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sodium fluorescein dye is added to the eye and the tear film is observed under the slit lamp or direct ophthalmoscope, while the patient avoids blinking until tiny dry spots develop. The longer it takes, the more stable the tear film. A short tear break-up time is a sign of a poor tear film. Generally >10 seconds is thought to be normal, 5-10 seconds marginal and <5 seconds low with high likelihood of dry eye symptoms.

The Schirmer test technique is done as follows: After drying the eye

of excess tears, Schirmer filter paper is placed at the junction of the middle and lateral one-third of the lower eyelid in each eye for five minutes. The eyes must remain open with normal blinking.

**Unanaesthetised:** Measures basal and reflex tearing. Normal is wetting of at least 15mm in five minutes.

**Anaesthetised:** Topical anaesthetic is applied before drying the eye and placing filter paper. Measures basal tearing only. Abnormal is wetting of 5mm or less in five minutes. Less than 10mm may be considered borderline.

### Treatment for dry eye

**Mild dry eye:** Artificial tears q.i.d.

#### Moderate dry eye:

- Increase the frequency of artificial tear application up to one to two hourly (use preservative free artificial tears)
- Add a lubricating ointment or gel twice a day (morning and night)
- Lifestyle medication (e.g., humidifiers and stop smoking to name a few)
- Cyclosporin 0.05% b.i.d. is effective for patients with chronic dry eye and decreased tears secondary to ocular inflammation
- If these measures are inadequate or impractical, consider punctual occlusion. Be sure any inflammatory component including blepharitis is treated prior to punctual occlusion.

#### Severe dry eye:

- Cyclosporine 0.05% b.i.d.
- Punctual occlusion (both lower and upper puncta if necessary) and preservative-free artificial tears one to two hourly as needed
- Add lubricating ointment or gel b.i.d. to q.i.d
- Moisture chamber (plastic film sealed at orbital rim) or goggles with lubrication at night
- If mucus strands or filaments are present, remove with forceps and consider 10% acetylcysteine q.i.d
- Other therapies may include oral flaxseed oil, oral omega-3 fatty acids, autologous serum tears, topical vitamin A, bandage contact lens, or scleral lens
- Consider a permanent lateral tarsorrhaphy if all of the previous measures fail.

### Summary

While I was doing this article I realised again how many people suffer from dry eye disease and how debilitating it can be. Never forget that inflammation is the most common cause of treatment failure. I hope that this article will inspire us all to diagnose and treat dry eye with renewed vigour. 



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