particles quite literally get up one's nose within seconds of being elevated, hence the sneezing.

**Alan Beswick**  
Birkenhead, Merseyside, UK

- 2 My mother, one of my sisters and I all experience this. I feel the behaviour is innate and confers an unrecognized evolutionary advantage. I have questioned many people, and we sun-sneezers seem to be in the minority. However, as the ozone thins and more ultraviolet light penetrates the Earth's atmosphere, it will become increasingly dangerous to allow direct sunlight into the eye. Those of us with the sun-sneeze gene will not be exposed to this, as our eyes automatically close as we sneeze! The rest of the population will gradually go blind, something not usually favoured by natural selection.

**Alex Hallatt**  
Newbury, Berkshire, UK

- 3 The tendency to sneeze on exposure to bright light is termed the 'photic' sneeze. It is a genetic character transmitted from one generation to the next and which affects between 18 and 35 per cent of the population. The sneeze occurs because the protective reflexes of the eyes (in this case on encountering bright light) and nose are closely linked. Likewise, when we sneeze our eyes close and also water. The photic sneeze is well known as a hazard to pilots of combat planes, especially when they turn towards the sun or are exposed to flares from anti-aircraft fire at night.

**R. Eccles**  
**Cardiff, UK**

*from Why Don't Penguins' Feet Freeze? and 114 other questions*

## Tekst 12 Light sneeze

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Two of the reactions in the text present the same cause for the light sneeze.

- 1p 37 Which cause is mentioned twice?
- A global warming
  - B inherited traits
  - C rising dirt
- 1p 38 How can the tone of Alex Hallat's response be characterised?
- A as alarmed
  - B as matter-of-fact
  - C as surprised
  - D as tongue-in-cheek

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### Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift.