

BLEPHARITIS AND MEIBOMIAN GLAND DYSFUNCTION

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The Meibomian glands are a row of over 40 oil-producing tubes that open along the lid borders. The oil keeps the lid margin feeling smooth and waxy, and once spread across the eye by blinking it transforms the water droplets that make up tears into a uniform layer called the tear film that resists evaporation and is optically stable. Meibomian gland dysfunction is a collective term for a group of conditions that cause a lack of this oily secretion. Since Meibomian glands atrophy with age it is common in the elderly, but in younger people may occur for a variety of reasons, one of which is inflammation. Inflammation at the lid margin is called blepharitis. It produces signs and symptoms from the inflammation as well as symptoms from blocked Meibomian glands. Meibomian gland dysfunction causes dry eye symptoms, where 'dry' refers to **oil** not water. The abnormal tear film causes a watery eye; an increased frequency of blinking that interrupts visual tasks, and abnormal sensitivity to cold air. A lack of oil at the lid margin causes itch, a gritty discomfort, and sometimes eyelash debris (dried mucous). If blepharitis is present the additional symptoms include a 'red rimmed' look, tear film debris, episodes of burning discomfort, and often a false diagnosis of conjunctivitis. Antibiotics given after a false diagnosis of conjunctivitis aggravate the symptoms of blepharitis. Other causes of persistent disease include environmental irritants, the presence of chronic skin disease like Rosacea or Demodex infestation, systemic diseases, and chemotherapy. Complications include loss of lashes, ingrowing lashes, Chalazia, and marginal corneal diseases including painful ulcers.

TREATMENT

NIGHT TIME

- 1) Soften the Meibomian gland contents with heat. Use a hot flannel, wheat pack, gel mask or 'Eye bag' for 4 minutes. Use the maximum heat possible without burning then try to empty the Meibomian glands with lid massage. Start at one end of the lid and work your way along.
- 2) Remove lash debris with either 'Sterilid,' or dilute bicarbonate solution (1/2 tsp. : 1 cup water)
- 3) Flush the tear film with artificial tears. Any preservative free preparation is suitable but the multi use preparations Optive Advanced, Optive, Systane Balance, or Hylo are equally effective.
- 4) Once in bed apply 2 to 3 'match heads worth' of Vitapos (Meibomian gland dysfunction), or Hycor ointment (blepharitis) onto a finger tip, close the eye, then rub a thin layer along the full width of the lids. This is treating the 'windscreen wipers, not the windscreen'. Re-apply if you get up frequently in the night.

DAY TIME

- 5) Increase your dietary intake of fish, nuts, and seeds (**Omega 3**) and minimize meat, dairy products, pastries and fried foods (**Omega 6 fatty acids**). If you do not eat fish consider either 3 capsules a day of 1,000 mg fish oil or Lacritec (www.lacritec.com.au) for 3 weeks, followed by a reduced dose. If there is no benefit by 3 weeks consider taking low dose **Doxycycline** on prescription. WARNING: Avoid high dose fish oil if you are a smoker and avoid Doxycycline if you have a history of Tetracycline allergy.
- 6) Avoid eye irritants, keep the computer screen below eye level, and blink frequently when using it. Apply regular doses of **oily** lubricating drops (Optive Advanced or Systane balance) as a substitute for Meibomian oils. If symptoms persist add an oily spray (Tearsagain, Optrex spray, or Eyemist). Spray your fingertip and rub it onto your upper lid. In severe cases the frequency of drops required may exceed hourly and the oily spray 3 hourly. Note: If the oil stings it simply means there was not enough fluid in the eye to cover the corneal nerves. Apply more drops and the sting will stop immediately.