### CHILDHOOD STRESSORS AND VISION

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#### STRESS AND NEARSIGHTEDNESS

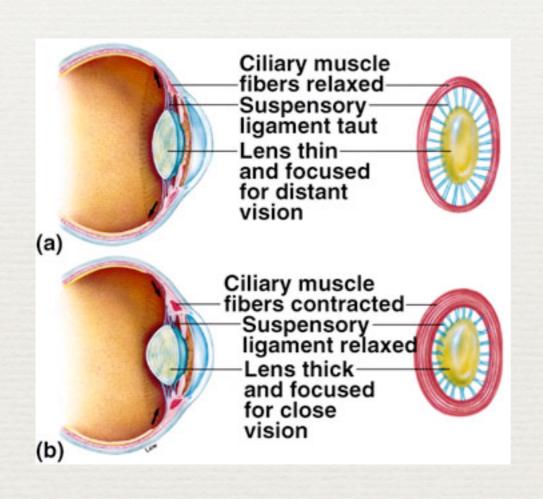


Perhaps the most dramatic evidence of stress and nearsightedness that we have is that of naval personnel in a submarine. Their problem is called submarine myopia (nearsightedness). Because of the stress of being in an environment with limited distance vision, the submariners become progressively more nearsighted as they stay in the submerged vessel. For example, my colleagues and I did a research project with the French Navy. Very few submariners were nearsighted at the beginning of the of their 73 day voyage, the standard tour in a nuclear submarine. By the end of the 73 days most of the submariners became nearsighted. Fortunately the nearsightedness of the submariners disappeared after being on land for 10 days. But unfortunately for schoolchildren, who go to school for most of the calendar year, the constant stress manifests itself with vision disorders, and surely there are other problems in the nervous system as well.

#### CHILDHOOD STRESSORS

- moving
- wsibling rivalry
- peer pressure
- Macademic/school pressure
- W conflict with teacher
- Mparents arguing
- W being abandoned by parent(s)
- W death of relative or friend
- **♥** loss of self-esteem
- W teenage transition from childhood
- accident or injury
- Whenging school, grade, or class
- Willness/hospitalization

### VISION AND STRESS



Any one or any combination of the stressor on the previous page can affect our vision. The primary effect

is on the ciliary muscle, which allows focusing changes as illustrated on the diagram. The end result can lead to a variety of vision disorders, with nearsightedness and convergence insufficiency being the most frequent.

### VISION DISORDERS

Very few children in kindergarten have vision problems, whereas in one of the graduate schools at Harvard 90% of the people have vision disorders. This relationship between educational level and vision problems has been well documented since the 1940's



Note the poor posture.



Note the eyeglasses on the graduates

# THE UNCOORDINATED CLASSROOM





We know of stress at work, and at home, however, for many people stress begins between preschool or kindergarten and first grade. This is what happens. We take a child who is used to free play, and we put them behind a desk. We then tell the child that you can't move, you can't stand up, you can't cough, you can't sneeze, you can't go to the bathroom, you can't eat, you can't take a drink of water, you can't talk, you can't sing, you can't move your feet, and you can't daydream (so put your imagination away). As our subtle mind/body intelligences are put on hold our sensitivity to them gradually, slowly, and so slowly disappears. This is how we gradually divorce ourselves from listening to our subtle feelings, intuition, and creativity. What we are left with is a bundle of residual tension that comes on to us, also in a very gradual way.

# THE COORDINATED CLASSROOM

Darell Boyd Harmon Co-ordinated Classroom, 1949, 79 pp

A series of lectures on vision, growth, and learning that was sponsored by the American Seating Company to develop the optimal visual environment in the classroom to maximize learning and minimize stress and vision disorders.



### CHESHIRE STUDY



John Streff, O.D. applied many of Harmon's concepts. In his report, known as The Cheshire Study, Dr. Streff noted a reduction in the incidence of nearsightedness following the program's intervention

#### GREAT VALLEY ACADEMY

A more recent application to Harmon's pioneering research is at the Great Valley Academy, CA, where we know that gifted learners are visual learners. Gifted learners can easily make pictures in their minds of what they are reading, instructions they are being given and consequences of their actions. GVA staff members work to help all of our students learn like gifted learners learn. Integrated Visual Learning (IVL) is an optometric-based process developed by Dr. Steven J. Ingersoll, O.D. The IVL process combines vision procedure with cognitive processing drills and mental and motor skills. This combination creates a unique program designed to strengthen visual learning of students. 80% of the information we receive is processed visually, so the better we learn visually, the higher our achievement.



## ACCOMMOTRAC® VISION TRAINER



Various functions develop degrading performance due to the stress level, and the insensitivity that we develop as we sit like robots in a classroom. The best way that I have found to overcome this stress is to teach a person how to get back in tune with oneself - have a dialogue with their subtle body intelligence, have a dialogue with their nervous system. What is this method? It is the hi-tech Accommotrac® Vision Trainer technique. The Accommotrac® Vision Trainer measures how the eye focuses and produces immediate auditory feedback. By repetition of this process we become aware of the subtleties not only about vision but of the tension in different parts of the body. Once we know that there's a problem, we can address it and we can get rid of that problem as well as the vision disorder.

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