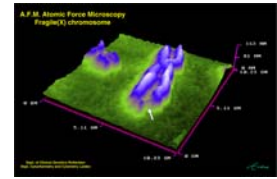


FRAGILE X SYNDROME



DEFINITION:

Fragile X syndrome is the most common inherited cause of mental retardation. The condition occurs in approximately 1 in 1,250 males and 1 in 2,250 females. The condition manifests itself more fully in males because they have only one X chromosome, whereas females have two X chromosomes, with only one being effected.

CAUSE:

Fragile X syndrome is the result of an abnormally long X chromosome. Gaps or breaks in the long arm of this chromosome are due to a folic acid deficiency.

POSSIBLE SIGNS, SYMPTOMS AND CHARACTERISTICS:

For Males:

- Ninety-five percent of males with the full mutation are mentally retarded **
- Large testicles
- Strabismus
- Mitral valve prolapse
- Hypotonia
- Joint laxity
- Autistic-like behaviors such as hand flapping, preservation, hand biting, and poor eye contact
- Deficits in processing sequential information, receptive language skills, visual-spatial abilities, visual-motor coordination, and short-term memory

For Females:

- Fifty percent of females with the full mutation are mentally retarded and the other 50% usually demonstrate learning disabilities **
- Tend to be shy, depressed, anxious, and hypersensitive
- Demonstrate deficits in mental flexibility, visual-motor performance, and short-term memory for nonverbal information

For Both Genders:

- Sensory motor integration deficits
- Large, narrow face
- Prominent ears
- Hyperactive
- Impulsive
- Autistic behaviors
- Delayed balance
- Poor coordination
- Motor planning deficits
- Tactile defensiveness

TEACHING TIPS AND SUGGESTED ACTIVITIES:

- Sensory integration activities should be implemented as early in life as possible, especially vestibular, kinesthetic, and tactile stimulation.
- Use weight training activities to increase muscle tone, joint stability, and self-esteem.
- Contact sports, object control activities, and cardiovascular endurance activities should be planned carefully due to hypotonia, joint laxity, strabismus, and mitral valve prolapse. (e.g., falling down or slipping of the valve).
- Teach the whole task in the context where it will be used.

** Refer to the fact sheets on MENTAL RETARDATION and AUTISM for possible signs, symptoms, and characteristics and more helpful hints and suggested activities.

Information on this sheet contains only suggested guidelines. Each student must be considered individually, and in many cases, a physician's written consent should be obtained.