

# WHAT IS TASS?

**Toxic Anterior Segment Syndrome (TASS)** is a sterile inflammatory reaction in the anterior segment of the eye that occurs after intraocular surgery (most commonly cataract surgery). It is caused by toxic substances entering the eye during surgery, leading to acute inflammation but no infection.

## ONSET:

- Rapid-onset TASS typically occurs within 12–48 hours post-surgery and is characterized by acute, sterile inflammation due to toxic insult, often from surgical instruments, solutions, or intraocular medications ([Verma et al., 2023](#)).
- Delayed-onset TASS may occur days to weeks post-surgery and can mimic chronic inflammatory responses similar to infectious endophthalmitis. It is sometimes associated with foreign materials, intraocular lens reactions, or persistent toxic insults ([Oshika et al., 2017](#)).

## SYMPTOMS:

- Anterior chamber inflammation (redness, swelling, pain).
- Corneal edema (clouding due to toxic damage to endothelial cells).
- Some cases may develop elevated intraocular pressure, which may lead to secondary glaucoma.
- Pupillary abnormalities especially with severe cases (dilated, irregular, or non-reactive pupil).

## CAUSES:

TASS occurs due to contaminants or toxic substances introduced during surgery, including:

- Residual detergents or disinfectants on surgical instruments ([Lambert, 2010](#)).
- Improperly mixed intraocular solutions (pH or osmolality imbalance) ([Verma et al., 2023](#)).
- Preservative-containing medications injected into the eye.
- Particulate matter or endotoxins in intraocular lens implants or viscoelastic agents ([Shouchane-Blum et al., 2019](#)).

## TREATMENT:

- High-dose topical corticosteroids to reduce inflammation ([Mamalis et al., 2006](#)).
- Cycloplegics to prevent synechiae (iris sticking to the lens).
- Frequent monitoring to prevent complications like glaucoma or corneal damage.

## PROGNOSIS:

- Most cases resolve with aggressive steroid treatment within a few days.
- Severe cases may lead to permanent corneal damage, glaucoma, or vision loss.