

Foreign Body in the Eye

A tiny speck — dirt, metal, or eyelash — lands on or sticks into the clear front window of your eye, making it hurt, water, and feel like sandpaper every time you blink.

THE ONE-LINE TRUTH

Something small stuck on or in the eye, causing pain, tearing, and a scratchy feeling.

The chain — how it unfolds

1. A tiny speck of metal, dirt, wood, or glass lands on the cornea or gets trapped under the eyelid. — why: Wind, grinding, hammering, or even a gust outdoors can send particles flying into your open eye, and your eyelashes and blink reflex do not always catch them in time.
2. Nerve endings in the cornea fire instantly, causing sharp pain, and tear glands flood the surface. — why: The cornea has the highest density of pain nerves in the body, so even a speck smaller than a grain of salt hurts a lot. Tears try to wash it away, but sticky or embedded particles stay put.
3. Each blink drags the speck across the cornea, scraping off the outermost cell layer (epithelium) and creating a corneal abrasion. — why: The inside of your eyelid acts like sandpaper rubbing over glass when a foreign body is stuck. The abraded area loses its protective barrier, exposing raw nerve endings and making pain worse.
4. The abraded cornea becomes a wet, open wound; bacteria from your eyelid, fingers, or the foreign body itself can invade and multiply. — why: Normal skin bacteria — especially Staph and Pseudomonas — can turn a simple scratch into a corneal ulcer (infected pit) within 24 to 48 hours if the epithelium does not close.
5. If the foreign body was high-speed or sharp, it may penetrate the cornea and enter the inside of the eye, releasing bacteria, fungi, or toxic material (like copper or iron) into the aqueous or vitreous fluid. — why: Grinding metal, chopping wood, or hammering can send chips flying at hundreds of feet per second. Once inside, the speck can rust, cause inflammation, seed infection (endophthalmitis), or scar the retina.

6. Endophthalmitis (infection throughout the inside of the eye) or a rust ring and dense scar form, clouding the cornea permanently and threatening vision. — why: Bacteria or fungi multiply in the nutrient-rich fluid inside the eye much faster than on the surface. Even after the infection is controlled, scar tissue on the cornea or retina can block light and blur or destroy central vision.
7. If untreated, a penetrating foreign body or severe infection can lead to loss of the eye or permanent blindness in that eye. — why: Once the retina detaches, the optic nerve dies, or the entire inside fills with pus, vision cannot be restored. Removing the eye (enucleation) may be the only way to stop pain and prevent spread of infection to the other eye or brain.

Spot it — what you see, and why

- Sharp pain or a scratchy feeling in the eye: The foreign object (a tiny piece of metal, wood, dirt, or other material) rubs against the cornea (the clear dome covering the front of your eye) or the conjunctiva (the thin skin lining the inside of your eyelid and white of your eye), which have many nerve endings that sense touch and pain, so even a speck can hurt a lot.
- Feeling like something is stuck in the eye even after blinking: The object is still there, sitting on or embedded in the surface of the eye or under the eyelid, so every blink drags it across the cornea like sandpaper, keeping the scratchy sensation going.
- Watery eye or lots of tearing: The eye's reflex is to flood the surface with tears to try to wash the object away and protect the cornea from more damage.
- Redness of the eye or eyelid: Tiny blood vessels in the conjunctiva swell and fill with more blood (like when you get a scrape on your skin) because the eye is irritated and inflamed by the foreign body.
- Sensitivity to light (photophobia): The cornea is scratched or irritated, and bright light makes the muscles inside the eye work harder, which increases pain; also, inflammation makes the nerves extra sensitive.
- Blurry vision: The object or the scratch it made disrupts the smooth, clear surface of the cornea (which has to be perfectly smooth to focus light correctly, like a camera lens), and extra tears and swelling blur the image even more.

Red flags — act now

- Severe pain that does not improve after rinsing or removing a surface object
- Sudden vision loss or large dark spots in vision
- Blood visible inside the colored part of the eye (hyphema) or behind the cornea
- Irregular or teardrop-shaped pupil (suggests rupture of the eyeball)

- History of high-speed impact (grinding metal, hammering, explosion) that could drive a particle deep into the eye

Treat it — in this order

1. Remove the foreign body with a moistened cotton swab or irrigation → Takes away the thing that is scratching and irritating the cornea with every blink — once it is gone, the scratch (abrasion) can start healing, pain drops fast, and the risk of infection from the object goes away.
2. Topical antibiotic drops or ointment (erythromycin or polymyxin-trimethoprim) → Lowers the chance of bacteria growing in the scratch on the cornea and causing an infection (bacterial keratitis) — especially important if the foreign body was dirty (soil, wood, or anything contaminated) or if the scratch is deep.
3. Rust-ring removal with a sterile needle or burr under the slit lamp → Scrapes away the rust deposit that formed around a metal foreign body — if you leave rust in the cornea it keeps inflaming the tissue, slows healing, and can leave a permanent scar that clouds vision.
4. Topical nonsteroidal anti-inflammatory drops (ketorolac or diclofenac) → Reduces pain from the corneal scratch by blocking prostaglandins (chemicals that make nerve endings hurt) — works faster and lasts longer than oral pain medicine for eye pain.
5. Cycloplegic drops (cyclopentolate or homatropine) → Relaxes the muscle inside the eye that focuses the lens and makes the pupil bigger — this stops painful spasms of that muscle (which happen automatically when the cornea is hurt) and makes the eye much more comfortable.

Your top priorities at the bedside

1. Do not let the patient rub the eye; cover it loosely with a rigid shield (like a paper cup taped over the eye) if a puncture is suspected — why: Rubbing or pressing on the eye can push a foreign body deeper, worsen a scratch, or if the eyeball is punctured, squeeze inner fluid and structures out through the hole. A rigid shield protects without touching the eye itself.
2. Check and record vision in each eye separately using a vision chart (or count fingers if no chart available) — why: Baseline vision tells us how much function remains and whether injury is mild or serious. Any vision worse than 20/40 or a difference between the two eyes signals possible deep injury. Document exact results so the provider knows if vision gets worse.

3. Irrigate the eye with sterile saline if a chemical exposure occurred, or if a loose surface foreign body is visible — why: Flushing washes away chemicals before they burn deeper; every second counts with acids or bases. For loose particles like dust or sand, gentle irrigation can float them out toward the inner corner where they are easier to remove. Never irrigate if you suspect a puncture through the eyeball.