

Call for Stricter Contact Lens Hygiene

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New research urges soft contact lens wearers to clean using a routine that involves rubbing

In a recent study carried out on the cleaning of soft contact lenses, those lenses that were cleaned according to a regime which included rubbing the lens with fingers were significantly cleaner than those which were just soaked and rinsed – even though the directions for use of the cleaning solutions did not, in theory, require any rubbing. The authors of the study, optometrists from Hong Kong's School of Optometry, concluded that contact lens wearers should ensure that they include a rubbing stage in their lens cleaning routine.

Background

Traditionally, care of soft contact lenses has involved the use of a cleaner, a disinfecting solution for soaking and storage and a rinsing solution. Cleaning solution was put onto the lens which was then rubbed with a finger before being soaked for a defined period of time in the disinfectant solution before rinsing and storage. An enzymatic solution was used once a week to remove protein deposits.

However, over recent years, as the contact lens industry has sought to make lens cleaning regimes less onerous, multi-purpose solutions have been developed, including so-called “no-rub” solutions which merely required lenses to be rinsed and soaked. Required soaking times have also been reduced in the drive for greater convenience. Currently these “no-rub” solutions dominate the market in many countries.

There have been several studies of “no-rub” solutions but little has been written comparing “rub” and “no-rub” regimes.

Cleaning contact lenses

The importance of an effective cleansing regime is well-established. Deposits left on lenses can house and protect micro-organisms, making it more difficult to kill them. Common contaminants on contact lenses are hand cream and mascara. Poor lens hygiene impacts directly on eye health, with the possible result of inadequate cleaning ranging from relatively trivial conditions (bacterial conjunctivitis) through to sight threatening conditions (corneal ulcers).

Recent outbreaks of *fusarium* and *Acanthamoeba keratitis* have involved major multi-purpose solutions and one of the main contributory factors has been the omission of the digital rubbing step.

Results of the study

The study showed that rubbing the lenses with a finger greatly increased the effectiveness of the cleansing regime. If the lenses were not rubbed, then neither varying the length of the soaking period, nor changing the brand of the multi-purpose solution made significant improvements to the effectiveness of the regime. Rubbing removed at least 80% of loosely-bound surface deposits, putting the lenses cleaned with rubbing in the study in the top two (of five) grades of cleanliness. Of those not rubbed, 98% or more were in the bottom three grades of cleanliness.

Advice

Multiple-use contact lens wearers are strongly advised to take note of this study and ensure that they rub their lenses as part of their cleaning regime.

Notes for editors:

- The report was written by Pauline Cho, Suk Yi Cheung, Wai Yip Chan and Wing Kin Yip from the School of Optometry, the Hong Kong Polytechnic University, Hong Kong SAR, China and published in the Journal of Ophthalmic and Physiological Optics 2009 29: 49-57 by the College of Optometrists, UK
- The lenses used in the study were multiple-use soft hydrogel lenses which are removed every night, cleaned and stored overnight and then used again the next day; these lenses were intended for replacement every two weeks, but the results of the study would apply equally to lenses replaced every month. Soft hydrogel lenses are the most commonly-used multiple-use contact lenses.
- The European Council of Optometry and Optics is the European organisation which represents the interests of optometrists and opticians from 30 countries. It aims to promote eye health to the public across borders and to harmonise clinical and educational standards of optometric and optical practice throughout Europe

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