



## BLEPHARITIS

The medical term « blepharitis » means « irritation of the eyelids ».

This covers a wide variety of locations, presentations and origins: **blepharitis may affect the skin of the eyelids, the eyelashes and/or the glands embedded into the eyelids, that produce an oil mixing into the tears.**

**It can result from an infection**, from a chronic skin condition such as atopy, seborrheic dermatitis or rosacea, or from a malfunction of the eyelid glands<sup>1</sup>. **It may be acute or chronic**, with chronic being the more common form<sup>2</sup>, and is frequently associated with dry eye and ocular surface irritation .

Blepharitis may affect people of all ages, including children, ethnicities, and gender. It is more common in individuals older than the age of 50 .

Reading these lines, you may think that blepharitis looks like a big shopping bag with lots of different things in it, but as there is considerable overlap of origins, symptoms and treatments in all types of blepharitis , it is more like a full-fledged entity with some variations.



Irritated eyes



Itchy eyes



Red eyes



Sight Trouble



Sore eyes



Sticky eyes



Watery Eyes

## CAUSES

### WHAT CAN CAUSE BLEPHARITIS?

The exact mechanisms of blepharitis are not known. The cause is most likely multifactorial, which means that several predisposing factors may be involved<sup>2</sup>.

**Some skin conditions are often associated with blepharitis:**

- **Seborrheic dermatitis** is a common form of eczema with dandruffs and flaky patches of skin that usually affects parts of the body with lot of oil-producing (sebaceous) glands: mainly the scalp, but also other locations like the sides of the nose and the upper part of the back<sup>3</sup>. Patients with seborrheic blepharitis frequently have seborrheic dermatitis of the eyebrows and scalp as well<sup>4</sup>. This condition is thought to be an overreaction of the immune system in response to an overgrowth of *Malassezia* yeast, an organism normally present on the skin<sup>4</sup>.
- **Rosacea** is a long-term inflammatory skin disease that causes reddened skin, flushing and small visible vessels, usually on the nose and cheeks. It may also cause eye problems<sup>4</sup>.
- **Atopic dermatitis** is a chronic skin disease consisting in very dry skin and eczema. It is associated with allergies<sup>5</sup>.
- **Psoriasis** may also be associated with blepharitis<sup>4</sup>.



#### **A dysfunction of the Meibomian glands may result in blepharitis.**

These tiny glands, called « *Meibomius glands* », named after the doctor Heinrich Meibom, who first described them in 1666, are embedded into the eyelids: twenty to thirty glands are located in the lower lid, and thirty to forty are located in the upper lid<sup>6</sup>.

They produce an oily secretion called « meibum », more or less similar to the sebum from sebaceous glands in the skin. Meibum mixes with the tears and spreads onto the ocular surface, to ensure its lubrication<sup>6</sup>. Normal meibum is an oily liquid, but when the Meibomian glands are dysfunctional, the meibum thickens and its draining becomes slower, clogging the gland.

Patients with Meibomian Gland Dysfunction (MGD) frequently have also rosacea or seborrheic dermatitis<sup>4</sup>.

**Demodex** is a mite normally present on the skin. On the eyelids, it inhabits the root of the eyelashes. An overgrowth of the *Demodex* mite population is thought to contribute to Meibomian gland dysfunction and blepharitis<sup>2</sup>.

**Blepharitis may also be the result of a bacterial infection**, mainly by *Staphylococcus Aureus*<sup>1,2</sup>.

**Dry eye, like blepharitis**, is a frequent consequence of all the aforementioned conditions and is often found associated with blepharitis<sup>1</sup>.

**Some medications are known to induce blepharitis**: oral treatments for acne (vitamin A acid derivatives) and for severe atopic dermatitis (monoclonal antibody)<sup>1</sup>.

## **SYMPTOMS**

### **WHAT ARE THE SYMPTOMS OF BLEPHARITIS?<sup>1</sup>**

Symptoms of blepharitis may be:

- Red, irritated eyelids, sore eyelids, swollen eyelids
- Burning, itching (of the eyelids and more globally of the eye),
- Crusting of eyelashes, loss of eyelashes,
- Watery eyes or tearing,
- Eyelid sticking,
- Blurring or fluctuating vision,
- Contact lens intolerance,
- Photophobia (discomfort or even pain with strong light),
- Increased frequency of blinking,
- Recurrent chalazion.

## DIAGNOSTIC

### HOW TO DIAGNOSE BLEPHARITIS PROBLEM?

Blepharitis is a clinical diagnosis<sup>2</sup> made by your eye care professional that mostly does not need investigations.

**In cases of recurrent blepharitis with severe inflammation as well as for patients who are not responding to therapy**, your ophthalmologist may decide to perform additional tests:

- Eyelids swabs, for bacterial search.
- Observation through a magnifying glass, that may show collarettes around the base of the eyelashes, which are typical of Demodex mites. Microscopic observation of epilated eyelashes may show the mites themselves, but they are very shy and don't often agree to show off.
- Several techniques and recent devices may be used to evaluate the Meibomian gland function<sup>1</sup>.

## TREATMENT

### WHAT TREATMENTS ARE AVAILABLE FOR BLEPHARITIS?

**Eyelid cleansing and massaging is the mainstay of treatment and effective in treating most cases of blepharitis<sup>2</sup>**. Once- or twice-daily is generally adequate ??.

**Refrain from touching or scratching your eyelids when itching, to avoid further irritation or infection<sup>1</sup>**. **Clean your hands before performing the eyelid cleansing.**

- **Warm**, wet compresses or a heating mask applied to the eye for 5 to 10 minutes soften the eyelid debris and the thickened meibum<sup>2</sup>.
- Then, a vertical **massage of the eyelids** with a clean finger, compress or wipe helps to express the meibum and unclog the glands<sup>1</sup>.
- Last, use a wet compress or an impregnated **eyelid cleansing** wipe to gently rub the eyelids from side to side, to remove crusting from the lashes??.

**In case of bacterial<sup>2</sup> infection**, topical antibiotic creams applied on the edge of the lids, around the eyelash base, may be prescribed during 2 to 8 weeks<sup>2</sup>.

Some specific oral antibiotics may be used to treat Meibomian gland dysfunction not responsive to eyelid hygiene or associated with rosacea. These oral antibiotics are used for their anti-inflammatory and lipid regulating properties??.

In some cases, a brief course of topical corticosteroids may be helpful for eyelid or ocular surface inflammation. Corticosteroid eye drops or ointments are applied several times daily to the eyelids or ocular surface. Once the inflammation is controlled, the corticosteroid can be tapered and discontinued and if necessary, may be used intermittently to maintain ocular comfort??.

**Artificial tears can be helpful for blepharitis associated with Meibomian gland dysfunction and dry eye<sup>1</sup>**.

When the blepharitis does not improve with these treatments, a Demodex mite infestation may be suspected. Recalcitrant blepharitis have been improved by therapy directed at decreasing or eradicating the Demodex mites??.

Several in-office procedural treatments have been proposed to improve the meibomian glands, but lack solid evidence of efficiency yet:

- Intense pulsed light (IPL)
- Unclog the meibomian glands by mechanical means (e.g., microblepharoexfoliation of the eyelid margin, meibomian gland probing, and/or devices using thermal pulsation)??.

### WHAT ABOUT CONTACT LENSES AND MAKEUP IN CASE OF BLEPHARITIS?

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## WHEN SHALL I SEEK MEDICAL ATTENTION FOR BLEPHARITIS?

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## WHAT IS THE DIFFERENCE BETWEEN BLEPHARITIS AND CONJUNCTIVITIS?

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## IS BLEPHARITIS CONTAGIOUS?

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## CAN BLEPHARITIS BE DEFINITELY CURED?

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