



Optometry and Sports

Convergence Insufficiency

Convergence insufficiency is a common problem of binocular vision.

This disorder can affect children or adults but tends to be more common in childhood. Many adults may not feel the onset of symptoms until they get their first bifocal, get a job involving a lot of near-related visual work such as computers or go back to school to further their education.

Causes

Convergence insufficiency occurs because of poor eye-teaming ability. Initially when we view something up close the lines-of-sight from each eye should cross directly where we look at. A tendency for the eyes to want to drift outward is present in individuals with this disorder. In order to keep the image clear and single, more effort is required in order to concentrate on the task. This ever-increasing effort is taxing and soon results in symptoms. This disorder can run in some families.

Signs and Symptoms

Blurred vision at near, eyestrain while doing near work, headaches, sleepiness while reading, double-vision, frequent loss of place when reading, inaccuracy while checking columns of figures or lists, copying from a blackboard and poor eye-hand coordination are common complaints. Whilst holding reading very close to the face, covering or closing an eye, developing a head turn or tilt are signs that the individual may not be aware of.

Diagnosis

A complete and thorough vision exam is required in order to detect this disorder. During this exam tests must be performed at a near distance in order to measure the eyes tendency to drift and how much ability the eyes have to compensate for this effect.

Treatment

1. **Vision therapy** is by and far the most successful treatment available for convergence insufficiency. The goal of therapy is to build eye-teaming ability to a level necessary to overcome the outward drift tendency.
2. **Prism** incorporated into an eyeglass prescription is a second option. Success with this form of treatment is much limited than with vision therapy. Very often adaptation to the new prescription occurs and the convergence insufficiency returns.
3. Alternatives include ocular muscle surgery however most experts do not support this mode of treatment today except in very unusual cases.