Why Do Our Eyes Tear?

Normal Tearing

1. Lacrimal gland- produces tears
2. Tear duct- drains tears
3. Eyelids- Distributes tears and pumps them down the drain

The lacrimal gland is responsible for producing tears. When you blink, the eyelid spreads the tears over the front of the eye to keep it moist.

The tears then drain into small channels (canaliculi) on the inner eyelid and travel into the tear duct (nasolacrimal duct), which empties into the nose.

Three causes of tearing or watery eyes

1. Producing too many tears - Lacrimal gland reflexive tearing

   - Anything that irritates the eye can cause you to tear. The watering is a protective reflex to help clear irritants away from the eye.
   - Chemical, allergy or mechanical irritants (onions, fumes, wind)
   - A small injury, scratch or foreign body on the eye surface
   - Eyelashes that grow inwards can irritate the eye (entropion)
   - Abnormal tears

     - Blepharitis: Clogged oil glands decrease oily layer of tears. The tears then evaporate or may not spread evenly across the eye. Patches of dryness become sore and make your eyes water.
     - Dry Eyes: The eyes should be bathed in fluid. When the eyes are dry this causes a tearing reflex.

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2. Faulty drainage of tears- Tear duct obstruction

- Blockage may occur at any point in the tear duct.
  - The most common location is just below the tear sac in the nose (nasolacrimal duct obstruction). This may cause tearing, discharge or a tear duct infection. This is corrected with surgery to create a new tear duct (DCR- dacryocystorhinostomy).
  - If the tear duct is partially blocked we treat it with a new tear duct or a stent.

- Blockage can occur at the punctum (the opening of the tear duct). This is treated by opening and stretching the punctum with a stent.
- Less commonly, there may be a blockage within the canaliculi (channel in the eyelid). This may be due to inflammation or scarring and is treated by creating a new tear duct.
- Some babies are born with a tear duct which has not fully opened. This is common and can be treated with surgery if necessary.

3. Eyelid Malposition- Eyelid pump dysfunction

- The eyelids evenly spread tears over the eye and pump the tears into the drain. If the eyelids are weak or abnormal, you may experience tearing. Eyelid malposition can be treated with a surgical procedure to correct the eyelid position and function.
  - Ectropion: This is where the eyelid turns outward away from the eye. The tears may roll out of the eye rather than down the tear duct.
  - Entropion: This is where the eyelid turns inward and irritates the eye.
  - Eyelid laxity: This is where the tendon that anchors the eyelids is loose which weakens the eyelid’s blink, closure and pump function.
  - Lagophthalmos: This is when the eyelids do not close completely with blinking, sleeping or at rest.