Information – Guidance on contact lenses

EU implementing rules require that:

- If contact lenses are worn when exercising the privileges of the applicable licence(s), they shall be for distant vision, monofocal, non-tinted and well-tolerated.
- Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.
- Orthokeratological lenses shall not be used.

Contact lenses should be worn where:

- hypermetropia (long sight) exceeds +5.00 dioptres or
- anisometropia (difference in prescription between the 2 eyes) exceeds 3.00 dioptres.

Contact lenses have an optical advantage over glasses. The change of image size is minimised compared to glasses. Ring scotomas (area of visual field missed) caused by spectacle frame and lenses are eliminated as are peripheral aberrations induced by a spectacle lens.

However, a pilot wishing to use contact lenses for flying will need to ensure that the lenses can be comfortably worn on the ground before using them in the cockpit. As a guide, a minimum wearing time of 8 hours a day for 5 days a week consistently for at least one month is acceptable. It is important that the wearing times do not impact on the pilot's visual acuity, comfort or eye health. All contact lens wearing pilots are expected to attend for regular check-ups as advised by their contact lens practitioners.

It should be noted that some successful contact lens wearers are not able to use their lenses in flight. This may be due to dehydration of the lens, altering lens parameters or other factors.

All contact lens materials (gas permeable, soft, soft disposable, hard) are acceptable for aviation use provided they are well tolerated. Optimum correction must be achieved. The correction of astigmatism should always be considered for soft contact lens wearers (toric lenses). Silicon hydrogels (a type of soft disposable contact lens material) should be considered for aviation use due to their low water content and high oxygen transmission.

All contact lenses must be for distance only correction.

The following types of contact lens correction are not acceptable:

Monovision
This is where the dominant eye is fully corrected for distance and the non-dominant eye is corrected for near. The distance visual acuity in the 'reading eye' will often fall below the appropriate acuity standard. It can interfere with depth perception and does not give optimum distance vision.

Multifocal (bifocal / varifocal)
Unlike spectacle lenses where the user can use eye movements to view through a different portion of the lens and consequently a different focal length, a contact lens will move with eye movement. This means that a different optical system must be applied to enable the viewing of more than one focal length. There are several designs of multifocal contact lenses, however they will tend to have a poorer optical quality and cause potential loss of visual acuity and contrast sensitivity. Some designs are also problematic in bright light conditions. Multifocal contact lenses are not acceptable for aviation use.

Cosmetic coloured lenses
These have either a tint or an iris pattern to change the apparent colour of the user's eyes. More recent designs include themed images such as slit pupil 'cat's eyes'. Coloured lenses are not compatible with aviation use due to potential visual disturbances in lower light levels where the pupil widens beyond the central clear zone of the lens. Some lenses also have a high risk of inducing corneal hypoxia in flight due to poor oxygen transmissibility.

Orthokeratology (or Ortho K) lenses
These are 'reverse geometry' lenses designed to remould the front corneal surface. They are often worn at night and removed during the day. Any change to the corneal shape (and hence improvement to unaided vision) tends to be lost during the day and wearers of these lenses are unable to have optimum vision throughout the day. For this reason, this type of lens is not acceptable for aviation use.

X-chrom or Chromagen lenses
These are coloured lenses which are occasionally worn by people with colour vision deficiencies to aid them in a particular area where they may confuse certain colours. The lenses do not correct a colour vision deficiency but merely move the colour confusion to a different area of the colour spectrum. Due to the significant interference and loss of colour discrimination induced, these are not acceptable for aviation use.