

What's Your Gut got to do with it?

FASD and the Microbiome

By

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Introduction

- To reframe how we think about food.
- I am **not** a Dietician, Nutritionist or Healthcare Professional.
- Any of the mentioned supplements should be take in accordance with your Healthcare professional. Especially for children or adults on medication.



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Food Textures

- Food texture is how a food feels in your mouth, such as whether it is crunchy, smooth, soft, chewy, dry, or slippery.

Have you ever noticed you
crave certain foods when
stressed, tired, overwhelmed
or emotional?

The body and the brain trying
to regulate itself.

The Microbiome

- The Human gut is home to a wide variety of bacteria and other microorganisms – Gut Microbiota
- Development of these microorganisms starts early
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- Gut Microbiome disorders are seen across neurodiverse conditions.

Gut Brain Connection

- Alcohol is a teratogen causing complex outcomes if Prenatal Alcohol Exposure (PAE) occurs.
- Alcohol consumption alters the balance of gut bacteria – Immune System development, access to nutrients, and brain development.
- Gut microorganisms influences brain development and behaviour.
- Early disruptions in microbiota can impact a child's movement, social abilities and cognitive functions.
- Microbiota provide energy and nutrients for brain growth and functioning.

Alcohol's Effects on the Gut

- Changes gut bacteria balance
- Weakens the gut lining
- Increases inflammation
- Affects nutrient absorption
- Alters gut-brain communication
- Impacts stress and immune systems
- May influence mood, behaviour, and eating patterns



Sometimes the best therapy
you can do is looking after
your Gut

Sensory Processing

- Sensory processing is how your brain interprets information received from your senses (this information is known as 'sensory input').
- This process is how you feel and react to things in your environment and sensations in your body.

- The five main senses are:
 - **Sight** (light; colour; pattern)
 - **Hearing** (sound)
 - **Smell** (odour/scent)
 - **Taste** (flavour)
 - **Touch** (texture; pressure; heat/cold).

Sensory Processing

- Other senses include:
- **balance** and **movement** ('vestibular') – keeping your body balanced and moving how you expect it to
- **spatial awareness** ('proprioception') – knowing where your body is in relation to other objects
- **awareness of internal states** ('interoception') – knowing whether you are hungry, thirsty, hot or cold, need the toilet, are ill or injured.
- **Do you recognise these senses?**

Nutrition

- Eating a Healthy and balanced diet
- Food and drink provide the energy and nutrients you need to be healthy.

Benefits of a Balanced Varied Diet

- Supports brain development and focus
- Helps mood and emotional regulation
- Gives more stable energy
- Supports gut health and digestion
- Feeds healthy gut bacteria
- Supports the immune system
- Helps the nervous system regulate stress
- Improves sleep and wellbeing
- Helps the body absorb important nutrients

Supplementation

- Adding extra nutrients – like vitamins, minerals, or other dietary substances – to your daily eating habits to fill nutritional gaps or support health.
- No evidence supplementation will cure FAS, but supplementation can play a supportive role in improving behaviour, sleep, mood and cognitive function.
- Use Supplements under the guidance of a healthcare professional – especially in children or those taking other medications.

Choline

- A nutrient that is found in many foods.
- Brain and Nervous system need Choline to regulate memory, mood, muscle control, and other functions.
- Needed in the formation of membranes that surround your body's cells.
- Most Choline comes from the food you eat
- Natural Sources of Choline: Eggs (Yolk), Legumes, Vegetables, Fish

Zinc

- Alcohol consumption can deplete zinc levels in the body.
- Zinc is crucial in supporting brain development.
- A lack of zinc being passed on to a foetus could be why PAE is linked with impaired brain growth.
- Studies have shown zinc deficiency to be linked to long-term problems with learning and memory.
- Natural sources: Shellfish, Meat, Poultry, Legumes, Nuts and Seeds.

Melatonin

- Melatonin is a hormone that's an important part of your ability to sleep.
- The pineal gland produces melatonin.
- Melatonin helps to regulate your body's sleep wake cycle (circadian rhythm)
- 79% of people living with FASD have an abnormal melatonin profile.
- Natural Sources: Eggs, Fish, Milk, Cherries, Nuts, Tomatoes

Magnesium

- Magnesium is a mineral the human body needs to function
- Important for a healthy cardiovascular system, nerves, muscles and bones.
- Regulates the body's calcium and blood sugar levels.
- Production of protein
- Best supplement Magnesium at night.
- Natural sources of Magnesium: Green Vegetables, Legumes, Nuts Seeds, Whole Grains, and Seafood

Vitamin D

- A nutrient the body needs to build bones and keep them healthy
- Body's Calcium absorption relies on Vitamin D
- Vitamin D also has many other uses in the body
- Vitamin D supports immune health and helps keep muscles and brain cells working.
- Natural Sources: Fish, Milk, Cereal, Sunlight

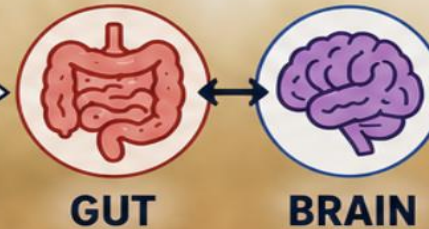
THE GUT-BRAIN AXIS

POOR DIET

Like a hose on a low setting, only a trickle gets through.

LIMITED NUTRIENTS

Poor diet gives limited nutrients to the gut-brain axis.



EFFECTS

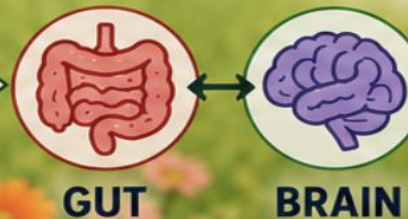
- Low mood
- High stress
- Anxiety
- Irritability
- Low energy
- Poor focus

HEALTHY DIET

Like a hose on full power, maximum flows through.

MAXIMUM NUTRIENTS

A healthy, balanced diet delivers maximum nutrients to the gut-brain axis.



BENEFITS

- Positive mood
- Lower stress
- Less anxiety
- Calm & balanced
- More energy
- Better focus

FEELS
DRAINED
AND
OVERWHELMED



LOW FLOW

FEELS
STRONG
ENERGISED
& RESILIENT



FULL FLOW



Your diet turns the tap.
Nourish your gut. Fuel your brain. Support your mood.