



**Colour blindness is one of the world's most common inherited conditions affecting:**

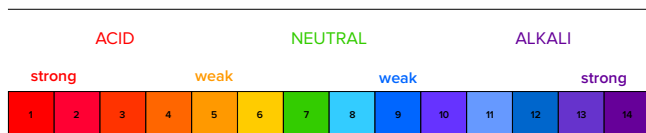
- ▶ 3 million people in the UK (300+ million people worldwide)
- ▶ 1 in 12 males/boys and 1 in 200 females/girls
- ▶ At least 1 child in every class of 30

**Most cases of colour blindness are hereditary, passed down the mother's side of the family. So, if any uncles, great uncles, grandfathers or cousins have colour vision deficiency (CVD), contact them – they can be a great support for both you and your child, sharing their experience of CVD and passing on advice.**

Images: left, normal colour vision, right, severe green deficiency

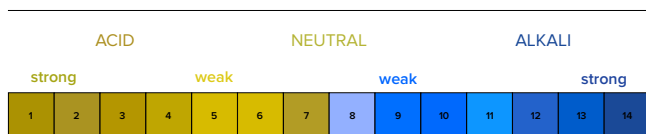
## Advice sheet for Parents (children aged 7-12)

Normal colour vision



pH value shown by different colour in universal indicator

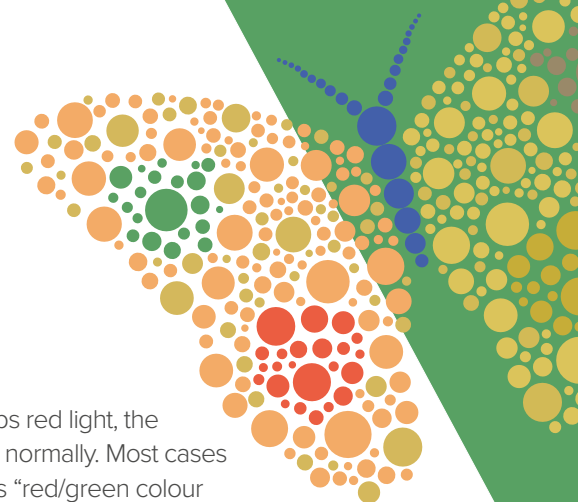
Severe green deficiency



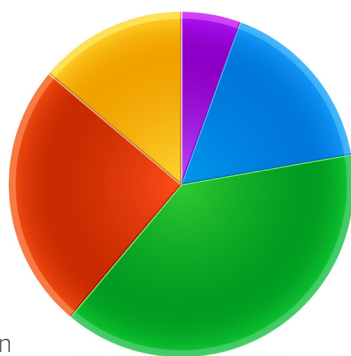
pH value shown by different colour in universal indicator

### What is colour blindness?

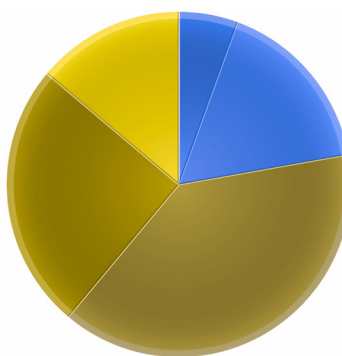
We see colour through three specific types of cone cells in our eyes, one type absorbs red light, the second green and the third blue. With inherited CVD, one cone type doesn't function normally. Most cases of CVD arise from a defect in the red or green cone types, this is commonly known as "red/green colour blindness" (see images). However, colour blindness can affect many other colour combinations.



Normal  
colour vision



Severe green  
deficiency



## How it affects your child's everyday life

Although children with CVD lead perfectly normal lives (which is why the condition often goes undiagnosed), colour blindness can put them at a distinct disadvantage – especially at school – in situations where colour is used as a way of communicating information. For example, a child with CVD may have difficulty participating in sports or group activities that require colour recognition (i.e. different coloured shirts or bibs) or understanding teachers' corrections highlighted in different colours.

With proper support children can learn coping techniques, but it's important parents realise that colour blind children tend to try and hide their problems. Equally, due to their colour blindness, they may not always know whether they can or can't see something.

Therefore, as parents, you need to be constantly alert to picking up the signs of colour blindness and, if possible, keep talking about it with them. It's easy to think that your child is coping well with CVD because they have learnt to identify colours based on what they've been *told* those colours are, or represent. This is not the same, however, as being able to see the same colour as everyone else, which means they will continue to come up against problems in different environments.

## If in doubt, take action

You can help your child to hone their coping techniques by spotting signs that they may need extra help. Teachers can also play a key role in supporting your child, so make sure you tell the school about your child's diagnosis as soon as possible and refer them to the *Teachers section* on our website (see *below*).

Your child is likely to need more time processing information that uses colour, as they will be searching for other (non-colour) clues. There are other key signs to watch out for, at home and at school, which indicate your child may need extra support, for example, if he or she:

- Uses inappropriate colour choices when completing worksheets, drawings and diagrams e.g. purple rivers

- Sometimes finds it difficult to interpret information in online homework software/ coloured web pages
- Rarely uses colour or uses incorrect colours
- Is confused about who is in their team when coloured bibs or tops are used in PE lessons or training
- Has difficulty seeing coloured training cones and line markings e.g. for 5-a side or volleyball courts
- Isn't sure if fruit is ripe, especially bananas
- Has trouble seeing all the images and instructions on computer games
- Can't easily tell when their tablet is fully charged because the different coloured LEDs all appear the same

## Ways you can help

Communication is key and helping your child to feel confident about recognising and speaking about their colour blindness is a major step towards minimising any disadvantages it causes.

### Encourage your child to:

- Tell their teachers or trainers if they are experiencing difficulties related to their colour blindness
- Feel happy to explain about CVD and ask their friends for help when needed
- Sit in good natural light whenever possible when working (but avoid bright sunlight)
- Research and use accessible Apps/software for CVD students e.g. Chrome extension/iOS accessibility settings

### Encourage teachers and sports coaches to:

- Use secondary indicators, in addition to colour, for graphs and charts e.g. patterns or shading
- Audit worksheets, textbooks, websites and other resources equipment for potential problems. e.g. training bibs
- Avoid relying on colour alone to assess understanding
- Regularly ask your child, out of earshot of other students, if they are experiencing difficulties that may be related to their condition – encourage them to voice any concerns

## Further information and resources

For more information and resources visit [www.colourblindawareness.org](http://www.colourblindawareness.org), which includes a Parents/ Families advice section, Press articles, downloadable information and links to videos, as well as our online shop [www.colourblindawareness.org/about-us/online-shop](http://www.colourblindawareness.org/about-us/online-shop). Schools and sports coaches can reference the Teachers and Sports sections.