

Diet, Nutrition, & Mental Wellbeing

Research into the relationship between diet and mental health has confirmed that what we eat can have a significant effect on our mood and overall mental wellbeing⁸. Eating a healthy diet can reduce the risk of ever suffering from depression and anxiety, and may effectively improve mood in people already suffering from these conditions. In terms of healthy diets, most of the research has investigated the effects of a Mediterranean-based diet on depression and anxiety. The findings so far have been impressive. People who eat a traditional Mediterranean diet have a significantly reduced risk of suffering from depression, anxiety, and even the more chronic mental health disorders such as schizophrenia and bipolar disorder. A Mediterranean diet is comprised of a high intake of fruits, vegetables, whole grains, legumes, nuts, olive oil, herbs and spices; a moderate intake of fish, poultry, eggs, cheese, yogurt, and red wine; low red meat consumption; and an infrequent intake of sugary and processed foods. On the other hand, eating a Western diet comprising packaged and processed meals; foods high in added sugar; fast-food, soda drinks, and a limited fibre intake, increases the risk of mental health problems. Given the strong link between the body and brain, what we eat not only affects our physical health but also has a profound impact on our mental health.

LOWER risk of depression and anxiety associated with HIGHER intake of:	HIGHER risk of depression and anxiety associated with HIGHER intake of:
<ul style="list-style-type: none">✓ Mediterranean-type diet✓ Fish✓ Fruits and vegetables✓ Whole grains✓ Olive oil✓ Low-fat dairy foods✓ Anti-inflammatory foods✓ Foods high in antioxidants✓ Moderate caffeine intake (depression)✓ Dietary flavonoids (compounds that occur naturally in plant foods including fruits, vegetables, grains, herbs, and beverages)	<ul style="list-style-type: none">✓ Red and/or processed meat✓ Refined grains✓ Sweets✓ Take-away foods✓ High-fat dairy products✓ Soft drinks✓ Energy drinks✓ Inflammatory foods✓ Artificial additives and sweeteners

Mood-Lifting Nutrients

Our mood is not only affected by the quality of our diet but can also be influenced by our body's nutritional balance. If we are low in essential nutrients it will greatly impact our body's ability to produce mood-lifting hormones and neurotransmitters. Additionally, an excess intake of certain nutrients can adversely affect our mental health. Although all nutrients are likely to have an influence on our mental health, some of the primary nutrients are listed below:

- **B-vitamins** – these have hundreds of roles in the body and low levels of most B-vitamins have been found in people with depression and anxiety. Vitamins B₃, B₆, and B₁₂ are particularly important for mental health.
- **Folate** – while this is a type of B-vitamin (vitamin B₉) it is often discussed separately to the other B-vitamins. Folate is often low in people with depression, and supplementing with folate may have a positive effect on mood. Some people have genes (known as a polymorphism) that reduce their ability to convert folate into its active form in the body. This disturbance is called a methylenetetrahydrofolate reductase (MTHFR) polymorphism. Folate needs to be converted into its active form to be used by most enzymes in the body.
- **Magnesium** – this mineral is essential for the activity of hundreds of enzymes in our body. Low magnesium levels have been found in people with depression and anxiety. Magnesium levels may be low due to a low dietary intake, although high stress (physical or mental) can also reduce magnesium stores. Magnesium supplementation can also have positive mental health effects.

- **Zinc** – this is another mineral required for hundreds of enzymatic reactions in the body. Low zinc levels have been found in people with depression. There has not been a lot of research investigating the effects of zinc supplementation on mood, although given its multiple roles in the body, having adequate levels is likely to be important.
- **Omega-3 fatty acids** – this nutrient is derived mostly from fish but is also found in nuts and seeds. There has been a great deal of research examining the role of omega-3 fats on mental health with most of it confirming its crucial role. Lower omega-3 levels have been found in people with depression and other mental health disorders. Most of the clinical trials investigating the effects of supplementation with omega-3 fish oil have been positive.
- **Iron** – low levels of iron can affect energy levels as it is required for the transport of oxygen throughout the body (it is a component of haemoglobin, the oxygen-carrying protein in red blood cells). When iron levels are clinically low, a diagnosis of iron-deficient anaemia results. Children, menstruating women, and older age adults are more susceptible to low iron levels. People on vegetarian diets are also at increased risk of low iron levels.
- **Vitamin D** – deficiency of vitamin D, which is mainly derived from the sun, can have a negative effect on mood. Low levels have been found in people with depression and may increase the risk of seasonal depression (often referred to as the winter blues).
- **Protein/ amino acids** – when we eat protein our body breaks it down into amino acids. Amino acids are the building blocks of mood-lifting neurotransmitters such as serotonin and dopamine. In particular, the amino acids tryptophan, tyrosine, and phenylalanine are important for mood. Research has shown that if you expose a person with a history of depression to a diet low in tryptophan (required for serotonin production), it significantly increases his or her risk of relapse.

These are the primary nutrients that can affect our mental wellbeing, although this list is not exhaustive. Being deficient, or having excess levels of most vitamins, minerals, fats, and amino acids, are likely to affect our mental and physical wellbeing. Other nutrients of note include copper (excess levels in particular), selenium, coenzyme-Q10, vitamin E, and calcium.

How is Your Dietary Intake of Mood Lifting Nutrients?

- Complete the checklist below to examine your daily intake of these important nutrients.
- Each column is allocated a number from 0 to 3. After you have completed the checklist, add up your total score. The maximum score is 39.

How good is your intake of mood-lifting nutrients? Refer to the categories below as a guide:

- 25 and over: your overall balance of nutrient intake seems GOOD (although make sure you review your intake of SPECIFIC nutrients to determine any potential deficiencies)
- 19-24: your overall balance of nutrient intake seems SOUND but not great (make sure you review your intake of SPECIFIC nutrients to determine any potential deficiencies)
- 13-18: your overall balance of nutrient intake seems LOW (make sure you review your intake of SPECIFIC nutrients to determine any potential deficiencies)
- 0-12: your overall balance of nutrient intake seems VERY DEFICIENT (make sure you review your intake of SPECIFIC nutrients to determine any potential deficiencies)

Sources of Important Mood-Lifting Nutrients

Nutrient	Good Food/ Supplement Sources	Mark how often you eat these foods			
		Never (0)	Sometimes (1)	Often (2)	Always (3)
Omega-3 fats	mackerel, herring, salmon, cod liver oil, sardines, tuna, flaxseeds, oysters, walnuts, chia seeds, hemp seeds, egg yolks, fish oil supplements, and flax seed oil				
Vitamin B ₁ (Thiamine)	asparagus, sunflower seeds, navy beans, flaxseeds, Brussels sprouts, black beans, barley, green peas, lentils, oats, eggplant, cabbage, and multivitamin/ B-complex supplement				
Vitamin B ₂ (Riboflavin)	soybeans, spinach, beetroot, tempeh, yoghurt, mushrooms, eggs, asparagus, almonds, turkey, cow's milk, broccoli, bok choy, and multivitamin/ B-complex supplement				
Vitamin B ₃ (Niacin)	tuna, chicken, turkey, salmon, lamb, beef, sardines, peanuts, prawns, brown rice, sweet potato, sunflower seeds, barley, green peas, and multivitamin/ B-complex supplement				
Vitamin B ₆ (Pyridoxine)	tuna, turkey, beef, chicken, salmon, sweet potato, potato, sunflower seeds, spinach, banana, capsicum, garlic, cauliflower, and multivitamin/ B-complex supplement				
Vitamin B ₁₂ (Cobalamin)	shellfish, beef liver, mackerel, salmon, crab, tofu, beef, eggs, sardines, cottage cheese, low-fat milk, lamb, tuna, scallops, prawns, turkey, chicken, and multivitamin/ B-complex supplement				
Folate	lentils, pinto beans, garbanzo beans, asparagus, spinach, navy beans, black beans, kidney beans, turnip greens, broccoli, beetroot, romaine lettuce, bok choy, and multivitamin/ B-complex supplement				
Magnesium	spinach, silverbeet, beetroot, pumpkin seeds, yoghurt or kefir, almonds, black beans, avocado, figs, dark chocolate, banana, soybeans, sesame seeds, quinoa, cashews, and magnesium supplement				
Zinc	beef, lamb, sesame seeds, pumpkins seeds, lentils, beans, cashews, turkey, quinoa, prawns, and zinc supplement Vegetarian sources: tofu, tempeh, beans, lentils, almonds, walnuts, sunflower seeds, pecans, and peas				
Iron	red meat, chicken, duck, turkey, soybeans, lentils, spinach, silverbeet, broccoli, sesame seeds, beans, and iron supplement Vegetarian sources: soybeans, lentils, spinach, tofu, chickpeas, tempeh, beans, quinoa, tahini, and potato				
Protein / amino acids	chicken, turkey, tuna, beef, soybeans, salmon, prawns, scallops, tofu, spinach, asparagus, lentils, peas, beans, and protein powders Vegetarian sources: green peas, quinoa, nuts, beans, chickpeas, tempeh, tofu, edamame (soy), hemp, and seeds				
Fibre	Soluble fibre: fruits, vegetables, oats, barley, and legumes Insoluble fibre: wholegrain breads and cereals, nuts, seeds, wheat bran, and the skin of fruits and vegetables Resistant starch: undercooked pasta, under ripe bananas, cooked and cooled potato and rice				
Fermented foods	Fermented foods have been exposed to natural, beneficial bacteria called lactobacilli. The bacteria feed on the starches and sugars in the food, converting them to lactic acid. Examples include kimchi, sauerkraut, yoghurt, kombucha, kefir, sourdough bread, miso, tempeh, natto, and pickles				
Total Score:					