Seeing colours differently

About 4% to 8% of the population has colour blindness, the most common of which is red-green colour blindness. Most cases of colour blindness are inherited, and these do not progress with time. There is, however, no cure for inherited colour blindness. In other cases, colour blindness may develop as a secondary effect of macular and optic nerve diseases or as a result of taking certain medications.



Normal vision

Red-green colour blindness

- Difficulty differentiating shades of red, yellow and green
- Caused by the loss or limited function of red cone or green cone photopigments in the retina
- Usually inherited
- Affects 5% of males and less than 0.1% of females



Yellow-blue colour blindness

- Difficulty differentiating shades of blue, green and yellow
- Caused by missing or limited function of blue cone photopigments in the retina
- Usually caused by optic nerve damage or toxicity
- Very rare

Sources: Associate Professor Audrey Chia, head of the Paediatric Ophthalmology and Strabismus Department at the Singapore National Eye Centre, Dr Marcus Tan, specialist in Ophthalmology and consultant at Raffles Eye Centre, National Eye Institute, National Health Service STRAITS TIMES GRAPHICS