Corneal Abrasions

**What is a corneal abrasion?**

A corneal abrasion is a scratch or cut on the outermost surface of the cornea, the epithelium. The cornea is the clear part on the front of the eye and has multiple layers, the most superficial one being the epithelium. The cornea covers the colored part of the eye (iris) and the pupil. [See figure 1]

![Fig. 1: A corneal abrasion is a scratch or cut on the surface of the cornea.](image)

**Why are corneal abrasions so painful?**

The cornea is very sensitive due to numerous nerve terminations that transmit the sensation of pain to the brain in order to help us recognize that something foreign is in the eye before it damages the surface of the eye. This is why having a corneal abrasion is a very painful experience.

**How are corneal abrasions treated?**

Most corneal abrasions are superficial and heal spontaneously without treatment. Larger corneal abrasions are treated with antibiotic drops or ointment to protect against infection while new cells grow to replace the ones that were damaged. Sometimes, depending on the size of the abrasion, a patch is placed over the closed lid. A patch helps decrease pain and heal faster. An eye should not be patched continuously for more than 24 hours. The patch should be removed at least daily and the antibiotic drop or ointment put in the eye again.

**How fast do corneal abrasions heal?**

In order for the abrasion to heal a new superficial layer- the epithelium should grow and cover the defect. Therefore, it depends on the size of the abrasion and the overall health of the cornea. An abrasion on a healthy cornea should heal in 1-5 days.
How is dye used to detect a corneal abrasion?

A yellow dye called fluorescein is placed on the surface of the eye. The dye fills in the corneal defect and will light up green (will fluoresce) in a cobalt blue light to show where the defect is [See figure 2].

![Fluorescent dye on eye](image)

**Fig. 2:** Fluorescent dye can be used to detect a corneal abrasion.

What is a corneal erosion?

The new epithelium that grows when the abrasion heals sometimes is not tightly attached to the layers below and sloughs off in the area of the original abrasion after the defect has healed. Erosions can occur with little or no trauma to the eye. They often occur upon awakening. They are often as painful as the original abrasion. If you experience pain after a corneal abrasion has healed you should notify your ophthalmologist.

*Updated 11/2017*