**Nutritional psychiatry – essential for fostering mental health**

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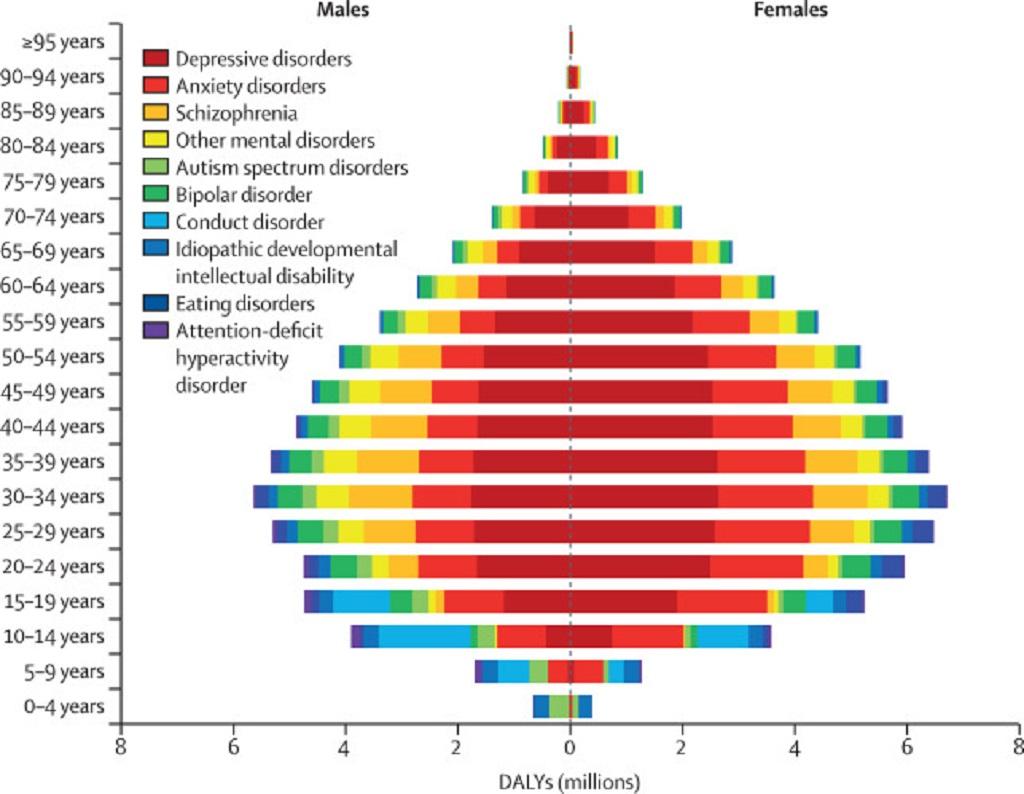
**Abstract**

Right food is equal to right mood is the notion that we hear. In this chapter how nutrition impact ones mental wellbeing and mental illness were discussed. .Oxidants, which has been demonstrated to have a detrimental influence on mood and mental health, can harm the brain if it isn't fed with a diet that can promote good neurotransmitter function. Many recognized mental health issues, including depression, schizophrenia, dementia, anorexia nervosa, and attention deficit hyperactivity disorder (ADHD), are strongly influenced by nutrition.

**Key words** diet, dietary factors, lifestyle, nutritional psychiatry, mental health, sleep, cognitive; mood, anxiety

**Introduction**

Psychiatric illnesses have traditionally been viewed as brain diseases, with just a small portion of the body or certain organs being involved in their pathogenesis. The notions of Traditional Chinese Medicine, Ayurveda, and Hippocratic Medicine, which all accorded a large role to the body—particularly the digestive system and diet—in influencing mental processes—have stood out against this brain-centered strategy. One in eight persons worldwide suffer from a mental illness.



Source: Lancet Psychiatry

* Mental diseases are frequently characterized by a variety of abnormal beliefs, perceptions, emotions, behavior, and interpersonal relationships. Mental illnesses include things like depression, bipolar disorder, schizophrenia, dementia, and developmental conditions like autism.
* •Significant disruptions in thinking, controlling emotions, or behavior are signs of mental illnesses.

## 5 Nutrients Needed for Optimal Brain Function

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| nutrient | Brain Function | deficiency | Foods recommended |
| **Vitamin D** | As a crucial hormone for brain function, vitamin D controls the synthesis of dopamine, noradrenaline, and adrenaline. | Fatigue, muscular weakness, hair loss, back pain, slow skin healing, bone discomfort, and mood swings are just a few symptoms of vitamin D deficiency. | eggs, fatty fish (like sock-eyed salmon or trout), mushrooms, fortified foods (like brown rice), goat cheese, and gluten-free oats. |
| **Vitamin B** | The major supplement for mood regulation is B12, and B9. | Vitamin B comlex deficiency causes depression, anxiety, and mood swings. It is associated with a disruption in the nervous system as well as the circulatory system | dark green vegetables, beans, peas, citrus fruits, and legumes (such as lentils and garbanzo beans). |
| **magnesium** | Magnesium acts as a mood booster, muscle relaxer, stress reducer, and sleep aid. | An excess of symptoms including agitation, anxiety, irritability, disorientation, sleeplessness, headache, hallucinations, and depression are exacerbated by a magnesium deficit. | Include almonds, pumpkin seeds, and dark organic chocolate (plus 72%) in your diet at least three times every day to help reduce stress. |
| **Omega-3 fatty acids** | **Omega-3 fatty acids** are essential for brain function, supporting mental sharpness, and positive mood. | Fatigue, poor memory, dry skin, heart issues, mood swings or sadness, and poor circulation are all signs of an omega-3 fatty acid deficit. | Oily fishes are great sources of omega-3 fatty acids. These healthy fats can also be found in flaxseeds and walnuts. |
| Probiotics | Live bacteria and yeast known as "probiotics" aid with healthy digestion, stress management, mood enhancement, and emotional stability by naturally occurring in the human gastrointestinal system. | Probiotic diseases including ADD/ADHD, anxiety, depression, schizophrenia, and Alzheimer's disease have been linked to an unhealthy gut. | Organic yogurt, kefir, sauerkraut, kimchi, non-GMO miso, and pickles are examples of probiotic foods. |
| **Selenium** | Selenium contains potent antioxidants, which can protect our brain cells and tamp down inflammation. | • Irritability  • Depression | Fish, garlic, sunflower seeds, brazil nuts  Whole grains, , eggs, legumes etc. |
| Amino acids | Amino acids are required for the production of proteins that assist your brain in controlling your mood. | Antioxidant glutathione protects against cellular damage caused by free radicals and heavy metals in the environment. | Amino acids rich foods like meats, eggs, nuts, legumes, and seafood. |
| **Zinc** | Zinc helps in regulating mood and cognition | • Confusion  • Blank mind  • Depression  • Loss of appetite  • Lack of motivation | Oysters, nuts, seeds  Fish, legumes, whole grains. |

The six cornerstones of nutritional psychiatry provide the basis for treating mental illness with diet.

1. **Eat balanced diet, Be complete**: The 80/20 rule states that 80% of your diet should be made up of whole, healthy foods that are high in fiber. Whole grains, legumes, nuts, seeds, fruits, vegetables, and protein are all included in this. 20% of the meal allows for some leeway.
2. **Eat a Rainbow diet:** Eat a rainbow of colorful plant foods to maximize nutritious content. Different colored plant foods provide various nutrients that are beneficial to the brain. Aim to have 75% whole, low-glycemic-index vegetables, which includes green leafy vegetables, cucumbers, radishes, eggplant, mushrooms, and tomatoes. The remaining 25% meal should consist of high-quality protein sources like salmon, grass-fed beef, sardines, chickpeas, and lentils, as well as healthy fats like olive oil, walnuts, or hemp seeds. These meals are crucial for tissue maintenance, reducing inflammation, and promoting mental wellbeing.
3. **The Greener, the Better**: In nutritional psychiatry, it is know that greens are healthy for the mind as well as the body. Folate is a crucial nutrient found in greens that helps keep our neurons functioning properly and reduces the occurance of depression symptoms . leafy greens include spinach, swiss chard, collard greens, arugula, romaine, and dandelion greens.
4. **Listen to Your Body Intelligence:** If something doesn't make you feel well after ingesting it, you should probably avoid it. Pay attention to how specific foods impact your symptoms of mental health and listen to your body.
5. **Consistency and Balance are the Secret:** Our brains follow us throughout our entire lives. Making long-lasting dietary and lifestyle changes is essential to enhancing our mental health rather than depending on quick fixes or miracle diets.
6. **Avoid Foods That Cause Anxiety:** This is essential for the effectiveness of the actions mentioned before. Meals that promote inflammation and anxiety, such as those containing added or refined carbohydrates, processed foods with nitrates, industrial seed oils (soy, maize, and grapeseed), and meats, are bad for mental health.

Adopting nutritional psychiatry and its tenets can help a lot of people achieve or maintain positive mental health in the face of significant obstacles as the COVID-19-linked negative mental health rates rise and the hidden and parallel epidemic persists.

**References**

1. Abou-Saleh MT, Coppen A. Folic acid and the treatment of depression. J Psychosom Res. 2006;61:285–7.
2. Available from: [http:/diet.hajimeru.biz/category/health/nutritionj/](http://http/diet.hajimeru.biz/category/health/nutritionj/)
3. Bell IR, Edman JS, Morrow FD, Marby DW, Mirages S, Perrone G, et al. B Complex vitamin patterns in geriatric and young adult inpatients with major depression. J Am Geriatr Soc. 1991;39:252–7.
4. Benton D. Selenium Intake, mood and other aspects of psychological functioning. Nutr Neurosci. 2002;5:363–74.
5. Black, M.M. , 2008. Effects of vitamin B12 and folate deficiency on brain development in children. Food Nutr. Bull. 29, S126–S131 .
6. Bourre JM. Effect of nutrients (in food) on the structure and function of the nervous system: Update on dietary requirements for brain, Part 1: Micronutrients. J Nutr Health Aging. 2006;10:377–85.
7. Brouwer-Brolsma, E.M. , Dhonukshe-Rutten, R.A. , van Wijngaar- den, J.P. , van de Zwaluw, N.L. , In ’t Veld, P.H. , Wins, S. , Swart, K.M. , Enneman, A.W. , Ham, A.C. , van Dijk, S.C. , van Schoor, N.M. , van der Velde, N. , Uitterlinden, A.G. , Lips, P. , Kessels, R.P. , Steegenga, W.T. , Feskens, E.J. , de Groot, L.C. , 2015. Cognitive performance: a cross-sectional study on serum vitamin D and its interplay with glucose homeostasis in Dutch older adults. J. Am. Med. Dir. Assoc .
8. Chouinard G, Young SN, Annable L. A controlled clinical trial of L-tryptophan in acute mania. Biol Psychiatry. 1985;20:546–7.
9. Davison K, Abraham KM, Connor, McLeod MN. Effectiveness of chromium in atypical depression: A placebo-controlled trial. Bio Psychiatry. 2003;53:261–4.
10. [Del-Ponte et al., 2019](https://www.sciencedirect.com/science/article/pii/S0924977X19317237#bbib0034) B. Del-Ponte, G.C. Quinte, S. Cruz, M. Grellert, I.S. Santos**Dietary patterns and attention deficit/hyperactivity disorder (ADHD): a systematic review and meta-analysis** J. Affect. Disord., 252 (2019), pp. 160-173
11. Docherty J, Sack DA, Roffman M, Finch M, Komorowski JR. A double-blind, placebo-controlled exploratory trial of chromium picolinate in atypical depression: Effect on carbohydrate craving. J Psychiat Pract. 2005;11:302–14.
12. Eby GA, Eby KL. Rapid recovery from major depression using magnesium treatment. Med Hypotheses. 2006;67:362–70.
13. Enderami, A. , Zarghami, M. , Darvishi-Khezri, H. , 2018. The effects and potential mechanisms of folic acid on cognitive function: a comprehensive review. Neurol. Sci. 39, 1667–1675 .
14. Gaudio, S. , Wiemerslage, L. , Brooks, S.J. , Schioth, H.B. , 2016. A systematic review of resting-state functional-MRI stud- ies in anorexia nervosa: evidence for functional connec- tivity impairment in cognitive control and visuospatial and body-signal integration. Neurosci. Biobehav. Rev. 71, 578–589 .
15. GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. The Lancet. DOI:<https://doi.org/10.1016/S0140-6736(18)32279-7>
16. Giannunzio, V. , Degortes, D. , Tenconi, E. , Collantoni, E. , Solmi, M. , Santonastaso, P. , Favaro, A. , 2018. Decision-making impair- ment in anorexia nervosa: new insights into the role of age and decision-making style. Eur. Eat. Disord. Rev. 26, 302–314 .
17. Gröber U., Schmidt J., Kisters K. Magnesium in prevention and therapy. Nutrients. 2015;7:8199–8226. doi: 10.3390/nu7095388.
18. Health Canada. About Natural Health Product Regulation in Canada. Accessed 5 March 2018. [www.canada.ca/en/health-canada/services/drugs-health-products/natural-non-prescription/regulation.html](https://www.canada.ca/en/health-canada/services/drugs-health-products/natural-non-prescription/regulation.html).
19. [Healy-Stoffel, Michelle](https://www.ingentaconnect.com/search;jsessionid=8j91eq3obprmk.x-ic-live-01?option2=author&value2=Healy-Stoffel,+Michelle); [Levant, Beth](https://www.ingentaconnect.com/search;jsessionid=8j91eq3obprmk.x-ic-live-01?option2=author&value2=Levant,+Beth), N-3 (Omega-3) Fatty Acids: Effects on Brain Dopamine Systems and Potential Role in the Etiology and Treatment of Neuropsychiatric Disorders [CNS & Neurological Disorders - Drug Targets (Formerly Current Drug Targets - CNS & Neurological Disorders)](https://www.ingentaconnect.com/content/ben/cnsnddt;jsessionid=8j91eq3obprmk.x-ic-live-01),[Bentham Science Publishers](https://www.ingentaconnect.com/content/ben;jsessionid=8j91eq3obprmk.x-ic-live-01) Volume 17, Number 3, 2018, pp. 216-232(17)
20. Hegyi, J. , Schwartz, R.A. , Hegyi, V. , 2004. Pellagra: dermatitis, de- mentia, and diarrhea. Int. J. Dermatol. 43, 1–5 .
21. Levenson CW. Zinc, the new antidepressant? Nutr Rev. 2006;6:39–42.
22. McLean A, Rubinsztein JS, Robbins TW, Sahakian BJ. The effects of tyrosine depletion in normal healthy volunteers: Implications for unipolar depression. Psychopharmacology. 2004;171:286–97.
23. Rayman MP The importance of selenium to human health. Lancet 2000; 356: 233-241
24. Smith, A.D. , Warren, M.J. , Refsum, H. , 2018. Vitamin B12. Adv. Food Nutr. Res. 83, 215–279 .
25. Tangney, C.C., Aggarwal, N.T., Li, H. , Wilson, R.S. , Decarli, C. , Evans, D.A. , Morris, M.C. , 2011. Vitamin B12, cognition, and brain MRI measures: a cross-sectional examination. Neurology 77, 1276–1282 .
26. Wallace CJK, Milev R. The effects of probiotics on depressive symptoms in humans: A systematic review. Ann Gen Psychiatry 2017;16:14.
27. Wurtman R, O'Rourke D, Wurtman JJ. Nutrient imbalances in depressive disorders: Possible brain mechanisms. Ann NY Acad Sci. 1989;575:75–82.