

Contact Lenses in the School Science Laboratory Are They Safe? Should They Be Allowed?

Every year many students ask can they wear contact lenses in the chemistry lab. Is the wearing of contact lenses in the science lab a serious concern? You bet it is! Let's explore the three primary hazards associated with the science laboratory.

- Should a chemical splash to the eye occur, the chemical could be held under the contact lens and against the surface of the cornea, possibly causing permanent eye damage.
- Involuntary spasm of the eyelid and the "panicked" nature of the victim who has the chemical splashed in his eyes makes removal of the contact lens virtually impossible. By the time the lens is removed, irreversible damage already may have occurred.
- In a situation where the victim is unconscious, people attempting to irrigate the victim's eyes may be unaware that the victim wears contacts.

Your teacher should know which students wear contact lenses. Students should also know if their lab partners are wearing contact lenses.

The hazards of wearing contact lenses in the science laboratory are why a number of safety specialists bluntly state, "contact lenses should **not** be worn in a laboratory."

The American Chemical Society agrees: "wearing contact lenses in the laboratory is normally forbidden because contact lenses can hold foreign materials against the cornea. Furthermore, they may be difficult to remove in the case of a splash. Soft contact lenses present a particular hazard because they can absorb and retain chemical vapors. If the use of contact lenses is required for therapeutic reasons, fitted goggles must also be worn.

OSHA and the American National Standards Institute (ANSI) agree the "wearers of contact lenses shall be required to wear appropriate covering eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers.

The national Institute of Occupational Health and Safety (NIOSH) lists more than 400 chemicals in their *Pocket Guide to Chemical Hazards*. Most of the chemical listings recommend against contact lens use. Everyone agrees, including Prevent Blindness America, that all contact lens wearers should be identified and some policy towards the use of contact lenses be written

First Aid for Contact Lens Emergencies

Exposure to flame or vapor: Remove lenses for cleaning and rinsing. If no eye irritation is felt, the lenses may be reinserted. Badly soiled lenses should be discarded.

Chemical splash: Vigorously irrigate the eye with water while holding the lids apart. In these critical circumstances, do not worry about losing the contact lens. If the lens remains in the eye after initial flushing (2-3 minutes), remove it or slide it onto the inside of the eyelid and continue to irrigate. Seek medical attention immediately. For a caustic splash, irrigation should be continued during transportation.

Foreign bodies: Remove the lens and irrigate the eye. If the eye remains uncomfortable, or it seems that the foreign body has remained in the eye or vision is blurred, the eye should be examined by an eye doctor before lenses are reinserted. All cases of injury from flying particles should be evaluated by qualified medical personnel.

Dust in the eyes: Remove the contact lenses and irrigate the eyes. Clean lenses and reinsert if the eyes are not red or uncomfortable. Otherwise, consult eye doctor before reinserting lenses.

Blunt trauma: Swelling or lacerations may make removal of lens (or pieces of lens) difficult. Professional evaluation of whole eyes recommended.