

# Fetal Alcohol Spectrum Disorder (FASD)

Does the pattern of drinking during pregnancy relate to the severity of the diagnosis of fetal alcohol spectrum disorder in a child?

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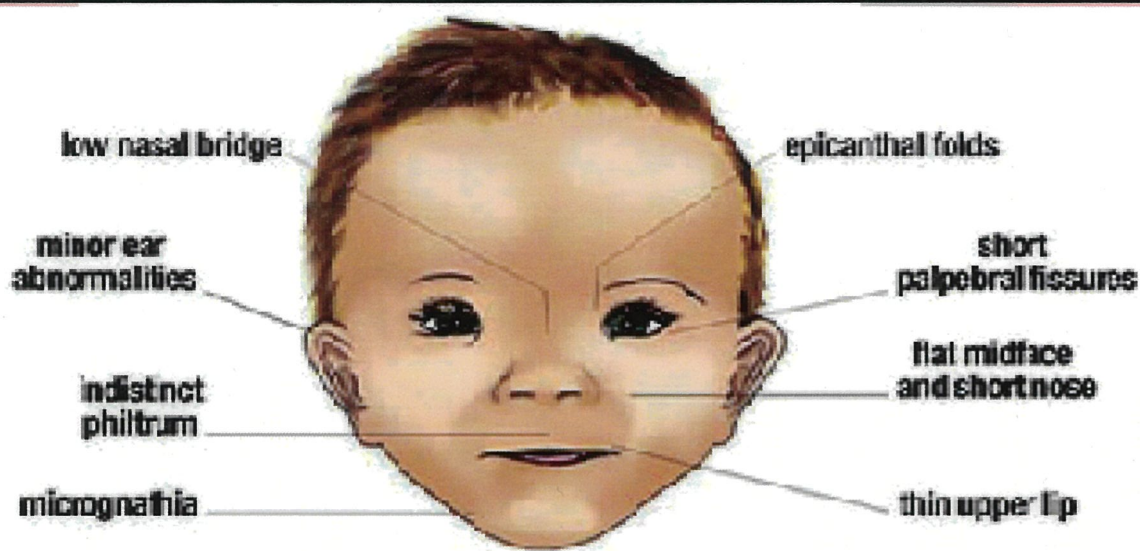
## What is FASD?

FASD is an umbrella term used to describe a wide range of debilitating lifelong effects including, but not exclusively cranio-facial, limb and cardiovascular defects, brain damage, growth restrictions, developmental delay and cognitive, social, emotional and behavioural problems (Ministry of Health, 2015). Fetal alcohol syndrome is the most severe of the disorders and includes prenatal and/or postnatal growth retardation, central nervous system dysfunction with or without obvious brain malformation - including various learning disabilities, hyperactivity, mental retardation and behavioural problems as well as a defining pattern of craniofacial malformations, which include short eye openings, thin border between the upper lip and facial skin, flat philtrum, an underdeveloped midface, wide inner canthal distance and droopy eyelid. Partial fetal alcohol syndrome, which is when the child has some but not all of the symptoms of fetal alcohol syndrome; alcohol - related birth defects, where a child has problems with organs such as the heart and kidneys due to alcohol exposure; and alcohol-related neurodevelopmental disorder, when a child has problems with learning and behaviour due to prenatal alcohol exposure, also come under the umbrella term of FASD (May & Gossage, 2011). About 170 babies are born with fetal alcohol spectrum disorder in New Zealand every year (Ministry of Health, 2015).

## The effects of pattern of alcohol consumption during pregnancy on the child

Alcohol can be detected in the fetus one minute after the mother's blood alcohol concentration begins to rise. The placenta can only metabolise a minute amount of ethanol and does not appreciably reduce the amount of alcohol that reached the fetus. Elimination of the ethanol from the fetus is prolonged due to reuptake of the amniotic fluid that contains ethanol. Alcohol elimination from the fetus relies heavily on the mother's metabolic capacity which can vary depending on the individual woman (Burd et al., 2012).

Timing has been found to be critical as to which anatomical features are affected and may be associated with the particular cognitive and behavioural traits that are produced in individual children diagnosed with FASD. Heavy levels of alcohol exposure in utero at any stage of pregnancy have a higher prevalence of problem behaviour. Drinking heavy amounts of alcohol in the first trimester is found to cause children to have increased somatic and internalising behaviour problems, including anxiety and/or depression (O'Leary et al., 2009). A significant drinking episode that occurs in the 6-9 week period of pregnancy is likely to cause facial abnormalities (May & Gossage, 2011). Children exposed to higher rates of alcohol consumption in late pregnancy have high rates of internalising and aggressive behaviour. Children exposed to high amounts of alcohol in late pregnancy are at higher risk of developing aggressive behaviour problems (O'Leary, et al., 2009). Children exposed to low to moderate amounts of alcohol and infrequent binges in utero are more likely to have lower overall cognitive and behavioural abilities (May & Gossage, 2011).



## Recommendations

- ◆ Do not consume any amounts of alcohol during any stage of pregnancy
  - ◆ Do not consume alcohol when trying to conceive
  - ◆ Do not consume alcohol if there is any possibility of becoming pregnant
- (Ministry of Health, 2015).

## References

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- May, P. A., & Gossage, J. P. (2011). Maternal risk factors for fetal alcohol spectrum disorders - not as simple as it might seem. *Alcohol Research and Health*, 34(1). 15-26
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- O'Leary, C. M., Nassar, N., Zubric, S. R., Kurinczuk, J. J., Stanley, F., & Bower, C. (2009). Evidence of a complex association between dose, pattern and timing of prenatal alcohol exposure and child behaviour problems. *Addiction*, 105. 74-86. doi:10.1111/j.1360-0443.2009.02756.x



## PECOT

Research Question: Does the pattern of drinking during pregnancy relate to the severity of the diagnosis of fetal alcohol spectrum disorder in a child?

PECOT Category	Information relating to question	Explanation
P (population)	Children with a diagnosis of fetal alcohol spectrum disorder	Children with a fetal alcohol spectrum disorder are needed to observe the individual characteristics that each child may have
E (Exposure)	Prenatal alcohol drinking	For a child to be diagnosed with fetal alcohol spectrum disorder they have had to have been exposed to alcohol in utero
C (Comparison)	First trimester timing, quantity and frequency vs. second and third trimester timing, quantity and frequency	To see if there is a relationship between various patterns of drinking and the severity of fetal alcohol spectrum disorder of the child
O (Outcome)	No pattern of drinking is safe during pregnancy	Due to prenatal exposure to alcohol been responsible for fetal alcohol spectrum disorder, we want to know if any pattern of drinking is safe during pregnancy
T (Timing)	Lifetime	The effects of fetal alcohol spectrum disorder begin in utero and last a life time

## Rationale

I have chosen to present my findings from assignment 1 in the form of a poster, rather than a submission as I feel that most health professionals have an understanding of what fetal alcohol spectrum disorder is, and the recommendations.

This poster is aimed mostly towards women of childbearing age. This is because it is important for women to understand that if there is any chance that they could possibly become pregnant then they should be abstaining from any alcohol use.

Women, who are not actively trying to conceive, should be aware of the potential side effects that alcohol can have on the fetus in the early stages of pregnancy when most people do not know that they are pregnant, and therefore the importance of using contraception. Women who are pregnant need to realise that alcohol consumption is not safe during pregnancy regardless of amount of alcohol consumed, and which stage of pregnancy that they are in.

By using a poster I am able to target the general population, educating them on alcohol consumption during pregnancy and the potential risk to their future child.