



## Post-Operative Balance Issues Following Cataract Surgery

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The visual and vestibular systems work together to allow a person to move about. Because these two systems are so closely integrated, any disruption in the processing of either system can have a negative impact on a person's sense of balance.

Cataract surgery can cause a dramatic change in the way a person visually experiences their world, and most of the time the effect is positive. However, if the brain is used to seeing the world from a certain perspective, and that perspective has suddenly been shifted, the disruption in the visual system can in turn cause sensory incoherence with the visual-vestibular connection.

**Patients who have a pre-existing vestibular dysfunction are more at risk after cataract surgery.** There are also various visual characteristics that may increase the likelihood of disrupting the visual-vestibular connection. Patients with significant corrections in their eyeglass prescription may have trouble adjusting to a new prescription, especially during the time between the first and second cataract surgery. Between the two procedures the prescription in one eye will typically be neutralized while the

other eye remains the same. The difference between the two prescriptions can be hard for patients to adjust to at first. Any feelings of dizziness or nausea are typically resolved with the surgery for the second eye, but in rare cases the disruption can cause symptoms that may be hard to overcome. The real problem arises when the cataracts don't mature symmetrically, and one eye needs surgery well before the other eye.

Due to the technological advances of the implantable lens that is used during cataract surgery, a patient now has many different options concerning the visual outcome they desire. More specifically, there are options available today that allow a patient to see in the distance and up close without the aid of glasses, at least to some degree. The two most popular options are multifocal intraocular lenses and a monovision outcome. Multifocal intraocular lenses allow the patient to use both eyes to focus on objects up close and far away. Monovision purposely sets one eye to focus on distance objects, while the other eye focuses on near targets. Both visual experiences are far different (and less efficient) than normal human vision, and as such can be difficult for the brain to

adjust to, especially for a patient with a vestibular disorder.

The key to success centers on communication between the doctor and the patient before surgery. **Any pre-existing condition, especially a vestibular condition, should be thoroughly explained** with all options explored. For most patients the safest result would be to choose to have both implants focused for distance, and to use glasses to see up close. This is generally the safest option as it most closely mimics how our vision is naturally used,

emphasizing symmetry between the two eyes and encouraging our brain to use both eyes together. This set-up should also provide the smallest amount of disruption to the visual-vestibular connection. Extra caution should be given to the patient who is considering a multifocal implant or a monovision result, as well as the patient who is only having one eye operated on for the foreseeable future. Contact lens simulations before the surgery can be used to mimic the multifocal and monovision outcomes, and should be considered, if possible.

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