National Organization for Disorders of the Corpus Callosum

GLOSSARY OF TERMS AND RELATED CONDITIONS

Acrocallosal Syndrome: genetic disorder in which individuals have large heads, agenesis of the corpus callosum, and finger and toe differences (extra or too few). They usually have developmental delay

Augmentative Devices: tools that help individuals with limited or absent speech to communicate, such as communication boards, pictographs (symbols that look like the things they represent), ideographs (symbols representing ideas), and iPad apps.

Aicardi Syndrome: a genetic syndrome in which girls have agenesis of the corpus callosum, as well as eye and other brain development abnormalities. They usually have seizures and severe developmental delay.

Amniocentesis procedure: in which a sample of fluid is drawn out of the uterus during pregnancy and tested for the presence of genetic abnormalities

Andermann Syndrome: a condition in which individuals (almost exclusively found in the certain part of Quebec) have agenesis of the corpus callosum, learning disabilities and problems with the nerves in their arms and legs, usually leading to being wheelchair bound as adults

Anterior Commissure: nerve pathway of about 50,000 neurons that connects the hemispheres of the brain

Applied Behavior Analysis (ABA Therapy): is a systematic process of studying and modifying observable behavior through a manipulation of the environment. Its principles can be applied to virtually anything capable of learning, but generally is applied in humans to individuals with autism and other developmental disorders. It uses an experimental approach of manipulating the environment and tracking alterations in behavior to understand and manipulate functional relationships between behavior and environments

Arnold-Chiari II Malformation: mal-development of the brainstem and cerebellum in which these structures can block the main opening (foramen magnum) connecting the brain with the spinal column. Patients can have ACC, hydrocephalus and incomplete closure of the spine (spina bifida)

Asperger's Syndrome: a developmental behavior disorder that is characterized by social skills deficits and repetitive behaviors, without cognitive or language delays. This diagnosis was removed from the Diagnostic and Statistical Manual – 5 (2013) and individuals who were previously given this diagnosis can be reassessed for autistic disorder as defined by the new manual; this diagnosis is still used in the World Health Organization ICD-10

Attention Deficit Hyperactivity Disorder (ADHD): a psychological diagnosis in which an individual exhibits a long-standing pattern of difficulty attending to others, focusing attention, listening, and following through; also characterized by physical restlessness and impulsiveness

Autism: a developmental behavior disorder that is evident prior to age 3 and is characterized by language and communication difficulties, social withdrawal, and repetitive behaviors such as rocking.

Bundles of Probst: in agenesis of the corpus callosum, the corpus callosum fibers which were unable to cross between the hemispheres form neural tracks within each hemisphere running from front to back of the brain

Colpocephaly: enlargement of the lateral ventricles, particularly in the posterior horns of the ventricles; a common secondary effect of callosal absence

Complete Agenesis of the Corpus Callosum: the corpus callosum is completely absent because it never developed

Computerized Axial Tomography (CT-scan or CAT scan): an x-ray procedure that measures densities of the brain from which a computer generates a two-dimensional picture of a "slice"; CT-scans show less detail of the brain than MRIs

Corpus Callosum (call o sum): pathway consisting of over 200 million nerve fibers that connect the two hemispheres of the brain; largest neural tract within the brain

Dandy-Walker Syndrome: a birth defect in which the cerebellum is malformed, the fourth ventricle is enlarged, and the cerebrallar vermis is absent; there may also be a cyst at the base of the skull; may impact head size, nausea, irritability, convulsions, and muscle jerking

Dysgenesis of the Corpus Callosum: broad term for all conditions in which the corpus callosum developed but was malformed in some way; for example, partial agenesis of the corpus callosum and hypoplasia of the corpus callosum

Fetal Alcohol Syndrome: medical condition in which a fetus is exposed to alcohol and subsequently exhibits a pattern of unusual facial features and impaired brain development

Heterotopia or Heterotopic Gray Matter: brain condition in which cells do not grow to their typical destination and end up trapped in the midst of other brain areas

Hippocampal Commissure: set of nerves that connect the left and right memory centers of the brain (Hippocampi)

Hydrocephalus (hydrocephaly): condition in which some or all of the brain's ventricles are enlarged; often associated with increased amounts of fluid that puts pressure on the brain

Hypoplasia of the Corpus Callosum: the corpus callosum develops normally but is unusually thin

Hypotonia: a condition of abnormally low muscle tone (the amount of tension or resistance to movement in a muscle), often involving reduced muscle strength. Hypotonia is not a specific medical disorder, but a potential manifestation of many different diseases and disorders that affect motor nerve control by the brain or muscle strength. The long-term effects of hypotonia on a child's development and later life depend primarily on the severity of the muscle weakness, nature of the cause and results of physical therapy.

Interhemispheric Cyst: pocket of fluid between the hemispheres; may vary in size

Lateral Ventricles: hollow areas of the brain that is filled with fluid, located in the middle of each hemisphere

Lipoma: a fatty tumor

Magnetic Resonance Imaging (MRI): a procedure that allows a computer to draw very detailed images of the inside of the human body; it involves the interaction of radio waves and a strong magnetic field

Menkes Disease: a disorder of copper metabolism in which patients (almost always boys) present with "kinky hair", brain atrophy and seizures

Microgyri: usually small folds in the surface of the brain

Migrational Disorder: see *Heterotopia*

Non-Verbal Learning Disability: a behavior label that is not in either the ICD-10 or the DSM-5; it is characterized by visual-spatial impairment, difficulty interpreting and recalling facial expressions, and typically poor social skills

Occulo-Cerebro-Cutaneous Syndrome: rare genetic condition which may be characterized by fluid-filled cysts in the brain (particularly the eye orbits), malformation of ventricles, ACC, seizures, mental retardation, and underdevelopment of skin

Partial Agenesis of the Corpus Callosum: only part of the corpus callosum developed

Posterior Commissure: small band of nerves that connects the hemispheres

Radial Gyri: unusual pattern of folding on the middle surface of the brain; the folds make creases that radiate out from the middle of the brain like sunrays

Sensory Integration Disorders: vary between individuals in their characteristics and intensity. Children can be born hypersensitive or hyposensitive to varying degrees and may have trouble in one sensory modality, a few, or all of them. Hypersensitivity is also known as sensory defensiveness, a condition characterized by over-responsivity in one or more systems. Examples of hypersensitivity include feeling pain from clothing rubbing against skin, inability to tolerate normal lighting in a room, a dislike of being touched (especially light touch) and discomfort when one looks directly into the eyes of another person

Shapiro Syndrome: a disorder only found in males, characterized by ACC and severe problems with regulating body temperature

Sonogram: a medical procedure that uses sound waves to generate pictures of internal body structures

Ultrasound: see *Sonogram*