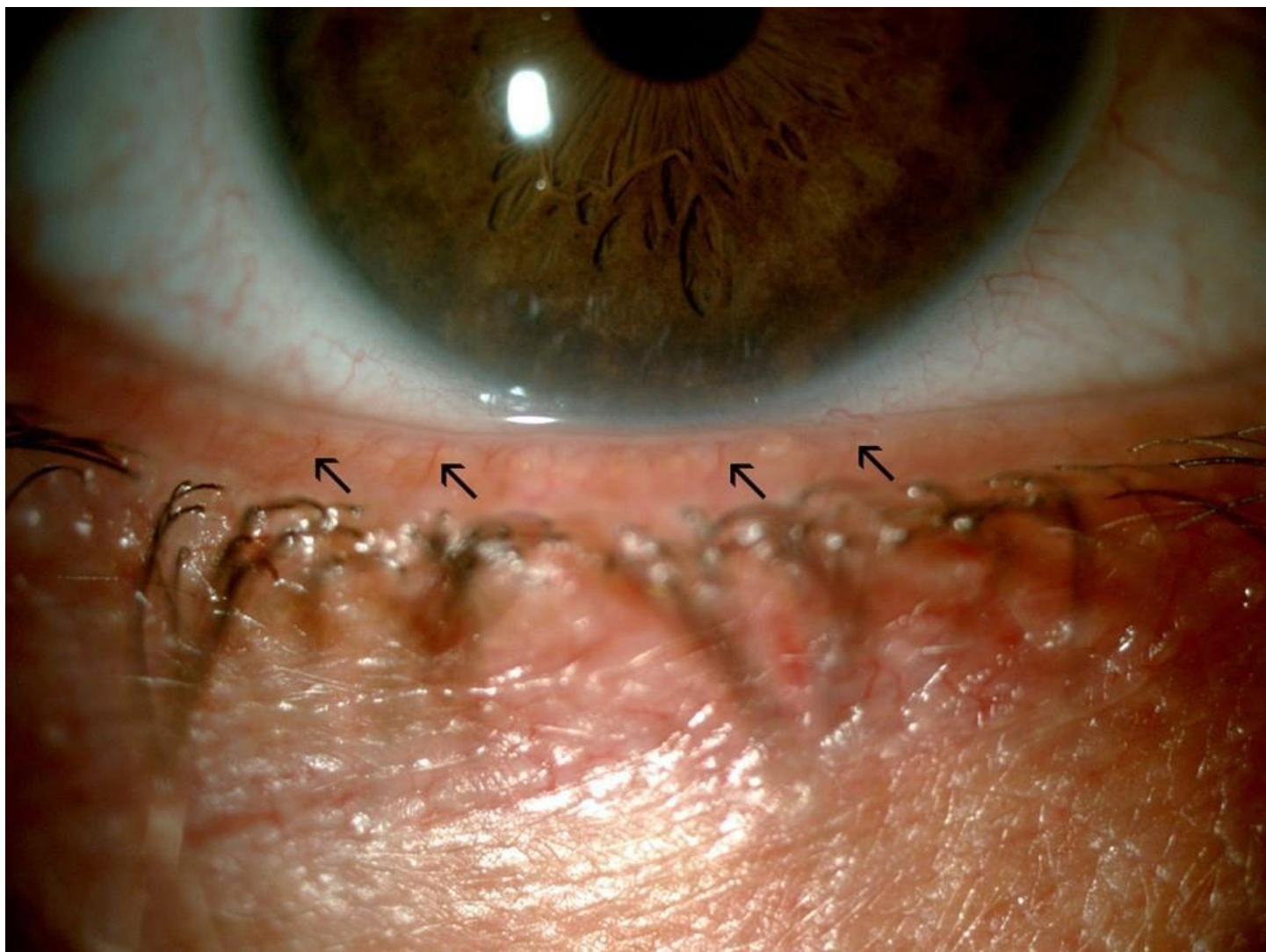


# Meibomian Gland Dysfunction and Treatment



**Figure 1.** Lower eyelid with signs of MGD: Clogged oil glands, small blood vessels (arrows) by the oil glands and redness of the eye. These signs may be seen with a microscope in the ophthalmologist's office.



## HOW DOES MEIBOMIAN GLAND DYSFUNCTION (MGD) AFFECT THE EYES?

In the early stages, patients may not notice anything, but if left untreated, MGD can cause eye symptoms. Clogged glands eventually disappear and become unable to make oils for the eye.

Signs and symptoms of MGD include

- Dryness
- Burning
- Itching
- Redness
- Stickiness or crusting
- Watering
- Blurry vision that comes and goes
- Foreign body sensation or the feeling that something (like dirt or sand) is in the eyes

Eyelid inflammation from MGD may also cause styes or chalazia to form on the eyelids. These different signs and symptoms of MGD may come about slowly and may be hard to see.

## HOW IS MGD TREATED?

There are different treatments to help MGD. These include warm compresses, antibiotic or steroid eye drops, artificial tear eye drops, and antibiotics by mouth. Your ophthalmologist may recommend one or more of these treatments depending on the severity of MGD. They may also discuss ways to improve eyelid/eyelash health by cleaning off crusting, dead skin, oil and bacteria that build up on the eyelid margins.

### 1) WARM COMPRESSES

Applying heat to the eyelid margins helps oils flow better out of the eyelid glands and melts the “thickened” oil that is blocking the eyelid glands.

Place a warm (not too hot) wet washcloth gently to the closed eyes to apply heat on the eyelids. Leave in place for four to five minutes. There are also eye masks and pads with gel beads that can be warmed in the microwave and used for warm compresses. Warm compresses should be done at least twice a day when the MGD symptoms are bad, and once a day to keep MGD from coming back or getting worse. As this is a chronic condition, warm compresses may be needed for weeks to months.

In the recent years, electronic eyelid heating devices have become available. These machines are used in the office to heat eyelids for longer periods of time and can be



helpful in cases of failed regular at-home warm compress treatments. Speak with your ophthalmologist if you have questions about this treatment.

## **2) MASSAGE**

Massage can be done immediately after applying the warm compress. Apply light pressure with your fingertips to the lid margin just above the eyelashes. Older children and teenagers may perform the massage by themselves once they understand the technique. Roll the finger upward on the lower lid while looking up, then roll the finger downward on the upper lid while looking down. Pressure from the thumb and pointer finger may also be used to massage the eyelids. Using too much pressure with massage may cause pain and more irritation, so be careful not to press too hard on the eyelids.

## **3) EYELID SCRUBS**

Washing the eyelids helps remove oil, bacteria and crusting which can block the oil gland openings. Use a Q-tip, your fingers, or a warm washcloth on the tips of your fingers to gently wipe along the eyelashes on the top and bottom eyelids. You can use a mild soap like Cetaphil or CeraVe or dilute baby shampoo (a few drops in a small cup of water). It is best to use a soap which will not burn or irritate the eyes. Ask your ophthalmologist if you have questions about what types of soaps to use. Eyelid scrubs may need to be done once a day or few times a week, depending on what your ophthalmologist recommends.

## **4) OMEGA- 3 FATTY ACID: FLAX SEED and FISH OIL**

In addition to the above treatments, studies show that boosting your child's diet with essential (omega-3) fatty acids can help with MGD. Omega-3 fatty acids can help the meibomian glands make better oils to moisturize the eyes.

Flax seed oil and fish oil are excellent sources of omega-3 fatty acids. For flax seed oil, try 1 teaspoon/day for toddlers or 1 tablespoon/day for older children. Mix with juice, smoothies, or hot cereal. Do not use flax seed oil if your child is on blood-thinning medication or blood-sugar lowering medication.

There are several companies which make "kid friendly" fish oil and flax seed oil liquids and gummies (Nordic Naturals and Barleans are two examples). If your child can take pills, there are several over the counter tablets/capsules which can be taken instead. Please talk to your child's pediatrician to be sure that omega-3 vitamins are safe for your child.

## **5) ANTIBIOTICS**

Although MGD is not an eyelid infection, antibiotics can help with the inflammation and bacteria that cause MGD. Your ophthalmologist may prescribe either an antibiotic eye



drop, an antibiotic eye ointment or antibiotics by mouth. Please be sure to follow the directions for any antibiotics prescribed for MGD, they may be different than what you have done with antibiotics for other problems.

MGD is a common condition seen in both children and adults. Newer treatment options are becoming available such as intense pulsed light treatment, surgery options, and immune based eye drops. It is important to talk to your child's primary care physician and ophthalmologist to see what treatment options may be best for your child's needs.

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