

Wellness Bulletin

February 2020

Linking Nutrition to Psychological Health

LIKE AN EXPENSIVE CAR

your brain functions best when it receives premium fuel. But unlike the petrol bowser which clearly indicates the quality of the options, when it comes to nutrition it takes a little more effort to understand what is best.

THE RESEARCH

So what does the research tell us in regards to nutritional benefit for mental health? A study¹ looking at the current research in the field of nutritional psychiatry stated that there is now consistent data to suggest diet quality may be a modifiable risk factor for mental illness. They note areas of interest include how diet affects inflammation in the body, the gut microbiome and its role in mental health, omega 3 fatty acids, amongst others.



YOUR GUT

The gut microbiome is one emerging area of research with promising applications to mental health. It has been found for example that transplantation of microbes from depressed patients into rodents results in depression-related behaviour and altering gut microbiota through probiotic supplementation or food products influences depression-related behaviour in animals¹. In addition to taking a probiotic, there are foods that promote a greater variety of gut bugs as well, in particular fibre-rich whole foods such as vegetables, fruit, whole grains, legumes, nuts and seeds.²



DEPRESSION AND DIET

A 2014 study looked at the rates of depression for those who ate a 'healthy' diet and they found they had a 16% lower risk of having depression compared with those who did not. The diet that they found of benefit included high intakes of fruit, vegetables, whole grains, poultry, fish and reduced-fat dairy products.³

It's been suggested that the anti-inflammatory properties of this style of diet are thought to influence concentrations of monoamines, a neurotransmitter which plays a role in the regulation of emotions and cognition.⁴ The antioxidant properties in fruit and vegetables could also reduce oxidative stress in the brain.

Another study looked at the Mediterranean diet, cognitive impairment and depression. This particular diet has a strong focus on vegetables, fruits, whole grains, beans, nuts and seeds, olive oil, fish and chicken. The study found a

32% reduction in the risk of depression in those people who followed a high adherence to this style of diet compared to those who did not⁵

40% reduction in the risk of cognitive impairment in that same group⁵

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THE BRAIN

In terms of the brain itself, it is estimated that grey matter contains around 50% polyunsaturated fatty acids, which are supplied by the diet. Grey matter includes regions of the brain involved in emotions, decision making and self-control. It is therefore crucial that we consume adequate levels of these healthy types of fat.

Omega 3 fatty acids (a type of polyunsaturated fat such as those found in the grey matter) can be obtained in the diet from oily fish such as salmon, trout, mackerel, sardines, tuna, snapper and mussels.

Including a handful of nuts per day is also helpful for obtaining plant-based Omega 3's. Walnuts, chia seeds and flaxseeds/linseeds are all particularly good sources. Choosing soy and linseed bread is an excellent way to add these into the diet.⁶

It has been found that people who had high levels of long-chain omega 3 fatty acid intakes were found on MRI's to have higher volumes of grey matter in areas of the brain associated with emotional regulation. This finding gives further weight to the suggestion that we are what we eat.⁷

THE FLIP SIDE

On the flip side we can also look at the impact of poor diet on mental health. A 2016 study found associations between junk food consumption, sugar and soft drinks with a higher prevalence of diagnosed ADHD in children and adolescents. It also found those children who consumed less vegetables, fruit, fatty fish and who regularly skipped breakfast were more likely to have ADHD.⁸

A very recent mice study found that long term consumption of a diet of highly refined carbohydrates led to anxiety-like behaviours. They found consuming this diet had the result of low-grade inflammation in the central nervous system, activating and releasing inflammatory markers.⁹



The Food and Mood Centre out of Deakin University is a research program dedicated to expanding research in the new field of Nutritional Psychiatry. It will hopefully bring new insights into this important area into the future.

Their website is an excellent resource for up to date and easy to understand information, with topics such as the gut microbiome and health, diet and its link with PTSD, alcohol and mental health and the benefits of polyphenols from spices.²

THE SMILES TRIAL

And finally, the results of the very first diet-depression randomised controlled trial (called the SMILES trial) have been published. The study specifically sought to answer the question "if I improve my diet will I feel less depressed?" The authors found at the end of the trial that those in the dietary intervention group had a much greater reduction in their depressive symptoms over a three-month period. This is a very promising result.

The authors suggest increasing fruit, vegetables, whole grains, nuts, foods high in Omega 3, swapping poor quality foods for more nutrient rich options and limiting intake of fast foods and sweets. Essentially, they report that an overall healthy diet can help to keep your gut healthy, reduce inflammation and make lasting changes to your overall physical and mental health.¹⁰

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