

When a bump on the head can leave you blind

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By Abigail Butcher

A few hours after bumping the back of his head, Keith Baxter noticed 'floating shapes' in his left eye. These became more annoying as the day wore on, so he emailed his optician for advice. 'Initially I thought it might be a problem with my contact lens, but it didn't go away when I took it out,' says Keith, 53, a risk analyst from Farnham, Surrey.

'At first I only half noticed it but it got worse, I can only describe it like someone had pulled a net curtain over half my left eye.'

Keith was on a skiing holiday in Switzerland and that morning had banged his head on a ski lift. He was wearing a helmet at the time, it didn't hurt so much as make him flinch.

His optician advised him to monitor his vision and to go in for a check-up when he returned to the UK five days later.

Three days after his accident, Keith started seeing flashes of light in his peripheral vision. 'I Googled it and everything indicated that I had a detached retina. I didn't want to go through the hassle of seeing a doctor in Switzerland - nor worry my wife - so I waited until we got home to see a doctor.'

He got home late on a Saturday night. The next morning he went to A&E at Frimley Park hospital in Surrey, and found himself undergoing emergency laser treatment to mend a tear in his retina that doctors say would have left him permanently blind within 24 hours.

The retina is a layer of tissue at the back of the eye which contains millions of nerve cells that are sensitive to light. It lines the inside wall of the eye, just like wallpaper lines the inside of a room. When light rays enter the eye, they come into focus on the retina, generating nerve impulses that are sent along the optic nerve to the brain.

Problems occur if the retina tears or becomes completely detached - usually this is a result of ageing, as the vitreous jelly that holds the eye in shape become thinner, and pulls away from the retina, pulling a piece with it. But around one in ten cases are a result of a head trauma or direct injury to the eye, says Louisa Wickham, a retinal specialist and clinical director at Moorfields Eye Hospital in London.

People who are short sighted are at greater risk of a detached retina because they often have more areas of weakness in the retina.

Around one in 300 people in the UK are affected by retinal tears or detachment, although this increases to one in 20 among the short-sighted.

A retinal tear or detachment caused by a head injury does not necessarily happen as quickly as Keith's. In a recent Scottish study, patients reported symptoms of retinal tears or detachment any time between 3.5 months to seven years after they hitting their head. A direct trauma to the eye - such as a sporting or DIY injury - is a more common cause than a head injury.

Most tears can be treated with laser surgery to literally 'spot weld' the edges of the tear in place - this prevents fluid getting behind the retina, which is what causes it to become detached. The procedure is relatively minor and can be done as an outpatient, with a 96% success rate if caught in time.

As well as flashing lights, a sudden increase in 'floaters', retinal tears can cause blurred vision, and a 'cobweb' effect in front of their vision.

Retinal detachment will cause a shadow in the vision.

Sometimes these symptoms can only be detected by covering the unaffected eye. 'A retinal detachment is a sight-threatening condition that needs to be treated urgently,' says Miss Wickham. 'If you experience any of these see an optician urgently or failing that an ophthalmology emergency service. Depending on where you live, this may require a GP referral letter or optician referral letter first. Some hospitals, like Moorfields Eye Hospital, run walk-in casualty service.'

With retinal tears and detachment, the longer a patient waits before seeking medical attention, the higher the risk of permanent damage to their sight or even blindness.

'With retinal detachment, about 85 per cent of cases are successfully reattached, but this doesn't always lead to restoration of vision,' says Miss Wickham. 'Some patients will permanently suffer from reduced peripheral or central vision.'

'The success rate is much improved in patients who seek treatment early.'

In the UK the most common technique of reattachment is vitrectomy, where the vitreous jelly that fills the eye is removed (using a probe with a hole at the end of it to suction it out) and the fluid drained from behind the retina. The standard treatment is to inject a gas bubble into the eye to hold the retina in place while it heals – around seven to ten days – and new vitreous jelly forms. The bubble itself is gradually absorbed by the body within two to four weeks. In more complicated cases where something has gone into the eye and damaged the retina, for instance, after a car accident, a silicone oil bubble is used instead, though this takes three to four months to work, and has to be removed surgically.

Other surgical options include scleral buckling, when a small band of silicone is stitched onto the outside wall of the eye (the sclera) at the site of the tear to provide support while the retina heals. Most retinal surgery is now done under local anaesthetic.

'Scleral buckling tends to be done on younger patients with 'round hole' retinal detachment associated with myopia, which tends to have a slower rate of progression and onset,' explains Miss Wickham.

New techniques introduced in the past three years include 'small gauge' surgery which uses narrower instruments inserted in a zigzag movement rather than a straight incision – the tissue in the eye then self-seals under its own pressure. This means there are no stitches at the end of the procedure – 'making surgery more efficient and giving the patient less discomfort,' she adds.

Keith suffered his retinal tear in March and has been told to do nothing over the next few months that would involve hitting his head, while his eye has a chance to heal.

'This means no mountain biking, which I love,' he says. "I still have the floaters and the flashing in my eye, which is quite off-putting, but I'm told these should lessen in time.'

In fact the floaters, which are bits of debris, will remain in his eye, but the brain learns to ignore them. The flashing, which is due to the gel pulling on the retina (the laser repairs the tear, not the pulling) normally stops within 12 weeks or so.

Keith adds: 'I should have been to see a doctor immediately. There was no pain at any time and it would have been so easy to ignore it further and get on with life. But if I had, I would probably be blind in that eye by now.'