Toxic conjunctivitis direct damage to ocular tissues.

Jacob Staumont*

Department of Ophthalmology, University Frankfurt, Frankfurt, Germany

Toxic conjunctivitis is caused by an offending agent, which is usually a preservative or medication. Conjunctivitis, also known as pink eye, is an inflammation of the white part of the eye's outermost layer and the inner surface of the eyelid. It gives the eyes a pink or reddish appearance. It is possible to experience pain, burning, scratchiness, or itchiness. In the morning, the affected eye may have increased tears or become stuck shut. Swelling of the white part of the eye is another possibility. Itching is more common in allergic cases, and conjunctivitis can affect one or both eyes. When an acidic or alkaline substance enters the eye, it can cause chemical eye injury. Alkali burns are usually more severe than acidic burns. Conjunctivitis is caused by mild burns, whereas severe burns can cause the cornea to turn white.

The conjunctiva lines the inside of the eyelids and serves as a coating for the sclera, or white portion of the eyeball. Through the production of mucus and tears, it typically serves to lubricate the eye. Ocular surface medicamentosa is the most common form of toxic conjunctivitis [1]. OSM is a delayed, cell-mediated hypersensitivity response of the ocular surface and adnexa to active drugs or preservatives. Topical preserved eye drops are becoming more popular in the treatment of glaucoma and ocular surface disorders such as dry eye disease. OSM is typically associated with long-term use of topical drops. OSM can cause significant ocular surface symptoms and visual dysfunction if not diagnosed and treated promptly, affecting quality of life, daily activities, and workplace productivity. A virus is the most common cause of infectious conjunctivitis [2]. Common causes include bacterial infections, allergies, other irritants, and dryness. Infections, both bacterial and viral, are contagious, spreading from person to person or through contaminated objects or water. Conjunctivitis is frequently caused by contact with contaminated fingers.

Chemical liquid or powder splashes can cause serious eye damage. In many cases, prompt and thorough eye rinsing reduces the risk of injury and long-term damage. Chemicals that are solid, liquid, powder, or aerosol can harm the eyes [3]. Soaps, disinfectants, solvents, cosmetics, drain cleaners, oven cleaners, ammonia, and bleach are the most common causes of chemical injuries in the home. Fertilizers and pesticides can cause eye damage in agricultural settings. Many irritating chemicals and solvents used in industry can cause eye damage. Chemical eye injury is a medical emergency. Within one to five minutes, damage can occur. Chemicals that come into contact with the eye, on the other hand, almost always cause only surface damage and no loss of vision. The most harm is done by caustic chemicals. Ammonia, drain cleaners, automatic dish washing detergents, and oven cleaners are examples.

These substances should be handled with extreme caution because misuse or carelessness can result in eye irritation or pain, inflammation, blurred vision, or serious eye injuries [4]. When working with chemical substances, the first step should always be to prevent accidents. The Barraquer Ophthalmology Centre strongly advises the use of protective equipment such as glasses, masks, and gloves. It is also critical to carefully read the product's instructions before handling in order to be aware of any potential risks [5]. There is a distinction within the chemical substances mentioned between acidic products, which include cleaning materials or batteries, and alkaline products, which bind elements such as lime, fertilisers, or dishwasher detergent. The first category of substances can cause burning eyes. Although they rarely cause deep tissue damage, they can still result in severe injuries. Alkaline substances, on the other hand, are more prevalent in the deeper layers of the tissues, and contact with the eyes can result in serious eye injuries.

There are three types of chemical burns that can affect the eyes. On the one hand, basic substance burns are caused by high concentrations of chemicals. They are the most dangerous because they can enter the eye and affect its vital internal components, resulting in vision loss or blindness. Acidic substance burns are caused by low pH elements and are less serious, but they are still dangerous for our eye health because they can cause significant corneal damage. When an eye injury occurs as a result of chemical contact, the first thing that should be done is a thorough eye wash with mineral water or physiological saline solution for at least 20 minutes. If the affected person wears contact lenses, they should take them out before washing their eyes. If the lenses cannot be removed, they should be washed as well.

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***Correspondence to:** Jacob Staumont, Department of Ophthalmology, University Frankfurt, Frankfurt, Germany, E-mail: staumontj546@unif.de

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