

What is Fetal Alcohol Syndrome (FAS)?

Fetal alcohol syndrome (FAS) is a birth defect caused by “prenatal alcohol exposure, which produces a spectrum of lifelong effects on offspring depending on the dose, timing and conditions of exposure.”

(Streissguth, Ann P., Ph.D. and Connor, Paul D., “Fetal Alcohol Syndrome and Other Effects of Prenatal Alcohol: Developmental Cognitive Neuroscience Implications,” Handbook of Developmental Cognitive Neuroscience; MIT Press (2001)).

FAS is a “preventable form of mental retardation and developmental disabilities” that may appear in children who were exposed to alcohol within their mother’s womb. Children who have FAS have one or more recognizable facial anomalies.

(Streissguth, Ann P., Ph.D., “Today I visited an Aleut Village: Observations on Preventing Fetal Alcohol Syndrome,” The IHS Primary Care Provider, Vol. 15, No. 9 (1990)).

Alcohol and the Brain

The type of damage alcohol exposure causes is permanent but not progressive. Alcohol has a direct toxic effect on cells and can cause cell death. The result is that certain parts of the brain will have fewer than normal cells.

The brain regions affected by prenatal alcohol exposure include:

- **Hippocampus**
- **Cerebellum**
- **Corpus Callosum**
- **Basal Ganglia**
- **Frontal Lobe of the Cerebrum**

Alcohol also causes changes in brain tissue density with a decrease in white matter density and an increase in gray matter density. The effect of this is a reduction in the speed and efficiency of information processing.

Specific Cognitive and Behavioral Impairments

Children prenatally exposed to alcohol exhibit a variety of problems with:

- **Verbal Learning**
- **Visual-Spatial Learning**
- **Attention**
- **Reaction Time**
- **Executive Functions**
- **Psychosocial Deficits and Problem Behaviors**

Copyright © National Indian Justice Center 2006
<http://nijc.org/>