

Fetal Alcohol Syndrome, Fetal Alcohol Effect The Neurodevelopmental Approach

By Kay Ness, M.A. Neurodevelopmentalist, Copyright 2001

There is much hope for the individual affected by alcohol *in utero*. Although identification and diagnosis has its place, your job as a parent is to find out how to best help your children reach their God-given potential. Parents need to know what is really causing the troublesome symptoms, and how they can help to remediate the problems. Do not let negative predictions limit the potential you see in your child. Individuals have defied labels for years and years by remediating the causes in very specific ways.

Alcohol during pregnancy (even small amounts) has been reported to cause a variety of both physical and symptomatic abnormalities, including small head size, facial anomalies, possible mental retardation, poor sucking response, sleep disturbances, restlessness, irritability, developmental delays, attending problems, sensory dysfunction, learning complications, difficult behaviors, and attachment disorders. The muscles, joints, heart, and kidneys are also reported as having been negatively impacted by alcohol.

Inefficiencies in gross motor, fine motor, muscle tone, auditory processing, visual processing, sensory function, academic learning, behavior, development, and cognitive function can all be addressed using a Neurodevelopment approach.

The Central Nervous System

Often, the symptoms associated with FAS/FAE are actually inefficiencies involving the central nervous system. The primary job of the Neurodevelopmentalist is to find methods that will impact the central nervous system in order to address the source of the developmental problem areas. This includes a variety of stimulation activities that will correct the underlying problems.

Therefore, an individual with FAS/FAE is approached just the same as any other child, whether the child is labeled Autistic, Developmentally Delayed, Learning Disabled, ADD, ADHD, or Down Syndrome. Neurodevelopmentalists are interested in what is going right (the strengths), what is going wrong (the weaknesses), and how to best impact the central nervous system to positively change function. We can positively impact the central nervous system because of something called brain plasticity, the brain's ability to change function, structure, and chemistry if the correct stimulation is provided to facilitate such change. There is no magical age at which this can no longer work. Function can be improved at any age, though it is usually easier and more quickly impacted if started at a younger age.

Sensory Dysfunction

The difficulties in behavior, attending, and learning associated with FAS/FAE are usually caused by underlying sensory dysfunction. Children with inefficiencies taking in, integrating, organizing, and processing sensory information often become very confused, overwhelmed, emotional, and hyperactive. Neurodevelopmentalists commonly see children with the symptoms in the following areas:

Hearing: Hearing may be hypersensitive to certain frequencies, or the individual may be unable to filter out sounds in a noisy environment- often manifested by degradation of behavior in these situations. ICAN Neurodevelopmentalists use Samonas Sound Therapy to normalize these insensitivities when indicated. This highly sophisticated sound therapy uses the most advanced technology in the world to retrain hearing and auditory processing problems, and ultimately helps improve reading skills in those with low auditory processing. Significant improvements in vestibular function and behavior are also seen with the use of sound therapy.

Vision: There are many areas of potential visual dysfunction. Central detail vision is extremely important (the ability to see things clearly/detailed at near-point). Of a child has low central detail vision, and also has overly developed peripheral vision, the child may be very visually distractible. The individual may also be overly sensitive to light, or they may experience tracking and/or convergence problems.

Tactility: There are six main areas of tactility that the Neurodevelopmentalist addresses:

1. *Light Touch* – this is on the skin surface, and can be overly sensitive, making the individual very ticklish and sensitive to textures, labels in clothing, and seams in socks, culmination in much squirminess. This child typically does all types of inappropriate touching and is not aware of spatial boundaries. Nail biting and picking at the skin can also be symptoms of this problem. Light touch can be too low (hyposensitive) so that a child does not feel things of the skin much at all. Both can be addressed and normalized with specific stimulation techniques.
2. *Deep Pressure* – The deep sensors down next to the bone are responsible for pain sensation, muscle tone, proprioception, and overall coordination. Directly addressing this sensory system can improve all of these functions.
3. *Temperature* – (Hot and cold). We often see children who lack the ability to perceive temperature appropriately. Warm water may feel hot, or the child may not respond to hot or cold at all. He may dress the same in the winter and the summer.
4. *Trigeminal* – We see individuals who have a hypersensitive trigeminal nerve, which makes the very sensitive to touch on the head. This makes getting haircuts and general grooming a nightmare. Trigeminal hypersensitivity can also trigger sneezing in sunlight. If the trigeminal sensation on the head is too low, the individual may have a flaccid face.
5. *Mouth tactility* – This is important if it is interfering with normal function. Some individuals have overly sensitive mouths. They may avoid foods with certain textures; brushing teeth is uncomfortable; a dentist visit is almost impossible. Others have insensitive mouths. They may overstuff their mouths when eating (not sensing when it is full) or have articulation and tongue control problems.
6. *Taste and smell* – A person may be sensitive to tastes and smells to such an extent that he is distracted by and avoids food. If the mouth is not sensitive enough to taste and smell, unusual behavior may be observed (pica – the eating of inedible objects).

Our goal is to normalize function in all sensory areas.

Cognitive Function and Dysfunction

The labels of learning disabilities, ADD, ADHD, and mentally retarded are simply symptomatic labels. These labels do not predict the potential of an individual. They simply tell you how the person is functioning right now. Given the plasticity of the brain, these areas can be greatly improved.

The main sources of cognitive problems are low auditory and visual processing, incomplete cortical hemispheric dominance (which affects long-term memory), and teaching methods that are inappropriate for the individual's learning strengths.

Auditory and Visual Processing

An individual who is labeled mentally retarded often has significant weakness in auditory and visual processing. Symptoms of low auditory processing include difficulty following direction, social immaturity, inability to learn to read with phonics, etc. (See the paper titled "Hearing, Learning and Listening" for more discussion of this issue.) By directly practicing visual and

auditory processing skills, while working on underlying sensory issues, it has been shown that processing ability can be significantly increased, thereby positively impacting function.

Cortical Hemispheric Dominance

Research has found that as the brain develops, lateralization occurs. Beginning at the midbrain, the functions of the brain cross over to the opposite side of the body, so that the right side of the brain controls the left side of the body, and visa versa. As the brain matures, lateralization should become smooth and coordinated, allowing the hemispheres of the brain to communicate smoothly and in an organized fashion. Symptoms of disorganization in this area may include difficulty with left/right discrimination; coordination; reversals n reading, writing, and hearing; and many other areas often labeled as “learning disabilities”. A person with complete lateralization should creep, crawl, and walk in a smooth cross-pattern.

As the brain is lateralizing, the genetic predisposition towards left or right dominance begins to emerge. This does not just affect the handedness; it affects the eye, ear, and foot as well. To be well organized, have good logic, control of emotions, and efficient long-term memory, an individual should be either right-sided or left-sided. If the individual is right-handed, he should also be right-eared, right-eyes (at near-point and far-point), and right-footed. If left-handed, the opposite should be true. This allows for the most organized control of long-term memory, control of emotionality, and many, many other areas of cognitive function. The classic “dyslexic” is usually found to be mixed in some way(s). For example, they may be right-handed and left-eyed, or mixed-handed with no eye dominance, or some combination of these. Establishing dominance on one side eliminates these symptoms. This must be carefully evaluated by someone experienced in this area to make sure that the underlying issues are resolved, and that the correct side is chosen for establishment of cortical hemispheric dominance.

Teaching Methods

Too often children that are labeled as mentally retarded or learning disabled are presented with few educational options and lowered educational expectations. Occasionally, some compensatory methods are used, but often the children are left behind their peers.

By focusing on the underlying sensory, processing, and dominance problems, which are getting in the way of learning, and by teaching children in the way they learn best, the expectation is that they can learn and often even catch up with their peers. For example, if a child has a significant auditory processing deficit and the school is trying to teach reading using phonics, the child will continually fail. Without adequate auditory processing, a child can learn all the phonics rules and know them very, very well, and still not make any sense out of longer words that he is trying to decode. We see these children sounding out the first part of the word and guessing at the rest of not even trying. We have seen children try to sound out words backwards or skip the middle parts of the words. All of these problems can be remediated, but in the meantime, this child can probably learn to read easily and well with a visual reading program while we worked on those auditory processing problems. The same goes for math, math facts, and any other area of knowledge. By teaching to the strengths while we remediate the weaknesses, we have been able to accelerate the learning of children who are behind, to the point of advancing a grade or two in reading every four months. This is not at all uncommon.

Behavior and Attachment Problems

Behavior problems are often a consequence of sensory, processing, or cognitive dysfunctions and the underlying frustrations of trying to deal with them. Addressing these problems and giving the children some learning success often helps behavior tremendously. Neurodevelopmentalists also work with different strategies to assist parents in helping their children improve behavior and lean to be more socially appropriate.

Metabolic Issues

Often ignored in the mix of cognitive and behavior problems are metabolic problems that an individual may have. Children with allergies, asthma, chronic illness, cyclical behavior and function often have underlying metabolic issues. They may be reacting to foods or allergens in the environment that severely affect function. An individual that does not feel well has difficulty functioning and behaving well. The most comprehensive program we have found is the systematic approach of ChemBalance. Numerous individuals with wide ranging problems have found success at stabilizing metabolic function by using the approach of ChemBalance to balance blood chemistry. The web site of ChemBalance is: www.chembalance.com. Articles on the philosophy and some underlying issues surrounding the work can be found at www.lifebalances.com.

Summary

The future of a person with FAS/FAE is bright. With the holistic approach of the Neurodevelopmental method, all the pieces can come together for the individual damaged by alcohol. We do not know what the specific God-given potential is for each person. However, it is our experience that if we view each individual as having unlimited potential, address the underlying problems, and help the family with support by providing therapeutic and academic programs, the child will advance and many will achieve at a far higher level than the gloomy prediction of the original diagnosis.

God bless you and yours as you search for answers for your loved ones.

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