



Blepharitis

Last revised in October 2015

Changes

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Last revised in October 2015

October 2015 — reviewed. A literature search was conducted in October 2015 to identify evidence-based guidelines, UK policy, systematic reviews, and key randomized controlled trials published since the last revision of the topic. No changes to clinical recommendations have been made.

Previous changes

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September 2012 — reviewed. A literature search was conducted in September 2012 to identify evidence-based guidelines, UK policy, systematic reviews, and key RCTs published since the last revision of the topic. No changes to clinical recommendations have been made.

April 2011 — minor update. Change to recommendation regarding need for additional contraception during or after a course of tetracycline - additional contraception is no longer required when using antibiotics that are not enzyme inducers with combined hormonal methods for durations of 3 weeks or less [[FSRH, 2011 \(/blepharitis#!references/-315093\)](#)]. Issued in June 2011.

March 2011 — topic structure revised to ensure consistency across CKS topics — no changes to clinical recommendations have been made.

September 2010 — minor update. Hydromoor[®] (hypromellose 0.3% preservative-free single dose eye drops) have been included. Issued in September 2010.

March 2010 — minor update. Lubri-Tears[®] eye ointment has been discontinued. Prescription removed. Issued in March 2010.

December 2007 to May 2008 — converted from CKS guidance to CKS topic structure. The evidence-base has been reviewed in detail, and recommendations are more clearly justified and transparently linked to the supporting evidence.

- The clinical scenario structure has been reviewed.
- There have been changes to the oral antibiotic prescriptions offered. Lymecycline has been added to the list of recommended tetracyclines.

- Dosing recommendations for the tetracyclines have been amended; a higher initial dose is recommended for 4 weeks, followed by a lower maintenance dose for a further 8 weeks.
- Prescriptions of amoxicillin and erythromycin to treat acute staphylococcal infection (cellulitis) have been removed because this indication is now outside the scope of this CKS topic. In recognition of this, the age threshold has been increased to 10 years as chronic blepharitis is very rare in young children.

January 2006 — minor update. Black triangle removed from carmellose sodium eye drops. Issued in February 2006.

October 2005 — minor technical update. Issued in November 2005.

August 2004 — reviewed. Validated in November 2004 and issued in April 2005.

August 2001 — reviewed. Validated in November 2001 and issued in April 2002.

August 1998 — rewritten.

Update

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New evidence

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Evidence-based guidelines

No new evidence-based guidelines since 1 October 2015.

HTAs (Health Technology Assessments)

No new HTAs since 1 October 2015.

Economic appraisals

No new economic appraisals relevant to England since 1 October 2015.

Systematic reviews and meta-analyses

No new systematic reviews since 1 October 2015.

Primary evidence

No new randomized controlled trials published in the major journals since 1 October 2015.

New policies

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No new national policies or guidelines since 1 October 2015.

No new safety alerts since 1 October 2015.

No changes in product availability since 1 October 2015.

Goals

To support primary healthcare professionals to:

- Diagnose blepharitis
- Relieve symptoms of blepharitis
- Prevent or minimize the risk of complications
- Provide information on appropriate self-care
- Refer appropriately if needed

Definition

What is it?

- **Blepharitis describes inflammation of the margin of the eyelids.**
- Chronic blepharitis can be classified according to which part of the margin of the eyelid is affected:
 - Anterior blepharitis — the base of the eyelashes (located on the anterior margin of the eyelid) are inflamed.
 - Posterior blepharitis — the meibomian glands (located on the posterior margin of the eyelid) are inflamed.
- Chronic blepharitis can also be classified by its cause, as:
 - Staphylococcal blepharitis.
 - Seborrhoeic blepharitis.
 - Meibomian blepharitis — often called Meibomian gland dysfunction.
- These types of blepharitis can occur in any combination.
- In primary care, it is often difficult to clinically distinguish between the different types — see the section on [Diagnosis \(/blepharitis#!diagnosis\)](#) for more information.

[[Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#)]

Causes

What are the causes of blepharitis?

- Blepharitis can be caused by staphylococcal infection, seborrhoeic dermatitis, meibomian gland dysfunction, or any combination of these.
- **Anterior blepharitis** is usually caused by staphylococcal infection or seborrhoeic dermatitis of the base of the eyelashes. Rarely, it is a complication of atopic eczema [[Asano-Kato et al, 2003 \(/blepharitis#!references/-315093\)](#)]:
 - **Staphylococcal blepharitis** is thought to be caused by low-grade staphylococcal infection:
 - *Staphylococcus aureus* can be isolated from the eyelid margins in about 50% of people with staphylococcal blepharitis, but in less than 10% of controls without blepharitis.
 - *Staphylococcus epidermidis* can be isolated from the eyelid margins in about 95% of people with staphylococcal blepharitis, and in a similar proportion of controls without blepharitis.
 - **Seborrhoeic blepharitis** is closely associated with seborrhoeic dermatitis and the two conditions may coexist:
 - Oily secretions are increased and the affected skin is scaly.
 - Seborrhoeic blepharitis commonly occurs together with posterior blepharitis.
- **Posterior blepharitis (Meibomian blepharitis)** is caused by Meibomian gland dysfunction (MGD):
 - The Meibomian glands run along the eyelid margin, posterior to the eyelashes; their oily secretions therefore spread onto the cornea and conjunctiva. These secretions form the outer layer of the tear film, which limits the evaporation of tears, provides a smooth optical surface, and helps maintain the structural and optical integrity of the eye.
 - The lipid secretions in people with MGD differ in composition and quantity from those without MGD, often resulting in dry eye syndrome.
 - Meibomian glands are derived from sebaceous glands. Seborrhoeic dermatitis and acne rosacea both affect the sebaceous glands. In seborrhoeic dermatitis, the sebaceous glands produce excessive secretions. In acne rosacea, the sebaceous glands are blocked, and fewer secretions reach the skin.

[[Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#)]

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Prevalence

How common is it?

- Blepharitis is common. It accounts for about 5% of all ophthalmological problems presenting in primary care.
- Blepharitis is more common in older adults but can occur at any age (see [Table 1 \(/blepharitis#!backgroundsub:2/-315004\)](#)).

Table 1 . Epidemiological associations with blepharitis.

Type of blepharitis	Association with:		
	Sex	Age Mean age of onset	Dry eye syndrome
Staphylococcal blepharitis	More common in women	About 42 years	About 50%

Seborrhoeic blepharitis	Equally common in men and women	About 50 years	About 33%
Meibomian blepharitis	Equally common in men and women	About 50 years	20–40%

Data from: [[Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#)]

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Prognosis

What is the prognosis?

- **Blepharitis is a chronic condition.** Periodic remissions, relapses, and exacerbations may occur.
- Blepharitis should not permanently affect vision, provided that any [complications \(/blepharitis#!backgroundsub:4\)](#) are treated.

[[American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#); [BMJ, 2015 \(/blepharitis#!references/-315093\)](#)]

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Complications

What are the complications?

- **Complications of blepharitis which affect the eyelids include:**
 - Meibomian cyst (chalazion) — see the CKS topic on [Meibomian cyst \(chalazion\) \(/meibomian-cyst-chalazion\)](#) for more information.
 - External styte (hordeolum) — see the CKS topic on [Styes \(hordeola\) \(/styes-hordeola\)](#) for more information.
 - Changes to the eyelashes in severe and long-standing cases — this includes loss of eyelashes (madarosis), misdirection of eyelashes towards the eye (trichiasis) and depigmentation of the eyelashes (poliosis).
 - Eyelid thickening, ulceration, and scarring — can cause the eyelid to turn inwards against the eyeball (entropion) or outwards (ectropion).
- **Complications of blepharitis which affect the eye include:**
 - Contact lens intolerance — common.
 - Dry eye syndrome (keratoconjunctivitis sicca) — see the CKS topic on [Dry eye syndrome \(/dry-eye-syndrome\)](#) for more information.
 - Conjunctivitis — red, injected conjunctiva. See the CKS topic on [Conjunctivitis - infective \(/conjunctivitis-infective\)](#) for more information.
 - Conjunctival phlyctenules — small (1–3 mm, hard, triangular, yellow-white nodules surrounded by hyperaemia (dilated blood vessels). Usually found in both eyes in the inferior limbus (the lower part of the eye where the clear cornea and white sclera meet).
 - Corneal inflammation (keratitis) — characterized by ulceration, scarring, perforation, corneal pain, red eye, and a rapid onset of decreased visual acuity. See the CKS topic on [Red eye \(/red-eye\)](#) for more information.

Diagnosis

When should I suspect blepharitis?

- **Suspect blepharitis if the person has:**
 - **Characteristic symptoms:**
 - Eyelids burn, itch, and stick together.
 - Symptoms are worse in the mornings.
 - Both eyes are affected.
 - Symptoms are often intermittent, with exacerbations and remissions occurring over long periods.
 - **Conditions that can cause blepharitis:**
 - Seborrhoeic dermatitis — see the CKS topic on [Seborrhoeic dermatitis \(/seborrhoeic-dermatitis\)](#) for more information.
 - Acne rosacea — see the CKS topic on [Rosacea \(/topic-under-review\)](#).
 - **Dry eye syndrome** — see the CKS topic on [Dry eye syndrome \(/dry-eye-syndrome\)](#) for more information.
- **Ask the person about:**
 - Previous treatments and response.
- **Examine the person for:**
 - Red, inflamed, and crusted margins of the eyelids.
 - Clinically it is often not possible to differentiate between the different types of blepharitis — see [Table 1 \(/blepharitis#!diagnosissub/-491338\)](#)
 - Rapid onset of visual loss or an acutely painful red eye. If present, refer to the ophthalmologist for same-day evaluation.
 - The severity of blepharitis and its impact on the person (severity of examination findings may correlate poorly with severity of symptoms reported by the person).
 - The presence of associated conditions and treat these appropriately — see the CKS topics on [Seborrhoeic dermatitis \(/seborrhoeic-dermatitis\)](#) and [Rosacea \(/topic-under-review\)](#).

Table 1 . Features associated with the different types of blepharitis.

Feature	Anterior eyelid margin		Posterior eyelid margin
	Staphylococcal blepharitis		Seborrhoeic blepharitis
Anterior eyelid			
Eyelash loss	Frequent	Rare	Unusual

Eyelash misdirection towards the eye	Frequent	Rare	May occur with long-standing disease
Eyelid depigmentation	Frequent	—	—
Eyelashes	Brittle scales of skin, which can form collarettes around the lashes.	Oily skin scales and greasy crusting on the lashes	—
Eyelid deposits	Matted, hard scales	Oily or greasy	Excess lipids that may be foamy
Eyelid erythema, oedema, and telangiectasia	Erythema (frequent), swollen with telangiectasia (more severe cases)	Erythema and oedema (frequent), telangiectasia (more severe cases). Changes are less marked than with staphylococcal blepharitis.	—
Eyelid ulceration	Occasional severe exacerbations	—	—
Eyelid scarring	May occur	—	Common with long-standing disease
Posterior eyelid			
Meibomian glands dilated/visibly obstructed, telangiectasia	—	—	Frequent
Chalazion (tarsal or Meibomian cyst)	Rare	Rare	Sometimes multiple
Stye	May occur	—	—
Eye			
Conjunctivitis	Mild to moderate injection, phlyctenules*	Mild injection	Mild to moderate injection, papillary reaction of tarsal conjunctiva

Cornea	Corneal epithelial defects [†]	Corneal epithelial defects not usually present	Corneal epithelial defects [†]
Aqueous tear deficiency [†]	Frequent	Frequent	Frequent
Associated skin disease			
Dermatologic disease	Atopic eczema (rare)	Seborrhoeic dermatitis	Seborrhoeic dermatitis, acne rosacea

* Crops of small yellow-grey nodules at the boundary between the cornea and sclera. † Detection requires slit-lamp examination and may require ophthalmology referral.

Data from: [\[Frith et al, 2001 \(/blepharitis#!references/-315093\)\]](#); [Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#); [American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#); [BMJ, 2015 \(/blepharitis#!references/-315093\)](#)

Basis for recommendation

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These recommendations are largely based on the Cochrane systematic review *Interventions for chronic blepharitis* [[Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#)], the American Academy of Ophthalmology guideline *Blepharitis: Preferred Practice Pattern (PPP)* [[American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#)], expert opinion in the textbook *The eye in clinical practice* [[Frith et al, 2001 \(/blepharitis#!references/-315093\)](#)], and in the British Medical Journal Best practice review article *Blepharitis* [[BMJ, 2015 \(/blepharitis#!references/-315093\)](#)].

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Differential diagnosis

What else might it be?

- The differential diagnosis of chronic blepharitis includes:
 - Squamous cell, basal cell, or sebaceous cell carcinoma of the eyelid margin.
 - Meibomian cyst (chalazion) — see the CKS topic on [Meibomian cyst \(chalazion\) \(/meibomian-cyst-chalazion\)](#).
 - Eczema — see the CKS topics on [Dermatitis - contact \(/dermatitis-contact\)](#) and [Eczema - atopic \(/eczema-atopic\)](#).
 - Dry eye syndrome — see the CKS topic on [Dry eye syndrome \(/dry-eye-syndrome\)](#).
 - Infection (such as conjunctivitis or impetigo) — see the CKS topics on [Conjunctivitis - infective \(/conjunctivitis-infective\)](#) and [Impetigo \(/impetigo\)](#).
 - Infestation (such as pubic lice) — see the CKS topic on [Pubic lice \(/pubic-lice\)](#).
 - Allergy — see the CKS topic on [Conjunctivitis - allergic \(/conjunctivitis-allergic\)](#).
 - Herpes (simplex or zoster) — see the CKS topic on [Herpes simplex - ocular \(/herpes-simplex-ocular\)](#).

This information is based on expert opinion in the clinical guideline *Blepharitis (inflammation of the lid margins)*[[The College of Optometrists, 2014 \(/blepharitis#!references/-315093\)](#)], the review article *Differential diagnosis of the swollen red eyelid*[[Papier et al, 2007 \(/blepharitis#!references/-315093\)](#)], and the British Medical Journal Best practice review article *Blepharitis*[[BMJ, 2015 \(/blepharitis#!references/-315093\)](#)].

Scenario: Management

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Scenario: Management of blepharitis

Age from 12 years onwards

Assessment

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How should I assess a person with blepharitis?

- **Investigations such as eye swabs for cultures are not usually required in primary care.**

Basis for recommendation

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This recommendation is based on the the American Academy of Ophthalmology guideline *Blepharitis: Preferred Practice Pattern (PPP)* [[American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#)]and what CKS considers to be good clinical practice.

First-line management

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How should I manage blepharitis first-line?

- Provided [referral \(/blepharitis#!scenariorecommendation:3\)](#) is not indicated:
 - Give information about the course of the condition. Explain that:
 - Blepharitis is a chronic, intermittent condition, and although it cannot be cured, symptoms can usually be controlled with self-care measures.
 - Compliance with treatment, especially eyelid hygiene, is essential, and this should be continued even when symptoms are well controlled.
 - Complications, such as vision loss, are rare.
 - Advise the person that good eyelid hygiene is the mainstay of treatment. The eyelids should be cleaned in a stepwise manner twice daily initially, then reduced to once daily as symptoms improve
 - Apply a warm compress to the closed eyelids for 5–10 minutes.
 - A clean cloth warmed with hot water.
 - Advise the person not to use a compress that is too hot as they may burn the skin.
 - For posterior blepharitis, they should massage the closed eyelids in a circular motion along the length of each lid. This aids expression of meibomian gland secretions. See the CKS topic on

- [Meibomian cyst \(chalazion\) \(/meibomian-cyst-chalazion\)](#) for more information.
- Clean the eyelid by wetting a cloth or cotton bud with cleanser (for example, baby shampoo diluted 1:10 with warm water) and wiping along the lid margins. The overall aim is gentle mechanical washing, which clears the debris and therefore reduces inflammation of the eyelid margin.
 - Eyelid scrubs or wipes can be used to clear away the scales on the lashes.
- Advise the person:
 - To avoid eye make-up, especially eyeliner. If this is not possible, advise the person to use one that washes off easily.
 - To avoid contact lens wear, especially during acute inflammatory episodes.
 - That further support and patient information can be found here: [Blepharitis - patient information leaflet](#) (<http://www.moorfields.nhs.uk/sites/default/files/uploads/documents/A%26E%20Blepharitis.pdf>) or from [Moorfields Hospital \(http://www.moorfields.nhs.uk/\)](#).
- If there are symptoms of dry eye syndrome, prescribe artificial tears or an ocular lubricant to relieve symptoms. See the CKS topic on [Dry eye syndrome \(/dry-eye-syndrome\)](#) for more information.
- Consider prescribing a topical antibiotic (such as chloramphenicol) or oral antibiotics (such as tetracyclines) if there are clear signs of [staphylococcal infection \(/boils-carbuncles-and-staphylococcal-carriage\)](#) or [Meibomian cyst \(chalazion\) \(/meibomian-cyst-chalazion\)](#) respectively. However be aware that:
 - Antibiotics should usually be reserved for second-line use when eyelid hygiene alone has proved ineffective — see the section on [Treatment failure \(/blepharitis#!scenariorecommendation:2\)](#).
- If there is evidence of seborrhoeic dermatitis, ensure this is adequately treated. See the CKS topic on [Seborrhoeic dermatitis \(/seborrhoeic-dermatitis\)](#).
- If there is evidence of acne rosacea, ensure this is adequately treated. See the CKS topic on [Rosacea \(/topic-under-review\)](#).

Basis for recommendation

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- These recommendations are mainly based on expert opinion in the US guidelines *Care of the patient with ocular surface disorders*[[American Optometric Association, 2011 \(/blepharitis#!references/-315093\)](#)] and *Blepharitis: Preferred practice pattern (PPP)*[[American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#)], the British guideline *Blepharitis (inflammation of the lid margins)*[[The College of Optometrists, 2014 \(/blepharitis#!references/-315093\)](#)], the British Medical Journal Best practice review article *Blepharitis*[[BMJ, 2015 \(/blepharitis#!references/-315093\)](#)], and the review article *How to promote and preserve eyelid health*[[Benitez-Del-Castillo, 2012 \(/blepharitis#!references/-315093\)](#)].
- **Providing information about the course of the illness**

These recommendations reflect good clinical practice and are based on expert opinion. Helping people understand the chronic nature of the condition and the continuing need for treatment, particularly the practice of good eyelid hygiene (even when blepharitis is well controlled), may improve compliance [[American Optometric Association, 2011 \(/blepharitis#!references/-315093\)](#); [Benitez-Del-Castillo, 2012 \(/blepharitis#!references/-315093\)](#); [American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#)].

Eyelid hygiene

- CKS found no randomized controlled clinical trials on the use of eyelid hygiene in the treatment of blepharitis. Evidence of effectiveness comes from several small case series [[Polack and Goodman, 1988 \(/blepharitis#!references/-315093\)](#); [Avisar et al, 1991 \(/blepharitis#!references/-315093\)](#); [Key, 1996 \(/blepharitis#!references/-315093\)](#); [Greiner et al, 1999 \(/blepharitis#!references/-315093\)](#)]. Firm conclusions cannot be drawn from this evidence, therefore recommendations are based mainly on clinical experience and expert opinion [[Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#); [American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#); [The College of Optometrists, 2014 \(/blepharitis#!references/-315093\)](#)].
 - The use of a warm compress is to loosen collarettes and crusts whilst raising the temperature above the melting point of meibum. This aids the expression of meibomian gland secretions through the orifices that line the lid margin. Warm compresses and expression of meibomian gland secretions can be particularly helpful for cases of posterior blepharitis and meibomian gland dysfunction (MGD) [[Key, 1996 \(/blepharitis#!references/-315093\)](#)].
 - Both patient-reported symptoms and clinical findings of blepharitis have been shown to improve with lid-scrub regimens [[Key, 1996 \(/blepharitis#!references/-315093\)](#)].
 - There is limited evidence to support the effectiveness of commercial eyelid cleaning solutions over traditional eyelid hygiene methods [[Denton et al, 1999 \(/blepharitis#!references/-315093\)](#); [Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#)].
 - The optimal dilution factor of baby shampoo with water is unknown, but 1:10 is often recommended as providing a good balance between irritating and cleaning actions.
 - Other products, such as sodium bicarbonate or soap, can be used, but they may be more likely to irritate the eyelid.
 - Recent evidence suggests that other eyelid cleaning products, including phospholipid solutions, may be more beneficial than baby shampoo for the management of blepharitis [[Benitez-Del-Castillo, 2012 \(/blepharitis#!references/-315093\)](#); [Khairuddin and Hueber, 2013 \(/blepharitis#!references/-315093\)](#)]. Further studies are required before any recommendations for the use of such products over traditional methods of eyelid hygiene can be made.
 - Because eye make-up can aggravate blepharitis, experts recommend that it be avoided [[The College of Optometrists, 2014 \(/blepharitis#!references/-315093\)](#)].

Management of dry eyes

- Blepharitis, particularly posterior blepharitis, is often associated with a poor-quality tear film and dry eye syndrome. Artificial tears and ocular lubricants are used to relieve symptoms and prevent deterioration of the cornea [[DEWS, 2007 \(/blepharitis#!references/-315093\)](#); [American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#)].

Topical and oral antibacterials

- For the basis of recommendations for the use of topical and oral antibacterials in the treatment of blepharitis, see the section on [Treatment failure \(/blepharitis#!scenariorecommendation:2\)](#).

Topical corticosteroids

- All forms of blepharitis may benefit from a course of treatment with topical corticosteroid drops to decrease inflammation in an acute exacerbation. However, corticosteroids may have significant adverse effects and should only be initiated by an ophthalmologist in secondary care [[Lindsley et al, 2012 \(/blepharitis#!references/-315093\)](#); [British Oculoplastic Surgery Society, 2014 \(/blepharitis#!references/-315093\)](#)].
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Treatment failure

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How should I manage treatment failure?

- **Ensure the person is using eyelid hygiene measures. If these are ineffective, consider prescribing topical antibiotics, especially if there are signs of staphylococcal infection on the anterior eyelid margins:**
 - Prescribe chloramphenicol eye ointment first-line, to be applied twice daily for a 6-week trial. Be aware that:
 - Antibiotic ointment or drops should be applied after eyelid hygiene and/or at night before sleep.
 - The frequency of topical application depends on the severity of the blepharitis and its response to treatment. As the condition improves, application can be reduced to once daily.
 - The antibiotic should be rubbed into the lid margin using a finger tip or cotton bud. Care should be taken not to traumatize the skin in this process.
 - Ointment should be used sparingly, with care taken to avoid contamination of the eye.
 - Contact lenses should ideally not be worn during treatment. If this is unavoidable, consider prescribing preservative-free chloramphenicol eye drops. Ointment preparations should never be used with contact lens wear.
 - Drops may be less effective, as they will be in contact with the lid margin for less time.
 - If chloramphenicol is contraindicated or not tolerated, fusidic acid eye drops are an alternative.
 - The person should continue to use a topical antibiotic for 1 month after the inflammation has subsided.
- **Consider prescribing oral tetracyclines if topical antibiotics are ineffective, or if there are signs of [Meibomian gland dysfunction \(/meibomian-cyst-chalazion\)](#) or [acne rosacea \(/topic-under-review\)](#).**
 - Low-dose oxytetracycline or doxycycline is recommended. For more information, see [Table 1 \(/blepharitis#!scenariorecommendation:2/-324803\)](#).
 - Prescribe an oral antibiotic for an initial 6 week trial. However:
 - The dose may be reduced to a the maintenance after symptoms improve (for example after 2-4 weeks). For more information, see [Table 1 \(/blepharitis#!scenariorecommendation:2/-324803\)](#).
 - Longer courses (for example 3 months) may be needed if symptoms do not fully resolve after 6 weeks.
 - Advise the person that:
 - Repeated courses of oral antibiotics may be required intermittently for blepharitis flare-ups.
 - [Eyelid hygiene \(/blepharitis#!scenariorecommendation:1\)](#) should be maintained throughout.

Table 1 . Recommended tetracycline dosing regimen for the treatment of chronic blepharitis.

Tetracycline product †	Initial dose (4 weeks)	Maintenance dose (8 weeks)
Oxytetracycline tablets	500mg twice a day	250mg twice a day
Doxycycline capsules	100mg once a day	50mg once a day

† Tetracyclines are not licensed for the treatment of blepharitis, but oxytetracycline and doxycycline are licensed for the treatment of acne rosacea, which often accompanies chronic blepharitis [BNF 70, 2015].

Basis for recommendation

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CKS found no significant evidence from randomized placebo-controlled trials on topical or oral antibiotics for the treatment of blepharitis. The authors of the Cochrane review *Interventions for chronic blepharitis* [Lindsley et al, 2012 ([/blepharitis#!references/-315093](#))], including 26 randomized controlled trials and 8 quasi-randomized controlled trials (n = 2169), concluded that although topical antibiotics were shown to provide some symptomatic relief in anterior blepharitis, there is no strong evidence. The effectiveness of oral antibiotics was further inconclusive, as further research is required to evaluate the effectiveness of such treatments.

These recommendations are therefore largely based on clinical experience and expert opinion in the British guideline *Blepharitis (inflammation of the lid margins)* [The College of Optometrists, 2014 ([/blepharitis#!references/-315093](#))], the American Academy of Ophthalmology guideline *Blepharitis: Preferred Practice Pattern (PPP)* [American Academy of Ophthalmology, 2013 ([/blepharitis#!references/-315093](#))], the textbook *Ophthalmology* [Yanoff and Duker, 2013 ([/blepharitis#!references/-315093](#))], the article *Blepharitis* [British Oculoplastic Surgery Society, 2014 ([/blepharitis#!references/-315093](#))], and information in the British National Formula (BNF) [BNF 70, 2015 ([/blepharitis#!references/-315093](#))].

Topical antibiotics

- The recommendations on first-line topical antibiotics is based on expert opinion [[American Academy of Ophthalmology, 2013](#) ([/blepharitis#!references/-315093](#)); [The College of Optometrists, 2014](#) ([/blepharitis#!references/-315093](#)); [British Oculoplastic Surgery Society, 2014](#) ([/blepharitis#!references/-315093](#))] and what CKS considers to be good clinical practice.
- Although controlled trials to support the effectiveness of chloramphenicol in the treatment of blepharitis are lacking, it is [[The College of Optometrists, 2014](#) ([/blepharitis#!references/-315093](#)); [BNF 70, 2015](#) ([/blepharitis#!references/-315093](#))]:
 - A broad spectrum topical antibiotic, and the drug of choice for superficial eye infections.
 - The first-line topical antibiotic of choice in the UK for the treatment of blepharitis.
 - Inexpensive and well tolerated by most people.
- Preservatives, such as benzalkonium chloride, accumulate in soft (hydrogel) contact lenses, and may induce toxic reactions causing irritation.

- Preservative-free drops can be used but ointment preparations should never be used in conjunction with contact lens wear [[BNF 70, 2015 \(/blepharitis#!references/-315093\)](#)].
- The recommendation on fusidic acid drops as a useful alternative topical antibiotic, especially for cases involving staphylococcal infection, is based on the review article *Fusidic acid viscous eyedrops – an evaluation of pharmacodynamics, pharmacokinetics and clinical use for UK optometrists* [[Doughty and Dutton, 2006 \(/blepharitis#!references/-315093\)](#)] and information in the BNF [[BNF 70, 2015 \(/blepharitis#!references/-315093\)](#)].
 - Fusidic acid is only available as eye drops.
- Although there is no evidence from clinical trials to guide the length of treatment, the recommendation to treat for 1 month after the inflammation has subsided is based on what CKS considers to be good clinical practice.

Oral antibiotics

- The prescribing of oral tetracyclines and optimal regimen of oxytetracycline or doxycycline in the treatment of blepharitis is based on expert opinion [[American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#); [Yanoff and Duker, 2013 \(/blepharitis#!references/-315093\)](#); [The College of Optometrists, 2014 \(/blepharitis#!references/-315093\)](#)], and what CKS considers to be good clinical practice.
 - Oxytetracycline and doxycycline are both licensed for the treatment of acne rosacea, which often accompanies blepharitis [[BNF 70, 2015 \(/blepharitis#!references/-315093\)](#)], and together with the fact that they require only once or twice daily dosing, these tetracyclines can be considered suitable options for the treatment of blepharitis.
 - Low doses are initiated, as the tetracycline is being used in an anti-inflammatory role rather than as an antibiotic [[Yanoff and Duker, 2013 \(/blepharitis#!references/-315093\)](#)].
 - The recommendation to consider longer courses of treatment (for example 3 months) is based on expert opinion of a previous external reviewer of this CKS topic [[Dart, Personal Communication, 2004 \(/blepharitis#!references/-315093\)](#)], expert opinion in the guideline *Blepharitis (inflammation of the lid margins)* [[The College of Optometrists, 2014 \(/blepharitis#!references/-315093\)](#)], and information in the BNF [[BNF 70, 2015 \(/blepharitis#!references/-315093\)](#)].

Referral

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When should I refer a person with blepharitis?

- **Refer for same-day ophthalmological assessment if:**
 - There are symptoms of corneal disease (such as pain and blurred vision).
 - The person experiences sudden onset of visual loss, *or*
 - An eye becomes acutely painful and red. See the CKS topic on [Red eye \(/red-eye\)](#) for more information.
- **Refer to an ophthalmologist (the urgency depending on clinical judgement) if:**
 - There is persistent localized disease despite optimal treatment in primary care.
 - Marked eyelid asymmetry or deformities (to exclude cancer of the eyelid margin).
 - There is associated cellulitis.

- o A gradual deterioration of vision.
- o There is associated disease, such as Sjögren's syndrome.
- o The diagnosis is uncertain.

Basis for recommendation

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These recommendations are based on the American Academy of Ophthalmology guideline *Blepharitis: Preferred Practice Pattern (PPP)* [[American Academy of Ophthalmology, 2013 \(/blepharitis#!references/-315093\)](#)] and what CKS considers to be good clinical practice.

Artificial tears and ocular lubricants

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Prescribing artificial tears and ocular lubricants

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Which artificial tear or ocular lubricant should I prescribe?

- For information on the management of dry eye syndrome associated with blepharitis, see the CKS topic on [Dry eye syndrome \(/dry-eye-syndrome\)](#). For information on the tear replacement and ocular lubricant products available in the UK, see [Table 1 \(/blepharitis#!prescribinginfosub:1/-315062\)](#).

Table 1 . Tear replacement and ocular lubricant products available in the UK.

Principal active ingredient	Products with preservatives	Products without preservatives	Comment
Hypromellose	Hypromellose (non-proprietary), Isopto Alkaline [®] , Isopto Plain [®] , Tears Naturale [®]	Artelac [®] SDU Hydromoor [®]	'Traditional' UK artificial tears; may require frequent application.
Carbomers	GelTears [®] , Liposic [®] , Liquivisc [®] , Viscotears [®]	Viscotears [®] (single dose)	Long acting; may require dosing only four times a day
Polyvinyl alcohol	Liquifilm Tears [®] , Sno Tears [®]	—	Increases the persistence of the tear film. Useful when ocular surface mucin is reduced
Carmellose sodium	—	Celluvisc [®]	—
Hydroxyethylcellulose	—	Minims [®] Artificial Tears	—
Povidone	—	Oculotect [®]	—

Sodium chloride	—	Minims [®] Saline	Short-acting 'comfort drops'; useful in contact lens removal
Paraffin (liquid and soft, yellow)	—	Lacrilube [®] , Simple Eye Ointment (non-proprietary)	Ointments do not usually contain preservatives
Acetylcysteine*	Ilube [®]	—	Active mucolytic ingredient - eye drops may sting briefly

* Prescription-only medicine (others are available over the counter).

Data from: [\[BNF 70, 2015 \(/blepharitis#!references/-315093\)\]](#)

Topical antibiotics

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Topical ocular antibiotics

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What general information should I be aware of when prescribing a topical ocular antibiotic?

- Eye drops should be used in preference to ointment if other eye drops are being used concurrently (for example for glaucoma).
- If two different topical eye preparations are used at the same time of day, inform the person that:
 - An interval of at least 5 minutes should be left between the application of two types of drops. This will help prevent any dilution and overflow that may occur if application of one preparation immediately follows another.
 - Eye ointment should be applied after drops.
- Contact lenses should not be used during treatment with topical antibiotics, or if untreated infection is present. Soft contact lenses should be avoided until at least 24 hours after treatment has been completed. For more information, see the section on [Treatment failure \(/blepharitis#!scenariorecommendation:2\)](#).
- Transient blurring of vision can occur with eye drops and people should be warned not to drive or operate machinery unless their vision is clear.
- If symptoms get worse despite treatment with a topical antibiotic, advise the person to seek medical advice. [\[ABPI Medicines Compendium, 2013c \(/blepharitis#!references/-315093\); ABPI Medicines Compendium, 2014b \(/blepharitis#!references/-315093\); ABPI Medicines Compendium, 2014a \(/blepharitis#!references/-315093\); BNF 70, 2015 \(/blepharitis#!references/-315093\)\]](#)

Contraindications and cautions

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Contraindications and cautions of topical antibiotics

- **Do not use topical chloramphenicol:**

- In people who have a history of hypersensitivity to chloramphenicol or to any other ingredient of the ointment or drops.
- In people who have experienced myelosuppression during previous exposure to chloramphenicol.
- In people who have a blood dyscrasia or who have a family history of blood dyscrasias.
- Concurrently with other myelotoxic drugs (such as azathioprine and methotrexate).
- In pregnant women (owing to the possibility of neonatal grey baby syndrome).
 - Fusidic acid is a suitable alternative if clinically appropriate[UKMi, 2013 (/blepharitis#!references/-315093)].

- **Do not use topical fusidic acid:**

- In people who have a history of hypersensitivity to fusidic acid or to any other ingredient of the drops.
- In people who wear contact lenses, as it may scratch the contact lens or cornea, and it contains preservatives (benzalkonium chloride), which may discolour soft contact lenses.

- **Topical chloramphenicol should be used with caution if the person is:**

- Breastfeeding — there is a theoretical risk of aplastic anaemia in the breastfed infant, although no evidence to support this.
 - Fusidic acid is a suitable alternative if clinically appropriate[UKMi, 2013 (/blepharitis#!references/-315093)].

- **Topical antibiotics should be used with caution if the person is:**

- Driving — should be avoided if ointment or drops causes blurred vision.
- Wearing contact lenses — should be avoided where possible (see the section on [Treatment failure \(/blepharitis#!scenariorecommendation:2\)](#) for more information).

[[ABPI Medicines Compendium, 2013c \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2014b \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2014a \(/blepharitis#!references/-315093\)](#); [BNF 70, 2015 \(/blepharitis#!references/-315093\)](#)]

Adverse effects

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Adverse effects of topical antibiotics

- **Topical chloramphenicol is relatively well tolerated.**

- The person may experience a transient stinging or a burning sensation in the eye.
- Hypersensitivity reactions (such as anaphylaxis, urticaria, and fever) are very rare.
 - If the person develops a hypersensitive reaction treatment must be discontinued immediately and the person should seek medical advice.
- Aplastic anaemia and bone marrow depression are very rare.

- **Topical fusidic acid has no reported serious adverse effects.**

- The person may experience a transient stinging or a burning sensation in the eye.

[[ABPI Medicines Compendium, 2013c \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2014b \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2014a \(/blepharitis#!references/-315093\)](#); [BNF 70, 2015 \(/blepharitis#!references/-315093\)](#)]

Oral tetracyclines

Contraindications and cautions

Contraindications and cautions of oral tetracyclines

- **Oxytetracycline and doxycycline are contraindicated in:**
 - Pregnant or breastfeeding women, or children younger than 12 years of age. Tetracyclines are deposited in the teeth and growing bones of the unborn or developing child, which can result in discolouration of teeth and occasionally dental hypoplasia.
 - People with acute porphyria.
- **Do not use oxytetracycline in:**
 - People with renal failure. Oxytetracycline is excreted renally.
 - Doxycycline may be used as the alternative in renal impairment.
- **Do not use doxycycline if:**
 - The person is likely to be exposed to excessive sunlight or ultraviolet light, owing to the risk of photosensitivity [[ABPI Medicines Compendium, 2013b \(/blepharitis#!references/-315093\)](#)].
 - Photosensitivity may also occur with oxytetracycline, but probably to a lesser extent [[Wolf, 2002 \(/blepharitis#!references/-315093\)](#)].
- **Use oxytetracycline and doxycycline with caution in:**
 - Hepatic impairment and those receiving potentially hepatotoxic drugs, such as carbamazepine, isoniazid, and methotrexate.
 - Myasthenia gravis — tetracyclines may increase muscle weakness in people with myasthenia gravis.
 - Systemic lupus erythematosus (SLE) — tetracyclines may exacerbate SLE symptoms.

[[ABPI Medicines Compendium, 2013a \(/blepharitis#!references/-315093\)](#); [BNF 70, 2015 \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2015b \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2015a \(/blepharitis#!references/-315093\)](#)]

Adverse effects

Adverse effects of oral tetracyclines

- **Most adverse effects are not serious. Common adverse effects are:**
 - Gastrointestinal disturbances such as nausea, vomiting, and diarrhoea.
 - Dysphagia and oesophageal irritation.
- **Other adverse effects include:**
 - Severe headache and/or visual disturbances — may be an early symptom of benign intracranial hypertension, a rare but serious adverse effect.
 - Severe oesophagitis.
 - Vulvovaginal candidiasis.
 - Photosensitivity.
 - Hepatotoxicity (rare).

Drug interactions

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Drug interactions with oral tetracyclines

- **Oral anticoagulants** — the concurrent use of warfarin with tetracyclines can increase the anticoagulant effect of coumarins.
 - Monitor the person's International normalised ratio (INR) regularly and within 3 days of starting the tetracycline. Adjust the warfarin dose accordingly.
- **Retinoids** — there is a possible increased risk of benign intracranial pressure if tetracyclines are used concurrently with retinoids (such as isotretinoin).
 - Avoid the concurrent use of tetracyclines and retinoids.
- **Antacids (containing aluminium, bismuth, calcium, or magnesium) and other medications containing iron or zinc** — these reduce the absorption of tetracyclines if taken concurrently.
 - Avoid taking antacids and other medications containing iron or zinc, within 2 hours before or after taking tetracyclines.
- **Milk** — the absorption of most tetracyclines is reduced by the calcium found in milk and other dairy products.
 - Doxycycline is less affected than oxytetracycline.
 - Oxytetracycline and tetracycline should be taken 1 hour before food or 2 hours after food. Doxycycline can be taken with food.
- **Carbamazepine** — doxycycline levels are reduced significantly in people taking long-term carbamazepine.

Advice for patients

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What advice should I give about tetracyclines?

- **Advise the person to:**
 - Stop treatment and seek medical advice if they develop severe headache and/or visual disturbances.
 - Take oxytetracycline on an empty stomach and in particular, milk should be avoided. Doxycycline may be taken with food.
 - Take oxytetracycline or doxycycline in an upright position with plenty of water, without chewing or breaking the tablets or capsules.
 - Avoid indigestion remedies such as antacids (or medicines containing iron or zinc), 2 hours before and after taking tetracyclines.
 - Avoid excessive exposure to sunlight and sunbeds if the person is taking doxycycline.

Search strategy

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Scope of search

A literature search was conducted for guidelines, systematic reviews and randomized controlled trials on primary care management of blepharitis.

Search dates

September 2012 - October 2015

Key search terms

Various combinations of searches were carried out. The terms listed below are the core search terms that were used for Medline.

- exp Blepharitis/, blepharit\$.tw.

Table 1 . Key to search terms.

Search commands	Explanation
/	indicates a MeSh subject heading with all subheadings selected
.tw	indicates a search for a term in the title or abstract
exp	indicates that the MeSH subject heading was exploded to include the narrower, more specific terms beneath it in the MeSH tree
\$	indicates that the search term was truncated (e.g. wart\$ searches for wart and warts)

Sources of guidelines

- [National Institute for Health and Care Excellence \(NICE\) \(http://www.nice.org.uk\)](http://www.nice.org.uk)
- [Scottish Intercollegiate Guidelines Network \(SIGN\) \(http://www.sign.ac.uk\)](http://www.sign.ac.uk)
- [Royal College of Physicians \(http://www.rcplondon.ac.uk/\)](http://www.rcplondon.ac.uk/)
- [Royal College of General Practitioners \(http://www.rcgp.org.uk/\)](http://www.rcgp.org.uk/)
- [Royal College of Nursing \(http://www.rcn.org.uk/development/practice/clinicalguidelines\)](http://www.rcn.org.uk/development/practice/clinicalguidelines)
- [NICE Evidence \(https://www.evidence.nhs.uk/topics/\)](https://www.evidence.nhs.uk/topics/)
- [Health Protection Agency \(http://www.hpa.org.uk\)](http://www.hpa.org.uk)
- [World Health Organization \(http://www.who.int\)](http://www.who.int)
- [National Guidelines Clearinghouse \(http://www.guideline.gov\)](http://www.guideline.gov)
- [Guidelines International Network \(http://www.g-i-n.net\)](http://www.g-i-n.net)
- [TRIP database \(http://www.tripdatabase.com\)](http://www.tripdatabase.com)
- [GAIN \(http://www.gain-ni.org/index.php/audits/guidelines\)](http://www.gain-ni.org/index.php/audits/guidelines)
- [NHS Scotland National Patient Pathways \(http://www.pathways.scot.nhs.uk/\)](http://www.pathways.scot.nhs.uk/)
- [New Zealand Guidelines Group \(http://www.nzgg.org.nz\)](http://www.nzgg.org.nz)
- [Agency for Healthcare Research and Quality \(http://www.ahrq.gov/\)](http://www.ahrq.gov/)
- [Institute for Clinical Systems Improvement \(http://www.icsi.org\)](http://www.icsi.org)
- [National Health and Medical Research Council \(Australia\) \(http://www.nhmrc.gov.au/publications/index.htm\)](http://www.nhmrc.gov.au/publications/index.htm)

- [Royal Australian College of General Practitioners \(http://www.racgp.org.au/your-practice/guidelines/\)](http://www.racgp.org.au/your-practice/guidelines/)
- [British Columbia Medical Association \(http://www.health.gov.bc.ca/gpac/index.html\)](http://www.health.gov.bc.ca/gpac/index.html)
- [Canadian Medical Association \(http://www.cma.ca/index.php/ci_id/54316/la_id/1.htm\)](http://www.cma.ca/index.php/ci_id/54316/la_id/1.htm)
- [Alberta Medical Association \(http://www.topalbertadoctors.org/cpgs.php\)](http://www.topalbertadoctors.org/cpgs.php)
- [University of Michigan Medical School \(http://ocpd.med.umich.edu/cme/self-study/\)](http://ocpd.med.umich.edu/cme/self-study/)
- [Michigan Quality Improvement Consortium \(http://mqic.org/guidelines.htm\)](http://mqic.org/guidelines.htm)
- [Singapore Ministry of Health \(http://www.moh.gov.sg/content/moh_web/home/Publications/guidelines/cpg.html\)](http://www.moh.gov.sg/content/moh_web/home/Publications/guidelines/cpg.html)
- [National Resource for Infection Control \(http://www.nric.org.uk\)](http://www.nric.org.uk)
- [Patient UK Guideline links \(http://www.patient.co.uk/guidelines.asp\)](http://www.patient.co.uk/guidelines.asp)
- [UK Ambulance Service Clinical Practice Guidelines \(http://www2.warwick.ac.uk/fac/med/research/hsri/emergencycare/jrcalc_2006/guidelines/\)](http://www2.warwick.ac.uk/fac/med/research/hsri/emergencycare/jrcalc_2006/guidelines/)
- [RefHELP NHS Lothian Referral Guidelines \(http://www.refhelp.scot.nhs.uk/index.php?option=com_content&task=view&id=490&Itemid=104\)](http://www.refhelp.scot.nhs.uk/index.php?option=com_content&task=view&id=490&Itemid=104)
- Medline (with guideline filter)
- [Driver and Vehicle Licensing Agency \(http://www.dft.gov.uk/dvla/medical/ataglance.aspx\)](http://www.dft.gov.uk/dvla/medical/ataglance.aspx)
- [NHS Health at Work \(http://www.nhshealthatwork.co.uk/oh-guidelines.asp\)](http://www.nhshealthatwork.co.uk/oh-guidelines.asp) (occupational health practice)

Sources of systematic reviews and meta-analyses

- [The Cochrane Library \(http://www.thecochranelibrary.com\)](http://www.thecochranelibrary.com) :
 - Systematic reviews
 - Protocols
 - Database of Abstracts of Reviews of Effects
- Medline (with systematic review filter)
- EMBASE (with systematic review filter)

Sources of health technology assessments and economic appraisals

- [NIHR Health Technology Assessment programme \(http://www.hta.ac.uk/\)](http://www.hta.ac.uk/)
- [The Cochrane Library \(http://www.thecochranelibrary.com\)](http://www.thecochranelibrary.com) :
 - NHS Economic Evaluations
 - Health Technology Assessments
- [Canadian Agency for Drugs and Technologies in Health \(http://www.cadth.ca\)](http://www.cadth.ca)
- [International Network of Agencies for Health Technology Assessment \(http://www.inahta.org\)](http://www.inahta.org)

Sources of randomized controlled trials

- [The Cochrane Library \(http://www.thecochranelibrary.com\)](http://www.thecochranelibrary.com) :
 - Central Register of Controlled Trials
- Medline (with randomized controlled trial filter)
- EMBASE (with randomized controlled trial filter)

Sources of evidence based reviews and evidence summaries

- [Bandolier \(http://www.medicine.ox.ac.uk/bandolier/\)](http://www.medicine.ox.ac.uk/bandolier/)
- [Drug & Therapeutics Bulletin \(http://dtb.bmj.com/\)](http://dtb.bmj.com/)
- [TRIP database \(http://www.tripdatabase.com\)](http://www.tripdatabase.com)

- [Central Services Agency COMPASS Therapeutic Notes](http://www.medicinesni.com/courses/type.asp?ID=CN)
(<http://www.medicinesni.com/courses/type.asp?ID=CN>)

Sources of national policy

- [Department of Health](http://www.dh.gov.uk) (<http://www.dh.gov.uk>)
- Health Management Information Consortium (HMIC)

Patient experiences

- [Healthtalkonline](http://www.healthtalkonline.org/) (<http://www.healthtalkonline.org/>)
- [BMJ - Patient Journeys](http://www.bmj.com/bmj-series/patient-journeys) (<http://www.bmj.com/bmj-series/patient-journeys>)
- [Patient.co.uk - Patient Support Groups](http://www.patient.co.uk/selfhelp.asp) (<http://www.patient.co.uk/selfhelp.asp>)

Sources of medicines information

The following sources are used by CKS pharmacists and are not necessarily searched by CKS information specialists for all topics. Some of these resources are not freely available and require subscriptions to access content.

- [British National Formulary](http://www.evidence.nhs.uk/formulary/bnf/current) (<http://www.evidence.nhs.uk/formulary/bnf/current>) (BNF)
- [electronic Medicines Compendium](http://www.medicines.org.uk) (<http://www.medicines.org.uk>) (eMC)
- [European Medicines Agency](http://www.ema.europa.eu/ema/) (<http://www.ema.europa.eu/ema/>) (EMA)
- [LactMed](http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT) (<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT>)
- [Medicines and Healthcare products Regulatory Agency](http://www.mhra.gov.uk/index.htm) (<http://www.mhra.gov.uk/index.htm>) (MHRA)
- [REPROTOX](http://www.reprotox.org/Default.aspx) (<http://www.reprotox.org/Default.aspx>)
- [Scottish Medicines Consortium](http://www.scottishmedicines.org.uk/Home) (<http://www.scottishmedicines.org.uk/Home>)
- [Stockley's Drug Interactions](https://www.medicinescomplete.com/mc/stockley/current/login.htm?uri=http%3A%2F%2Fwww.medicinescomplete.com%2Fmc%2Fstockley%2Fcurrent%2F) (<https://www.medicinescomplete.com/mc/stockley/current/login.htm?uri=http%3A%2F%2Fwww.medicinescomplete.com%2Fmc%2Fstockley%2Fcurrent%2F>)
- [TERIS](http://depts.washington.edu/terisweb/teris/) (<http://depts.washington.edu/terisweb/teris/>)
- [TOXBASE](http://www.toxbase.org/) (<http://www.toxbase.org/>)
- [Micromedex](http://www.micromedex.com/products/hcs/) (<http://www.micromedex.com/products/hcs/>)
- [UK Medicines Information](http://www.ukmi.nhs.uk/) (<http://www.ukmi.nhs.uk/>)

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Blepharitis - Summary

- Blepharitis describes inflammation of the margin of the eyelids.
- Chronic blepharitis can be classified according to which part of the margin of the eyelid is affected:
 - Anterior blepharitis — the base of the eyelashes (located on the anterior margin of the eyelid) are inflamed.
 - Posterior blepharitis — the meibomian glands (located on the posterior margin of the eyelid) are inflamed.
- It can also be classified by its cause, as:
 - Staphylococcal blepharitis.
 - Seborrhoeic blepharitis.
 - Meibomian blepharitis.
- Blepharitis is common and accounts for about 5% of all ophthalmological problems presenting in primary care. It is more common in older adults but can occur at any age.

- Blepharitis is a chronic condition. Treatment can control symptoms and prevent complications, however, periodic relapses and exacerbations can occur.
- Blepharitis should not permanently affect vision, provided that complications are adequately managed.
- The diagnosis of blepharitis is suggested by:
 - Characteristic symptoms such as itchy, burning, and sticky eyes.
 - The presence of associated conditions such as acne rosacea and seborrhoeic dermatitis.
 - The presence of dry eye syndrome.
- Investigations such as eye swabs for culture are not usually required in primary care.
- The differential diagnosis of chronic blepharitis includes squamous cell, basal cell, or sebaceous cell carcinoma of the eyelid margin, eczema, infection (such as impetigo), and infestation (such as pubic lice).
- Management of blepharitis includes:
 - Assessment to determine the severity and type of blepharitis.
 - Giving information about the natural history of the condition.
 - Advice on good eyelid hygiene, including advice to avoid eye make-up.
 - Consideration of topical antibiotics (such as chloramphenicol or fusidic acid) if initial treatment is unsuccessful.
- Referral for same-day ophthalmological assessment should be arranged if:
 - The person experiences sudden onset of visual loss, or
 - There are symptoms of corneal disease (such as pain or blurred vision). The eye becomes acutely painful and red.
- Referral (urgency depending on clinical judgement) should be arranged if:
 - There is persistent localized disease or marked eyelid asymmetry (to exclude eyelid malignancy).
 - There is associated disease, such as Sjögren's syndrome.
 - Vision deteriorates. Depending on clinical judgement, the person can be referred to an appropriately trained optometrist.
 - There are ongoing symptoms despite optimal treatment in primary care.
 - The diagnosis is uncertain.

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Have I got the right topic?

Age from 12 years onwards

This CKS topic covers the management of chronic blepharitis.

This CKS topic does not cover the management of acute infection of the eyelids, ulcerative blepharitis, or blepharitis caused by herpes simplex or Candida infection. It does not cover the wider management of conditions associated with blepharitis, such as dry eye syndrome, atopic eczema, acne rosacea, or seborrhoeic dermatitis.

There are separate CKS topics on [Dry eye syndrome \(/dry-eye-syndrome\)](#), [Eczema - atopic \(/eczema-atopic\)](#), [Herpes simplex - ocular \(/herpes-simplex-ocular\)](#), [Rosacea \(/topic-under-review\)](#), [Seborrhoeic dermatitis \(/seborrhoeic-dermatitis\)](#), and [Red eye \(/red-eye\)](#).

The target audience for this CKS topic is health care professionals working within the NHS in the UK, and providing first contact or primary health care.

How up-to-date is this topic?

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Diagnosis

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Diagnosis of blepharitis

- [Diagnosis](#)
- [Differential diagnosis](#)

Management

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- **[Scenario: Management \(/blepharitis#!scenario\)](#)** : covers the management of chronic blepharitis, including when to refer a person with blepharitis.

Prescribing information

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Important aspects of prescribing information relevant to primary healthcare are covered in this section specifically for the drugs recommended in this CKS topic. For further information on contraindications, cautions, drug interactions, and adverse effects, see the [electronic Medicines Compendium \(http://www.medicines.org.uk/emc\)](http://www.medicines.org.uk/emc) (eMC) (<http://www.medicines.org.uk/emc>), or the [British National Formulary \(http://www.evidence.nhs.uk/formulary/bnf/current\)](http://www.evidence.nhs.uk/formulary/bnf/current) (BNF) .

How this topic was developed

- [Search strategy](#)

References

ABPI Medicines Compendium (2013a) *Summary of product characteristics for Doxycycline 100mg capsules*. Electronic Medicines Compendium *Datapharm Communications Ltd*. www.medicines.org.uk [Free Full-text (<http://www.medicines.org.uk/emc/medicine/26378/SPC/Doxycycline+100mg+Capsules/>)]

ABPI Medicines Compendium (2013b) *Summary of product characteristics for Doxycycline 50mg Capsules*. Electronic Medicines Compendium *Kent Pharmaceuticals Ltd*. www.medicines.org.uk [Free Full-text (<https://www.medicines.org.uk/emc/medicine/26316/>)]

ABPI Medicines Compendium (2013c) *Summary of product characteristics for Chloramphenicol 0.5% w/v Eye Drops*. Electronic Medicines Compendium *Datapharm Communications Ltd*. www.medicines.org.uk [Free Full-text (<https://www.medicines.org.uk/emc/medicine/25612/>)]

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Supporting evidence

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The information and recommendations in this CKS topic are largely based on the Cochrane systematic review *Interventions for chronic blepharitis* [Lindsley et al, 2012 ([/blepharitis#!references/-315093](#))], expert opinion in the US guideline *Blepharitis: Preferred practice pattern (PPP)* [American Academy of Ophthalmology, 2013 ([/blepharitis#!references/-315093](#))], the British guideline *Blepharitis (inflammation of the lid margins)* [The College of Optometrists, 2014 ([/blepharitis#!references/-315093](#))], the textbook *Ophthalmology* [Yanoff and Duker, 2013 ([/blepharitis#!references/-315093](#))], and information from the British National Formulary (BNF) [BNF 70, 2015 ([/blepharitis#!references/-315093](#))], and the relevant

manufacturers' Summary of Product Characteristics [[ABPI Medicines Compendium, 2013c \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2013a \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2014a \(/blepharitis#!references/-315093\)](#); [ABPI Medicines Compendium, 2014b \(/blepharitis#!references/-315093\)](#)].

CKS found no relevant randomized placebo-controlled trials of treatments (lid hygiene, topical drug treatments, or oral antibiotics) for blepharitis. Evidence for the effectiveness of various treatments are therefore largely based on expert opinion.

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