Teaching Students with Fetal Alcohol Spectrum Disorders

A Resource Guide for Florida Educators

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CONTENTS

Introduction

The result of prenatal exposure to alcohol ranges from Fetal Alcohol Syndrome (FAS), the leading cause of preventable mental retardation in the United States, to other fetal alcohol effects causing lifelong disruptions in cognitive, linguistic, and social development. This range of effects is referred to as Fetal Alcohol Spectrum Disorders (FASD). The most common birth defect associated with FASD is central nervous dysfunction, and children prenatally exposed to alcohol may present with cognitive, behavioral, and psychological dysfunction resulting in lifelong disabilities. Abnormal cognitive functioning manifests in a variety of domains, including mathematical deficiency, difficulty with abstract concepts such as time and space, and inability to see the relationship between cause and effect, as well as comprehension and memory deficits. FASD is a physical disability with behavioral symptoms often demonstrated by poor attention and concentration skills, impaired judgment, hyperactivity, and impulsivity (Streissguth, 1997; Malbin, 2002).

Children with prenatal exposure to alcohol may present with cognitive, behavioral, and psychological dysfunction that causes lifelong disabilities. Abnormal cognitive functioning manifests in a variety of domains, including mathematical deficiency, difficulty with abstract concepts such as time and space, and inability to see the relationship between cause and effect, as well as comprehension and memory deficits.

Families of children with FASD are faced with a multitude of issues touching every aspect of their lives. In addition to addressing the immediate physical, educational, and financial needs of their child, families must also identify long-range strategies to ensure these needs are met throughout the lifetime of the child. The emotional toll on families should not be underestimated. For natural birth parents, the reality that their child's mental retardation, birth defects, and/or neurodevelopmental disorders are a result of maternal alcohol consumption during pregnancy is very difficult to face. For adoptive or foster parents, discovering that their child suffers from FASD after years of trying to understand his cognitive and behavioral problems results in feelings of frustration and isolation (Abel, 1988; Davis & Lipson 1984).

While children with Fetal Alcohol Spectrum Disorders may be affected at almost every level of functioning, nowhere is it clearer than in the academic arena.

The effects of prenatal exposure to alcohol have been well documented in empirical and clinical studies over the last 30 years. First identified in the United States in the landmark study *Patterns of Malformations in Offspring of Chronic Alcoholic Mothers* (Jones, Smith, Ulleland, & Streissguth, 1973), Fetal Alcohol Syndrome and Fetal Alcohol Spectrum Disorders have been the subject of hundreds of articles in a diversity of publications from the *Journal of the American Medical Association* to *Clinical Linguistics and Phonetics.* The inclusion of this subject across such a broad spectrum of publications is indicative of the range of effects of FASD. The negative effects of prenatal exposure to alcohol range from mild cognitive and/or behavioral dysfunction to profound mental retardation. The effects are lifelong but may be mitigated with early intervention (Streissguth,

MYTH:
Admitting that children with FASD have brain damage means that society has given up on them.

FACT:
Some people believe that acknowledging the brain damage that accompanies FASD will depict those affected as hopeless and devoid of treatment options. Yet, society spends millions of dollars developing treatment procedures for children born with more obvious birth defects and for people sustaining brain damage in more noticeable ways (e.g., auto accidents). Individuals with FASD are in no way helpless, but their needs have been sadly overlooked in the allocation of societal resources.

1996). While children with Fetal Alcohol Spectrum Disorders may be affected in almost every area of functioning, nowhere is it clearer than in the academic arena.

Teachers face unique challenges in working with children with FASD. Many children with FASD are not diagnosed until they reach elementary school, when higher-level executive functioning skills are needed. Even then, classroom teachers may not have the tools or information needed to correctly identify the cause of the cognitive or behavioral problems, or know of intervention strategies to help these children reach their full academic potential. Best educational practices require the development and implementation of academic and behavioral strategies to address the needs of students with FASD. Despite the best efforts of general and special educators, parents often feel school personnel do not understand and, therefore, cannot address the unique needs of students with FASD.

This resource guide provides important information to assist educators and school health care professionals in understanding FASD. **Section One** discusses the problems children with FASD have, provides an introduction to FASD, and explains the latest terminology. **Section Two** explains how and when alcohol consumption affects fetal development, brain development, and sensory integration. **Section Three** discusses the possible misdiagnosis and/or the co-occurring diagnosis of students with FASD, the differences in strategies depending on the diagnosis, and realistic expectations of students with FASD. **Section Four** discusses implications for educators and outlines strategies by age group. **Section Five** contains a comprehensive list of FASD resources including books, videos, support organizations, newsletters, and websites.

The information provided in this resource manual is based on the research and literature currently available. It is our hope that it will provide intervention strategies that will be used by educators to promote a positive academic experience and support individuals with FASD in reaching their full potential.

14 Primary Performance Problems Associated with Fetal Alcohol Spectrum Disorders

Prenatal alcohol exposure often results in central nervous system dysfunction that affects a student's ability to successfully perform in an academic setting. The frequency and magnitude of these problems varies greatly among affected students and is not correlated to IQ scores.

1. Compromised executive functioning; may have difficulty planning, predicting, organizing, prioritizing, sequencing, initiating, and following through. Difficulty setting goals, complying with contractual expectations, being on time, or adhering to a schedule.
2. Difficulty with memory; information input, integration, forming associations, retrieval, and output. Difficulty learning from past experiences. Often repeats the same mistake over and over again in spite of increasingly severe punishment.
3. Inconsistent memory or performance; may remember on Monday but forget by Thursday.
4. Difficulty with abstract concepts such as time, math, or money.
5. Impaired judgment; often unable to make decisions. Difficulty differentiating safety from danger, friend from stranger, or fantasy from reality.
6. Inability to generalize information; difficulty forming links and associations, unable to apply a learned rule in new setting.
7. Communication challenges; appears to understand instructions, but actually does not comprehend. Often repeats rules verbatim, then fails to apply them.
8. Language problems; difficulty comprehending the meaning of language and accurately answering questions. May agree or confabulate, comply or fill in the blanks. May talk excessively, yet be unable to engage in a meaningful exchange. The sheer volume of words may create the impression of competence.
9. Slow cognitive pace; may think more slowly, may require minutes to generate an answer rather than seconds. Students with FASD are "ten-second people in a one-second world."
10. Slow auditory pace; central auditory delays means language is processed more slowly, requiring more time to comprehend. Many students only grasp every third word of normally paced speech.
11. Perseveration; may be rigid, get stuck, have difficulty switching gears, stopping an activity, or transitioning to a new one. Often reacts strongly to changes in setting, program, and/or personnel.
12. Dysmaturity; often functions socially, emotionally, and cognitively at a much younger level of development than chronological age.
13. Impulsivity coupled with inability to abstract and predict outcomes; acts first and then is able to see the problem after the fact.
14. Sensory integration dysfunction; May overreact to stimuli. May display tactile defensiveness, be easily overwhelmed by sensory input, be unable to filter out extraneous stimuli. May underreact to pain.

Adapted from: Diane Malbin, Fetal Alcohol Spectrum Disorder and the Role of Family Court Judges in Improving Outcomes for Children and Families. *Juvenile and Family Court Journal,* Spring 2004.

Overview of Fetal Alcohol Spectrum Disorders

MYTH:
Children eventually outgrow FASD.

FACT:
FASD lasts a lifetime: although, its manifestations and associate complications vary with age. Children with FASD usually require a longer period of sheltered living, and many need a stronger than usual support system to achieve their optimal level of adaptive living. Understanding this can help families plan effectively for structured transitions between school and work and spare their child the expectation that they should or must be independent at age 18, or that it is shameful to ask for help.

The Vocabulary

Over the last several years the vocabulary used to describe individuals prenatally exposed to alcohol has evolved. First identified in the United States in 1973 (Jones, Smith, Ulleland, & Streissguth, 1973), FAS is characterized by specific diagnostic criteria. Beginning in 1978, the term Fetal Alcohol Effects (FAE) has been used to describe conditions that are presumed to be caused by prenatal alcohol exposure but do not follow the exact configuration of the characteristics that uniquely identify FAS. In 1996, the Institute of Medicine proposed using the terms Partial Fetal Alcohol Syndrome (PFAS) to describe those individuals with some but not all of the facial abnormalities that characterize FAS, and using Alcohol Related Neurodevelopmental Disorder (ARND) and Alcohol Related Birth Defects (ARBD) to describe conditions in which there is a history of maternal alcohol exposure and an outcome validated by clinical or animal research to be associated with that exposure (Stratton, Howe, & Battaglia, 1996). Most recently, the term Fetal Alcohol Spectrum Disorders (FASD) has emerged to describe the spectrum or range of clinical conditions associated with prenatal alcohol exposure. FASD is an umbrella term that includes FAS and other effects of prenatal alcohol exposure. For the purposes of this resource manual FAS, FAE, PFAS, ARND, ARBD, and FASD will be used as they appear in the research supporting the information presented.

Fetal Alcohol Syndrome

Fetal Alcohol Syndrome is a constellation of physical, cognitive, and behavioral abnormalities resulting from prenatal exposure to alcohol (Jones, Smith, Ulleland, & Streissguth, 1973). There is general agreement across the literature that there are four specific criteria required for a diagnosis of FAS:

- confirmed maternal alcohol consumption during the pregnancy;
- growth deficiency, pre or postnatally, for height, weight, or both;
- specific pattern of anomalies including a face characterized by short palpebral fissures (eye slits), flat midface, flattened philtrum, and thin upper lip;
- central nervous system (CNS) abnormalities. The estimated prevalence of FAS is one to three births per 1000 (Sampson, Streissguth, Bookstein, Little, Clarren, Dehaene, Hanson, Graham, 1997).

Physical and Neurodevelopmental Characteristics

Children with FAS possess certain common characteristics, as well as a variety of effects that affect each child differently. However, all children with FAS possess facial abnormalities that are most easily recognizable between the ages of 2 through 10 and central nervous system dysfunction, and many display growth retardation that manifests itself in below average height throughout their lifetime and below average weight until adolescence. The illustration below identifies the facial features characteristic of children with FAS.

Fig. 1 Facial Features Associated with FAS

Source: Streissguth and Little, 1994

Facial features particularly characteristic of a child with Fetal Alcohol Syndrome (FAS). Discriminating features (i.e., those considered definitive signs of FAS) are shown on the left side of the illustration; characteristics listed on the right side are associated with FAS but are not sufficient to determine the presence of the syndrome. Microencephaly (small head circumference) is not a facial feature per se, but a central nervous system characteristic. (Palpebral fissures = eye opening; philtrum = groove between nose and upper lip, epicanthal folds = skin folds covering inner corner of the eye; micrognathia = abnormal smallness of the jaws.)

from National Institutes of Health Publication No. 99-4368

Facial features characteristic of FAS include short palpebral fissures (eye slits); thin upper lip; shortened upturned nose; flattened, smooth, wide philtrum; epicanthal folds; and flat midface.

Growth retardation associated with children with FAS includes low birth weight for gestational age, decelerating weight not caused by poor nutrition, and a disproportionately low weight to height ratio.

CNS neurodevelopmental abnormalities associated with FAS include decreased cranial size at birth, structural brain abnormalities, impaired fine motor skills, neurosensory hearing loss, poor tandem gait, and poor eye-hand coordination.

Brain damage associated with FAS may include poor habituation, poor self-regulation, impulsivity, attention deficits, slow central nervous system processing speed, arithmetic disability, poor capacity

MYTH:
People with FASD always have mental retardation.

FACT:
Although it is true that FASD is caused by prenatal brain damage and every person with FASD has specific, individualized cognitive strengths and weaknesses, not all people with FASD have mental retardation. For example as one study found, only 25% of 178 individuals with FAS were classified as having mental retardation (Streissguth, A., Barr, H., Kogan, J., & Bookstein, F., 1996). In fact, it is possible for an individual with FASD to have an IQ score within the normal range. FASD diagnostic centers such as the one at the University of Washington Medical School see individuals with a broad spectrum of IQ scores (Clarren & Astley, 1997).

for abstraction or metacognition, deficits in higher level receptive and expressive language, poor impulse control, memory problems, disorientation in time and space, poor judgment, and difficulty with self-reflection. Children with FAS who have IQ scores in the normal range may still have specific cognitive or neuropsychological impairments or problems with adaptive behaviors that are not reflected on IQ tests scores.

Birth defects associated with FAS may include cardiac, skeletal, renal, ocular, and auditory dysfunction.

Fetal Alcohol Spectrum Disorders Without FAS Characteristics

Unfortunately, absent the physical characteristics associated with FAS, there are no biochemical tests or physical markers to determine if a child has FASD. Symptoms may be unrecognizable at birth and may be misdiagnosed as difficulties resulting from a difficult delivery or other prenatal stressor. Further, the characteristics of children with FASD can vary. Often children with alcohol-related, organically-based brain problems are never given a diagnosis of FASD. The cognitive, behavioral, and language manifestations of alcohol's effects are often attributed to disabilities such as attention deficit or general developmental delays.

While FASD may not always include the full battery of physical symptoms seen in children with FAS, neither is it considered a less severe form of FAS. To the contrary, since they lack outward signs and consequently are not perceived as having brain damage, children affected by FASD without the FAS characteristics often have more problematic experiences in school and as adults (Streisguth 1997).

Most easily recognizable, the physical characteristics of FASD (growth deficiencies and facial features) are not really its essence. The real long-term disability of FASD is the CNS dysfunction.

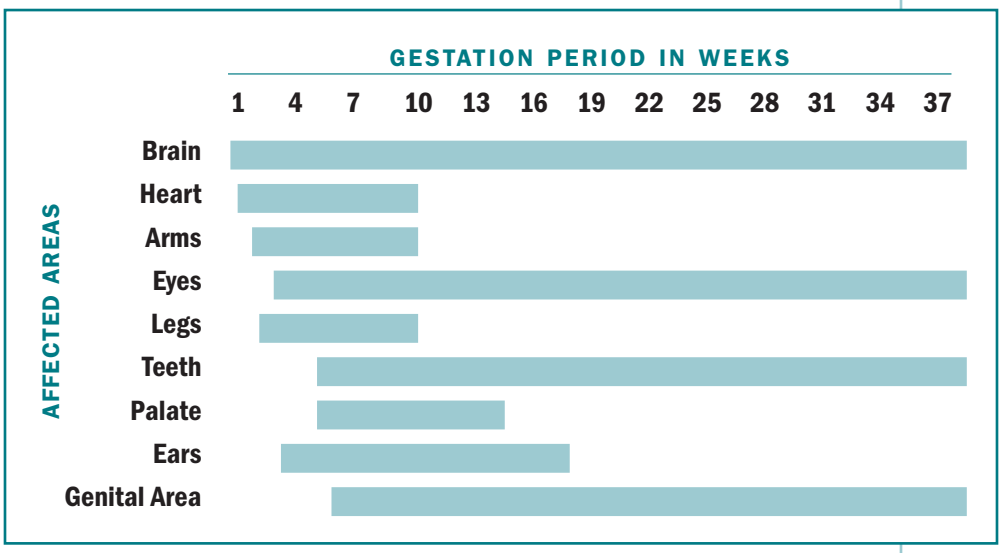
Indications of possible CNS abnormalities include

- head circumference below the third percentile
- developmental delays
- poor impulse control
- inconsistent knowledge base
- difficulty grasping abstract concepts
- speech/language disorders
- problems with perception, sensory integration, and tactile defensiveness
- hyperactivity
- learning disabilities
- distractibility.

The Effects of Alcohol Exposure on the Developing Fetus

The placenta does not protect the developing fetus from the negative effects of alcohol exposure. Ethanol (the kind of alcohol in beverages) crosses the placenta freely. When a pregnant woman consumes alcohol, her blood levels and those of her fetus are approximately equal within minutes of consumption (Streissguth & Little, 1994). The developing fetus is negatively affected by alcohol exposure in a variety of ways. The table below indicates which areas of the developing fetus are affected during different stages of the gestation period.

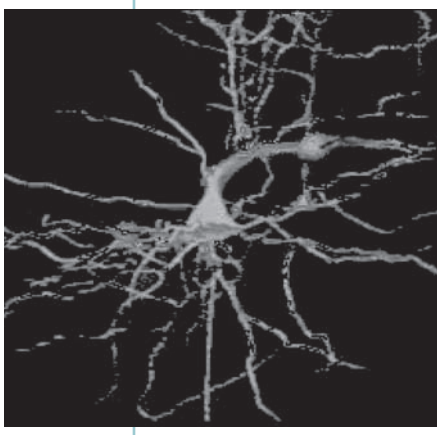
Fig. 2 Areas of Developing Fetus Affected During Pregnancy by Prenatal Alcohol Exposure



The Effect of Prenatal Exposure to Alcohol on Brain Development

As a fetus develops, cells destined to become the brain and nervous system attach to each other with the help of cell adhesion molecules. A recent laboratory study by Wilkemeyer, Menkari, Spong, and Charness (2002) revealed that ethanol interferes with adhesion molecules and hinders crucial cell-to-cell attachments. Prenatal alcohol exposure can disrupt the normal proliferation and migration of brain cells and produce structural deviations in brain development.

Prenatal alcohol exposure can also disrupt the electrophysiology and neurochemical balance of the brain so that messages are not transmitted as efficiently or as accurately as they should be. In some children with FASD, the wiring of the brain's message system is dysfunctional, causing message receptors to be faulty.



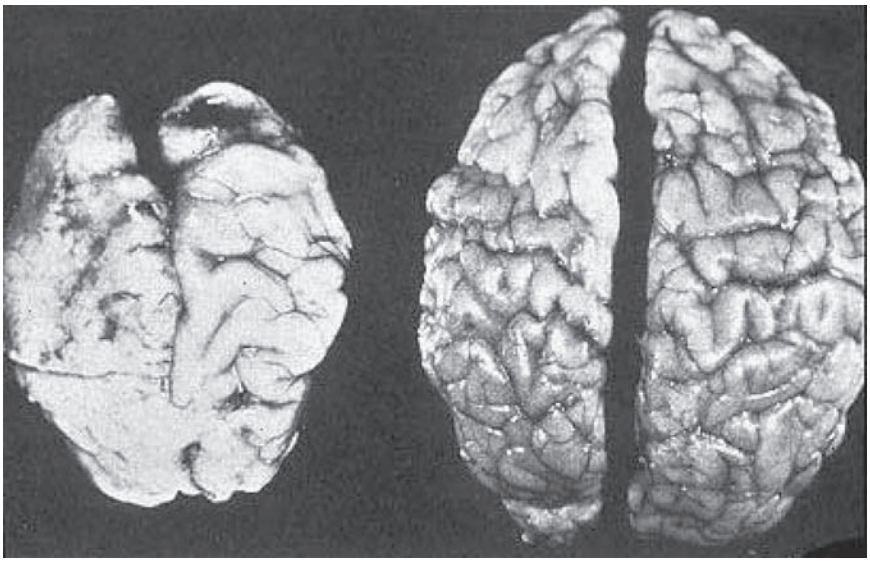
During pregnancy, transient ethanol exposure can delete millions of neurons from the developing brain. Consequently, the primary birth defect associated with prenatal alcohol exposure is central nervous system dysfunction causing learning disabilities, behavior problems, memory deficits, attention deficit hyperactive disorder, and/or mental retardation. Fetal Alcohol Syndrome is the leading cause of preventable mental retardation in the U.S.

Initially, information on the neuroanatomical effects of prenatal alcohol exposure came from autopsies of children with FAS (Clarren, 1986; Mattson, & Riley, 1996). The photo below (Fig. 3) compares the brain on the left of a 5-day-old infant with FAS and the brain on the right of a 5-day-old infant with normal brain development.

These autopsies revealed

- malformations of the brain tissue
- failure of certain brain regions to develop at all
- failure of certain cells to migrate to their appropriate locations during embryonic brain development
- a tendency for the tissue to die off in other brain regions.

Fig. 3 Comparison of Brain of Infant Prenatally Exposed to Alcohol (left) and Normal Infant Brain (right)



Clarren 1986

Using magnetic resonance imaging (MRI) and computed tomography, which measure the area or volume of a body structure, researchers have documented the following effects of prenatal exposure to alcohol on brain development:

- reduced overall brain size (Mattson et al., 1994, 1996)
- anatomical defects at the midline of the brain, including the agenesis or underdevelopment of the corpus callosum (Johnson et al., 1996, Mattson et al., 1994; Riley et al., 1995)
- reduced volume of the cerebellum (Clarren, 1986; Mattson & Riley, 1996)
- reduced volume of the basal ganglia (Mattson et al., 1994).

Fig. 4 Regions of the Brain Most Affected By Prenatal Alcohol Exposure

Region of the Brain	Function
Corpus Callosum	Processes information between the left and right hemispheres of the brain
Cerebellum	Motor control
Basal Ganglia	Processes memory
Hippocampus	Learning and memory
Frontal Lobes	Impulse control

The effects of prenatal alcohol exposure on brain development are eloquently articulated by Dr. Ira Chasnoff of the Children's Research Triangle.

"The behavioral, emotional, and learning difficulties of children with Fetal Alcohol Syndrome can best be understood as a deficit in processing information: recording information (bringing it in to the brain), interpreting the information, storing the information in memory for later use, and using the information to guide language and movement.

The damage to the brain caused by prenatal alcohol exposure mainly occurs in the parts of the brain that affect information processing. The hippocampus connects sensory and motor information from different parts of the brain. Damage to the hippocampus interferes with the child's using sensory information (such as hearing) and connecting that information to a motor activity. This causes learning and memory problems. For example, asking a child to take a note to the teacher often will result in her taking the note to school, but she cannot remember what to do with it when she gets there.

Other alcohol-induced structural changes in the brain can occur in the corpus callosum, the section of the brain that permits the two major halves of the brain to share information. If this communication is interrupted, as it is in alcohol-exposed children, then some types of information can never reach consciousness. For example, a child can recite the rules for good behavior in the school lunchroom, but then cannot understand or follow them.

Finally, the thalamus receives input from all over the body and sends it to the cerebral cortex, the area of the brain responsible for cognition and learning. The thalamus helps organize behavior related to survival–fighting, feeding, and fleeing. This is why children with FAS often get a look of panic in their eyes when faced with a sudden change or threat or when they are overloaded with information. Parents describe the children as 'not there.' Also, the child does not learn from experience. Parents describe the child as "stubborn," but the connections between past instructions or experience and current behavior just don't exist.

It therefore can be seen that the behaviors demonstrated by children with FAS are a result of brain damage, not willful misconduct. When a child knows all his spelling words one day, and cannot spell a single word the next day, he often is accused of having "selective memory." Instead, the child is having difficulty recording information and storing it for later use. This child will need special, often multi-sensory, cues to be able to remember the spelling words. The child who runs out into the street is not being disobedient. She simply has not made the connection between the words, 'Do not run out into the street,' and the literal motor action. Thus, she will need clear structure ('This is the boundary of our yard.') to ensure her safety."

(with permission, Chasnoff, www.childstudy.org)

The Effects of Prenatal Exposure to Alcohol on Executive Functioning

Prenatal exposure to alcohol results in the developing brain being exposed to a behavioral teratogen that results in behavioral and cognitive dysfunction even in children without the physical characteristics associated with FAS. The emerging consensus is that children with FASD are markedly impaired in "executive functioning." These children are less able to work through complex tasks to achieve a goal. Even children with FAS who perform in the normal range on simple tests may do poorly in tests assessing complex cognitive efforts (Mattson et al., 1999).

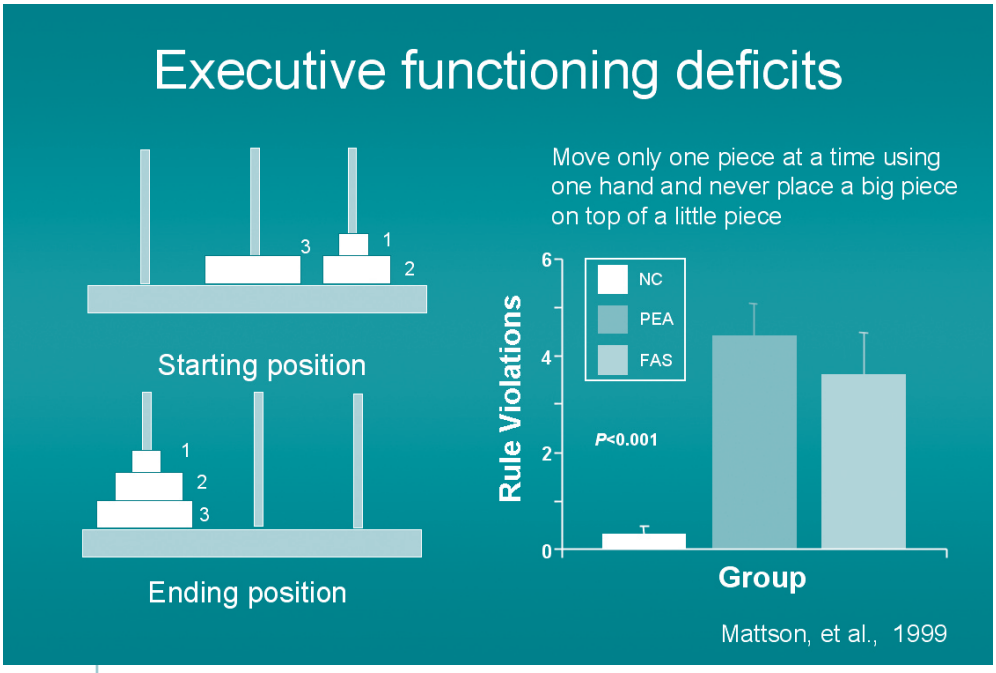
Fig. 5 Table of executive functions

Prenatal exposure to alcohol can affect executive functioning, which is controlled by the frontal lobes in the following manner:

Executive Functions	Effects of prenatal exposure to alcohol
Inhibitions	Socially inappropriate behavior, as if inebriated
Planning	Inability to apply consequences from past actions
Time Perception	Difficulty with abstract concepts of time and money
Internal Ordering	Difficulty with sequencing, difficulty processing information
Working Memory	Difficulty storing and/or retrieving information
Self-Monitoring	Requires frequent cues, assistance from others with monitoring behavior
Verbal Self-regulation	Needs self-talk, verbal self-feedback
Motor Control	Fine motor skills more affected than gross motor skills
Regulation of Emotion	Difficulty in maintaining stable emotional state, swings from emotional highs to lows; unable to regain composure without assistance
Motivation	Requires external motivators, may demonstrate lack of remorse

Tests of executive functioning assess the ability of students to perform complex tasks requiring significant cognitive effort, such as planning, problem solving, judgment, time perception, controlling inhibitions, self-monitoring, reasoning, internal ordering, arithmetic tasks, and working memory. A recent study of children prenatally exposed to alcohol demonstrated various deficits on measures of executive functioning. For example, on the tower measure shown below, the only two rules were never place a larger piece on top of a smaller one and move only one piece at a time. Children with FAS and FAE made more rule violations than the control group (Mattson et al., 1999).

Fig. 6 Test of Executive Functioning



The Effect of Prenatal Exposure to Alcohol on Sensory Integration

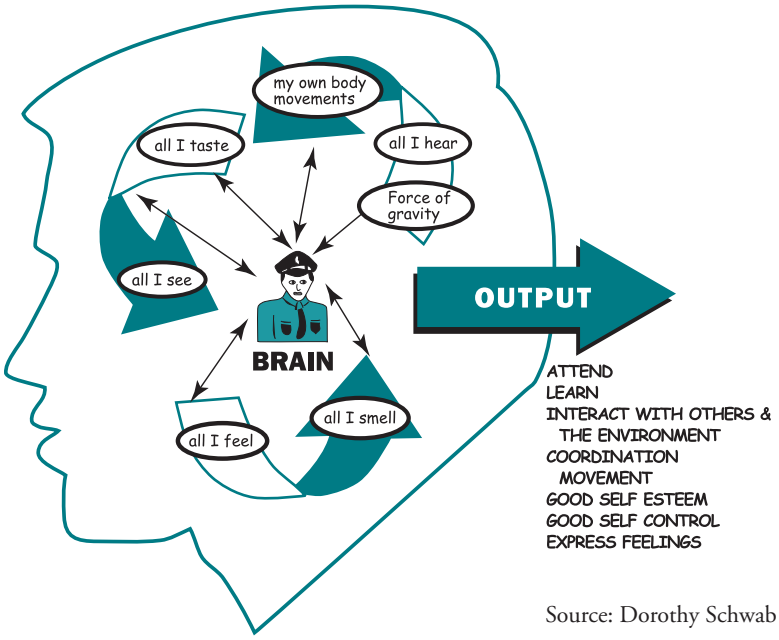
Many children with FASD have sensory integration problems (Schwab, 1999). Sensory integration involves taking in information from all of our senses, organizing that information, and using it to respond in an appropriate manner. This process involves the central nervous system, which is comprised of the brain and the spinal cord. Students with FASD are likely to have disordered sensory integration (Schwab, 1999).

The two following illustrations depict normal sensory integration and disordered sensory integration. It is easy to understand why students with FASD have problems with concentration, organization, academic learning, abstract reasoning, and specialization of each side

of the body and the brain when their ability to filter and organize stimulation from their senses is impeded. Strategies designed to limit and control stimulation have been found to be effective in assisting students with disordered sensory integration.

Fig. 7 Normal Sensory Integration

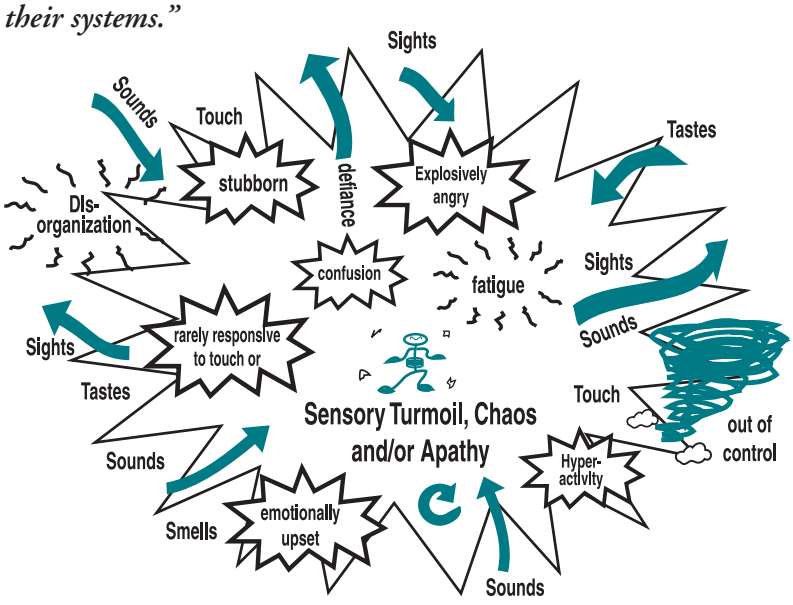
"Processing touch information correctly allows us to feel safe and enables us to bond with those who love or care for us."



Source: Dorothy Schwab

Fig. 8 Disordered Sensory Integration

"Many children with FASD have difficulty processing, organizing, and coping with the sensory information that constantly bombards their systems."



Source: Dorothy Schwab

MYTH:

The behavior problems associated with FASD are the result of poor parenting or bad environment.

FACT:

Because people with FASD are born with some brain damage, they do not process information in the same way as most people and do not always behave in a manner that others expect. Even in the best environments, the brain damage can result in behavioral problems and present parenting challenges. Parents and caregivers need help and support, not criticism. Of course, a loving and understanding home environment helps a child with FASD, but its absence isn't the primary cause of the behavioral problems associated with the disorder.

Realistic Expectations of Students with FASD

Common Co-occurring/Misdiagnoses of FASD

Many children with FASD have co-occurring disorders or are misdiagnosed with a disorder other than FASD.

The following list identifies the most common.

- Attention Deficit Disorder
- Attention Deficit with Hyperactivity Disorder
- Oppositional Defiant Disorder
- Reactive Attachment Disorder
- Learning Disability
- Speech and Language Delay
- Pervasive Developmental Delay
- Developmental Receptive Language Disorder
- Sensory Integration Dysfunction
- Conduct Disordered, Severely Emotionally Disturbed
- Borderline Personality Disorder
- Antisocial Personality Disorder
- Autism, Asberger's

The strategies needed to address negative behaviors in children with FASD are often very different from strategies found to be effective for other disorders. The following tables illustrate the differences in strategies to address basically the same behavior. It is not enough to observe the behavior; identifying the root cause of the behavior will dictate the most effective intervention strategy.

Behavior: **Takes risks**	*Core Cause of Behavior*	*Intervention*
Fetal Alcohol Spectrum Disorders	■ Does not perceive danger	Provide mentor; utilize a lot of repeated role playing
Attention Deficit Hyperactivity Disorder	■ Acts impulsively	Utilize behavioral approaches (e.g., stop and count to 10)
Oppositional Defiant Disorder	■ Pushes the envelope; feels omnipotent	Psychotherapy to address issues; protect from harm

Behavior: **Does not complete tasks**	*Core Cause of Behavior*	*Intervention*
Fetal Alcohol Spectrum Disorders	■ May or may not take in information ■ Cannot recall information when needed ■ Cannot remember what to do	Provide one direction at a time
Attention Deficit with Hyperactivity Disorder	■ Takes in information ■ Can recall information when needed ■ Gets distracted	Limit stimuli and provide cues
Oppositional Defiant Disorder	■ Takes in information ■ Can recall information when needed ■ Choose not to do what they are told	Provide positive sense of control; limits and consequences

Behavior: **Hits others**	*Core Cause of Behavior*	*Intervention*
Fetal Alcohol Spectrum Disorders	■ Someone told them to ■ Misinterprets intentions of others ■ May sense bump as attack ■ May respond from history of abuse	Deal with misinterpretations at the time; one-to-one support
Attention Deficit Hyperactivity Disorder	■ Frequently an impulsive act	Behavioral approaches to address impulsivity
Oppositional Defiant Disorder	■ Plans to hurt others ■ Misinterprets intentions of others as attack or impending attack	Consequences; cognitive behavioral approaches

Source: Dan Dubovsky, SAMHSA FASD Center for Excellence

Revisiting Expectations for Students with FASD

There are four specific criteria related to the diagnosis of FAS:

- confirmed maternal alcohol consumption during the pregnancy;
- growth deficiency, pre or postnatally, for height, or weight, or both;
- specific pattern of anomalies including a characteristic face with short palpebral fissures (eye slits), flat midface, flattened philtrum thin upper lip; .
- CNS abnormalities

Equally serious are the invisible symptoms of FASD, neurological damage including mental retardation; attention and memory deficits; hyperactivity, difficulty with abstract concepts such as space, time, or money; poor problem solving skills; difficulty learning from consequences; poor judgment; immature behavior; and poor impulse control.

Absent the diagnostic criteria found in children with FAS, children with FASD often remain undiagnosed. Expectations for these children are often the same as those for children not affected. Revisiting our expectations for children with FASD to recognize and acknowledge that they have neurological brain damage, a physical disability with behavioral symptoms, provides us with an opportunity to shift our paradigm and embrace strategies that will work.

Children with Fetal Alcohol Spectrum Disorders often feel bad about themselves. They have heard their parents, teachers, and counselors describe them as “stubborn,” “defiant,” and “not motivated,” when in fact they are overwhelmed with the sights, sounds, smells, textures, and information bombarding them from all directions. Once parents and teachers understand the brain-based difficulties in information processing that confront the child and learn to look beyond the behaviors they see, they can help the child to make sense of the world around him.

"Parents and professionals report a significant shift in their perceptions about people with FASD once their disability is understood from a neurological perspective. As a result, feelings toward those with FASD also change, moving from frustration to understanding and acceptance."

The following pre- and post-evaluation of participants in a course at the University of Wisconsin captures this shift. The column on the left contains descriptions of children with FASD prior to information on FASD; the column on the right contains descriptions six months later, after information on FASD was provided.

From seeing the child as…	***To understanding the child as…***
Won't	Can't
Annoying	Frustrated, challenged
Lazy, unmotivated	Tries hard, tired of failing
Lies	Fills in the blanks
Fussy	Oversensitive
Acting younger, babied	Being younger
Trying to get attention	Needs contact, support
Inappropriate	Displays behaviors of younger child
Refuses to sit still	Over-stimulated
Resisting	Doesn't get it

Personal feelings of the adult change from…	***To feelings of…***
Hopelessness	Hope
Fear	Understanding
Chaos, confusion	Organization, comprehension
Power struggles	Working with
Isolation	Networking, collaboration

Professional shifts from…	***To…***
Stopping behaviors	Preventing problems
Behavior modification	Modeling, using visual cues
Changing people	Changing environments

— Diane Malbin (2002). *Trying differently, rather than harder* (p 42-43).

Implications for Educators

Section Four

The Range of Educational Responses

Florida's public schools offer a variety of educational venues in response to a widely diversified population. Within the public school construct, students with FASD may be assigned to an exceptional student education classroom, a regular classroom with accommodations pursuant to Section 504 (of the Rehabilitation Act of 1973), or a regular classroom with no accommodation. Regardless of the setting, an education plan should be developed to ensure that the student with FASD receives the optimal academic experience and opportunity. Each student with FASD is different; each educational response will be different as well. This resource manual is designed to offer a vast number of alternative strategies to assist teachers' efforts to respond to the challenges inherent in working with students with FASD. It should be used in conjunction with other resources including the practice wisdom of the students themselves, their families, and the other members of the multidisciplinary team.

Implications for Educators / Strategies That Work

Now that we know what FASD is and how it affects brain development, sensory integration, learning, cognition, behavior, and social-emotional development, it is time to explore strategies that will result in optimal outcomes for a student with FASD. The intervention strategies identified in this resource guide are a compilation of research, practice wisdom and vignettes. Contributing to this body of knowledge are Julie Conry, British Columbia Department of Education; Jan Osborne, Northwest Regional Educational Laboratory; Judith Kleinfeld and Siobhan Wescott, editors of *Fantastic Antone Succeeds*; Diane Malbin, author of *Fetal Alcohol Spectrum Disorders: Trying Differently Rather Than Harder* and *Fetal Alcohol Syndrome*, and *Fetal Alcohol Effects: S*trategies for Professionals; G. Findlay and A. Sorenson, authors of *What Educators Need to Know about Having Students with Fetal Alcohol Syndrome and Fetal Alcohol Effects in the Classroom: Issues, Identification, Intervention and Instructional Strategies*; and R. Schenck, J.T Cole, and C. Medina, authors of *Fetal Alcohol Syndrome, Fetal Alcohol Effects: Implications for Rural Classrooms*. The strategies are organized in sections by grade level.

For each grade level—preschool, elementary, middle, and high school—strategies are organized into three categories:

1. **Classroom Environment**
   - *Create quite zones.*
   - *Design classroom seating.*
   - *Limit distractions.*
   - *Organize materials.*
   - *Establish clear rules for classrooms and learning centers.*

2. **Active Learning Strategies**
   - *Use multiple modalities, multi-sensory, and/or manipulatives.*
   - *Keep steps simple.*
   - *Create opportunities for decision making and problem solving.*
   - *Model and demonstrate appropriate behaviors.*
   - *Provide structure.*

3. **Establishing Routines**
   - *Maintain a daily schedule.*
   - *Ensure consistency in scheduling.*
   - *Plan for change.*
   - *Build in transitions.*
   - *Use visual, auditory, and sensory cues.*

Classroom Environment

The classroom setting should be well-organized and designed or redesigned to accommodate the student's need for reduced stimuli, a physical outlet when seated, and visual boundaries. Reduced stimuli can be achieved by providing head phones with no music or sound; by designating a quiet area filled with blankets and pillows, or a pup tent in the corner of the room; or by creating a quiet place where students can experience a physical release and a degree of solitude. Allowing students to hold "kushy balls" or other small items that can be manipulated by hand will provide a physical outlet and increase the amount of time the student can remain seated. A classroom that is well-organized and labeled with words and pictures provides a level of comfort for a student with FASD. Using masking tape to clearly mark or identify borders provides a visual reminder of where the student may move about without disturbing the rest of the class.

Active Learning Strategies

Children with FASD learn differently from other children and often at a slower pace (Streissguth, 1996). Recognize those differences and employ strategies that play to the student's strengths and accommodate deficits. A carefully orchestrated role play can provide a positive venue for learning social skills and appropriate behavior. Building movement into a lesson plan, such as counting the number of times a student can jump rope in two minutes and then asking the class to calculate the number of times the student would jump rope in three minutes or one minute, ties together math and movement into one activity. Charting the number of jumps for each child adds another skill.

Students with FASD may have trouble making connections between experiences. Brainstorming with the students about the similarities and differences between objects, playing 20 questions, practicing games that use daily living skills, and comparing what to do in various situations will help build linkages with experiences.

For students with strength in spatial intelligence, where knowledge is processed visually through images, pictures, and color, building a story board for a chapter of text can help with understanding and comprehending the story. Puppetry is an excellent tool for teaching concepts, especially social skills. Puppets can be used to model appropriate behavior while teaching new concepts.

Many students with FASD struggle with social skills throughout their lifetime. Peer programs that use same-age or older students to assist in maintaining order can provide opportunities for peer assistants to model appropriate behaviors and demonstrate positive social skills. For older students, a peer assistant can take notes for the student during a lecture and facilitate a discussion to reinforce learning.

Establishing Routines

Students with FASD require advance notice of changes and transitions. Jan Osborne (1994) writes in *A Source Book of Successful School-based Strategies for Fetal Alcohol and Drug Affected Students,* "Try to imagine the affected child as a train. A train cannot make turns or transitions without the use of a wide or gradual turn; otherwise, the train jumps the track and crashes." Accommodating the need for transition time can be accomplished through a variety of strategies. Schedules should be posted in the classroom in an age-appropriate manner. For young students with FASD, schedules may need to be illustrated with large pictures that demonstrate the activity and corresponding time period. For students at the middle and high school level, posting the daily schedule in a photo album, on index cards, or in a book with pictorial cues can provide the same effect.

MYTH:

People with FASD are unmotivated and uncaring, always missing appointments or acting in ways that society considers irresponsible or inappropriate.

FACT:

People with FASD usually care tremendously about pleasing others and want desperately to be accepted, but their basic organic problems with memory, distractibility, processing information, and being overwhelmed by stimulation all work against their desires. They simply have difficulty understanding the meaning and interrelationships of a complex world. In addition, the repeated experience of failing to meet expectations can generate a general reluctance to take on challenges, even in someone with the best intentions.

Adapted from Ann Streissguth, Ph. D., *Fetal Alcohol Syndrome: A Guide for Families and Communities.*

In addition to establishing a schedule, building transition cues into the daily routine of younger students such as music, songs, or poems can relieve the anxiety associated with change. For example, as an activity nears completion (five minutes prior to the end), begin playing music or singing a song. This will give the student notice that the activity is nearing completion. Next, begin a poem or chant that signals that everyone is to gather in a prearranged place. Finally, displaying a picture of the next activity gives the student notice of what is to come next. For upper classes, list scheduled transitions on color-coded cards with class changes and a map to each class.

Using the strategies outlined on the following pages to design classrooms that address the student's needs, to build transition cues into the daily routine, and to address the different learning processes of children with FASD will help teachers ensure that the academic experience is positive and fruitful.

Interventions for Preschoolers

"Teachers must be aware that the type of brain damage that children with FAS/FAE have often leaves them unable to repeat a skill they once did with ease" (Harwood & Kleinfeld, 2002).

Preschoolers with FASD may not immediately grasp the meaning of a word or phrase they just heard. While they may appear to be listening, they may understand only a fraction of what is said to them (Malbin 1993). Teachers can employ the following strategies to ensure that preschoolers with FASD gain the most from a learning environment.

1. Classroom Environment

Creating Quiet Zones

- Use calm colors on the walls.
- Provide clay or Kushi balls to release hand stress.
- Provide a child sized rocking chair for the child who needs to release energy.
- Provide bean bag chairs for relaxation.
- Create a cocoon with blankets, pillows, and other soft materials.
- Provide head phones with no music or sound.
- Use stuffed animals for comfort and support.

Designing Classroom Seating

- Have students sit on carpet squares for boundaries during circle time.

Limiting Distractions

- Limit number and type of objects hanging from ceiling or walls.
- Allow students to stand or move around when working, if possible.
- Avoid loud noises.
- Keep bulletin board decorations to minimum.
- Create a safe area where student can go to work alone without distraction.

Organizing Materials

- Ensure supplies are well-labeled.
- Use pictures for labels when appropriate.
- Keep areas neat and clean.
- Provide cubbies for individual storage.
- If a teacher's desk is used, frame it with colored tape to provide a focal point.

Establishing Clear Rules for Classrooms and Learning Centers

- Establish classroom procedures/routines and reinforce often.
- Be consistent.
- Provide locks and/or gates for safety.
- Define appropriate behaviors in each setting.
- Post rules in classroom – use pictures and words.

2. Active Learning Strategies

Using Multiple Modalities, Multi-sensory, and/or Manipulatives

- Provide a Kushi ball to squeeze.
- Have some tactile objects in the classroom.
- Bounce a ball to count.
- Develop building projects.
- Use concrete objects for reinforcing behaviors.
- Draw or role play stories.
- Teach themes.
- Use art activities for learning.
- Use feelings cards.
- Use hands-on manipulative activities.
- Use multi-sensory methods of presentation.
- Appeal to multiple intelligences.
- Employ use of all senses and modes of communication.
- Touch and count objects.
- Use books with simple, plain pictures.
- Read aloud to children.
- Use sensory stimulation to teach concepts; to teach the color orange, wear orange clothes, paint with orange paint, and use orange paper.

Keeping Steps Simple

- Have students repeat requests or directions.
- Model the expected behavior.
- Have students act out the request or directions.
- Be prepared to repeat directions or requests.
- Don't confuse inability to repeat a skill with unwillingness.
- Be aware of the student's self-esteem; be willing to reteach and redirect.
- Draw pictures of each step in a sequenced activity.
- Create sequencing games, rhymes, stories, cartoons.
- Repeat, repeat, repeat.

Creating Opportunities for Decision Making and Problem Solving

- Role play ways to handle conflict.
- Involve student in setting goals and planning.
- Discuss what works/what doesn't work.
- Provide opportunities to practice decision making.

Modeling and Demonstrating Appropriate Behaviors

- Use peers to help students learn routines.
- Provide opportunities to practice behaviors.
- Role play situations such as fire drills.
- Role play social situations and appropriate behaviors.

Providing Structure

- Be consistent in routines.
- Announce time limits.
- Use cues to signal the end of an activity.

3. Establishing Routines

Maintaining a Daily Schedule

- Alternate quiet time and activities that burn energy every 20 minutes or so.
- Create a calendar for each week; use pictures.
- Create a schedule for each day; use pictures.
- Cross off events/activities when completed.
- Prepare student if you will be gone for a day or more.
- Use rituals for opening and closing each day.
- Review daily schedule each morning.
- Post schedules using words and pictures.
- Provide a consistent schedule.

Planning for Change

- Prepare student for a substitute teacher when possible.
- Prepare student for new staff, such as teacher aides or volunteers.
- Use a buddy to help with transitions.
- Prepare student for schedule or transition changes by previewing transitions.
- Use transitional cues.

Building in Transitions

- Build in closure time–count down, 5 minutes, 4 minutes, etc.
- Have next activity ready.
- Use music to cue change to next activity.
- Use a motor activity to transition, such as follow the leader.
- Use changes in pace (quiet time, motor activity, short activity, longer activity).
- Provide extra help during transitions.
- Use the same musical theme to signal the end of activities.

Using Visual, Auditory, and Sensory Cues

- Label with words and/or pictures.
- Use visual cues such as a picture of a clock.
- Use auditory cues such as a pleasant bell tone.
- Say student's name before question/request.

Interventions for Elementary School Students

Elementary school children with FASD may display attention impairments, learning disabilities, arithmetic disabilities, specific cognitive disabilities, deficits in higher order receptive and expressive language, or poor muscle control. There are, however, strategies that teachers and caregivers can employ to help facilitate academic achievement for elementary school children with FASD.

1. Classroom Environment

Creating Quiet Zones

- Create an emotionally and physically safe environment.
- Create a comfort zone, personal working space, and quiet place.
- Establish "your own space" for student.
- Permit the student to go to comfort zone upon request.
- Allow student to use headphones to listen to soothing music.
- Allow student to wear headphones with no music or sound.
- Provide options for movement within boundaries.
- Tape off an area where the student is permitted to move about freely.
- Use pets to practice gentleness and control.
- Allow students to bring stuffed animals for comfort and support.
- Permit worry stones on desks.
- Permit students to have Kushi balls in their hands.
- Use calm colors on the walls.
- Have a child-sized rocking chair in the classroom.
- Have an aquarium with slow moving fish to create calm area.
- Maintain a calm and quiet environment.
- Limit the number and type of objects hanging from the ceiling or walls.

Designing Classroom Seating

- Arrange desks so students are not facing each other.
- Take health issues into consideration (e.g., hearing, sight, mobility) and seat accordingly.
- Try using tables rather than desks.

Kevin and the math quiz

Kevin, a third grade boy with FAS, completed his multiplication facts with 100 percent accuracy on Monday and received lots of praise from the teacher and his peers. Two days later, on a new, but similar, assignment, Kevin missed almost half of the facts. His teacher, familiar with the learning differences of students with FAS, knows that spotty or intermittent learning and retrieval is normal. She was able to reassure Kevin he was okay and began the process of reteaching. Kevin likes his teacher, feels safe in such a stress-free environment, and continues to look forward to coming to school.

Limiting Distractions

- Limit the number and type of decorations.
- Decrease the amount of visual and auditory stimulation.
- Permit student to wear earphones without music or sound.
- Allow student time to release energy, and then teach.
- Minimize interruptions.
- Use soothing colors on walls.
- Place posters at sides and back of room to reduce visual distractions.

Organizing Materials

- Ensure adequate storage space to reduce clutter.
- Use labels, pictures, and words.
- Create check list of needs: pencil, paper, calculator, etc., for each individual child to use.
- Frame the teacher's desk with colored tape to help student focus.

Establishing Clear Rules for Classrooms and Learning Centers

- Keep rules few and simple.
- Be consistent in your enforcement of the rules.
- Allow access to drinking fountains and bathrooms.
- Permit movement within boundaries.
- Follow through with structure and allow for adaptations.
- Communicate rules with words and pictures when possible.
- Schedule free time.
- Set up "information center" where student can go if lost.

2. Active Learning Strategies

Using Multiple Modalities, Multi-sensory, Manipulatives

- Facilitate cooperative learning with peer tutors.
- Use music/chimes/songs to cue interactions with pictures.
- Adapt curriculum to be more multi-sensory.
- Highlight important points in text books for students.
- Increase movement opportunities to accommodate different modalities.
- Use open-book tests.
- Cut worksheets into smaller strips so the student can work on a few problems at a time.
- Encourage the use of computers and tape recorders.
- Create listening posts with textbooks on tape.
- Accept different demonstrations that material has been learned.
- Integrate physical activity with learning.
- Encourage generalization of abilities by having experiences outside of class.
- Use guided oral practice.
- Use hands-on manipulative activities.
- Use multi-sensory methods of presentation.
- Appeal to multiple intelligences.
- Employ use of all senses and modes of communication.
- Use role plays to model appropriate behavior, demonstrate a skill, generalize a new concept.
- Use music to teach vocabulary and to help remember processes.
- Encourage developmentally appropriate quality of speech.
- Facilitate the understanding of the concept of numbers, not just the memorization of numbers.
- Teach the number one first: one pencil, one ball, etc.
- Touch and count objects.
- Use money and time to teach addition and subtraction.
- Use books with simple, plain pictures.
- Read aloud to children.
- Use sensory stimulation to teach concepts; to teach the color orange, wear orange clothes, paint with orange paint, use orange paper.

Keeping Steps Simple

- Focus on the process.
- Review or teach adaptation.
- Break learning into pieces.
- Preteach/reteach.

Creating Opportunities for Decision Making and Problem Solving

- Create a "negotiations table" where students can go to resolve conflicts.
- Allow students to help one another.
- Provide opportunities to apply concepts in functional contexts (instead of using a worksheet on fractions; measure and cook).
- Teach basic social skills using role plays.
- Provide structured choices.
- Foster independence in school work and in play.
- Provide choices and encourage decision making.
- Teach daily living skills.
- Encourage positive self-talk.

Modeling and Demonstrating Appropriate Behaviors

- Use mentors to model and reinforce positive behaviors.
- Provide immediate feedback on responses.
- Role play, allow students to perform skits for different social/behavioral situations.
- Take photographs of a child doing what is requested.
- Use buddy system for social situations.
- Demonstrate directions given to student.
- Teach relaxation skills.
- Talk to the student about using language appropriate for his or her level.

Providing Structure

- Create "work folders" containing alternatives to the traditional lesson.
- Establish alternative "stations" where lessons can be completed.
- Provide for change within the structure.
- Allow additional time to complete assignments.
- Use visual, musical, or physical cues to signal changes, transitions.
- Create a space where students can take walks or laps.
- Leave resource rooms open before school and during recess to help students who have problems with "free time."

3. Establishing Routines

Maintaining a Daily Schedule

- Create schedules using words, pictures, clocks.
- Provide folders with the schedule for the day.
- Post calendar/schedule of daily events.
- Begin and end routines with cues.
- Open and close the day with rituals.
- Identify and discuss changes in the schedule in advance of the occurrence.
- Review the day's schedule each morning and afternoon.

Ensuring Consistency in Scheduling

- Maintain a consistent, predictable routine from day to day.
- Provide calendars for the week that highlight each day's special events (library, music).
- Teach routines and reteach; don't make assumptions that the student knows the routine.
- Teach child to prepare for the next day before going to bed.

Planning for Change

- Prepare the student in advance (days, if possible) if you will be gone.
- Ensure that substitute plans contain information about the student.
- Use manipulatives to show change/termination of activity.
- Give directions about change in small increments.
- Preteach unusual circumstances (substitutes, fire drill, assemblies, interruptions).

Building in Transitions

- Use music at transition times.
- Give signals leading up to transition, at 5 minutes and at 3 minutes.
- Use environmental cues (bells, dimming lights).
- Use a timer.
- Create a system of cues that can be used outside the classroom.
- Have the activity ready for the next instructions period.
- Use 4 steps: forewarn, anticipate, state, and act.
- Make sure there is closure to every lesson.
- Give cues for the ending and beginning of activities.
- Let student take breaks during the day for napping or moving around.

Using Visual, Auditory, and Sensory Cues

- Establish a pre-arranged signal with the student for you to know when he or she is upset.
- Use signals plus words.
- Use "echo system": call out a cue; students echo command.
- Use visual aides for landmarks or lining up.
- Establish visual cues for activities and learning centers.
- Use music/bells/songs to cue interactions, with pictures of where the student is and where the student is going.

Interventions for Middle School Students

By the time students with FASD are teenagers, they recognize that they are different from other students. Their social skills are developmentally several years behind their peers, and they have problems maintaining relationships. Strategies that allow them to fit in without being conspicuous help to address these concerns.

1. Classroom Environment

Creating Quiet Zones

- Provide beanbag chairs and pillows.
- Provide a space where students can "ground themselves."
- Provide portable study carrels.
- Establish a space where the student can go to have some quiet time alone.

Classroom Seating

- Assign seating toward the front of the classroom.
- Provide carpeting, nonpedestal desks, and flat desk tops.
- Use name tags on chairs, desks, and/or floor.

Limit Distractions

- Ask student what environment works best for him or her: groups or individual, lights on or off, radio on or radio off.
- Limit classroom interruptions. For example, have attendance sheets picked up outside the classroom.
- Keep bulletin boards simple.
- Encourage headsets for students who work well with them.
- Put curtains or other coverings on windows to limit outside distractions.

Organize Materials

- Organize materials around themes.
- Ensure materials are located in a consistent location and labeled.
- Label everything.

Establishing Clear Rules for Classrooms and Learning Centers

- Establish consistent and clearly identified rules.
- Allow students to help establish classroom rules and post them.
- State classroom rules in the positive.
- Post rules; review frequently and enforce consistently.
- Communicate rules, guidelines, and limits to parents.

Organizing Sandra

Sandra, a grade 8 student with FAE and a high/average IQ, was consistently late to her first class even though her mother drove her to school on time. The teachers and school counselor had spoken with Sandra about being responsible and placed her on a behavior modification program where she received points for being on time and made up time missed in an after school detention program. Sandra became highly stressed and was often unable to sleep at night.

One day the counselor observed Sandra. She saw the student get out of her mother's car, go directly to her locker, and begin to search out materials for class. As the students clamored in the hall and the noise level increased, Sandra became increasingly agitated as she attempted to screen out the distractions and find her school supplies. When the bell rang and the hall quieted, Sandra relaxed and was able to focus. She retrieved her materials and rushed to class–late. On arrival, she was sent back to get homework. After searching for more than 10 minutes, she burst into tears alone in the hallway.

Fortunately, the counselor was familiar with the organizational difficulties of students with information processing deficits and was able to help Sandra organize her locker. Together, they put the supplies for each class into separate, color-coded bags. Now Sandra walks to her locker before each class and pulls out the correct bag. She has been supported and assisted to meet her basic needs for competency and belonging and is no longer late for class.

2. Active Learning Strategies

Using Multiple Modalities, Multi-sensory, and/or Manipulatives

- Permit audio taping of lectures.
- Allow peer tutor to take notes.
- Provide computers in classroom or permit laptops from home.
- Put digital clocks in classroom.
- Use interest stations or centers to provide opportunities for cooperative learning.
- Use books on tape.
- "Level" activities according to developmental stage.
- Give student opportunities to use art to express feelings.
- Use concrete materials to teach math (measuring cup, coins).
- Permit the use of calculators for math.
- Allow accommodations in instruction and assessment (highlighting text, tape recording text, bracketed outlining).
- Employ music and movement to express feelings.
- Recognize and accommodate various learning styles.
- Role play feelings, situations, historical events.
- Teach abstract concepts with concrete materials (calculators, stopwatch, pattern blocks, geo boards, fraction pieces).
- Use themes to integrate activities.
- Use Gardener's seven intelligences (linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, intrapersonal, and interpersonal).
- Give simple instructions.
- Teach a new skill in the setting in which it will be used.

Keeping Steps Simple

- Break assignments down into small, simple steps.
- Use sequential teaching.

Creating Opportunities for Decision Making and Problem Solving

- Teach basic social skills using role plays.
- Foster independence in school work and in play.
- Create a structured environment that includes limited choices and encourages decision making.
- Teach daily living skills.
- Encourage positive self-talk.

Modeling and Demonstrating Appropriate Behaviors

- Implement a buddy system with selected peers.
- Educate students about personal boundaries.
- Provide opportunities to practice behaviors.
- Teach social skills and anger management.
- Teach relaxation techniques.
- Provide opportunities to apply skills; use role play and games to teach transfer to other situations.
- Establish peer/buddy system for lunch, free time, in between classes.

Providing Structure

- Allow additional time to complete assignments.
- Introduce day planners.
- Provide supervision.

3. Establishing Routines

Maintaining a Daily Schedule

- Schedule academics in the morning and electives in the afternoon.
- Use a block schedule.
- Provide a daily assignment sheet.
- Group classes near each other to keep the student from having to walk long distances from one class to another.
- Be willing to modify the student's schedule.
- Use notebooks/assignment sheets/sticky notes to help the student organize his or her day.
- Color code subjects in notebooks for organization.
- Preview class period/week.
- Make daily progress reports.
- Extend timelines for homework and modify curriculum, if necessary.
- Teach student to keep a daily schedule using clear and simple reminders.
- Prepare students for different classroom expectations by putting icons on the first page of the notebook for that class (picture of pencil, remember to bring pencil).

Ensuring Consistency in Scheduling

- Provide a consistent beginning of each class.
- Provide a consistent routine at the end of class.
- Use consistent seating in class and on the bus.
- Set consistent time to meet with student in an advisory role.
- Require the student to check in every day.

Planning for Change

- Remind student of appropriate behavior before activity.
- Explain changes in advance.
- Practice fire drills, changing classes.
- Pre-teach; pre-correct.

Building in Transitions

- Allow student to leave early to change classes.
- Use predetermined cues to signal transitions.
- Have relaxing music playing when student enters room.
- Give notice of upcoming transitions (5 minutes, then 4 minutes).
- Build transitions into routines.

Using Visual, Auditory, and Sensory Cues

- Display pictures of the day's schedule with arrows to signal transitions and sequence.
- Use an egg timer to signal the end of an activity.
- Have student assist in developing cues.
- Give notice at 10 minutes, then 5 minutes that the activity will be ending.

Interventions for High School Students

"One of the most debilitating effects of prenatal alcohol exposure involves the development and use of social communication. Social communication enables people to influence 'day-to-day' events in their lives" (Coggins, Friet, & Morgan, 1997, 221).

1. Classroom Environment

Creating Quiet Zones

- Provide an opportunity for students to take time out to re-group.
- Provide a space inside and outside where students can "ground themselves."
- Provide portable study carrels.
- Teach relaxation techniques.

Designing Classroom Seating

- Assign the student seating toward the front of the classroom.
- Provide both desks and tables in each classroom.
- Use interest centers or stations to provide cooperative learning opportunities.
- Provide space for a "safe zone."
- Seat students so that they do not distract each other.
- If using circle seating, place the student directly across from the teacher to help the student maintain eye contact and focus.

Limiting Distractions

- Ask students what environment works best for them: groups or individual, lights on or off, radio on or radio off.
- Limit classroom interruptions. For example, have attendance sheets picked up outside the classroom.
- Observe and respond to patterns of behavior. Does the student attend better with auditory stimulation? Does the student need to be physically active? Does visual stimulation distract the student?
- Encourage headsets for students who work well with them.
- Put curtains or other coverings on windows to limit outside distractions.

Establishing Clear Rules for Classrooms and Learning Centers

- Establish consistent and clearly identified rules.
- Allow students to help establish classroom rules and post them.
- State classroom rules in the positive.
- Post rules; review frequently and enforce consistently.
- Communicate rules, guidelines, limits to parents.

Aaron Learns by Doing

Aaron is in grade 9 and has FAS. He has been suspended from school 15 times between September and early December. Thirteen of the 15 suspensions were due to his uncooperative behavior during lunch time. Aaron has received special education assistance to manage his emotional disturbances on an ongoing basis.

When a specialist familiar with the challenges of FAS asked Aaron to tell her about school, he replied, "Mr. Williams doesn't like me. He always yells at me in front of the kids at lunch. I hate him."

The specialist asked Aaron to recite the rules for lunchtime behavior, which he did promptly and perfectly. On a hunch, she walked with Aaron to the empty lunchroom and said, "Show me."

Aaron was unable to demonstrate the correct behavior, even missing where he was supposed to sit. The specialist spent the rest of their session actually practicing the rules and even took some pictures of him so he could review them later.

Aaron was suspended two more times during the rest of school year, neither time for lunch room behavior.

2. Active Learning Strategies

Using Multiple Modalities, Multi-sensory, and/or Manipulatives

- Provide a schedule of class expectations in advance.
- Permit audio taping of lectures.
- Allow peer tutors to take notes.
- Provide computers in classroom or permit laptops from home.
- Put digital clocks in classroom.
- Use interest stations or centers to provide opportunities for cooperative learning.
- Use books on tape.
- "Level" activities according to developmental stage.
- Give student opportunities to use art to express feelings.
- Use concrete materials to teach math (measuring cup, coins).
- Permit the use of calculators for math.
- Allow accommodations in instruction and assessment (highlighting text, tape recording text, bracketed outlining).
- Provide a variety of methods to measure student's learning such as oral tests or graded homework.
- Adapt the modality to the student's strengths. Allow student to produce in his or her strength modality.
- Employ music and movement to express feelings.
- Recognize and accommodate various learning styles.
- Role play feelings, situations, historical events.
- Teach abstract concepts with concrete materials (calculators, stop watch, pattern blocks, geo boards, fraction pieces).
- Use themes to integrate activities.
- Use art to explain a process.
- Use Gardener's Seven Intelligences (linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, intrapersonal, and interpersonal).
- Give simple instructions.
- Teach a new skill in the setting in which it will be used.
- Provide hands-on learning opportunities.
- Provide a vocational component or nonacademic assignment (office aide).

Keeping Steps Simple

- Break assignments down into small, simple steps.
- Teach small pieces of knowledge at a time.
- Use mapping techniques rather than linear outlines to show structures (main idea-subsequent ideas).
- Use sequential teaching.

Creating Opportunities for Decision Making and Problem Solving

- Teach basic social skills using role plays.
- Foster independence in school work and in extra-curricular activities.
- Create a structured environment that includes limited choices and encourages decision making.
- Teach daily living skills.
- Encourage positive self-talk.
- Arrange for a signal a student can give when he or she feels comfortable in a situation and able to answer.

Modeling and Demonstrating Appropriate Behaviors

- Implement a buddy system with selected peers.
- Educate students about personal boundaries.
- Provide opportunities to practice behaviors.
- Teach social skills and anger management.
- Provide opportunities to apply skills; use role play and games to teach transfer to other situations.
- Remind student of appropriate behavior before activity.
- Assign a peer helper to track the student (especially during lunch) to determine if the student can make good decisions during free or unstructured times.

Providing Structure

- Allow additional time to complete assignments.
- Introduce day planners.
- Create a structured environment that includes limited choices.
- Provide supervision.
- Give simple instructions.
- Integrate subjects to help with transitions.
- Limit the number of different instructors involved with the student.

3. Establishing Routines

Maintaining a Daily Schedule

- Preview class period/week.
- Schedule most academic subjects early in the day.
- Schedule active and hands-on experiences later in the day.
- Arrange schedule so that student is assigned to classes that allow the most freedom of movement.
- Group classes near each other to keep the student from having to walk long distances from one class to another.
- Be willing to modify the student's schedule.
- Use notebooks/assignment sheets/sticky notes to help the student organize his or her day.
- Color code subjects in notebooks for organization.
- Provide daily progress reports.
- Extend timelines for homework and modify curriculum, if necessary.
- Teach student to keep a daily schedule.
- Prepare students for different classroom expectations by putting icons on the first page of the notebook for that class (picture of pencil, remember to bring pencil).

Ensuring Consistency in Scheduling

- Provide a consistent beginning for each class.
- Provide a consistent routine at the end of each class.
- Set consistent time to meet with student in an advisory role.
- Require students to check in every day.
- Establish clear and set routines.

Planning for Change

- Explain changes in advance.
- Practice changing classes early in the year.
- Pre-teach; pre-correct.

Building in Transitions

- Allow student to leave early to change classes.
- Use pre-determined cues to signal transitions.
- Build transitions into routines.

Using Visual, Auditory, and Sensory Cues

- Provide cues such as hard copy of overheads, fill in the blank information, outlines of lectures with room for notes.
- Have student assist in developing cues.
- Give notice at 10 minutes, then 5 minutes that the activity will be ending.

Health Care Interventions

The education system can play an important role in assisting families in managing the challenges of raising a child with FASD. Included in those challenges are managing the health care implications of FASD. School administrators, health care professionals, teachers, and families can participate as partners for a child with FASD by ensuring

- early identification and treatment
- increased knowledge and understanding of FASD
- improved ability to manage the condition
- a supportive nurturing environment.

To achieve these goals, school administrators, health care professionals, and teachers should work with families to

- develop a personal and family medical history
- develop a plan of care
- develop an understanding of FASD and how to manage the condition
- create an environment that meets the needs of the child with FASD
- foster healthy coping skills for the child and the family
- foster self-esteem in the child
- plan for educational needs, including postsecondary education
- plan for career/employment needs
- plan for transition to the adult health care system.

Teachers, school health care professionals, and school administrators will likely encounter several students with FASD during their careers. Some of these children will have FAS and may be easy to recognize. Many more of these children will have other effects of prenatal alcohol exposure. These children may not be as easy to recognize. The following is a list of diagnostic centers in Florida that will provide additional information on diagnosis, treatment, and working with families and their children with FASD. Additionally, section 5 contains a comprehensive list of FASD books, videos, support organizations, newsletters, and websites.

Diagnostic Centers

All Children's Hospital
880 Sixth Street S, Suite 240
St. Petersburg, Florida 33701
(727) 892-6760; (727) 892-8491

University of South Florida Regional Genetics Program
10770 North 46th Street,
Tampa, Florida 33617-3451
(813) 975-6900 Fax (813) 975-6615

University of South Florida
Developmental Evaluation & Intervention Program
17 Davis Boulevard, Suite 200
Tampa, Florida 33617-3451
(813) 272-2972 Fax (813) 272-2962

Nemours Children's Clinic
85 W Columbia Street
Orlando, FL 32806
(407) 650-7245 Fax: (407) 650-7248

Tampa Children's Hospital Child Development Center
4144 N Armenia Avenue, Suite 375
Tampa, Florida 33607-6449
(813) 876-8316

Shands Hospital
Department of Pediatric Neurology, University of Florida
1600 SW Archer Road, Room HD403
Gainesville, Florida 32610
(352) 392-6442, Fax (352) 392-9802

Jackson Memorial Hospital
Mailman Center for Child Development
1061 NW 12th Ave.
Miami, FL 33136
(305) 243-6006

Florida Center for Family and Child Development
4620 17th St.
Sarasota, FL 34235
(941) 371-8820
www.childdevelopmentflorida.org

Section Five

Resources

Books

Alcohol, Health and Research World, Special Focus: Alcohol-Related Birth Defects. *Alcohol, Health and Research World;* Vol. 18, No. 1, 1994; to order this special edition call (800) 553-6847. For more information on subscribing contact the U.S. Government Printing Office at (202) 783-3238.

The Best I Can Be: Living with Fetal Alcohol Syndrome or Effects. Kulp, L., & Kulp, J. Order at www.betterendings.org (763) 531-9548.

The Broken Cord. Dorris, M., 1989, 300 pgs. Story by a father about his adopted son, Adam, who has fetal alcohol syndrome. Cost: $18.95 hard back; $9.95 paperback. Order from: Harper & Row, Publishers, 10 East 53rd St., New York, NY 10022.

Bruised Before Birth: Parenting Children Exposed to Parental Substance Abuse. Publication addresses the needs of children through adolescence. Cost: $14.95 plus $2.75 postage and handling. Order from: Family Resources, 1521 Foxhollow Rd., Greensboro, NC 27410.

Cheers, Here's to the Baby. LaFever, L. Story by a mother about her son who has FAS. Order from: FAS*FRI Publications, PO Box 2525, Lynnwood, WA 98036. Email at: vicky@fetalalcoholsyndrome.org

Children with Fetal Alcohol Syndrome: A Handbook for Parents and Teachers. Burd, L., 1998. Helps parents and teachers understand FAS. 1300 South Columbia Road, Grand Forks, ND 58202. (701) 780-2477.

Fantastic Antone Grows Up: Adolescents and Adults with Fetal Alcohol Syndrome. Kleinfeld, J. M., Wescott, S., & Morse, B. (Eds.). Order from: NOFAS, 1819 H Street NW, Suite 750, Washington, DC 20006. (202) 785-4585.

Fantastic Antone Succeeds: Experience in Educating Children with FAS. Kleinfeld, J. M, Wescott, S. (Eds.) 1993, 361 pgs. Cost: $23.50 softcover, $33.50 hardcover S/H included. Order from: NOFAS, 1819 H Street NW, Suite 750, Washington, DC 20006. (202) 785-4585.

FAS and FAE and Education: The Art of Making a Difference. Berg, S. et al. 1997. The FAS and FAE Support Network of British Columbia, #151-10090, 152nd Street, Suite 187, Surrey, BC V3R 8X8. (604) 589-1854, Fax: (604) 589-8438. Email: fasnet@istar.ca

FAS/FAE: A Practical Guide for Parents. 1994. Slinn, J. Based on experiences with his two FAS adopted children. Order from: Parents Resource Network, 540 West International Airport Road, Anchorage, AK 99518-1110, (907) 564-7489.

FAS: Parent and Child: A Handbook. Morse, B. A., & Weiner, L., 1992. Fetal Alcohol Education Program, Boston University School of Medicine, 1975 Main Street, Concord, MA 01742. (978) 369-7713.

Fetal Alcohol Syndrome/Fetal Alcohol Effects Strategies for Professionals. Malbin, D., 1993. Hazelden Educational Materials, Pleasant Valley Road, P.O. Box 176, Center City, MN, 55012-0176. (800) 328-9000.

Fetal Alcohol Syndrome: A Guide for Families and Communities. Streissguth, Ann, Ph.D., 1997. Paul H. Brookes Publishing Company, P.O. Box 10624, Baltimore, MD 21285-0624. www.brookespublishing.com/store/books/streissguth-2835/index.htm

Fetal Alcohol Syndrome: The Impact on Children's Ability to Learn. National Health/Education Consortium Occasional Paper #10. Institute for Educational Leadership, 1001 Connecticut Ave. NW, #310, Washington, DC 20036. (202) 872-8450.

Handle with Care: Helping Children Prenatally Exposed to Drugs and Alcohol. Villarreal, S. F., Mckinney, L. E., Quackenbush, M., 1992, 200 pgs. Cost $17.95, soft cover. Order from: Sales Department, ETR Associates, P.O. Box 1830, Santa Cruz, CA 95061-1830. (800) 321-4407.

Layman's Guide to Fetal Alcohol Syndrome and Fetal Alcohol Effects. Berg, S., et al., 1995. Cost $15.00. (604) 589-1854, Fax: (604) 589-8438. Email: fasnet@istar.ca

My Name Is Amanda and I Have FAE — A Book for Young Children with FAS/E Published by: FAS/E Support Network of B.C., Cost: $8.50. (604) 589-1854. Email: fasnet@istar.ca

Our FAScination Journey: The Best We Can Be, Keys to Brain Potential Along the Path of Prenatal Brain Injury. Kulp, J. (763) 531-9548. Order from: www.betterendings.org.

Reaching Out to Children with FAS and FAE. Davis, D., 1992. Handbook for parents, teachers, and others who live and work with children who have FAS/FAE. Order from: The Center for Applied Research in Education, West Nycak, NY 10995. Published in Seattle, WA.

Recognizing and Managing Children with Fetal Alcohol Syndrome/Fetal Alcohol Effects: A Guidebook. McCreight, B. Cost $16.50. Order from: CWLA, c/o CSSC, 130 Campus Drive, Edison, NJ 08818-7816, when ordering ask for stock # 607-0. (800) 407-6273. www.cwla.org

So Your Child Has FAS and FAE – What You Need to Know. Berg, S., et al., 1997. The FAS and FAE Support Network of British Columbia, #151-10090, 152nd Street, Suite 187, Surrey, BC V3R 8X8. (604) 589-1854, Fax : (604) 589-8438. Email: fasnet@istar.ca

Trying Differently Not Harder. Malbin, D. Sequel to Fetal Alcohol Syndrome/Fetal Alcohol Effects Strategies for Professionals. Available only at Fascets Marketplace, (503) 621-1271.

Videos

Alcohol and Pregnancy: Fetal Alcohol Syndrome and Fetal Alcohol Effects. A video showing how alcohol adversely affects the developing fetus and pointing out critical periods during pregnancy when the fetus is most vulnerable. Through candid interviews, it presents a realistic look at the daily struggles of the FAS/FAE child and his parents or caregivers. 20 minutes. Cost $295. To order, write: Aims Media, 9710 DeSoto Avenue, Chatsworth, CA 91311-4409. (800) 367-2467. Contact for free previews and rentals.

The Clinical Diagnosis of Fetal Alcohol Syndrome. A new video by Jon M. Aase, M.D., shows complete and never before seen information on the clinical diagnosis of FAS. The video can be purchased for the price of $150.00 + $9.00 for S/H from Flora & Company P.O. Box 8263 Albuquerque, NM 87198-8263, or by calling (505) 255-9988, 24 hours a day.

FAS. Includes interviews with noted experts Sterling Clarren, M.D., Diane Malbin, M.S.W., Antonio Rathbum, and others. 45 minutes. Cost $225, plus $6.00 for shipping and handling. Order from: Hazelden Educational Materials, Box 176, Center City, MN 55012.

Fetal Alcohol Syndrome and Effect: Stories of Hope and Help. Families and individuals affected by fetal alcohol exposure share their stories. Cost $225. Order from: Hazelden, P.O. Box 176, Pleasant Valley Road, Center City, MN 55012. (800) 329-9000.

Four Part Series on FAS. Provides information for caregivers about how to handle children with FAS as they get older. Cost: $345/tape. To order, write: Altschul Group Corporation, 1560 Sherman Ave., Suite 100, Evanston, IL 60201-9971. (800) 421-2363. Contact regarding free previews and rentals.

Training Tapes for Living with F.A.S. and F.A.E. *The Early Years, The School Years,* and *A Focus on Prevention* explaining the cause of FAS and FAE and how to care for and better meet the needs of children with FAS/FAE. Each tape is 20 minutes long and costs $295. To order, write: Altschul Group Corporation, 1560 Sherman Avenue, Suite 100, Evanston, IL 60201-9971. (800) 421-2363. Contact regarding free previews and rentals.

Training Tapes of Living with F.A.S. and F.A.E. *The Early Years, Birth through Age 12,* and *Independence, Ages 12 to Adult* seek to assist those living with FAS/FAE and their families from soothing a fussy baby to adaptive living skills. Each tape is 32 minutes long and costs $295. To order, write: Altschul Group Corporation, 1560 Sherman Avenue, Suite 100, Evanston, IL 60201-9971.

Worth the Trip: Raising and Teaching Children with Fetal Alcohol Syndrome. About health, development, and learning style of a child with FAS. Cost $150. Order from: Vida Health Communications, 6 Bigelow Street, Cambridge, MA 02139. Phone: (617) 864-4334, Fax: (617) 864-7862.

Support Groups, Agencies, and Organizations

Adoptive & Foster Moms Support Group (AM/FM)
Beaver Dam, WI
Sandy Yaroch
Email: syaroch@hotmail.com
(414) 885-6903

Adult Children of Alcoholics
P.O. Box 3216
Torrance, CA 90510
(310) 534-1815

Alcoholics Anonymous
P.O. Box 459, Grand Central Station
New York, NY 10163
(212) 870-3400
www.alcoholics-anonymous.org/econtent.html

Al-Anon
Al-Anon Family Group Headquarters
1600 Corporate Landing Parkway
Virginia Beach, VA 23454-5617
(888) 4AL-ANON / (757) 563-1600
Fax: (757) 563-1655
www.al-anon.alateen.org

American Medical Association
515 N. State St.
Chicago, IL 60610
(312) 464-5000

The Arc ***(a national organization on mental retardation)***
500 East Border Street, Suite 300
Arlington, TX 76010
(800) 433-5255

The Association for Retarded Citizens of Florida
2898 Mahan Drive, Suite #1
Tallahassee, FL 32308
(850) 921-0460

Centers for Disease Control and Prevention
Division of Birth Defects and FAS Prevention Section
4770 Buford Hwy. NE (MS F15)
Atlanta, GA 30341-3724
(404) 488-7370

Center for Science in the Public Interest
Alcohol Policies Project
1875 Connecticut Ave. NW, #300
Washington, DC 20009
(202) 332-9110

Children of Alcoholics Foundation
555 Madison Avenue, 20th Floor
New York, NY 10022
(212) 754-0656 / (800) 359-2623

Child Development Unit, Kids in Need Program
University of Colorado Health Sciences Center
Child Development Unit, B-140
The Children's Hospital
1056 East 19th Ave
Denver, CO 80218
(303) 861-6630

Families Anonymous (FA)
P.O. Box 3475
Culver City, CA 90231
Phone: (800) 736-9805

Family Empowerment Network Support Group,
(The FEN Pen Newsletter)
Georgiana Wilton
610 Langdon St., 519 Lowell Hall
Madison, WI 53703
(800) 462-5254

Fetal Alcohol Task Force
1016 East First Street Port
Angeles, WA 98362

Fetal Alcohol Education Program
Boston University School of Medicine
1975 Maine St.
Concord, MA 01742
(978) 369-7713

Fetal Alcohol and Drug Unit
University of Washington
180 Nickerson St., Suite 109
(206) 543-7155

FAS Family Resource Institute
P.O. Box 2525
Lynwood, WA 98036
(206) 778-4048
FAS Workshops; Adult and Teen Prevention Programs

Fetal Alcohol Syndrome Support Network (FASN)
Margaret Sprenger
Mississauga Coordinator
2266 Homelands Drive
Mississauga, ON L5K1G6
Phone/Fax: (905) 822-0733

Florida Alcohol and Drug Abuse Association
Association Resource Center
(850) 878-2196
www.fadaa.org

Florida Department of Children and Families
1317 Winewood Blvd. Building 1, Room 202
Tallahassee, Florida 32399-0700
Phone: (850) 487-1111 / Fax: (850) 922-2993

Florida Department of Health
4025 Esplanade Way
Tallahassee, Florida 32399-1723
Phone: (850) 245-4444

International F.A.S. Trainer
Contact Keith Wymer,
P.O. Box 312
Angel Fire, NM 87710
Email: kwc2@afweb.com

March of Dimes Birth Defects Foundation
1275 Mamaroneck Ave.
White Plains, NY 10605
(914) 428-7100

National Association for Perinatal Addiction Research and Education (NAPARE)
200 N. Michigan Ave., #300
Chicago, IL 60601
(312) 541-1272 / (800) 638-BABY

National Clearinghouse for Alcohol and Drug Abuse Information (NCADI)
P.O. Box 2345
Rockville, MD 20847-2345
(800) 729-6686

National Council on Alcoholism and Drug Dependence (NCADD)
12 West 21 St.
New York, NY 10010
(212) 206-6770

National Institute on Alcohol Abuse and Alcoholism (NIAAA)
Wilco Bldg.
600 Executive Blvd.
Rockville, MD 20852
(301) 443-6370

National Indian Health Service Fetal Alcohol Syndrome Project
Headquarters West
5300 Homestead Rd. NE
Alburquerque, NM 87110
(505) 837-4228

National Organization on Fetal Alcohol Syndrome (NOFAS)
1815 H St., NW, Suite 1000
Washington, DC 20006
(202) 785-4585 / 800) 66-NOFAS (666-6327)

National Perinatal Information Center
One State Street, Suite 102
Providence, RI 02908

National Association for Native American Children of Alcoholics
1402 3rd Ave., Suite 1110
Seattle, WA 98101
(206) 467-7686 / (800) 322-5601

National Black Alcoholism Council
285 Genesee St.
Utica, NY
(315) 798-8066

National Coalition for Hispanic Health and Human Services
1501 16th St. NW
Washington, DC 20036
(202) 387-5000

National Council on Disability
1331 F St., NW, Suite 1050
Washington, DC 20004-1107
(202) 272-2004

National Women's Resource Center for the Prevention and Treatment of Alcohol, Tobacco and other Drug Abuse and Mental Illness
200 N. Michigan Ave, Suite 300
Chicago, IL 60601
(800) 354-8824 / (312) 541-1272

National Women's Health Network
1325 G St. N,
Washington, DC 20005
(202) 347-1140

Parent to Parent
(800) 527-9552
Organization serving as a support network for parents of children with disabilities in Florida.

Resource Center on Substance Abuse Prevention and Disability
1331 F St. NW, Suite 800
Washington, DC 20004
(202) 783-2900

SAMHSA National Clearinghouse for Alcohol & Drug Abuse Information
(800) 729-6686
Provides information packets, brochures, literature searches.

SNAP (Society of Special Needs Adoptive Parents)
409 Granville Street, Suite 1150
Vancouver, BC V6C1T2, Canada
(604) 687-3114

Support Group for Adoptive and Foster Parents
Contact: Ronnie Jacobs
Paramus, NJ
(201) 261-1450

Toughlove
P.O. Box 1069
Doylestown, PA 18901
Phone: (215) 348-7090 / Fax: (215) 348-9874

Women for Sobriety
PO Box 618
Quakertown, PA 18951-0618
(800) 333-1606

Newsletters

Iceberg Newsletter
P.O. Box 95597
Seattle, WA 98145

Manitoba FAS News
CAP, Manitoba Medical Assn.
125 Sherbrook St.
Winnipeg, Manitoba, Canada R3c2B5,
Attn: D. Ridd \ (204) 944-6360

F.A.S. Track
PO Box 3418
Peoria, IL 61612
(309) 691-3800

FANN – Fetal Alcohol Network Newsletter
158 Rosemont Avenue
Coatsville, PA 19320
Listing of National Support Groups \ (610) 384-1133

F.A.S. Times
The Family Resource Institute
PO Box 2525
Lynnwood, WA 98036
(206) 531-2878 / (800) 999-3429
Subscriptions available: $15.00(family), $25.00 (Professional)

The Clearinghouse for Drug Exposed Children Newsletter
Division of Behavioral and Developmental Pediatrics
University of California, San Francisco
1350 7th Avenue, Room 101
San Francisco, CA 4143-1311
(415) 476-9691

Growing With FAS/FAE Newsletter
7802 SE Taylor
Portland, OR 97215
Contact Pamela Groves / (503) 254-8129

FAS/FAE Newsletter
c/o Mailbag
P.O. Box 74612
Fairbanks, AK 99707
Support group, contact Gail Hales (907) 456-2866

Notes from NOFAS
1819 H St, NW, Suite 750
Washington DC 20006
(800) 66-NOFAS

The FEN Pen / ***Family Empowerment Network***
University of Wisconsin-Madison
777 S. Mills St.
Madison, WI 53715
(608) 262-6590 / (800) 462-5254
Subscriptions available: $5.00 (Family), $10.00 (Professional)

SNAP (Society of Special Needs Adoptive Parents)
409 Granville Street, Suite 1150
Vancouver, BC V6C1T2, CANADA
(604) 687-3114
Subscription available: $15.00 (Individual Membership), $20.00 (Family), $35.00 (Group/Society)

Other Resources

Alcohol Research and Health has an ARBD Update, Vol. 23(3), 2001, entire volume is FAS related $20/year. Back issues are sometimes available. Write to Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. Call (202) 512-2250 processing code is #5746.

Alcohol, Pregnancy, and the Fetal Alcohol Syndrome. This new slide-lecture unit from Project Cork of the Dartmouth Medical School contains seventy-nine full color slides, with accompanying text, covering the effects of maternal drinking on fetal development. The slide unit is available from Milner-Fenwick, Inc., 2125 Greenspring Drive, Timonium, MD 21093. To order call (800) 432-8433 or fax (410) 252-6316.

CSAP National Clearinghouse for Alcohol & Drug Abuse Information. Provides referrals, information packets according to need or topics of interest, and literature search service, or select from their 1,000 publications. (800) 729-6686.

CSAP National Resource Center for the Prevention of Perinatal Abuse of Alcohol and Other Drugs. For health professionals and educators interested in obtaining information. 9302 Lee Highway, Fairfax, VA 22301. (800) 354-8824.

Drug and Alcohol 24 Hour Hotline. (800) 562-1240.

Family Health Line. Provides education about the effects of drinking during pregnancy and helps link pregnant women with treatment services. (800) 451-2229.

FAS Information Packet. South Dakota UAP Interdisciplinary Center for Disabilities, Early Childhood Research Program. 414 E Clark Street, Vermillion, SD 57069-2390 (800) 658-3080 or (605) 677-5311 ($3.00 for out-of-state).

FASERS of Florida – Fetal Alcohol Syndrome Education Service. Email: wishesthree@earthlink.net

FDA Drug Bulletin: Surgeon General's Advisory on Alcohol and Pregnancy. Information of importance to physicians and other health professionals. Vol. 11(2), July, 1981.

Guidelines of Care for Children with Special Health Care Needs: Fetal Alcohol Syndrome and Fetal Alcohol Effects. Minnesota Department of Health 1999 Minnesota Children with Special Health Needs, 85 East Seventh Place, P.O. Box 64882, St. Paul, MN 55164-0882. (651) 215-8956 (voice or TDD) (800) 728-5420 (voice or TDD)

Hazelden Hotline. A service of the Hazelden treatment program, helps people to overcome fears about talking to friends and relatives with addiction problems. Call (800) I-DO-CARE.

A Manual on Adolescents and Adults with FAS with Special Reference to American Indians. Indian Health Service FAS Project, 5300 Homestead Avenue NE, Albuquerque, NM 87109, (505) 837-4228 (free of charge).

Men Have Babies Too. Brochure developed by the March of Dimes examines the male's influence on the unborn baby. To order, call the March of Dimes National Office (914) 428-7100.

Office of Minority Health Resource Center. Conducts customized database searches, accessing information on health programs and organizations, as well as funding sources and articles. A printout will be mailed to you at no charge. (800) 444-6472.

Preventing FAS and Other Alcohol-Related Birth Defects: Teacher and Student Manuals. The Arc National Headquarters, 500 East Border, Suite 300, Arlington, TX 76010. (817) 261-6003.

Prevention of Perinatal Substance Use: Pregnant and Postpartum Women and Their Infants Demonstration. 350 pages, 1993. Available free of cost. NMCHC inv. Code G031. Order from: National Maternal and Child Health Clearinghouse, 8201 Greensboro Drive, Suite 600, McLean, VA 22102. (703) 821-8955, ext: 254 or 265.

Training of Trainers Manual on FAS. American Indian Family Healing Center, 1815 39th Avenue Oakland, CA 94601. (510) 534-2737 ($20.00).

When the Bough Breaks: Pregnancy and the Legacy of Addiction. New Sage Press, 825 NE 20th Avenue #150, Portland, OR 97232. (503) 232-6794.

Working with FAS Children: A Handbook for Caregivers of FAS/FAE Children. Jean Cornish, Minnesota Services Associates. (612) 645-0688.

Websites

Alcohol Exposure During Pregnancy. Links to Learning Disabilities, ADD and Behavior Disorders. Contains articles written by a graduate research team at the University of South Florida. These articles describe various environmental and chemical factors that can adversely affect a fetus. www.chem-tox.com/pregnancy/alcohol.htm

AlcoholismHelp.com A resource for people affected by alcoholism. www.alcoholismhelp.com

The Arc. The national organization of and for people with mental retardation and related developmental disabilities and their families. (800) 433-5255. www.thearc.org/fetalalcohol.html

ARCH — National Respite Network and Resource Center. Access to Respite Care and Help (ARCH) helps families find respite care options for disabled children and adults in all 50 states. Call (800) 773-5433 or go online. www.respitelocator.org

Canadian Center on Substance Abuse. Fetal Alcohol Spectrum Disorder Information Service. Includes an overview of FASD, recommended readings, and resources for professionals working with individuals with FASD and their families. www.ccsa.ca/index.asp?ID=17

Center for Disease Control and Prevention. Posters, information on incidence of alcohol-related birth defects and information about funded activities related to prenatal alcohol use. www.cdc.gov/ncbddd/fas/

Children's Research Triangle. Ordering information for Dr. Chasnoff's articles and educational tools, including information on identifying and intervening with children with FAS. The site also includes information to use when adopting a child overseas. www.childstudy.org/

Facts about Alcohol Use During Pregnancy. http://TheArc.org/faqs/fas.html

Family Village. A global community for people with varying disabilities. www.familyvillage.wisc.edu

FAS Bookshelf. Order videos and books for families living with FAS. www.fasbookshelf.com/buyit.html

FAS Community Resource Center. http://come-over.to/FASCRC

FAS Facial Photographic Analysis Software. www.depts.washington.edu/fasdpn/software.html

FAS/E Support Network of British Columbia. www.fetalalcohol.com

FASCETS — Fetal Alcohol Syndrome Consultation, Education, and Training Services, Inc. www.fascets.org

FASD — The Partnership to Prevent Fetal Alcohol Spectrum Disorder. Unites communities nationwide in a public health response to prevent FAS and alcohol-related birth defects. The Partnership aims to empower mothers to deliver healthy babies by encouraging women who are planning a pregnancy or already pregnant to avoid alcohol. www.prevention.samhsa.gov/faspartners

FASlink. Fetal Alcohol Syndrome Information, Support & Communication Link. Includes information for families and health care professionals. www.acbr.com/fas/

fasWorld. An international alliance of parents and professional working together to prevent FAS. www.fasworld.com

Fetal Alcohol Syndrome/Effects. Created by Kathryn Shea, C.S.W. Rich source of information and inspiration for families of children with FAS. www.taconic.net/seminars/fas01.html

Florida Alcohol and Drug Abuse Association Resource Center. Disseminates information about alcohol and other drugs to Floridians. www.fadaa.org

Healthy Families Florida. Promoting positive parent child relationships. www.healthyfamiliesfla.org/

HRSA (U.S. Dept. of Health & Human Services) **Information Center.** Downloadable manual — Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health. www.ask.hrsa.gov/detail.cfm?id=MCHN092

Journal of FAS International. www.motherisk.org/JFAS

Motherisk. Research findings related to the effects of alcohol on pregnancy. www.motherisk.org/alcohol/index.php3

National Institute on Alcohol Abuse and Alcoholism. Includes several FAS guides for health care providers. www.niaaa.nih.gov/publications/publications.htm

National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism. www.niaaa.nih.gov/

National Organization on Fetal Alcohol Syndrome. Information about preventing, identifying and living with FAS. www.nofas.org/

NIDA — National Institute on Drug Abuse. www.nida.nih.gov/NIDAHome.html

NOFAS — The National Organization on Fetal Alcohol Syndrome. www.nofas.org/

Northeast Consultation and Training Center. Provides training and consultation on FAS issues. www.taconic.net/seminars

Online Clinic. This is Dr. Larry Burd's site. Includes a presentation on FAS and three tools to help you estimate the scope of the problem due to FAS and related developmental disorders resulting from prenatal alcohol exposure in your community. www.online-clinic.com/#

Post Adoptive Resources Project. Support for families who have adopted children with emotional/behavioral disabilities. Many of the disabilities are alcohol/drug related. www.geocities.com/heartland/prairie/4786

Region 3 FAS Partnership. Creative FAS website for parents. www.fas-region3.com/Daily.html

SAMHSA Fetal Alcohol Spectrum Disorders Center for Excellence. Provides information and resources about FASD. www.fascenter.samhsa.gov

SAMHSA National Clearinghouse for Alcohol & Drug Abuse Information. Provides information packets, brochures, literature searches. Includes a treatment locator. www.samhsa.gov/public/public.html

Screening for Mental Health Includes information on screening for alcohol abuse. www.mentalhealthscreening.org/

Screening for Substance Abuse During Pregnancy: Improving Care, Improving Health. Online copy of publication includes copies of recommended screening forms. www.ncemch.org/pubs/PDFs/SubAbuse.pdf

Texas Fetal Alcohol Syndrome Consortium. Includes information about Texas's FAS prevention and education initiatives as well as links to other FAS sites. www.main.org/texasfasc

U.S. Department of Health and Human Services, and SAMHSA's National Clearinghouse for Alcohol and Drug Information. www.health.org

Writeslaw. Article entitled "Play Hearts, Not Poker," about working with and having an IEP written for special needs children. www.wrightslaw.com/advoc/articles/iep.bollero.hearts.htm

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