
Executive summary

Health Council of the Netherlands: Committee on Health risks of contact lenses. Health risks of contact lenses. The Hague: Health Council of the Netherlands, 2001; publication no. 2001/20

Almost one-and-a-half million people in the Netherlands wear contact lenses. The health risks associated with the wear of lenses range from irritated and red eyes to serious complications including permanent damage to the cornea resulting in loss of vision. Lenses have recently become available through the Internet, the wholesale trade and high-street chemists, which led to the question whether this will give rise to more complications.

The cause of complications is multifactorial. Putting a contact lens in the eye disturbs its physiology. Once the wearer has become accustomed to wearing lenses a new equilibrium is reached, but this can be disturbed again by a variety of factors (ageing of the lens, damage to the lens, deposits on the lens, changes in the tear film, changes in the frequency and type of blinking, chemical toxicity, mechanical stresses and chronic oxygen deficiency).

A serious complication for contact lens wearers is microbial keratitis, an inflammation of the cornea, which has an annual incidence per 10,000 wearers of 1.1 for hard lenses, 3.5 for soft lenses and 20 for extended wear lenses (which are kept in at night). In a few cases this can only be cured by corneal transplantation. Not enough information is available on the incidence of other complications in the Netherlands: ophthalmologists probably see only a small proportion of them, since it is contact lens practitioners or GPs who are consulted in most cases.

It is not known how much risk is involved in wearing fun lenses (used because of colour or images, not for correction of vision).

In contrast with fun lenses, contact lenses are regarded as medical appliances and as such must comply with various statutory quality standards. Fitting lenses and

checking eyes, however, are not the exclusive province of a particular profession. Titles such as ‘contact lens practitioner’ do not enjoy statutory protection, except for ‘optometrist’, which may only be used by someone who has received appropriate training (specified by law).

Expert fitting, correct instruction, good aftercare and supervision, and compliance with the instructions by users can make a major contribution to reducing the incidence of complications, in the Committee’s opinion. Timely detection and proper treatment can prevent serious damage to the eyesight. The Committee therefore considers that fitting contact lenses and checking eyes should be done by experts who have received appropriate (legally described) training, i.e. optometrists and ophthalmologists. Consequently, the contact lens specialists who did not yet receive that training should be enabled to do so in the next years.

The sale of lenses is not subject to statutory restrictions other than the general rules that apply to all transactions. The availability of lenses from others than optometrists and ophthalmologists could increase the risk of complications, according to the Committee. There is however no data to predict the magnitude of that risk. The Committee considers that vigilance is called for a possible increase in complications. It would not be appropriate to regulate the sale of contact lenses by law since this would not eliminate the risks and there is no foolproof system for enforcing such rules.

The Committee’s conclusions are as follows:

- there are health risks associated with wearing contact lenses
- surveys show that extended wear lenses have the highest risks
- it is reasonable to assume that the risks are diminished by correct fitting, proper instruction and regular check-ups
- there is legislation on the quality of contact lenses but not on fitting, instruction and check-ups
- there is no centralized record of the complications due to wearing contact lenses.

The Committee’s recommendations are as follows:

- contact lens wearers should be instructed by experts on how to use lenses, the risks involved, and ways of reducing the risks
- use of extended wear lenses should be discouraged (unless medically indicated)
- fitting contact lenses and checking wearers’ eyes should be done by appropriately trained experts (optometrists and ophthalmologists)
- a central record of serious contact lens-related complications should be kept.