



# module 237

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Welcome to the two hundred and thirty seventh module in the *Pharmacy Magazine* Continuing Professional Development Programme, which looks at common eye conditions.

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## for this module

### GOAL

To offer an overview of the management of common eye conditions with the emphasis on conjunctivitis and dry eye.

### OBJECTIVES:

After studying this module you should be able to:

- Explain the symptoms of, and treatments for, common eye conditions
- Discuss the pros and cons of treating conjunctivitis with topical chloramphenicol
- Make a suitable product recommendation for dry eye syndrome.



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## Common eye conditions

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### Introduction

Pharmacy has a valuable role to play in supporting customers to preserve the health of their eyes and prevent or delay the onset of sight loss. According to the Royal National Institute of Blind People (RNIB), over half of all sight loss cases in the UK are preventable.

Research by the College of Optometrists found that 64 per cent of people said they valued their sight more than any other sense but 36 per cent said they left it "months" and 13 per cent "years" before seeking help, even if they had noticed a deterioration in their eyesight.

Regular sight checks (at least once every two years) are essential to spot the early signs of sight loss and eye disease.

### Conjunctivitis

Conjunctivitis is the inflammation of the mucous membrane that lines the anterior sclera of the eye and inside the eyelid.



There are two main types:

- Infective conjunctivitis
- Allergic conjunctivitis.

Infective conjunctivitis may be viral or bacterial in origin. Viral conjunctivitis can be caused by a wide range of viruses, most commonly adenovirus, and is often concurrent with upper respiratory tract or influenza symptoms.

Bacterial conjunctivitis is most often caused by *Streptococcus pneumoniae*, *Haemophilus influenzae* (especially in children) or *Staphylococcus aureus*. It is clinically difficult to distinguish from viral conjunctivitis.<sup>1</sup>

## HOW THE EYE WORKS

Light enters the front of the eye through the clear cornea and lens and travels to the retina at the back. The cornea is the transparent membrane that forms the outer coating at the front of the eyeball and covers the iris and pupil.

While the cornea focuses the light towards the retina, the lens bends the light rays so that they form a clear image on the retina. As the lens is elastic, it can change shape, getting fatter to bring close objects into focus and thinner for distant objects.

Tears form a protective layer at the front of the eye and also help to direct the light coming into the eye. The iris can change the size of the pupil depending on the amount of light needed. The pupil gets smaller in bright conditions, allowing less light in, and bigger in dark conditions, allowing more light in.

### Middle of the eye

The middle of the eye is filled with the vitreous – a clear jelly-like substance that allows light to pass from the front to the back of the eye.

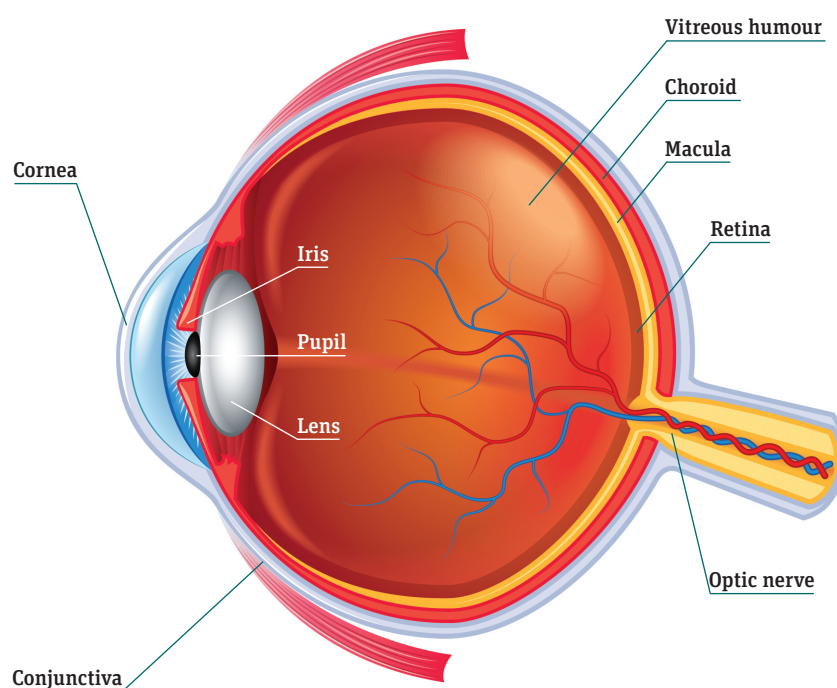
### Back of the eye

The retina is a light-sensitive layer comprising rod and cone cells, which collect the light signals directed onto them and send them as electrical signals to the optic nerve.

Rod cells are concentrated around the edge of the retina and help us to see things that aren't directly in front of us, objects in dim light and movement.

Cone cells are concentrated in the centre of the retina (the macula), where the light is focused by the cornea and lens. Cone cells give the vision used for detailed activities such as reading, watching TV and seeing people.

The optic nerve is made up of thousands of nerve fibres, which pass the electrical signals from the retina to the brain where they are processed.



Acute infective conjunctivitis may affect one or both eyes and typically gives the sensation of a gritty or itchy eye(s), accompanied by tear production and sometimes a purulent discharge or crusting of the eyelid margins. The discharge may cause the eyelids to be stuck together on waking. The affected eye(s) will often look slightly red, but this is not usually very marked. This type of conjunctivitis is not associated with any change in vision. Pain is not a feature of simple conjunctivitis. There are no agreed definitions of mild, moderate or severe conjunctivitis.

Chlamydial infections and some other bacterial infections can cause chronic conjunctivitis that lasts for weeks or months if untreated. Chlamydia is one of the commonest sexually transmitted infections in the UK. Most patients presenting with chlamydial conjunctivitis will have an associated genital infection, of which they may be unaware.

### Chloramphenicol

Chloramphenicol is widely recommended as the drug of choice for infective conjunctivitis.<sup>2</sup> It has a relatively broad spectrum of action

against most gram-positive and gram-negative bacteria. The rationale for using topical antibacterial therapy is to speed recovery, reduce relapse and potentially prevent complications such as orbital cellulitis and keratitis.

Acute infective conjunctivitis is not normally serious, does not usually lead to important sight-threatening complications, and in most cases resolves spontaneously.<sup>3,4</sup>

A significant proportion (5-14 per cent) of patients experience adverse effects from ocular use of chloramphenicol. These include stinging and local discomfort. Local allergic reactions can occur, causing uncomfortable red itchy eyes, symptoms that are similar to conjunctivitis itself. The potential risk of aplastic anaemia with topical chloramphenicol therapy (less than one per million treatment courses) is considered insignificant.<sup>1</sup>

Topical chloramphenicol can speed up the resolution of symptoms and infection in acute bacterial conjunctivitis, although only by a day or so.<sup>3,4</sup> In a meta-analysis of data from primary care trials, patients with purulent discharge or a mild severity of red eye were found to benefit most from treatment.<sup>4</sup> Most patients recover by

day seven whether they receive treatment or not, even when the cause of conjunctivitis is bacterial.<sup>4</sup> Antibacterial treatment is therefore not considered essential.

### OTC treatment

Chloramphenicol eye drops and ointment have been available OTC from UK pharmacies as a treatment for conjunctivitis since 2005. It is indicated for use in adults and children aged two years and over.

In Scotland local patient group directions allow pharmacists to prescribe and dispense a POM pack of chloramphenicol eye drops to eligible patients using the minor ailment service. In most health board areas children over one year of age can be supplied but some directions restrict supply to children aged over two years. Pharmacists must sign up to the patient group direction individually and send the completed form to the local health board contact before they are able to prescribe the POM pack.<sup>5</sup>

For chloramphenicol eye drops, the recommended dose is one drop in the affected eye(s) every two hours for the first 48 hours and four-hourly thereafter during waking hours,

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continued for five days, even if symptoms improve. For the ointment, the recommended dose is a small amount of ointment applied to the affected eye, either at night (if eye drops are used during the day), or three or four times daily if used alone.

### Other antibacterial treatments

Also available for OTC sale is propamidine (as propamidine isethionate in Brolene eye drops and dibromopropamidine isethionate in Golden Eye Ointment).

Propamidine is bacteriostatic against gram-positive non-spore-forming organisms, but less active against gram-negative bacteria and spore-forming organisms; it also has antifungal properties.<sup>6</sup> These products are authorised for the treatment of "local, superficial" eye infections.

Application is recommended four times a day for the drops and twice a day for the ointment. Patients are advised to seek medical advice if there is no stabilisation or any improvement after 48 hours. There appears to be no formal published assessment of the efficacy of propamidine in the management of acute infective conjunctivitis.

### When to refer

Patients should be referred to a doctor if they have any of the following characteristics:

- Receiving treatment with other eye drops or eye ointment
- Suspected foreign body in the eye
- Eye pain or visual impairment (e.g. loss of vision, reduced or blurred vision)
- Pregnant or breast-feeding
- No improvement is seen after 48 hours of treatment with topical chloramphenicol

### Eye tests

More than 30 million people in the UK are entitled to a free eye examination on the NHS, including anyone:

- Aged 60 years or over
- Under 16 years or under 19 years and still in full-time education
- Diagnosed as having diabetes or glaucoma
- Living in Scotland
- 40 years of age or over with a close relative with glaucoma
- Registered blind or partially sighted
- In need of complex lenses
- Receiving certain benefits or credits (e.g. income support or income-based job seekers allowance).

- Eye inflammation associated with a rash on the scalp or face
- Conjunctivitis in the recent past
- Conjunctivitis present for two weeks despite self-care measures (and no urgent referral symptoms)
- Glaucoma
- Personal or family history of bone marrow problems
- Using a medicine that interacts with chloramphenicol eye drops/ointment
- "Severe" bacterial conjunctivitis and when infection is not confined to the conjunctiva.

### Contact lens wearers

If the patient wears contact lenses, suggest that they seek advice from a contact lens practitioner (optician or optometrist) or a doctor before using topical chloramphenicol. If a practitioner or doctor has recommended chloramphenicol, contact lenses should not be worn during, or for at least 24 hours after finishing the course of treatment. Contact lenses should not be used until all signs and symptoms of conjunctivitis have gone. Reusing old contact lenses may cause re-infection.

Urgent medical referral should be considered for people with:

- An eye or head injury
- Painful eye movements
- Vision defects
- Pain in the eye
- Photophobia
- Acute glaucoma with severe nausea
- Eye surgery or laser treatment in the past six months
- Symptoms get worse despite using topical chloramphenicol
- Unusual-looking pupil (torn, irregular, dilated or sluggish/non-reactive to light)
- Cloudy eye.

### Weighing up the need for chloramphenicol

It may be appropriate to treat infective conjunctivitis as long as there is no reason to refer the patient to the doctor. Royal Pharmaceutical Society guidance says that, when making a supply of OTC chloramphenicol, pharmacists need to be satisfied that it is in line with the marketing authorisation and is clinically beneficial.<sup>5</sup> It is important for the pharmacist to have a discussion with the patient regarding the pros and cons of using chloramphenicol.

This should include a discussion about:

- The possible causes of acute conjunctivitis



Infected conjunctivitis may infect one or both eyes



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(the possibility that the cause might be viral or bacterial)

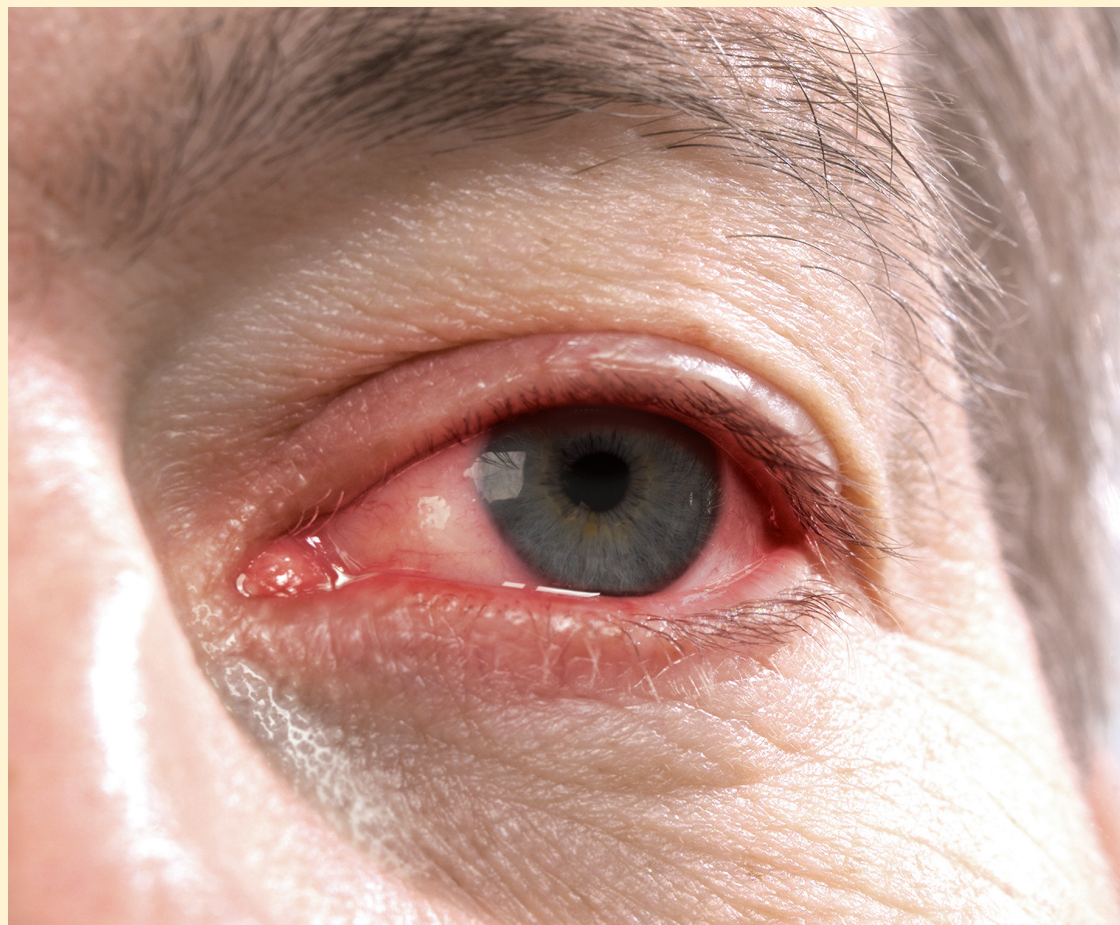
- The condition's self-limiting nature (it is likely to have resolved within a week)
- The marginal benefit from using an antibacterial (speeding up recovery by a day or so)
- The risk of adverse effects from treatment
- The need for judicious use of antibiotics to reduce the risks of bacterial resistance to these treatments.

Given the self-limiting nature of conjunctivitis, it seems appropriate to discuss with patients the option of postponing treatment. Some patients will still prefer treatment although they understand the limitations. It may seem reasonable to consider therapy when the person considers the symptoms to be distressing. Contrary to public health advice<sup>7</sup>, some schools and childcare organisations may require treatment before allowing a child to return.

### Practical advice

The following advice can be given whether or not OTC chloramphenicol is used, to help reduce symptoms and prevent spread of infection:

- Bathe the eyelids with lukewarm water to remove any discharge and help soothe the redness and itching. The eye should be cleaned by wiping from the bridge of the nose to the outer eye, using a fresh piece of cotton wool or gauze for each wipe. Tissues used to wipe the eyes should be discarded
- Avoid wearing contact lenses until symptoms have resolved
- Use simple hygiene measures (hand washing, avoid sharing pillows and towels)
- Seek medical advice if symptoms do not settle within seven days, or if visual disturbance, significant eyelid swelling, photophobia or pain in the eye develop



Allergic conjunctivitis causes itching, redness and lid swelling

- Seek medical advice if there is no improvement after treatment with chloramphenicol, or symptoms deteriorate after two days of treatment.

### Allergic conjunctivitis

Allergic conjunctivitis occurs in predisposed individuals, typically following exposure to grass pollen or animal fur. Allergens dissolve in the tear film, cross the conjunctival epithelium and activate mast cells, leading to the symptoms and signs of allergic conjunctivitis.

Usually seasonal, typical signs and symptoms of allergic conjunctivitis are itching, redness and lid swelling, watery or mucous discharge, runny or stuffy nose and a burning sensation in the eyes.

Perennial allergic conjunctivitis is less common, but produces similar symptoms that may persist with varying severity for months, accompanied by a low level of itching.<sup>8</sup>

Allergic conjunctivitis usually affects both eyes. Acute allergic conjunctivitis will usually improve without treatment, but a variety of drugs can be used to treat it.<sup>8</sup> Standard treatment is with topical or oral antihistamines, alone or in combination with sodium cromoglicate (a topical mast cell stabiliser), although there is clinical uncertainty about the relative efficacy of these treatments.<sup>9</sup>

When rapid relief of symptoms is required, an oral or topical ocular antihistamine may be appropriate, depending on the person's preference and previous response to treatment. Systemic treatment with an oral antihistamine may be more appropriate if the conjunctivitis is accompanied by other symptoms such as rhinitis.

When prolonged control of symptoms is required, an oral antihistamine, topical ocular antihistamine or topical sodium cromoglicate, depending on the person's preference and previous response to treatment, may be used.



### Keeping an eye open for...

Having an eye test is not only good for the eyes. Optometrists may be able to spot signs of eye diseases such as glaucoma, cataracts and macular degeneration, but other medical conditions they may be able to spot include:

**Diabetes:** High blood sugar related to diabetes can cause problems in the small blood vessels in the retina. An optometrist is able to spot early characteristic changes, such as tiny leaks from damaged blood vessels

**Brain tumours:** These can create blind spots that may be picked up in a visual field test, and pressure within the head may cause a swelling at the back of the eye that could be visible to the optometrist

**High blood pressure:** This can cause changes to the blood vessels at the back of the eye, which an optometrist may be able to spot when examining the eye. Blood vessel walls may thicken, narrowing the vessels and restricting the blood supply to the retina

**'Floaters':** These are caused by dead cells and debris in the eye and are normally harmless, but a sudden onset of many floaters may be the sign of a retinal tear, which can lead to sudden loss of vision if not treated.

If sodium cromoglicate is used, an oral antihistamine or a topical ocular antihistamine might be useful for symptom control in the first few weeks while waiting for the mast cell stabiliser to take effect, and for breakthrough symptoms.<sup>10</sup>

### Practical advice<sup>10</sup>

- Remove contact lenses, if worn, until symptoms and signs resolve
- Avoid rubbing the eyes
- Avoid exposure to the allergen when practical
- Use a cool compress (such as a flannel soaked in cold water) on the affected eyes to ease symptoms.

### Dry eye

Dry eye disease is a common, chronic eye condition in older people that has a significant impact on quality of life.<sup>11,12</sup> It is defined as a “multifactorial disease of the tears and ocular surface that results in symptoms of discomfort, visual disturbance and tear film instability, with potential damage to the ocular surface”. It is accompanied by changes in the quality of the tear film and sub-acute inflammation of the surface of the eye.<sup>12</sup>

Normally, the tear film provides a smooth optical surface and protects the corneal surface by flushing away debris, having a bacteriostatic effect, maintaining epithelial hydration and acting as a lubricant to prevent the eyelid rubbing the surface on blinking.<sup>13</sup> The tear film is made up of a lipid layer overlying a mucoaqueous layer (see box, this page).<sup>13</sup> The lipid layer is secreted by the meibomian gland (specific sebaceous glands of the eyelid margin).

Dry eye disease can occur as part of the ageing process or be associated with systemic autoimmune diseases (e.g. Sjögren’s syndrome), dietary deficiencies, contact lens wear and in those who have had refractive surgery.<sup>12,13</sup> Symptoms include redness and irritation, and a feeling of burning, stinging or grittiness which is often worse when reading or watching TV because concentrating reduces the blink rate, causing the corneas to dry further.

Watery eyes can also be a symptom, which may seem counterintuitive given the name of the condition but is a result of the eyes producing more tears to soothe the irritation.<sup>16</sup>

Older age, female sex, reduced androgen levels, oestrogen replacement therapy and an imbalance in the dietary intake of essential fatty acids are other important risk factors for dry eye disease.<sup>11</sup> Symptoms are likely to be more severe if there is an underlying medical cause. Patients with Sjögren’s syndrome are also likely to have a dry mouth.

Medications associated with dry eyes include drugs used to treat hypertension, benign prostatic hyperplasia and depression.<sup>11</sup> Serious complications are rare. If the corneas become very dry they are more prone to bacterial infection. Very rarely the cornea can thin and even perforate resulting in pain, photophobia and reduced vision, which requires urgent medical assessment.

### Treatment

There are several OTC treatment options available to patients with dry eye syndrome.<sup>2,13</sup>

#### Aqueous artificial tears

These help supplement the aqueous layer of the tear film and prevent further irritation. Examples include hypromellose (e.g. Tears Naturale, Isopoto Plain), carboxymethylcellulose (e.g. Optive) or polyvinyl alcohol (e.g. Sno Tears, Liquifilm Tears, Hypotears).

#### Liposomes

The lipid layer in the tear film stabilises the water layer and slows its evaporation. Liposomes can be sprayed onto the closed lid and migrate from there to combine with the tear film (e.g. Tears Again, Optrex Actimist Eye Spray).

#### Viscoelastics

These include sodium hyaluronate (e.g. Optrex Dry Eye Drops, Clinitas Soothe), carbomers (e.g. Geltears, Viscotears) or hydroxypropyl guar (Systane).

#### Paraffin ointments

If a patient’s eyes don’t fully close when they are asleep, tears can evaporate and dry eye syndrome can be worse in the morning. Being stickier than drops, ointments can lubricate the eyes for longer but they do blur vision so should only be used at night. Examples include liquid



### The tear film<sup>16</sup>

The tear film is made up of three layers, produced by different glands in the eye:

#### • Lipid/oil layer

Produced by the meibomian glands, this is the outermost layer of the tear film. A dense and oily layer that seals moisture to the eye, it allows the free flow of the eyelid over the eye and smooths out the surface.

#### • Aqueous/water layer

Produced by the lacrimal glands, this layer lubricates, smoothes irregularities of, and delivers nutrients to, the corneal surface as well as washing away waste products.

#### • Mucous/mucin layer

Produced by the conjunctival goblet cells, this layer of the tear film is closest to the surface layer of the eye and spreads tears over the corneal surface as well as protecting the cornea against foreign substances.

paraffin (Lacri-Lube), white soft paraffin (Lubri-Tears) and yellow soft paraffin (Simple Eye Ointment; Lubrifilm).

It is logical to start with a less viscous formulation at first as this is less likely to cause stinging and blurring.<sup>13</sup> For people with mild or moderate symptoms, artificial tears alone may be sufficient.<sup>14</sup>

Hypromellose-containing drops are the most commonly used products but provide only temporary relief because they are absorbed by the corneal epithelium and so require frequent administration (ideally at 30-minute intervals initially until symptoms improve, then decreased frequency). More viscous products require less frequent application but may be less well tolerated.

Sodium chloride is short-acting and suitable as ‘comfort drops’ or for use with contact lenses. If a product causes irritation or if soft contact lenses are worn, a preservative-free product may be more suitable. There appears to be no formal evidence on which products offer the most improvement in dry eye symptoms.<sup>15</sup> The severity of the condition and the person’s preference should guide choice.

### When to refer

It is recommended that a patient is referred to his/her GP if<sup>16</sup>:

- Symptoms mainly affect one eye rather than both
- There is a reduction in vision or vision loss occurs
- Any associated redness of the eye is not resolving with OTC product use



### Reflection exercise 1

Dry eye disease is a common chronic condition in older people but do you know which other groups of people can suffer from dry eyes?



- There is a history of ocular disease
- Ocular surgery has previously been performed
- Ocular prescription medications are being taken
- There is a visible lid mass or abnormality
- Eye pain develops other than dry eye syndrome  
grittiness or irritation
- Symptoms are significant and patient also wears contact lenses.

### Practical advice for dry eyes

Patient education is important in the management of dry eye disease.<sup>12</sup> Patients need to know that treatment is long-term and may be slow to take effect.<sup>12</sup>

Non-drug interventions that may improve dry eye symptoms in some patients include:

- Avoiding aggravating factors, such as cigarette smoke, dry heated air, air conditioning
- Considering using a humidifier to introduce moisture into the air
- Limiting the use of contact lenses
- Taking frequent breaks from computer use
- Using hot compresses (such as a facecloth soaked in warm water for 3-10 minutes), or other eyelid warming devices (such as eye masks). These may help unblock meibomian glands and improve tear film quality. Lid massage immediately afterwards helps the flow of the lipid secretion (meibum).

Patients with more severe symptoms, not helped by OTC products and practical measures, should be advised to seek medical assessment.

### Other eye problems

#### Blepharitis

Blepharitis occurs when the rims of the eyelids become inflamed, resulting in burning, soreness or stinging eyes, crusty eyelashes and itchy eyelids. It is commoner in people over 50 years of age, although it can develop at any age.

Treatment comprises twice-daily lid hygiene, cleaning the eyelash line using a cotton-wool bud dipped in warm water with a drop of baby shampoo or a pinch of sodium bicarbonate.



#### Reflection exercise 2

A customer who usually wears contact lenses comes to your pharmacy and tells you that she suffers from dry eye syndrome. Would you know which product(s) to recommend based on the severity of the condition and product ingredients?



Dry eye can have a significant impact on the quality of life of older people

Eye cleaning tissues are also effective and require no preparation. Patients should make sure that the eyes are not dry and use topical lubricant eye drops where necessary, as dry eyes can worsen blepharitis symptoms.

If lid hygiene fails, chloramphenicol antibiotic ointment can be applied to the lid margin but if this does not control the problem within a month, the patient should be referred to his/her GP, who may prescribe antibiotics.

#### Styes

A stye, also known as a hordeolum, is a small abscess on the eyelid, which appears as a painful lump on the outside or inside of the eyelid. Styes are usually caused by an infection with Staphylococcus bacteria. Most styes will resolve without treatment within one to three weeks but, when the eyelid is infected, chloramphenicol ointment can be applied for a few days. If the infection is spreading, a course of antibiotics may need to be prescribed.

External styes virtually always disappear, but internal styes may form a residual lump in the lid – a chalazion – that can require surgical drainage by an ophthalmologist.

#### Watering eyes

Watering eyes occur when tears do not drain away sufficiently (epiphora) or when too many



#### DIY and eye safety

DIY causes more than 30,000 eye injuries every year, so it is important anyone at risk knows what precautions to take and what to do if an accident does occur.

The commonest eye injuries for adults are caused by flying chips of wood or metal, so eye protection, which conforms to European Standard BSEN 166, is essential. When welding, a proper mask that covers the whole face and goggles with the British Standard number BS1542 should be used. Many accidents occur when goggles are lifted to get a closer look.

Any foreign body in the eye requires medical assistance but the action to be taken will depend on the size of the object. A small splinter or liquid, such as a chemical, can usually be removed by flooding it with water. Larger objects, such as pieces of wood, require urgent medical attention. The affected eye should never be rubbed as this will only make matters worse.

A cut or punctured eye should never be washed. Cuts should be bandaged lightly if possible. Abrasions will need hospital treatment with drops, ointments and a sterile pad over the eye for at least 24 hours.

Lacerations are far more painful and may require drug therapy and the stitching of any torn tissue.

Source: The Eyecare Trust

## Driving and eye function

As a minimum legal requirement motorists must be able to read a number plate from a distance of 20.5 meters (67 feet) and have a 120° wide field of view. Research has shown that more than 10 per cent of drivers would fail a driving test if they re-took it because of poor eyesight.

Source: *The Eyecare Trust*

tears are produced (hypersecretion). It can affect people of any age, but is commonest in young babies (0-12 months) and people over 60 years of age, affecting one or both eyes and causing blurred vision, sore eyelids and sticky eyes.

Treatment is not always necessary for watering eyes and mild cases may not need treatment at all, but if infective conjunctivitis is the cause, then antibiotics may be necessary, while antihistamines can reduce inflammation if allergic conjunctivitis is to blame.

### Diabetic retinopathy

Eye problems are among the most significant complications of diabetes, and eye problems from diabetes are the commonest cause of blindness in people of working age.

Diabetes affects the eye in a number of ways. The most damaging condition occurs when the fine network of blood vessels in the retina leak fluid. This is known as diabetic retinopathy.

Cataracts can also develop earlier and progress more rapidly in people with diabetes than in other people. Untreated diabetes may also cause frequent or noticeable changes to eyesight.

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Serious eye problems are less likely if the diabetes is well controlled or in its early stages. If problems are detected and treated early, most sight loss from diabetic eye disease can be prevented.

This module is also online at [pharmacymagazine.co.uk](http://pharmacymagazine.co.uk)



Pharmacy Magazine's CPD modules are available on Cegedim Rx's PMR systems, Pharmacy Manager and Nexphase. Just click on the 'Professional Information & Articles' button within Pharmacy KnowledgeBase and search by therapy area. Please call the Cegedim Rx helpdesk on 0844 630 2002 for further information.



 COMMON EYE CONDITIONS

# assessment questions

Use this form to record your learning and action points from this module on **Common Eye Conditions** or record on your personal learning log at [pharmacymagazine.co.uk](http://pharmacymagazine.co.uk). Any training, learning or development activities that you undertake for CPD can also be recorded as evidence as part of your RPS Faculty practice-based portfolio when preparing for Faculty membership. So start your RPS Faculty journey today by accessing the portfolio and tools at [www.rpharms.com/Faculty](http://www.rpharms.com/Faculty)

**1. Which statement is TRUE regarding infective conjunctivitis?**

- a. It may be caused by bacteria or viruses
- b. It usually affects both eyes
- c. It frequently affects vision
- d. Eye redness is more marked if the infection is bacterial

topical or oral antihistamines alone or in combination with sodium cromoglicate  
d. Acute allergic conjunctivitis does not get better without treatment

**2. The tear film comprises how many layers?**

- a. Two
- b. Three
- c. Four
- d. Five

**5. Find the FALSE statement. Dry eye disease:**

- a. Is common in older people
- b. Is associated with high cholesterol levels
- c. Is associated with the use of antidepressant drugs
- d. Can lead to serious complications

**3. Which statement is FALSE?**

- a. Public Health England does not recommend excluding children with infective conjunctivitis from school
- b. RPS guidance says that, when making a supply of OTC chloramphenicol, pharmacists need to be satisfied that it is in line with the marketing authorisation of the product
- c. Patients with pain in the eye(s) should be referred to a doctor
- d. Patients should be advised to seek medical advice if there is no improvement after treatment with chloramphenicol, or symptoms deteriorate after two days of treatment

**6. Find the TRUE statement:**

- a. Liposomal sprays are the most effective treatment for dry eyes
- b. Cold compresses can help dry eye symptoms
- c. The severity of the condition and the person's preference should guide choice
- d. Hypromellose eye drops need to be used four times daily

**4. Which statement about allergic conjunctivitis is incorrect?**

- a. It usually affects both eyes
- b. Itching and redness are typical characteristics
- c. Standard treatment is with

**8. In a driving test motorists must be able to read a number plate at:**

- a. 50 feet
- b. 57 feet
- c. 60 feet
- d. 67 feet

Activity completed. (Describe what you did to increase your learning. Be specific) *(ACT)*

Date: \_\_\_\_\_ Time taken to complete activity: \_\_\_\_\_

What did I learn that was new in terms of developing my skills, knowledge and behaviours? Have my learning objectives been met?\* *(EVALUATE)*

How have I put this into practice? (Give an example of how you applied your learning). Why did it benefit my practice? (How did your learning affect outcomes?) *(EVALUATE)*

Do I need to learn anything else in this area? (List your learning action points. How do you intend to meet these action points?) *(REFLECT & PLAN)*

You can also record in your personal learning log at [pharmacymagazine.co.uk](http://pharmacymagazine.co.uk) 

\* If as a result of completing your evaluation you have identified another new learning objective, start a new cycle. This will enable you to start at Reflect and then go on to Plan, Act and Evaluate. This form can be photocopied to avoid having to cut this page out of the module. You can also complete the module at [www.pharmacymagazine.co.uk](http://www.pharmacymagazine.co.uk) and record on your personal learning log

**ENTER YOUR ANSWERS HERE** Please mark your answers on the sheet below by placing a cross in the box next to the correct answer. Only mark one box for each question. Once you have completed the answer sheet in ink, return it to the address below together with your payment of £3.75. Clear photocopies are acceptable. **You may need to consult other information sources to answer the questions.**

- |           |                             |           |                             |           |                             |           |                             |           |                             |           |                             |           |                             |           |                             |
|-----------|-----------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|-----------------------------|
| <b>1.</b> | a. <input type="checkbox"/> | <b>2.</b> | a. <input type="checkbox"/> | <b>3.</b> | a. <input type="checkbox"/> | <b>4.</b> | a. <input type="checkbox"/> | <b>5.</b> | a. <input type="checkbox"/> | <b>6.</b> | a. <input type="checkbox"/> | <b>7.</b> | a. <input type="checkbox"/> | <b>8.</b> | a. <input type="checkbox"/> |
|           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |           | b. <input type="checkbox"/> |
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Name (Mr, Mrs, Ms) \_\_\_\_\_

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Card No. \_\_\_\_\_ Start date \_\_\_\_\_ Expiry date \_\_\_\_\_

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**Processing of answers**  
Completed answer sheets should be sent to Precision Marketing Group, Precision House, Bury Road, Beyton, Bury St Edmunds IP30 9PP (tel: 01284 718912; fax: 01284 718920; email: [cpd@precisionmarketinggroup.co.uk](mailto:cpd@precisionmarketinggroup.co.uk)), together with credit/debit card/cheque details to cover administration costs. This assessment will be marked and you will be notified of your result and sent a copy of the correct answers. The assessors' decision is final and **no correspondence** will be entered into.