

Thumbs Up for Healthy Eyes

Contact lenses are enjoyed safely and loved by millions of people.

Looked after properly, contact lenses are a safe and effective way to correct vision. However, research indicates that not all contact lens wearers consistently follow aftercare adviceⁱ, which can increase the risk of developing eye infections.

WASH HANDS AND DRY BEFORE TOUCHING YOUR EYE

Washing and drying hands before touching contact lenses might sound like an obvious thing to do. However, less than 50% of contact lens wearers in an international study washed their hands adequately before touching their lenses, with contact lens wearers in the UK faring worse than averageⁱⁱ.

Touching a contact lens with unclean hands can result in harmful germs and dirt being transferred to the contact lens and, in turn, potentially to the surface of the eye.

These germs can cause infections such as microbial keratitis, which can be serious and result in permanent scarring of the cornea.

Mr Badrul Hussain, consultant ophthalmic surgeon, Moorfields Eye Hospital

“Whilst serious infections are rare, every year we treat patients with eye infections that could have been avoided if appropriate contact lens care and wear advice was followed.

“Effective hand-washing is an essential part of contact lens care as it limits the spread of harmful bacteria. I would advise contact lens wearers to always wash and dry their hands thoroughly before handling their contact lenses or lens cases.”

Touching contact lenses with hands that haven't been dried properly can be particularly dangerous, posing the risk of transferring the harmful, water-borne acanthamoeba microbe. This can result in a rarer and more serious form of microbial keratitis called acanthameoba keratitis, which in extreme cases can result in blindness.

It's just as important to thoroughly wash hands and dry before taking contact lenses out, as lens storage cases belonging to people who have not taken sufficient care with hand-washing have been found to have the potentially harmful acanthamoeba microbe growing in themⁱⁱⁱ.

How clean are our hands?

In short: not at all.

More than 4,700 different types of bacteria can be found living on the human hand, with the average hand playing host to around 150 different types of bacteria^{iv}.

And it's not just bacteria that's coating our hands. A survey of 404 commuters in five UK cities found that more than one in four people (28%) had bacteria of faecal origin on their hands^v!

Why are our hands so dirty?

Bacteria, dirt and general grime are easily transferred to the skin on our hands as we go about our daily lives.

We all know that it's important to wash our hands regularly to prevent the spread of germs, however, in practice most of us don't do it effectively.

An observation of more than 3,700 people revealed that after using a public toilet, 15% of men and 7% of women didn't wash their hands at all. Of those that did, only 50% of men and 79% of women used soap^{vi}.

The same study found that just 1 in 20 people (5%) wash their hands for the recommended 20 seconds – the length of time it takes to sing happy birthday twice. Most people's average hand-wash lasts just 6 seconds.

Thumbs down

Ineffective hand-washing techniques can result in certain parts of our hands harbouring potentially harmful bacteria.

The thumbs are particularly at risk of being left out as well as finger tips and between our fingers^{vii}.



This image is taken under UV light and shows the remnants of a substance that is only visible under UV light. The hands were coated in the substance and then washed for only a couple of seconds before the photo was taken.

How to wash your hands effectively:

1. Wet your hands with water (warm or cold).
2. Apply enough soap to cover all over your hands.
3. Rub hands palm to palm.
4. Rub the back of your left hand with your right palm with the fingers on your right hand rubbing between the fingers on your left hand. Repeat with the other hand.
5. Rub your palms together with fingers rubbing between each other.
6. Rub the backs of your fingers against your palms.
7. Clasp your left thumb with your right hand and rub in rotation. Repeat with your left hand and right thumb.
8. Rub the tips of your fingers in the other palm in a circular motion, going backwards and forwards. Repeat with the other hand.
9. Rinse hands with water (warm or cold).
10. Dry thoroughly.

ⁱ BMG Research commissioned by the General Optical Council, February 2016

ⁱⁱ Morgan PB, et al. An international analysis of contact lens compliance. *Contact Lens Anterior Eye* (2011), doi:10.1016/j.clae.2011.08.001

ⁱⁱⁱ Moorfields Eye Hospital

^{iv} Fierer, N., Hamady, M., Lauber, C.L. and Knight, R., 2008. The influence of sex, handedness, and washing on the diversity of hand surface bacteria. *Proceedings of the National Academy of Sciences*, 105(46), pp.17994-17999.

^v Judah, G; Donachie, P; Cobb, E; Schmidt, W; Holland, M; Curtis, V; (2009) Dirty hands: bacteria of faecal origin on commuters' hands. *Epidemiology and infection*, 138 (3). pp. 409-14.

^{vi} Hand Washing Practices in a College Town Environment
Borchgrevink, Carl P; Cha, JaeMin; Kim, SeungHyun. *Journal of Environmental Health; Denver* Vol. 75, Iss. 8, (Apr 2013): 18-24.

^{vii} Taylor L (1978), An evaluation of handwashing techniques, *I Nursing Times*, 12 January