

CONVERGENCE INSUFFICIENCY

INTRODUCTION

The textbook definition of convergence insufficiency is a neuromuscular abnormality of the binocular system characterised by an inability to converge the two eyes or to sustain the two eyes converged. In plain English, this means that for whatever reason this individual has difficulty keeping both eyes turned in and pointing at the same thing when they are doing close work eg reading, writing, computer etc.

WHY DOES MY CHILD HAVE A CONVERGENCE PROBLEM?

The first thing to say is that your child does not have a muscle problem. In other words it is not that your child cannot turn either eye inward, rather they are unable to turn both eyes inward together and sustain this posture. One of the reasons for this may be that the child had never developed or learned this ability. With the commencement of school work and learning to read, this problem becomes more apparent. Another reason may be that the visual system is no longer able to meet the demands of the near visual tasks that the child is performing and has adapted to the near visual stress of trying to complete their near task by allowing one eye to drift out. In other words there is a breakdown in the ability to sustain normal binocular (two-eyed) functioning due to the visual stress and cognitive demands of the task.

SYMPTOMS

Individuals that have never developed the ability to maintain their eyes converged, generally have very few visual symptoms. These children do however, have poor finer eye-hand and visual motor skills and will tend to avoid near centred tasks having difficulty attending to these. They may also require more tactile involvement (feeling) in learning about their world than would be expected for their age.

Those children that have acquired the convergence insufficiency problem tend to have more symptoms, particularly when doing prolonged near centred tasks. These symptoms may include, but are not necessarily limited to the following:

- Difficulty sustaining attention at visually demanding tasks.
- Visual fatigue or stress symptoms such as red eyes, sore eyes, frontal or temporal headaches, transient near and/or distance blur.
- Occasionally a child will also complain of double vision or the letters moving or running (swirling).
- Abnormal postural adaptations when trying to centre on near tasks, including head tilting or holding their work very close.
- General fatigue and orbital pain around the eyes.

MANAGEMENT

Obviously, the management of the case and the duration of the treatment will depend on why the child has the convergence insufficiency problem. If it is because the child has never developed this ability, then a broader optometric visual therapy program will be required of which developing convergence skills is but one aspect. In these cases, usually spectacle lenses are not required.

Treatment of acquired convergence insufficiency will require the prescribing of a training spectacle (reading lens). In some cases because these lenses reduce/alleviate the visual demands (stress/fatigue) on the visual system this is all that is necessary. In 25% of cases, however, visual therapy will also be needed to rebuild and develop their visual stamina and convergence skills. Visual therapy on its own will not work particularly well for convergence insufficiency. For every half-hour or an hour of therapy your child does at night time, they are doing 5 or 6 hours of “anti-therapy” during school time (ie demanding close work). Hence the importance of them wearing their glasses (training spectacles) in the classroom as well as for all homework, reading, computer, or any prolonged close work tasks.

DURATION OF TREATMENT

In an uncomplicated acquired convergence insufficiency case, it may take 4 to 6 in-office visits, which are usually spaced 2 weeks apart. For the developmental convergence insufficiency case, a longer period may be required to develop and teach all the required visual skills.

In Office Optometric Visual Therapy – Fees are payable at the commencement of therapy.

- ❑ \$ 40.00 per session
(A \$20.00 deposit is required to have the program made up)
This fee covers your visual therapy program and the hire of visual therapy appliances, or visual therapy training equipment that may be required during training (lenses, prism flippers, red/green filters, prism spectacles or loose prisms). This equipment is provided on a hire basis, if it is not returned or returned damaged you will be charged the replacement cost. The cost of this equipment is spread out over the whole of the program.

This Fee is not claimable through Medicare or your Health Fund.

WHAT ABOUT THE FUTURE

Obviously if your child acquired the convergence insufficiency because of the stresses of prolonged near work, then if we placed the child back under those stresses, they can make the same adaptation. For this reason we may require the utilisation of training lenses at the completion of visual therapy for another 12 to 18 months. Hopefully by then the child will have developed good stamina and we will then be able to gradually wean them from their glasses, or reduce their wearing time. Periodic follow-ups should then be provided every 12 months during the child’s schooling life.