

Alcohol and Pregnancy

Cause for Concern?

In Australia and around the world there are increasing rates of:

- women drinking at high risk
- binge drinking amongst teens & indigenous women
- unplanned pregnancies
- alcohol use in pregnancy
- FAS diagnoses

What is FASD?

- ☹ An umbrella term for **a range of disabilities and effects** from prenatal alcohol exposure
 - Foetal Alcohol Syndrome (FAS) - the tip of the iceberg
 - Alcohol-related birth defects
 - Alcohol-related neuro-developmental disorders
 - Stillbirth, prematurity, miscarriage
- ☹ the most common **preventable** cause of birth defects and brain damage in children
- ☹ a **lifelong condition** that causes physical and mental disabilities
- ☹ can result in secondary disabilities.

All drugs affect the unborn child.

The 3 legal drugs are known to cause the most harm to the foetus because of their widespread use

- tobacco
- caffeine
- alcohol

Alcohol is a Teratogen – an agent that causes a structural abnormality following foetal exposure during pregnancy.

One standard drink contains about 10% alcohol and gives a blood alcohol content level of between 0.02 and 0.05 depending on the body size, genetics etc. (Laboratory studies show that 0.014 BAC can effect a foetus: $\frac{1}{4}$ - $\frac{1}{2}$ of a standard drink)

- Alcohol passes through the placenta
- Foetus has same BAC as the mother
- Baby's liver unable to metabolise alcohol
- Uterus alcohol cycle trap – longer exposure to alcohol than the mother
- No safe level – no safe time

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- Dr Margaret Clarke found that in Canada 96% of mothers with alcohol-affected children are social drinkers, and only 4% are alcohol dependent.

Effects on the Infant:

- Preterm delivery
- Low birth weight
- Birth defects
- Small head or unusual face
- Irritable, sleep disturbance, feeding difficulty
- Poor muscle tone
- Hearing and visual impairment
- Growth and development problems

Effects on the Developing Neural Tube and Brain

Alcohol interferes with the development of the cell itself, migration of the cells and also with the growth and multiplication of the cells. As the brain develops, intricate cell communication networks are being formed with over 10,000 connections. Alcohol at this stage of development affects executive control as this is dependent on the communications networks being created. It also affects the cell adhesive molecules which allow the cells to move out to make these networks. Cells may commit apoptosis (cell suicide) as they recognise that they are impaired - causes cell shrinkage in the brain.

Effects on Brain Function

- **Corpus Callosum** – poor executive function
- **Hippocampus** – learning and memory
- **Cortex** - Average FAS IQ is 70 (mild ID) but can range from 16 – 105.

Alcohol Related Neurological Disorders (ARND): 70-75% have normal IQ's but are affected by some learning problems.

- Speech & language
- Poor school performance:
 - reading
 - numeracy (telling time & money)
 - writing (fine motor dysfunction)
- Difficulty with memory, abstract thought, sequencing, generalising & cause and effect reasoning
- **Frontal lobe** – judgement, conscience

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- **Hypothalamus** – emotions
 - Poor social skills, judgement
 - Problems relating: overly physical, friendly, inappropriate sexuality
 - Difficulty making friends
 - Poorly organized, often late
 - Repeat the same mistakes
 - Hyperactive behaviour (ADD/ADHD)
 - Inattention, overactivity, impulsivity
 - Conduct disorder - aggression
 - Anxious, depressed, low self-esteem

“We just assumed that the kids with FAS had ADHD and gave them Ritalin.”

Claire Coles, Ph.D., associate professor at Emory

Effects on Education and Social Life:

- Difficulty storing and retrieving information,
- Inconsistent performance days
- Impulsivity, distractibility, disorganization,
- Ability to repeat instructions, but inability to put them into action.
- Difficulty with abstractions, such as math, money management, time concepts.
- Cognitive processing deficits
- Slow auditory pace
- Developmental lags
- Inability to predict outcomes or understand

Secondary Effects of FASD - Not born with these.

- Disrupted education (60%)
- Unemployment (80%)
- Mental health problems (90%)
- Trouble with the law and imprisonment (60%)
- Alcohol and drug abuse (30%)
- Vulnerable, inappropriate sexuality (50%)
- 10% >21 years live, work independently
- Homelessness
- Suicide

Streissguth, 1997 (n = 415)

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Challenges:

“Most children with foetal alcohol spectrum disorder face more stress, more obstacles, more loneliness, more failure, and less success in a single day than most non-affected people face in a far longer time. These children are not exceptional because they have the condition; they become exceptional through trying to survive despite all odds. The tragedy lies not in the reality that some people have FAS. The tragedy lies in the reality that they are denied their basic human rights to have an appropriate education, to be raised in a supportive environment, and to grow up to be adults who participate in life in a productive and satisfying manner.”

(McCreight 1997).

Traditional learning based theory requires the brain to:

- Understand and process information quickly
- Understand ideas and concepts
- Make links and form associations
- Interpret, store and remember information
- Take what is learnt in one situation and apply it in another

A person with FASD will not be able to function in this context, **but individuals with FASD CAN learn!!** But we must :

- Understand that the brain is the source of all behaviour
- Individuals with FASD have a brain difference
- Brain difference = different behaviour = normal for them
- Accept them as individuals who “can’t do” rather than “won’t do”

We also know that people with FASD may be very good at many things. They may:

- ✓ be loving & affectionate
- ✓ be friendly & outgoing
- ✓ be artistic & musical
- ✓ work well with animals and plants
- ✓ be very loyal
- ✓ show a great determination to succeed in life!

What Can be Done?

- ☺ **Early Diagnosis** – brings understanding – encourage health department to increase knowledge for doctors and society and to increase number of diagnostic clinics.

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☺ **Involvement in Special Education and Social Services –**

- individualized educational programs
- respite care
- stress and behavioural management training

Children who receive special education geared towards their specific needs and learning style are more likely to achieve their developmental and educational potential. Children with FAS show a wide range of behaviours and severity of symptoms. Special education allows for individualized educational programs. In addition, families of children with FAS who receive social services, such as respite care or stress and behavioural management training, have more positive outcomes than families who do not receive such services.

☺ **Provide Loving, Nurturing, & Stable Care –** FASD people are particularly sensitive to:

- disruptions
- transient lifestyles
- harmful relationships

☺ **Reduce Exposure to Violence –** anger or frustration management training.

What can we do personally?

- Choose to say No to alcohol.
- Don't blame or judge others - recognise that alcoholism is a disease & some people do not know.
- Be informed and share with others – encourage them to be drug-free.
- Encourage governments to warn and legislate to protect the community.
- Be supportive of those affected – individuals, carers, teachers

**FASD is a lifelong disability! Help to prevent it!
Stay alcohol free!**

Where can we get more information?

- www.nofasard.org
- www.elizabethrussell.com.au
- www.ichr.uwa.edu.au/alcoholandpregnancy