

Supporting Training Initiatives



the otc treatment clinic

Common conditions and their treatment options



This module has been endorsed with the NPA's Training Seal as suitable for use by medicines counter assistants as part of their ongoing learning. Complete the questions at the end to include in your self-development portfolio



Welcome to TM's OTC Treatment Clinic series. This handy, four-page section is specially designed so that you can detach it from the magazine and keep it for future reference.

Each month, TM covers a different OTC treatment area to help you keep up-to-date with the latest product developments. In this issue, we focus on eye care. At the end of the module there are multiple choice questions for you to complete, so your progress can be monitored by your pharmacist.

You can find out more in the *Counter Intelligence Plus* training guide.

The last six topics we have covered are:

- Head lice
- Acne
- Hayfever
- Ovulation & pregnancy
- Smoking cessation
- Oral care

You can download previous modules from www.tm-modules.co.uk

module 208 Eye care

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for this module

OBJECTIVES: After studying this module, assistants will:

- Be familiar with the basic structure of the human eye
- Understand some of the most common minor eye conditions
- Have a basic understanding of some serious eye conditions
- Be aware of the importance of regular eye checks
- Be able to offer lifestyle advice to maintain healthy eyes
- Know which customers to refer to the pharmacist.

Despite being highly fragile organs, eyes are often neglected, and most of us don't give them much thought day-to-day. Yet if you asked people which sense they would miss the most, the majority would undoubtedly say their sight. Unfortunately, eye conditions can creep on gradually, without us noticing until they start to become more serious.

According to figures from the Royal National Institute of Blind People (RNIB), almost two million people in the UK are living with sight loss – which could have been avoided in over 50 per cent of cases. And this number is set to increase alongside Britain's ageing population, with up to four million people predicted to be living with sight loss in 2050 – a worrying statistic considering over one-third of older people with sight loss also suffer from depression.

Like so many ailments, eye problems differ in their severity. Some problems can be unsightly,

irritating and perhaps embarrassing but are nonetheless minor and can be treated easily. Whereas others, like glaucoma, can cause permanent blindness if untreated and some can even be the result of poorly managed medical conditions, such is the case in diabetic retinopathy.

Although it is unlikely that you will regularly encounter serious eye concerns in the pharmacy, it's important to be aware of such conditions so that you can advise customers on how to reduce their risk and know who to refer to the pharmacist.

The structure of the eye

Sight is a series of events triggered by light, which involves the eyes and the brain. Light reflected from an object passes through the clear cornea at the front of the eye and is focused by the lens onto the retina at the back of the eyeball.

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reflective exercise

Helen, 29, comes to the pharmacy complaining that her eyes feel dry and gritty. She wears contact lenses and takes an oral contraceptive. Her job involves working at a computer in an office that is often air conditioned during the summer. She asks for some drops. Her eyes are not red or sore.

What would you recommend?

This sounds like a mild case of dry eye, which occurs when the eyes do not make enough tears, or the tears evaporate too quickly, causing the eyes to become dry and irritated.

Explain to Helen that taking oral contraceptives, staring at a screen in a dry environment and wearing contact lenses are all risk factors for dry eye.

Suggest that Helen tries lubricating eye drops. These supplement natural tears and make the eyes feel more comfortable. Ask Helen which type of contact lenses she uses and check compatibility with your range of eye drops. Although Helen can use drops frequently, she should consider a different product (perhaps an ointment for night-time use) if she needs to apply them more than four to six times a day.

Working at a computer screen often means that people blink less frequently, so Helen may benefit from making a deliberate effort to blink more. She could also use a humidifier in her office to moisten the air.

What if:

Helen returns to the pharmacy with the same gritty sensation in her eye and has recently started developing redness and itching. Helen has had hay fever before, but usually suffers from nasal symptoms.

The retina is a layer of light-sensitive cells called rods and cones. Rod cells are concentrated around the edge of the retina. They help us to see things that aren't directly in front of us (peripheral vision). They also help us to see in dim light and to recognise movement.

Cone cells are found in the centre of the retina, where light is focused by the cornea and lens. This area is called the macula. Cone cells give us detailed vision, which we use when reading or watching television. They are also responsible for most of our colour vision.

This sounds like allergic conjunctivitis. Ask Helen if she has been exposed to any allergens recently, such as pet dander, dust mites or pollen. Smoke or ingredients in personal products like shampoo can also irritate the conjunctiva. A bacterial or viral infection could also be the cause. Refer to the pharmacist if you're unsure.

What if:

Helen mentions that she's been spending a lot of time outdoors recently and suspects her symptoms may be due to hay fever.

Recommend she tries eye drops containing sodium cromoglicate.

What if:

Helen comes back to the pharmacy two weeks later. Her symptoms haven't improved but also haven't got any worse.

Refer Helen to the pharmacist. Her symptoms may not have been brought on by an allergy and could be the result of wearing contact lenses that aren't suitable for her.

What if:

Helen also asks for an OTC treatment for her 39-year-old boyfriend. She mentions he has developed crusty eyelashes, itchy eyelids and sore, stinging eyes as a result of his dandruff. She thinks a shampoo for severe dandruff will do the trick.

Helen's boyfriend will need to come in to the pharmacy and be seen by the pharmacist. His symptoms sound similar to blepharitis, which can be caused by seborrhoeic dermatitis or a bacterial infection. In the meantime, he should practise good, daily eye hygiene to help manage his symptoms.

Rod and cone cells collect light waves and send them as electrical signals to the optic nerve at the back of the eye. This is made up of thousands of nerve fibres that pass electrical signals to the brain. It is the brain that processes this information and interprets what we see.

Other structures in the eye include:

- Iris – the coloured, circular part of the eye in front of the lens, which controls pupil size
- Pupil – the circular opening at the centre of the iris, which controls the amount of light that enters the eyes

- Conjunctiva – the mucous membrane that lines the eyelids and covers the front of the eye
- Sclera – the white part of the eye, which acts as a tough coating, protecting the outer eye
- Aqueous humor – the clear, watery fluid that fills the front part of the eye between the cornea, lens and iris
- Vitreous body – a colourless mass of soft, gel-like material that fills the eyeball behind the lens.

What are tears?

Tears are made up of a mixture of components that must be kept in a perfect balance to ensure the eyes remain properly moistened.

Every time we blink, a thin layer of tears spreads across the eye's surface. This layer, known as the tear film, forms a protective coat that lubricates the eye and washes away any foreign objects.

The tear film is made up of three layers:

1. **Aqueous (water) layer** – the largest component, this is produced by the lacrimal gland on the upper, outer portion of each eye. On its own, this layer would quickly run off the eye's surface or evaporate, but the other layers of the tear film help to keep it in place
2. **Lipid layer** – produced by oil-secreting (meibomian) glands along the edge of the upper and lower eyelids. This is found on top of the aqueous layer and prevents it from evaporating too quickly
3. **Mucin layer** – created by cells on the eyelids and eye surface below the aqueous layer. This coats the eye and allows the aqueous layer to 'stick' to the otherwise water-repellent cornea.

Common, non-serious conditions

Dry eye

According to NHS Choices, around one in three people over the age of 65 suffer from dry eyes. In the majority of cases, it merely causes mild discomfort and doesn't pose any long-term health problems. However, in severe cases, it can be painful and lead to permanent damage to the front of the eye.

Dry eye is caused by reduced or impaired tear production. Some people don't produce enough tears, while others produce tears of a poorer quality, such as an imbalance between the three layers of the tear film. Alternatively, some people suffer because the tears that are produced are not spread across the front of the eye properly. For example, as people age, their eyelids may become less effective at spreading tears when they blink. Therefore, age is a risk factor for dry eye. Other causes include:

- Hormonal changes (e.g. menopause)
- Certain medicines (e.g. antihistamines)
- Contact lenses
- Environment (e.g. exposure to smoke)
- Prolonged reading or staring at a screen
- Pre-existing health conditions (e.g. rheumatoid arthritis, Sjogren's syndrome)

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Regular eye tests are important in maintaining eye health

- • Surgery or an accident that permanently affects or scars the eyes
- An infection or inflammation of the glands around the eye (e.g. blepharitis).

Treating dry eye

Although there is no cure for dry eye, there are ways to help reduce symptoms:

- Lifestyle changes such as lowering the temperature in a room or using a humidifier to ensure that the air isn't too dry. It's also important to blink frequently, which may be reduced when staring at a computer screen
- Lubricant eye drops – dry eye sufferers often benefit from using eye drops called 'artificial tears'. These drops supplement natural tears and make the eyes feel more comfortable. Such products don't contain drugs so can be used frequently to alleviate symptoms. However, anyone who finds that they need to apply these drops more than four to six times a day should consider trying a different product.

There are various different brands available OTC and customers may need to try multiple products before they find one that works for them. OTC treatments include Murine Dry & Tired Eyes, Optrex Actimist Eye Spray, Rohto Dry Eye Relief and Systane Ultra Lubricant Eye Drops.

Customers who have found several OTC treatments to be ineffective, or who feel like there is always something in their eyes, should be referred to the pharmacist.

Conjunctivitis

This umbrella term applies to any condition that causes redness and inflammation of the conjunctiva (the thin layer of tissue that covers the front of the eye). Conjunctivitis is a common condition and often causes eyes to become itchy and watery, and to appear red and inflamed. Sufferers may complain of a gritty feeling or burning sensation in their eyes and may describe a sticky, yellow coating on their eyelashes when

they wake in the morning.

Anyone with the following symptoms should be referred to the pharmacist:

- Moderate or severe pain
- Sensitivity to light
- Disturbed vision
- Intense redness in one or both eyes.

Common types of conjunctivitis include:

1. Infective – caused by a bacterial or viral infection. Viral infections may produce cold-like symptoms
2. Allergic – occurs as the result of an allergic reaction to substances like pollen or dust mites
3. Irritant – occurs as the eye comes into contact with substances that irritate the conjunctiva, such as shampoo, chlorinated water or smoke.

Treating conjunctivitis

Bacterial and viral conjunctivitis usually clear up on their own. However, OTC products (e.g. chloramphenicol, propamidine isethionate, dibromopropamidine) can be recommended when a bacterial infection is thought to be the cause. Brands include Brochlor, Brolene, Golden Eye and Optrex. Viral conjunctivitis cannot be treated, but most infections run their course in four to seven days.

For allergic conjunctivitis, sodium cromoglicate eye drops can be recommended. Products include Opticrom Allergy, Optrex Allergy and Otrivine Antistin eye drops.

Eye drops containing naphazoline help to alleviate redness by reducing the size of the blood vessels in the conjunctiva. These can be useful when the redness is caused by a temporary irritation. OTC products include Murine Irritation and Redness Relief, and Optrex Red Eyes.

Styes

A stye is a small collection of pus that usually appears like a pimple or boil on the outside or inside of the eyelid. Styes are fairly common,

with most people developing at least one during their life. The most common cause is a bacterial infection, although chronic inflammation along the edge of the eyelid (blepharitis) can also be a factor.

Most styes heal without treatment within a few days or weeks. However, applying a warm compress can help to release the pus and aid healing. Sufferers should run warm water over a clean washcloth, wring it out and place it over the closed eye. Re-wet the cloth when it cools and repeat for five to 10 minutes, several times a day. Warn customers never to try and burst the stye themselves.

Customers with styes that persist beyond several weeks should be referred to the pharmacist.

Blepharitis

This occurs as the rims of the eyelids become red and swollen due to inflammation. It is a common condition and accounts for around one in 20 eye problems reported to GPs, according to NHS Choices. Blepharitis can develop at any age, but is more likely to occur in people older than 40.

Symptoms include crusty eyelashes, itchy eyelids, and a burning, sore and stinging sensation in the eyes. This may be caused by a bacterial infection or be due to a complication of another skin condition, such as seborrhoeic dermatitis or rosacea.

Blepharitis is not usually serious, but it can be a long-term condition. There is not always a cure, although practising good, daily eye hygiene may help to manage symptoms.

Serious eye conditions

The following conditions are major causes of adult sight loss in the UK, according to RNIB:

● Glaucoma

The most common type of glaucoma is primary open angle glaucoma (POAG). This is a chronic condition that develops slowly over time and gradually reduces peripheral vision. POAG is more common in older people and those who are very short-sighted.

Acute angle closure glaucoma is caused by a sudden blockage to the flow of fluid in the eye, causing a build up of pressure that can damage the optic nerve. This is a painful condition and should be treated urgently to prevent sight loss.

● Cataracts

These are cloudy patches in the lens that make vision blurred or misty. They can develop in one or both eyes and affect older men and women equally. In the UK, it is estimated that more than half of all people over 65 have some degree of cataract development.

● Age-related macular degeneration (AMD)

This occurs when the macula is unable to

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function correctly, leading to a gradual loss of central vision. Peripheral or side vision is unaffected. AMD mainly affects people over the age of 50 and is more common in women. Smoking is a known risk factor.

● Diabetic retinopathy

This is a complication of diabetes where the blood vessels of the retina become damaged. Initially, it only mildly affects vision, but in severe cases it can cause blindness. Diabetic retinopathy can affect anyone with type 1 or type 2 diabetes. The longer a person has had diabetes, and the less controlled their blood sugar is, the more likely they are to develop the condition.

NHS eye tests

It is recommended that everybody has an eye examination every two years, unless advised otherwise by an optometrist. However, according to The Eyecare Trust, 20 million Britons risk avoidable sight loss by failing to have this regular check. Around one in 10 British adults have never had an eye test.

Many people are entitled to a free eye exam on the NHS, including:

- Those aged 60 or older
- Those under 16, or under 19 and still in full time education
- People living in Scotland
- Diabetes or glaucoma patients
- Those aged 40 or over who have a close relative with glaucoma
- Registered blind or partially sighted patients
- Those in need of complex lenses.

Individuals who are entitled to income support or working tax credit may also be eligible, and may qualify for subsidies to cover the cost of glasses or contact lenses.

Tips for healthy eyes

The RNIB and NHS Choices recommend the following tips to keep eyes healthy:

- Have regular eye tests – tests should be carried out every two years even if there is no change to an individual's vision
- Quit smoking – smoking can double the risk of developing AMD
- Eat well – adopt a healthy, balanced diet abundant in green, leafy vegetables such as kale and broccoli. Oranges, kiwi fruit, nuts, seeds and oily fish may also be beneficial
- Keep active – research suggests that regular exercise may reduce the risk of sight loss from high blood pressure, diabetes and hardening of the arteries. Maintaining a healthy weight is important as obesity increases the risk of developing diabetes
- Watch your units – excessive alcohol consumption is associated with an increased risk of early AMD. The recommended daily limits are three to four units for men and two to three units for women
- Be sun safe – UVA and UVB rays in sunlight can damage eyes and may increase the risk of developing cataracts and AMD. Choose CE marked sunglasses and wear wide-brimmed hats
- Safety first – DIY causes more than 20,000 eye accidents a year, many of which could have been prevented with appropriate protection. Certain sports may also require safety goggles.

Tips for reducing screen fatigue

- Take frequent breaks – give your eyes a rest every 20 minutes or so
- Create an eye-friendly environment – position copy documents at roughly the same distance from the screen to avoid having to re-focus. Dim the lights and minimise glare or reflection

when to refer

- Dry eye symptoms that have not been relieved by OTC products
- A feeling of always having something in the eyes
- Moderate or severe eye pain
- Sensitivity to light or seeing halos
- Disturbed vision
- Intense redness in or around the eyes
- Styes that persist for longer than a few weeks
- Prolonged, unexplained tearing
- Any eye injury
- A foreign object in the eye that cannot be removed
- Any sudden, serious change in vision
- Suddenly seeing flashing lights or floaters
- Customers who have diabetes.

- Position the computer monitor at arm's length, with the top of the screen at eye level. Choose a font size of at least 12 points and make sure the screen is clean
- Keep blinking – concentrating on a screen for long periods of time can slow blinking rates by as much as 400 per cent.

More information

- Royal National Institute of Blind People: www.rnib.org.uk
- Eyecare Trust – www.eyecaretrust.org.uk
- The National Eye Institute: www.nei.nih.gov/health/eyediagram/

assessment questions: eye care

For each question, select one correct answer. Discuss your answers with your pharmacist.

1. Which of the following statements is TRUE?

- a) The iris is a layer of light-sensitive cells called rods and cones
- b) Rod cells are responsible for most of our colour vision
- c) Cone cells provide us with peripheral vision
- d) Rod and cone cells collect light signals and send them as electrical signals to the optic nerve

3. Which of the following conditions is a major cause of adult sight loss in the UK?

- a) Glaucoma
- b) Age-related macular degeneration
- c) Cataracts
- d) All of the above

5. Which of the following customers is entitled to a free eye examination on the NHS in England?

- a) A 55-year-old woman
- b) A type 1 diabetes patient
- c) A 21-year-old in full time education
- d) A regular sufferer of dry eye

2. Which of the following is NOT a recognised cause of dry eye?

- a) Dehydration
- b) Age
- c) Certain medicines e.g. antihistamines
- d) Contact lenses

4. Which of the following customers should you refer to the pharmacist?

- a) A woman with slight eye 'fatigue' from staring at a computer screen
- b) Someone with allergic conjunctivitis
- c) A customer with dry eye that hasn't been relieved after trying several OTC products
- d) A man who has a stye that has been present for a few days

6. Which of the following is NOT a recognised tip for maintaining healthy eyes?

- a) Have an eye test at least every two years, unless advised otherwise by an optometrist
- b) Avoid regular caffeine consumption
- c) Adopt a healthy, active lifestyle
- d) Wear CE marked sunglasses and wide-brimmed hats to protect eyes from UV rays