Blepharitis
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What Is Blepharitis?
Blepharitis (pronounced blef-uh-RYE-tis) is one of the most common conditions affecting the eyelids. As its name implies, Blepharitis is a condition caused by inflammation of the eyelid margins. This is the area where the eyelashes meet the eyelids and presents with crustiness at the lash margin, much like dandruff. Blepharitis is often a chronic condition that is difficult to treat. Blepharitis can be uncomfortable and may be unsightly. But it usually does not cause permanent damage to your eyesight, and it is not contagious.

Who Gets Blepharitis?
As one of the most common eye conditions, it can affect any individual at any age, but is more common the older you get. It is not uncommon to suffer blepharitis without knowing that you have it. Mild cases often go unnoticed.

Bacteria that live on everybody's skin can cause blepharitis in some people and is usually the commonest cause. A build-up of dandruff like flakes on the eyelid margin are often a cardinal sign.

Skin conditions, like Rosacea and eczema may also cause blepharitis.

What Are the Symptoms of Blepharitis?
There are many symptoms and signs of blepharitis which vary in severity from person to person. These include:

- Watery eyes.
- Red eyes.
- A gritty, burning, or stinging sensation in the eyes.
- Eyelids that appear greasy.
- Itchy eyelids.
- Red, swollen eyelids.
- Flaking of the skin around the eyes.
- Crusted eyelashes upon awakening.
- Eyelid sticking.
- More frequent blinking.
- Sensitivity to light.
- Eyelashes that grow abnormally (misdirected eyelashes).
- Loss of eyelashes

On rare occasions more severe complications may occur, including:

- Corneal ulceration.
- Lid cyst formations.
- In turning of the eyelid margins.
How Is the Diagnosis Made?
There is no magic test that diagnoses blepharitis. This is usually on clinical examination by your doctor or optometrist.

Your ophthalmologist will carefully examine your eyelids and your eyes using a special piece of equipment called a slit lamp.

What is the Treatment for Blepharitis?
As stated above, there is no cure for blepharitis. Self-care measures, such as washing your eyes and using warm compresses, may be the only treatment necessary for most cases of blepharitis. If that is not enough, your doctor may suggest prescription treatments, including:

- **Medications that fight infection.** Antibiotics applied to the eyelid have been shown to provide relief of symptoms and resolve bacterial infection of the eyelids. These are available in a variety of forms, including eyedrops, creams and ointments. If you don't respond to topical antibiotics, your doctor may suggest an oral antibiotic.

- **Medications to control inflammation.** Steroid eyedrops or ointments may help control inflammation. Your doctor may prescribe both antibiotic and anti-inflammatory drugs.

- **Medications that affect the immune system.** Topical cyclosporine (Restasis) is a calcineurin inhibitor that has been shown to offer relief of some signs and symptoms of blepharitis.

- **Treatments for underlying conditions.** Blepharitis caused by seborrheic dermatitis, rosacea or other diseases may be controlled by treating the underlying disease.

Blepharitis rarely disappears completely. Even with successful treatment, the condition frequently is chronic and requires daily attention with eyelid scrubs. If you don't respond to treatment, or if you've also lost eyelashes or only one eye is affected, the condition could be caused by a localized eyelid cancer.

Self-care measures such as the following may be the only treatment necessary for most cases of blepharitis.

**Clean Your Eyes Daily**
If you have blepharitis, follow this self-care remedy two to four times a day during flare-ups and once or twice a day after the condition is under control:

- Apply a warm compress over your closed eye for several minutes to loosen the crusty deposits on your eyelids.
- Immediately afterward, use a washcloth moistened with warm water and a few drops of diluted baby shampoo to wash away any oily debris or scales at the base of your eyelashes. Use a different clean cloth for each eye.
- In some cases, you may need to be more deliberate about cleaning the edge of your eyelids where your eyelashes are located. To do this, gently pull your eyelid away from your eye and use the washcloth to gently rub the base of the
lashes. This helps avoid damaging your cornea with the washcloth. Ask your doctor whether you should use a topical antibiotic ointment after cleaning your eyelids in this way.

➢ Rinse your eyelids with warm water and gently pat it dry with a clean, dry towel.

It also may be a good idea to stop using eye makeup when your eyelids are inflamed. Makeup can make it harder to keep your eyelids clean and free of debris. Also, it's possible that makeup could reintroduce bacteria to the area or cause an allergic reaction.

**Lubricate Your Eyes**

Try over-the-counter artificial tears. These lubricating eyedrops may help relieve dry eyes.

**Demodex Blepharitis**

Demodex blepharitis is a special type of blepharitis with the mites being one of the most common causes of blepharitis, yet it remains an often-overlooked differential diagnosis.

Demodex is an ectoparasite mite which colonises the skin of many animals. In humans, two species occur. Demodex Folliculorum is found in the eyelash follicles and Demodex Brevis lives deeper in the meibomian glands and sebaceous glands of the lashes.

The prevalence of Demodex is quoted as 84% of the population at age 60 and 100% of those older than 70 years. In our Edinburgh optometry practice, we find around 15% of all patients show the signs.

You cannot see them yourself on your eyelashes because they are not there! We use slit lamp biomicroscopy x40 magnification. They reside inside the skin at the base of eyelashes, and they hate light.

At night male Demodex leave the hair follicles moving slowly at 6-8mm/ hour to find a female and mate. Eggs are laid just inside the eyelash follicle. Nymphs hatch 3-4 days later, and they take about a week to develop into adults. The total lifespan of a Demodex is 18 days. Outside of the body a Demodex can survive 56 hours in a drop of oil. The mites have eight claws at the front which they use for locomotion, and they feed off the sebum-oil surrounding eye lash follicles.

The characteristic sign of Demodex is cylindrical dandruff (CD) at the base eyelashes and is a mixture of keratinised epithelial cells and sebum likely caused by Demodex clawing in and out of the eyelashes at night. The mites carry bacteria, such as staphylococci.

- Up to 5 -10 CD lashes mild - moderate (*easier to treat*).
- More than 10 CD mod - severe (*harder to eradicate*).

Treatment is based on waiting for eggs to hatch killing the mites and preventing them mating.
**Demodex Treatment**

The issue with Demodex mites is that they are in all hair follicles if you have them including eyebrows and possibly the hair. So, the treatment must be systemic with Tea Tree oil. This means that you should change to Tea Tree oil shampoos and leave this in place on your head before washing for several minutes. You should also use Tea Tree oil soaps to wash your face on a regular basis at least twice a day and again allow the soap to soak into your eyebrows and eyelashes to ensure that as many mites are killed as possible.

In terms of using Tea Tree oil scrubs these are very important and they usually come at 100% in terms of an oil. This can be diluted to 50% or 20% using olive oil or walnut oil. The idea would be that you use cotton buds to emulsify the eyelashes and the eye lids up to the lid margin but avoid the eye with the Tea Tree oil and leave these in place for approximately 10 minutes before washing off. This should be repeated every 10 minutes for 30 minutes at least twice a day. This means that you will have a half an hour treatment in the morning and in the evening to help alleviate the symptoms. The treatment course is a minimum of 8 weeks, and I would therefore be grateful if you could continue for this length of time. You can use Ocusoft eye scrubs, which will help with the removal of the blepharitis. You will also notice that your symptoms will get far worse in the early stages of the treatment in the first few weeks then better. This is to be expected as the death of most of these mites does cause a reaction locally and until this start to die off things will probably not improve significantly.

You may have now read about Demodex mites, and these require a long time to eradicate. The eradication involves killing any nesting eggs also as well as the actual mites. Therefore, the treatment must be sustained for a period of 8 weeks possibly longer.

You may also use Ocusoft plus lid wipes for the eyelids once daily for 30 days. One wipe can be used for both eyes.

It is also important once you have started treatment to then look at your bedding, linen, and towels. It is possible that these mites are within your bedding and therefore you should either purchase new bedding after a week of treatment or try appropriate boiling/washing of your bed sheets, pillows, and duvets. This includes your towels.