



PRoF Alliance

The Basics of Fetal Alcohol Spectrum Disorders (FASD)



PROF Alliance

Our mission is to prevent fetal alcohol spectrum disorders and support all impacted in Minnesota and beyond

Our vision is a world in which alcohol is not consumed during pregnancy and people living with fetal alcohol spectrum disorders are identified, supported and valued

* Acknowledgement *

Proof Alliance acknowledges that not every person who can become pregnant identifies as a woman. We try to use gender-neutral language as often as possible, much of the current research available currently refers only to “women” when discussing the ability to become pregnant. When citing this research, we refer to the language used in the study. In these cases, “woman” refers to someone who was assigned female at birth.

What is FASD?

Fetal Alcohol Spectrum Disorder

- A group of birth defects that is the result of prenatal alcohol exposure
 - Wide range of symptoms including physical, mental, behavioral, & learning disabilities
 - Prenatal alcohol exposure affects each person differently & organic brain injury causes inconsistency
 - Permanent disability, lasts a lifetime
 - **All people with FASD can be successful**
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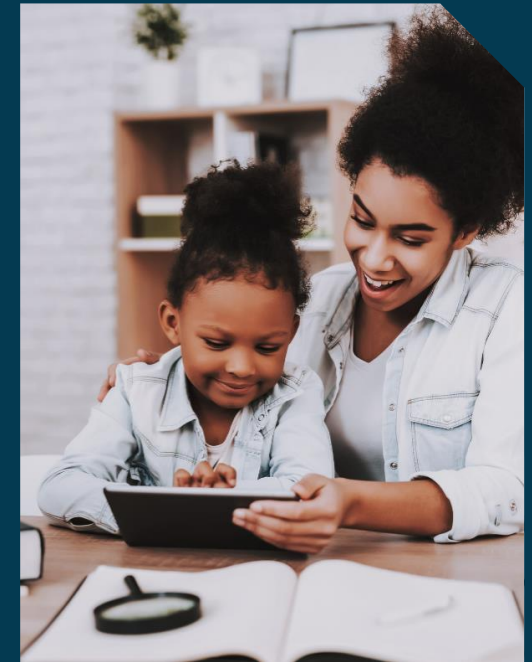
True or false?

FASD is more common than Down syndrome.



True or false?

FASD is more common than autism.



True or false?

FASD is the leading cause of intellectual disabilities in the U.S.

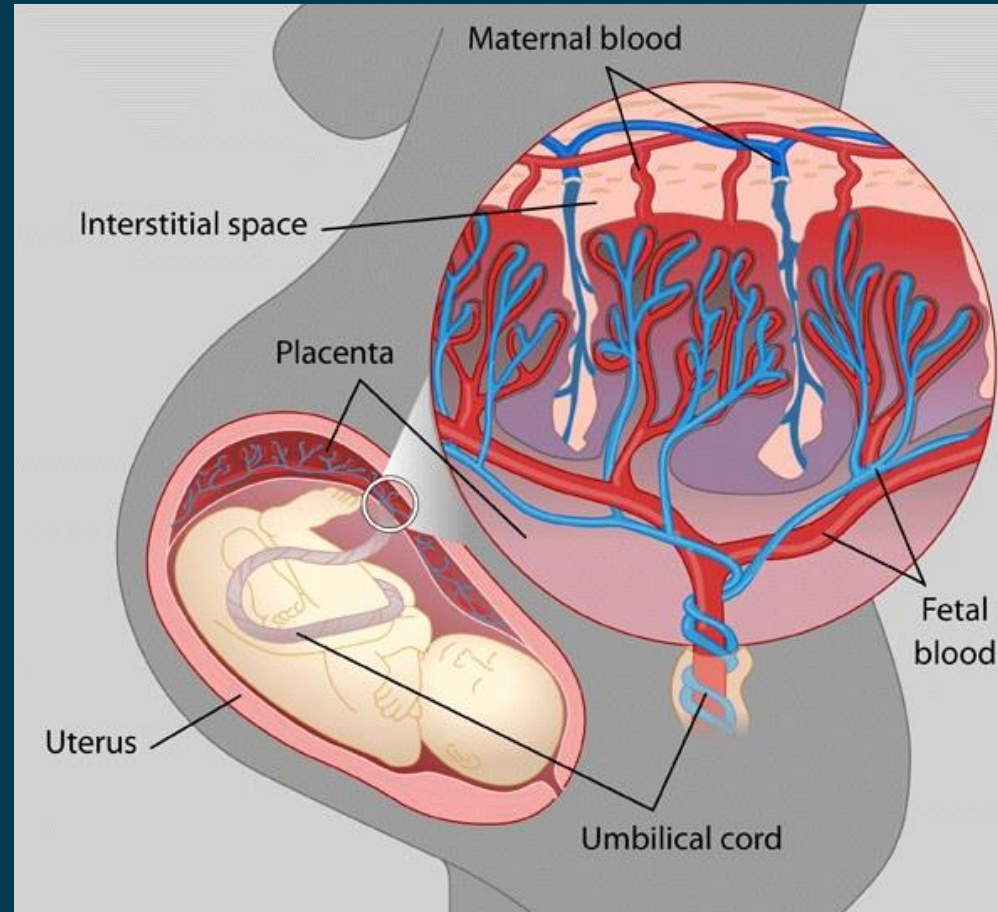
Prevalence Study



Research shows as many as 1 in 20 children in the U.S. have an FASD.

Effects of Alcohol during Pregnancy

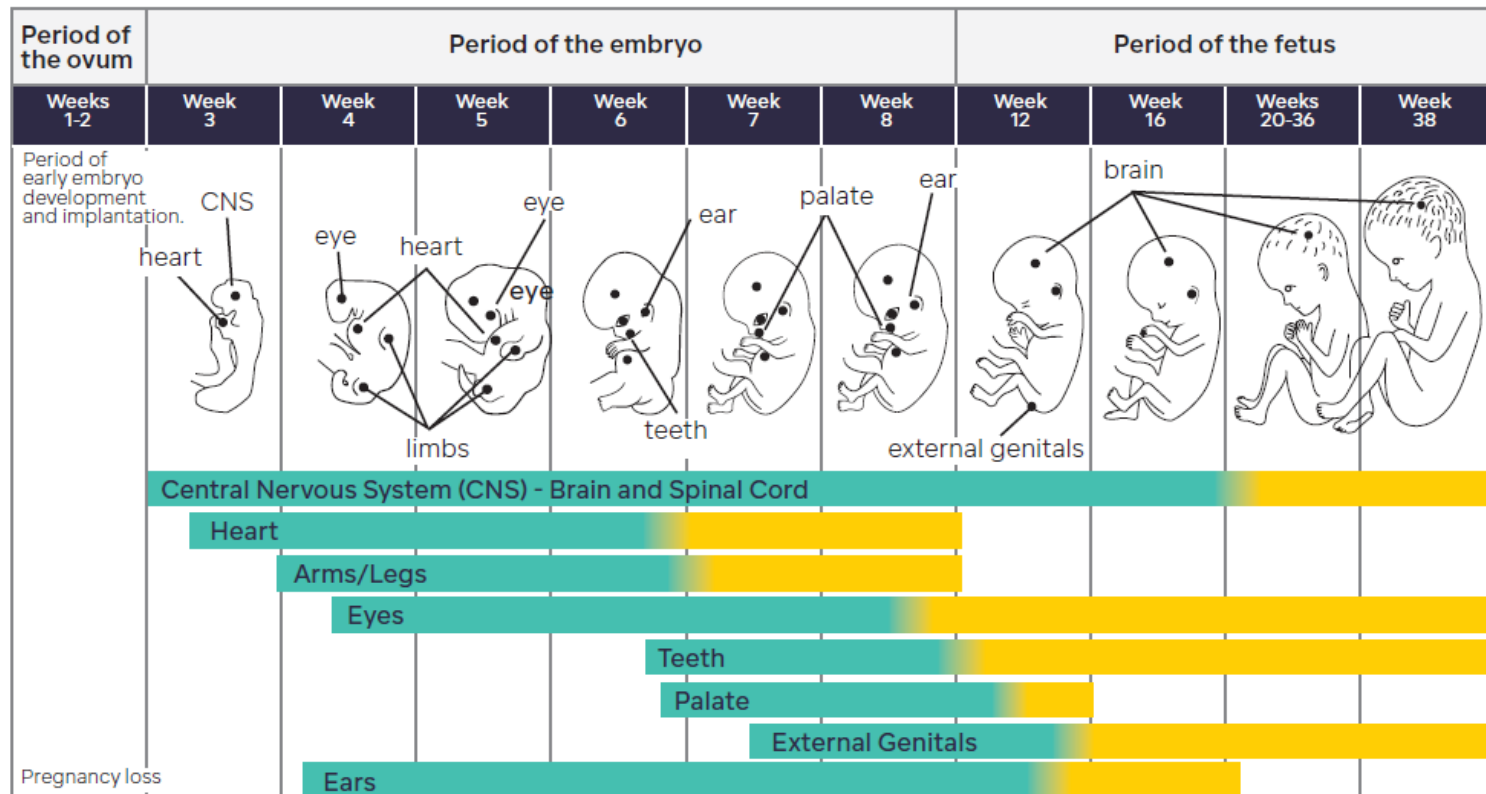
- Pregnant person drinks alcohol
 - Alcohol enters the placenta & passes from maternal blood supply to fetal blood supply
 - Fetus urinates alcohol into the amniotic fluid
 - Fetus then swallows amniotic fluid
 - Alcohol is perpetually reabsorbed by the fetus
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Fetus Developmental Timeline

Fetal Development Chart

This chart shows vulnerability of the fetus to defects throughout 38 weeks of pregnancy.*
 • = Most common site of birth defects



Period of development when major defects in bodily structure can occur.
 Period of development when major functional defects and minor structural defects can occur.

Adapted from Moore, 1993, the National Organization on Fetal Alcohol Syndrome (NOFAS), 2009, and the Centers for Disease Control (CDC), 2018.
 *This fetal chart shows the 38 weeks of pregnancy. Since it is difficult to know exactly when conception occurs, health care providers calculate a woman's due date 40 weeks from the start of their last menstrual cycle.

Ending the Stigma

Why do people drink alcohol during pregnancy?



FASD is a Complex Public Health Issue

- Unplanned pregnancy may lead to drinking without the knowledge they are pregnant
- Substance use disorders
- Form of self-medicating or coping mechanism due to external stressors or mental illness
- Binge drinking is generally socially-accepted
- Mixed messages from family, friends, media, etc.
- Doctors implicitly give permission by not discussing alcohol use with their patients or downplaying the risks
- Public still misunderstands risks from drinking and does not recognize the high prevalence of FASD



is it safe to drink while pregnant



Google Search

I'm Feeling Lucky

Where are you getting your medical advice from?

Abstaining completely from alcohol during pregnancy - from conception through birth - is recommended by all major medical groups, including:

- Centers for Disease Control and Prevention (CDC)
- U.S. Surgeon General
- American Academy of Pediatrics
- American College of Obstetricians and Gynecologists (ACOG)
- National Institutes of Health
- World Health Organization



What role does dad play?

- There is not enough research yet to decide if the father's alcohol use can also be unsafe.
 - Even so, alcohol consumed by the males can lead to a variety of problems in the reproductive system.
 - There are many health benefits linked with drinking less alcohol. Also, this is a way to be supportive of their partner choosing an alcohol-free pregnancy.
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Nursing and FASD

Can drinking while nursing cause an FASD?

- Alcohol in breast milk cannot cause an FASD
- Alcohol in breast milk can impact a baby's sleep patterns, growth and development
- The safest choice is to continue not drinking alcohol if breastfeeding
- For more info, talk with your healthcare provider. You can also visit aap.org or mothertobaby.org



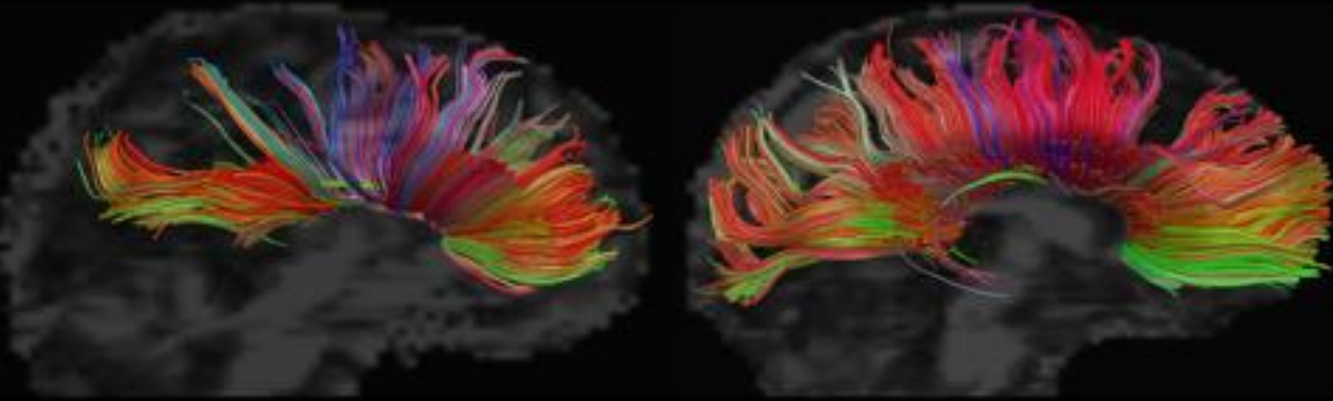
True or False?

Most people with an FASD have distinct facial impairments caused by prenatal alcohol exposure.



Inter-hemispheric Fiber Tractography through Corpus Callosum

Fractional anisotropy maps



FASD

Control

Anatomical images

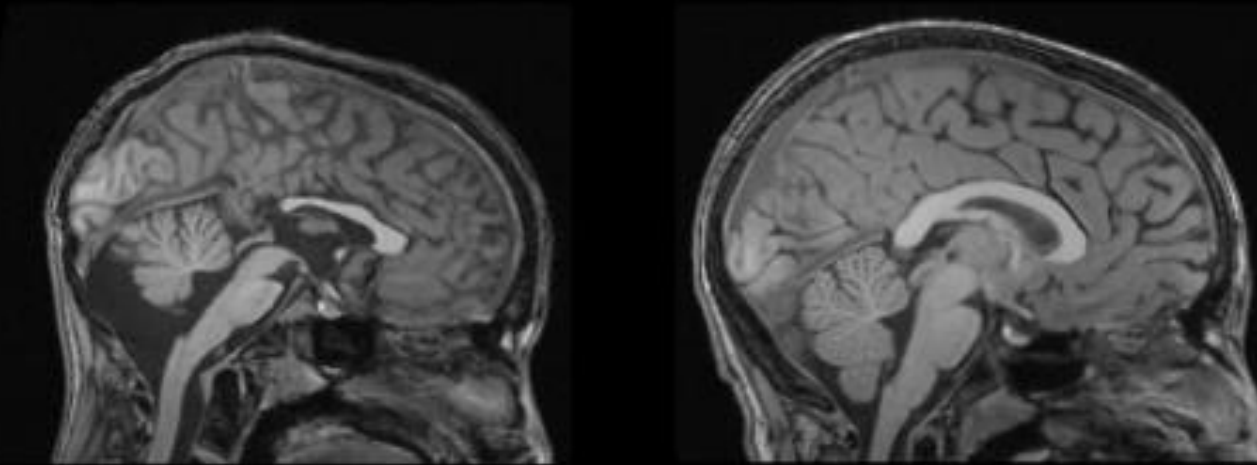


Photo courtesy of Dr. Jeffery Wozniak,
University of Minnesota, 2019

Common Behavioral Symptoms

Impaired Executive Functioning:

- Organizing stored information
- Planning future events
- Problem solving
- Memory and attention
- Impulse control
- Cause and effect
- Generalizing concepts
- Abstract concepts

Common Behavioral Symptoms

It's important to remember that FASD is a spectrum disorder. This is only a small sampling of the characteristics that are common with FASD.

- Poor social skills/lack of boundaries
- Slower information processing
- Learning difficulties (commonly but not limited to math)
- Anger or frustration often & may take longer to self regulate
- Extreme under or over-sensitivity to sensory input
- Difficulty following directions or connecting steps
- May be prone to confabulation

Developmental Skills: Case Example

Physical maturity	—————>	18 years old
Comprehension	—————>	6 years
Emotional maturity	—————>	6 years
Social Skills	—————>	7 years
Concept of money, time	—————>	8 years
Reading level	—————>	16 years
Expressive language	—————>	20 years



Fingledobe & Pribin

Last serny, Fingledobe & Pribin were in the nerd-link treppering gloopy caples & cleaming burly greps.

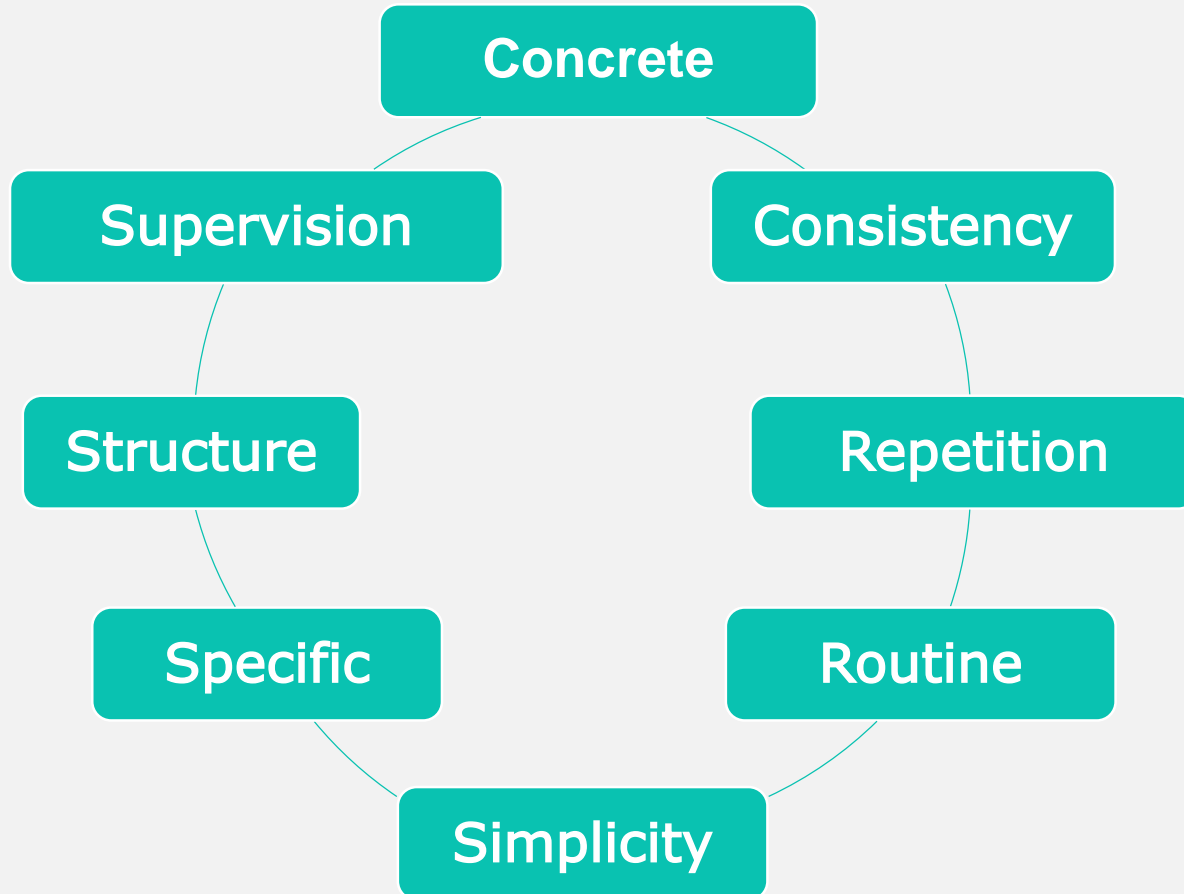
Suddently a ditty strezzle boofed into Fingledobe's tresk.

Pribin glaped & glaped. "Oh Fingledobe!" He Chifed, "That ditty strezzle is tunnning in your grep!"

Recognize Strengths

- **Friendly, likable:** May be outgoing & sociable & have little anxiety about strangers
 - **Verbal, chatty:** May be very socially interested (but not necessarily socially skilled)
 - **Helpful, hard-working:** If you ask, they will do it. They can be very good workers with the right job & training
 - **Determined, resilient:** They don't hold grudges & will come back if rejected. Every day is a new day!
 - **Want to be liked:** They will do whatever they can to have friends
-

The Eight Essentials for Success



From 8 Magic Keys - developed by Deb Evensen & Jan Lutke 1997

In Conclusion...

- FASD is 100% preventable and we can make a difference in our communities
 - People with an FASD can be successful
 - There is no safe type, amount or time to consume alcohol while pregnant
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Proof Alliance Resources

- Public awareness & prevention
- Community grants & partners
- Family engagement & support
- Diagnostic clinic & screening
- Youth & young adult program
- Public policy work
- Professional education
- Proof Alliance website resources





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