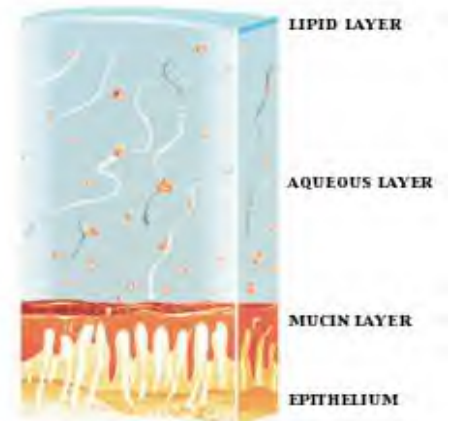


**Blepharitis is an inflammation of the lid margins (where the lashes grow from the lids). The lids have glands (Meibomian Glands) which secrete lipids (oils), an important part of the tear layer.**

Tears actually have three layers:

- 1) Mucous (closest to the eye) helps hold the tears onto the eye surface.
- 2) A thick water layer lubricates and carries nutrients
- 3) The thin lipid layer, produced by the meibomian glands, stops the tears evaporating and holds them upright. So while the oil layer is very thin it is vital in ensuring the eyes feel comfortable.



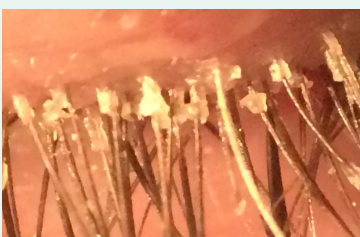
## What is blepharitis?

In blepharitis the meibomian glands become blocked and infected. Lipid secretion is reduced and of poor quality. Cosmetically the lids can look red and inflamed. The lids can become encrusted which can feel uncomfortable. The poor lipid production will severely reduce tear quality making the eyes feel irritable, gritty or itchy. Finally the eyes may also tear excessively because the lids and lipids are unable to support the tear layer. Some people are prone to blepharitis but it will be aggravated by smoky, dusty or dry atmospheres. Topical and systemic antibiotics may help, but since it is a chronic problem it will recur once the medication course is completed. Long term control of the problem is difficult but the modern treatments outlined in this Fact Sheet are much more effective and as Medical Optometrists, we can actively treat, rather than simply manage the problem.

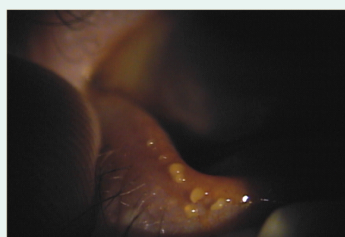
## Types of Blepharitis

Anterior Blepharitis, Posterior Blepharitis, Hordeolum (Stye) and Chalazia all involve lid glands. Styes are infections of the glands and are painful - these usually resolve but for recurrent or chronic styes we can prescribe a course of systemic antibiotics (Doxycycline or Lymecycline).

Chalazia form when the glands are fully blocked. These are not infected and not painful. However they are difficult to resolve. Surgically they can be excised but this is not done routinely anymore, heat and expression (See page 2) is the treatment of choice but it does not always work. It is better to deal with blepharitis to prevent these more significant episodes occurring.



**Anterior Blepharitis**



**Posterior Blepharitis**



**Anterior Hordeolum (Stye)**



**Chalazion**

# Self Management: Traditional Lid Hygiene

For long term, self management, lid hygiene techniques are vital but are a little time consuming. The introduction of dedicated medications makes the process much easier but must be done regularly to be effective. Once the condition is controlled a maintenance regime, perhaps 3 times per week is recommended. There are four steps which may be modified depending on severity.

## Step 1: Heat

The traditional method of heating a flannel and holding it over the closed eyes is time consuming and does not melt the oils. We now recommend OPTASE Moist Heat Mask. The mask absorbs moisture releasing constant, and importantly, moist heat. The Moist Heat Therapy generates enough heat to penetrate deep into the lid. Warming and softening the blocked lipids allows effective expression, improves outflow while also softens eyelash debris improving tear film lipid quality. This reduces evaporation of natural tears and restores moisture to the eye and surrounding area.

## Step 2: Self Expression

Once the glands and gland fluids are warm, the lids are squeezed to express the contents. This can be done by massaging the lids or, at least for the lower lid, squeezing the lid between thumb and index finger. The upper lid is more difficult to massage manually. A more vigorous method is to use an EyePeace. Developed by ophthalmologists, the device is recommended for once a day use, applying 5 to 10 'squeezes' on each occasion. This device is quick and easy and does both upper and lower lids simultaneously.



## Step 3: Lid Washes

Once expressed, the closed lids should be gently washed in warm water. This does not need to be sterile. This will wash away any of the gland oils so they cannot solidify on the lids, blocking the glands and allowing toxins to accumulate.

## Step 4: Ophthalmic Lid Wipes

Finally, use lid wipes to sterilise the lid margins and reduce recurrence. There are a number of excellent wipes available, we recommend the Optase Cleansing Gel because:



1. Easily used during showering therefore improving compliance
2. Non-Toxic for the environment and the container is recyclable.

Modern wipes do more than sterilise, they add hyaluronate, chamomile & Aloe Vera, to soothe and hydrate the lids.

### Demodex

If the blepharitis is caused by the mite Demodex a more vigorous wipe, with concentrated Tea Tree oil is required. Cliradex does sting and is only used for Demodex. Applied once a week with standard wipes in between.

# Practice Management: Gland Expression - Blephex

## STEP 1. Meibomian Gland Expression: Posterior Blepharitis

The International Workshop on Meibomian Gland Dysfunction recommends performing meibomian gland expression at the earliest clinical sign. Prior to expression, a heat mask is applied for 10 minutes to soften the gland oils which will improve the effectiveness of expression.

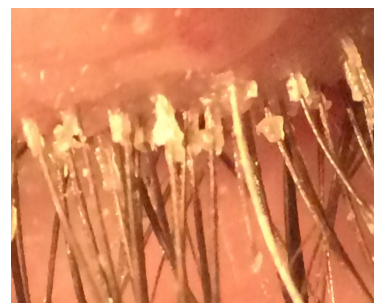
Next topical anaesthetic is instilled. Starting with the lower lid, the patient looks up and the paddles are aligned against the outer and inner surface of the lids. Moving from the nose toward the outer lid the lids are gently squeezed between the paddles to express the thickened oils. For the upper lid the patient looks down and the upper lid is pulled slightly off the eye. A similar procedure expresses the glands in the upper lid.



## STEP 2. Blephex: Anterior Blepharitis

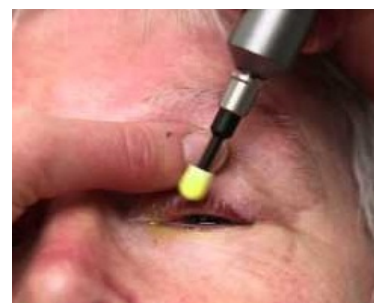
Because debris builds up on the eyelids and hardens, it forms a layer blocking the openings to the meibomian glands. Further, this allows bacteria and toxins to reduce lipid production. The blockage coupled with increased bio-load cause irritation.

The Blephex treatment involves a soft, medical grade sponge moving across the eyelid margins. As the implement spins it removes debris, bacteria and toxins from the lid margins keeping the glands clean and open.



Both Therapeutic Expression of the glands and Blephex must be performed by a trained clinician in the practice. The procedure must be repeated, usually every six months but more frequently in difficult cases.

To be fully effective, in between treatments the usual lid hygiene regime should be maintained.



## Medical Optometrists Only - Prescription Only Medications

### Topical 'Soft' Steroids

Prescribing short-term soft steroid (Fluorometholone) ointment overnight can improve symptoms when used over two to four weeks for posterior blepharitis.

### Systemic Antibiotics

As Medical Optometrists we may prescribe, for severe cases, a course of Doxycycline or Lymecycline for 6 weeks to control acute flare-ups, reduce inflammation and stabilise the lipid layer. This however, must be followed with ongoing lid hygiene.

As Medical Optometrists we feel it is important to mirror the clinical management recommendations of the ophthalmology department at the Royal Victoria Infirmary. All lubricants, wipes and tablets prescribed by us are those recommended by them.

## Lubricants

All drops contain Sodium Hyaluronate, an effective moisturiser found in nature which also mimics natural tears. Hyabak and Hycosan Fresh are recommended for irritated or mild dry eye. Our general purpose drops.

**Hyabak:** Viscosity matches natural tears so there is no stickiness or blurriness after application.

**Hycosan Fresh:** Contains Euphrasia a natural anti-inflammatory helping de-congest eyes and eyelids relieving eye fatigue symptoms.

**Hycosan Dual** with the addition of Ectoin forms a natural dual barrier against environmental pollen, dust particles and animal hair. Stabilises the tear film and lipid layer in Posterior Blepharitis.

**Hycosan Extra and Theoloz Duo** are our drops of choice when there is significant corneal staining.

**Theoloz Duo:** Trehalose protects epithelial cells on the ocular surface, improving their resistance to daily stresses of dry environments.

**Hycosan Extra** has a high resting viscosity but with little or no blurring of vision.

**Hycosan Night** soothes dry, itchy eyes while you sleep. Contains Vitamin A, beneficial for Goblet Cells which produce the mucous component of the tear layer. For improvement of the tear film and protection of the ocular surface.



## Lid Cleaning

**Blephasol** aqueous solution for gentle cleansing of eyelids and lashes. Will also remove make-up, including waterproof mascara and eyeliner.



**OPTASE Lid Wipes** a gentle formulation with Tea Tree Oil and Sodium Hyaluronate.



### OPTASE Eye Lid Cleansing Gel

massaged in to the eye lid and lashes creates a foam which removes impurities, dirt, debris and make up from the eyelids and the base of the eyelashes. It soothes and purifies the eye lid and leaves the eyes feeling fresh and clean.



## Liposomals

### OPTASE EyeSpray.

Liposomals supply an artificial oil layer. Relieving symptoms these are recommended when the glands no longer function.



## Heat Masks

### OPTASE Moist Heat Mask

The mask absorbs moisture releasing constant and importantly moist heat. The Moist Heat Therapy softens Meibomian glands oils, improving outflow while also softening eyelash debris improving tear film lipid quality. This reduces evaporation of natural tears and restores moisture to the eye and surrounding area.



## Omega 3 Supplements

**Omega Vision (Medical Grade Omega 3)** capsules specifically contain RTG (re-esterified triglyceride), the correct form of Omega 3. Omega Vision is recommended to relieve the symptoms of ocular surface disease from within. Four capsules daily provide a therapeutic dose of 2.2 gms of EPA and DHA (the only essential fatty acids proven to have health benefits) giving the necessary amount of anti-inflammatory benefits. Omega Vision also contains Vitamin D3. Contaminant free & free of PCB's and Toxins. Recommended by the Eye Department in the RVI.