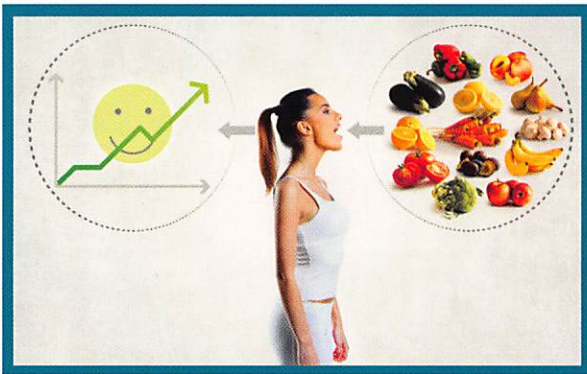


Digestion Starts in the Brain.

What you see, hear, smell, taste, and touch provide sensory stimuli to your brain that triggers the process of digestion.



- Your brain will signal for saliva to be produced via the salivary glands.
- Your pancreas, liver and gallbladder will commence preparation for intake of food.
- Salivation helps to breakdown carbohydrates via salivary amylase.
- Your teeth mechanically assist to breakdown food into bolus.
- You swallow ... and this is when the food choices that you make will influence both your **physical AND your mental health.**



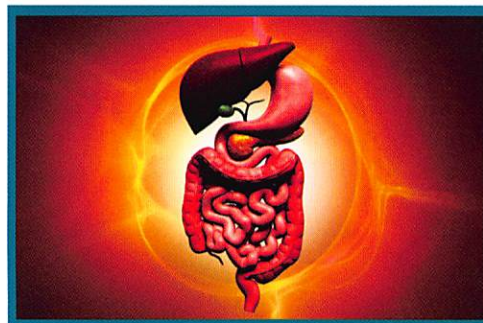
- The micronutrients **Zinc, B1 and B6** are necessary to produce Hydrochloric Acid (HCl).
- HCl helps to manufacture amino acids from protein which are the building blocks for neurotransmitters that influence your mood, i.e. Serotonin, Dopamine and Norepinephrine.



0 pH

14 pH

- The digestive system has different ranges of pH (acid and alkaline).
- In order for your stomach to break down protein it needs to be very acidic.
- If your stomach is too alkaline it will not be able to break down protein to manufacture amino acids for neurotransmitter production.
- Your small intestine receives the digested food and further breaks it down before distributing essential nutrients into the bloodstream for delivery into cells and around the body.
- Fatty acids are necessary for stimulation of bile flow and bile is necessary to emulsify fats and absorption of fat soluble vitamins A,D,E and K.
- The brain is also very reliant upon essential fatty acids (EFA) i.e. Omega 3, 6, and 9.
- Low EFA have been linked to psychiatric disorders i.e. mood disorders, schizophrenia and bipolar.
- Mental health has been linked to improper ratios of microbiota in the digestive tract.
- Healthy gut flora (microbiome) are essential to produce vitamin B12, neurotransmitters and hormones.
- A compromised gut flora will increase the risk of toxicity, mental health problems, and immune problems.



Food for Neurotransmitters Neurotransmitters for Mood



- **Neurotransmitters** are chemical messengers and are essential to support mental health.
- Many macro and micro-nutrients are necessary for neurotransmitter production which is why a **nutrient dense diet** is essential for optimising mental health. **For example, Zinc, B1, and B6** are needed for absorption of **Iron, Calcium and Magnesium** which are necessary for production of Serotonin, the mood balancing neurotransmitter.
- B6 is also a co-factor in the synthesis of Glutamate which is necessary for production of **GABA**, an essential neurotransmitter required by the brain to induce a state of calm.
- GABA and Serotonin have many benefits and are noted to reduce symptoms of depression, anxiety, worry, and improve sleep.
- If you have depression, Doctors may prescribe an SSRI which is a serotonin reuptake inhibitor, but home produced is best.
- **Serotonin** is a neurotransmitter that is actually produced in the small intestine and *not* the brain and is in your digestive system for a reason.
- Serotonin is also needed for **Melatonin** which is required to induce sleep.
- An imbalance of serotonin may also be attributed to dysbiosis (leaky gut).
- If serotonin is lost/reduced due to dysbiosis then Melatonin will also diminish which may result in sleep disturbances as well as mood imbalance.

Eat a Nutrient Dense Diet

Improve Your Mood Through Good Digestion

Take time out to 'Sense' your meal.

For example:

- How does your meal smell, i.e. is it aromatic.
- Can you identify different tastes, i.e. tangy, bitter or sweet .
- What is the texture and visual appeal of your meal, is it crunchy, smooth, colourful or bland.

You cannot digest your food properly if you are not relaxed. Take the time to leisurely eat your meal. Plan your meal in advance and have healthy options and ingredients at hand. Sit to eat your meal without distraction.

EAT SLOWLY!

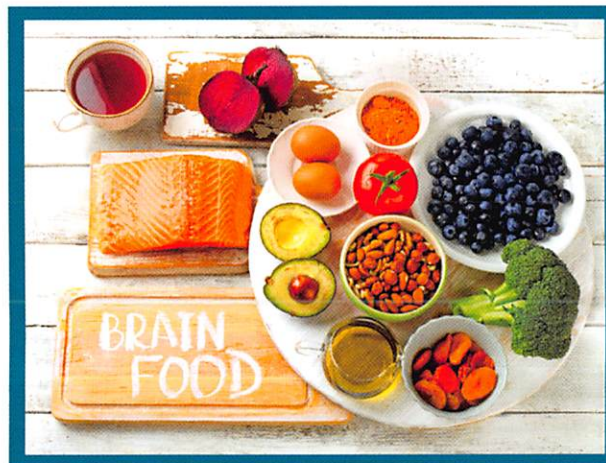
Antibiotics (against life) or Probiotics (for life)

Reduce your use of antibiotics unless absolutely necessary. Alternatively choose a diet rich in live cultures: pro-biotics, fermented and cultured foods. Add prebiotic foods to your diet to help support your gut bacteria, they need to eat too. Healthy gut bacteria is key to mental and physical health.

Your colon is home to many beneficial gut flora, without them you would not be able to eliminate toxins or manufacture essential vitamins like Vit B12 or produce neurotransmitters and hormones.

Reduce your consumption of sugar and refined carbohydrates. Increased sugar in the diet will activate a stress response within the body which triggers the production of cortisol. Cortisol is produced during times of stress. You will also risk inflammation and diabetes. Consumption of sugar will also create an imbalance of healthy gut bacteria that's associated with an increased risk of mood disorders and other mental and physical health conditions.

Good Mood Starts with Good Nutrition

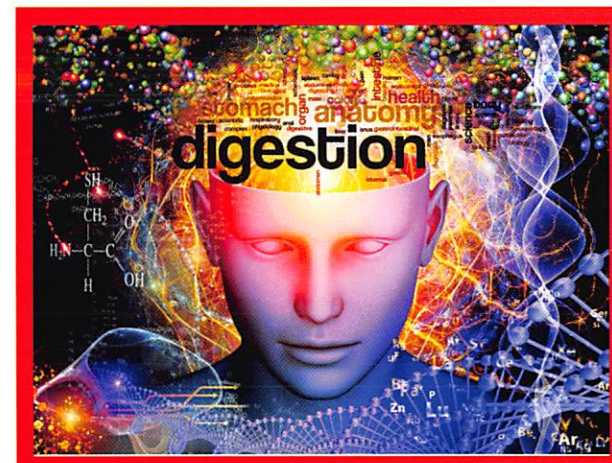


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Digestion and Mood



Discover how your digestive system plays a role in your mental health.

Find out how you can improve your mental health, relieve stress, raise your mood and reduce anxiety. **Bon Appetite**

Dr Sharon
Wilkinson
Clinical Psychologist

Good Digestion Helps
Promote Your Mental Health