抑郁症管理的新视角：营养素的作用与挑战（文献综述）

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**摘要：**作为全球性的公共健康问题，抑郁症造成了极大的社会负担，传统疗法的局限性促进了管理策略的新探索。营养精神病学的快速发展揭示了营养素与心理健康之间深刻的内在联系。本文系统回顾了常见营养素在抑郁症管理中的研究现状，认为维生素D、B族维生素、锂、镁、锌、不饱和脂肪酸、色氨酸和SAMe等营养素通过影响神经递质合成、调节炎症和免疫反应、减轻氧化应激等途径，对改善症状和提高药物治疗效果方面具有积极作用。鉴于研究结果所展现出的异质性，未来应致力于厘清真相的深入研究，并且聚焦于精准的干预策略和个性化治疗方案。尽管营养干预抑郁症有其局限性和不确性，但低风险、高可及性、良好的依从性以及不可忽视的潜在价值，使其成为抑郁症管理中不可或缺的重要辅助性治疗手段。

**关键词:** 抑郁症, 营养精神病学, 营养素

**New Perspectives in Depression Management: The Role and Challenges of Nutrients**

**Abstract:** Depression, a global public health issue, imposes significant societal burdens, prompting the exploration of new management strategies due to limitations in traditional therapies. The rapid advancement in nutritional psychiatry has uncovered profound intrinsic links between nutrients and mental health. This article systematically reviews the current research on common nutrients in managing depression. Nutrients such as Vitamin D, B-group vitamins, lithium, magnesium, zinc, unsaturated fatty acids, tryptophan, and SAMe positively affect symptoms and enhance anti-depressants' efficacy by influencing neurotransmitter synthesis, regulating inflammation and immune responses, and reducing oxidative stress. In light of the heterogeneity in findings, future studies should be dedicated to in-depth research to clarify the truth, concentrating on precise intervention strategies and personalized treatment plans. Despite the presence of limitations and uncertainties associated with nutritional intervention strategies, their low-risk profile, high accessibility, favorable compliance, and significant potential value render them indispensable adjunctive therapy in the management of depression.

**Keywords:** Depression, Nutritional Psychiatry, Nutrients

**参 考 文 献**

[1] Institute-for-Health-Metrics-and-Evaluation. GBD Compare[EB/OL]. (2020-10-15)[2023-07-27]. <https://www.healthdata.org/data-tools-practices/interactive-visuals/gbd-compare>.

[2] Ekong M B, Iniodu C F. Nutritional therapy can reduce the burden of depression management in low income countries: A review[J]. IBRO Neurosci Rep, 2021,11:15-28.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34939062/)

[3] Farah A. The role of L-methylfolate in depressive disorders[J]. CNS Spectr, 2009,14(1 Suppl 2):2-7.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19169195/)

[4] Warden D, Rush A J, Trivedi M H, et al. The STAR\*D Project results: A comprehensive review of findings[J]. Curr Psychiatry Rep, 2007,9(6):449-459.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18221624/)

[5] Mauskopf J A, Simon G E, Kalsekar A, et al. Nonresponse, partial response, and failure to achieve remission: Humanistic and cost burden in major depressive disorder[J]. Depress Anxiety, 2009,26(1):83-97.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18833573/)

[6] Rush A J, Trivedi M H, Stewart J W, et al. Combining medications to enhance depression outcomes (CO-MED): Acute and long-term outcomes of a single-blind randomized study[J]. Am J Psychiatry, 2011,168(7):689-701.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21536692/)

[7] Kverno K S, Mangano E. Treatment-resistant depression: Approaches to treatment[J]. J Psychosoc Nurs Ment Health Serv, 2021,59(9):7-11.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34459676/)

[8] Goh K K, Chang S C, Chen C H, et al. Therapeutic strategies for treatment-resistant depression: State of the art and future perspectives[J]. Curr Pharm Des, 2020,26(2):244-252.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31924151/)​​

[9] Lande R G. Nutraceutical augmentation strategies for depression: A narrative review[J]. J Am Osteopath Assoc, 2020,120(2):100-106.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31985760/)​​

[10] Saxena P P, Kyomen H. Leucovorin as an antidepressant adjunct in elderly inpatients with treatment-resistant depression[J]. Prim Care Companion CNS Disord, 2021,23(2):20m-2767m.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34000126/)

[11] Alvarez-Mon M A, Ortega M A, García-Montero C, et al. Exploring the role of nutraceuticals in major depressive disorder (MDD): Rationale, state of the art and future prospects[J]. Pharmaceuticals (Basel), 2021,14(8):821.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34451918/)

[12] Kris-Etherton P M, Petersen K S, Hibbeln J R, et al. Nutrition and behavioral health disorders: depression and anxiety[J]. Nutr Rev, 2021,79(3):247-260.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32447382/)

[13] Young S N. The use of diet and dietary components in the study of factors controlling affect in humans: A review[J]. J Psychiatry Neurosci, 1993,18(5):235-244.[PubMed](https://pubmed.ncbi.nlm.nih.gov/8297922/)

[14] Otsuka R. Diet, nutrition, and cognitive function: A narrative review of Japanese longitudinal studies[J]. Geriatr Gerontol Int, 2022,22(10):825-831.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36002912/)

[15] Bayes J, Schloss J, Sibbritt D. The use of diet for preventing and treating depression in young men: Current evidence and existing challenges[J]. Br J Nutr, 2023:1-12.[PubMed](https://pubmed.ncbi.nlm.nih.gov/37519245/)

[16] Chopra C, Mandalika S, Kinger N. Does diet play a role in the prevention and management of depression among adolescents? A narrative review[J]. Nutr Health, 2021,27(2):243-263.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33416032/)

[17] Carney R M, Freedland K E, Rubin E H, et al. Omega-3 augmentation of sertraline in treatment of depression in patients with coronary heart disease: A randomized controlled trial[J]. JAMA, 2009,302(15):1651-1657.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19843899/)

[18] Chambergo-Michilot D, Brañez-Condorena A, Falvy-Bockos I, et al. Efficacy of omega-3 supplementation on sertraline continuous therapy to reduce depression or anxiety symptoms: A systematic review and Meta-analysis[J]. Psychiatry Res, 2021,296:113652.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33348198/)​​

[19] Dennis C L, Dowswell T. Interventions (other than pharmacological, psychosocial or psychological) for treating antenatal depression[J]. Cochrane Database Syst Rev, 2013(7):D6795..[PubMed](https://pubmed.ncbi.nlm.nih.gov/23904069/)​​

[20] Doornbos B, van Goor S A, Dijck-Brouwer D A, et al. Supplementation of a low dose of DHA or DHA+AA does not prevent peripartum depressive symptoms in a small population based sample[J]. Prog Neuropsychopharmacol Biol Psychiatry, 2009,33(1):49-52.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18955102/)​​

[21] Chowdhury M H, Ghosh S, Kabir M R, et al. Effect of supplementary omega-3 fatty acids on pregnant women with complications and pregnancy outcomes: Review from literature[J]. J Matern Fetal Neonatal Med, 2022,35(13):2564-2580.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32643471/)​​

[22] De Giuseppe R, Roggi C, Cena H. n-3 LC-PUFA supplementation: effects on infant and maternal outcomes[J]. Eur J Nutr, 2014,53(5):1147-1154.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24448975/)​​

[23] Appleton K, Sallis H, Perry R, et al. Omega-3 fatty acids for depression in adults[J]. Cochrane Database Syst Rev, 2015,0(11):D4692.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26537796/)​​

[24] Appleton K M, Voyias P D, Sallis H M, et al. Omega-3 fatty acids for depression in adults[J]. Cochrane Database Syst Rev, 2021,11(11):D4692.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34817851/)

[25] Ciappolino V, Delvecchio G, Agostoni C, et al. The role of n-3 polyunsaturated fatty acids (n-3PUFAs) in affective disorders[J]. J Affect Disord, 2017,224:32-47.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28089169/)

[26] Chew E Y, Clemons T E, Agrón E, et al. Effect of omega-3 fatty acids, lutein/zeaxanthin, or other nutrient supplementation on cognitive function: The AREDS2 randomized clinical trial[J]. JAMA, 2015,314(8):791-801.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26305649/)

[27] Okereke O I, Vyas C M, Mischoulon D, et al. Effect of long-term supplementation with marine omega-3 fatty acids vs placebo on risk of depression or clinically relevant depressive symptoms and on change in mood scores: A randomized clinical trial[J]. JAMA, 2021,326(23):2385-2394.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34932079/)

[28] Farooq S, Singh S P, Burke D, et al. Pharmacological interventions for prevention of depression in high risk conditions: Systematic review and meta-analysis[J]. J Affect Disord, 2020,269:58-69.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32217344/)

[29] Deacon G, Kettle C, Hayes D, et al. Omega 3 polyunsaturated fatty acids and the treatment of depression[J]. Crit Rev Food Sci Nutr, 2017,57(1):212-223.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25830700/)

[30] Lin P Y, Su K P. A Meta-analytic review of double-blind, placebo-controlled trials of antidepressant efficacy of omega-3 fatty acids[J]. J Clin Psychiatry, 2007,68(7):1056-1061.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17685742/)

[31] Martins J G. EPA but not DHA appears to be responsible for the efficacy of omega-3 long chain polyunsaturated fatty acid supplementation in depression: evidence from a Meta-analysis of randomized controlled trials[J]. J Am Coll Nutr, 2009,28(5):525-542.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20439549/)

[32] Bloch M H, Hannestad J. Omega-3 fatty acids for the treatment of depression: Systematic review and Meta-analysis[J]. Mol Psychiatry, 2012,17(12):1272-1282.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21931319/)

[33] Sarris J, Byrne G J, Stough C, et al. Nutraceuticals for major depressive disorder- more is not merrier: An 8-week double-blind, randomised, controlled trial[J]. J Affect Disord, 2019,245:1007-1015.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30699842/)

[34] Sarris J, Ravindran A, Yatham L N, et al. Clinician guidelines for the treatment of psychiatric disorders with nutraceuticals and phytoceuticals: The World Federation of Societies of Biological Psychiatry (WFSBP) and Canadian Network for Mood and Anxiety Treatments (CANMAT) Taskforce[J]. World J Biol Psychiatry, 2022,23(6):424-455.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35311615/)

[35] American-Psychiatric-Association. Edition F. Diagnostic and statistical manual of mental disorders. 5th ed.[J]. Am Psychiatric Assoc, 2013,21(21):591-643.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23995026/)

[36] Belmaker R H, Agam G. Major depressive disorder[J]. N Engl J Med, 2008,358(1):55-68.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18172175/)

[37] Neumeister A, Hu X Z, Luckenbaugh D A, et al. Differential effects of 5-HTTLPR genotypes on the behavioral and neural responses to tryptophan depletion in patients with major depression and controls[J]. Arch Gen Psychiatry, 2006,63(9):978-986.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16953000/)

[38] Levinson D F. The genetics of depression: a review[J]. Biol Psychiatry, 2006,60(2):84-92.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16300747/)

[39] Couto T C, Brancaglion M Y, Alvim-Soares A, et al. Postpartum depression: A systematic review of the genetics involved[J]. World J Psychiatry, 2015,5(1):103-111.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25815259/)

[40] Hayley S, Poulter M O, Merali Z, et al. The pathogenesis of clinical depression: Stressor- and cytokine-induced alterations of neuroplasticity[J]. Neuroscience, 2005,135(3):659-678.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16154288/)

[41] Belsky J, Pluess M. Beyond diathesis stress: Differential susceptibility to environmental influences[J]. Psychol Bull, 2009,135(6):885-908.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19883141/)

[42] Mergenthaler P, Lindauer U, Dienel G A, et al. Sugar for the brain: The role of glucose in physiological and pathological brain function[J]. Trends Neurosci, 2013,36(10):587-597.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23968694/)

[43] Dienel G A. Brain glucose metabolism: Integration of energetics with function[J]. Physiol Rev, 2019,99(1):949-1045.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30565508/)

[44] Murrough J W, Abdallah C G, Mathew S J. Targeting glutamate signalling in depression: progress and prospects[J]. Nat Rev Drug Discov, 2017,16(7):472-486.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28303025/)

[45] Burhani M D, Rasenick M M. Fish oil and depression: The skinny on fats[J]. J Integr Neurosci, 2017,16(s1):S115-S124.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29254106/)

[46] DiNicolantonio J J, O'Keefe J H. The importance of marine omega-3s for brain development and the prevention and treatment of behavior, mood, and other brain disorders[J]. Nutrients, 2020,12(8):2333.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32759851/)

[47] Fava M, Mischoulon D. Evidence for folate in combination with antidepressants at initiation of therapy[J]. J Clin Psychiatry, 2010,71(11):e31.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21114944/)

[48] Zheng W, Li W, Qi H, et al. Adjunctive folate for major mental disorders: A systematic review[J]. J Affect Disord, 2020,267:123-130.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32063563/)

[49] Sales A J, Maciel I S, Crestani C C, et al. S-adenosyl-l-methionine antidepressant-like effects involve activation of 5-HT(1A) receptors[J]. Neurochem Int, 2023,162:105442.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36402294/)

[50] Freeman M P, Fava M, Lake J, et al. Complementary and alternative medicine in major depressive disorder: The American Psychiatric Association Task Force report[J]. J Clin Psychiatry, 2010,71(6):669-681.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20573326/" \t "_new)

[51] Shaw K, Turner J, Del M C. Are tryptophan and 5-hydroxytryptophan effective treatments for depression? A Meta-analysis[J]. Aust N Z J Psychiatry, 2002,36(4):488-491.[PubMed](https://pubmed.ncbi.nlm.nih.gov/12169147/" \t "_new)

[52] Sadir S, Tabassum S, Emad S, et al. Neurobehavioral and biochemical effects of magnesium chloride (MgCl2), magnesium sulphate (MgSO4) and magnesium-L-threonate (MgT) supplementation in rats: A dose dependent comparative study[J]. Pak J Pharm Sci, 2019,32(1(Supplementary)):277-283.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30829204/)

[53] Botturi A, Ciappolino V, Delvecchio G, et al. The role and the effect of magnesium in mental disorders: A systematic review[J]. Nutrients, 2020,12(6):1661-1680.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32503201/)

[54] Malhi G S, Tanious M, Das P, et al. Potential mechanisms of action of lithium in bipolar disorder. Current understanding[J]. CNS Drugs, 2013,27(2):135-153.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23371914/)

[55] Maes M, Yirmiya R, Noraberg J, et al. The inflammatory & neurodegenerative (I&ND) hypothesis of depression: leads for future research and new drug developments in depression[J]. Metab Brain Dis, 2009,24(1):27-53.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19085093/)

[56] Wilkins C H, Sheline Y I, Roe C M, et al. Vitamin D deficiency is associated with low mood and worse cognitive performance in older adults[J]. Am J Geriatr Psychiatry, 2006,14(12):1032-1040.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17138809/)

[57] Mikkelsen K, Stojanovska L, Apostolopoulos V. The Effects of Vitamin B in Depression[J]. Curr Med Chem, 2016,23(38):4317-4337.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27655070/)

[58] Tiemeier H, van Tuijl H R, Hofman A, et al. Vitamin B12, folate, and homocysteine in depression: the Rotterdam Study[J]. Am J Psychiatry, 2002,159(12):2099-2101.[PubMed](https://pubmed.ncbi.nlm.nih.gov/12450964/)

[59] Hajianfar H, Mollaghasemi N, Tavakoly R, et al. The association between dietary zinc intake and health status, including mental health and sleep quality, among Iranian female students[J]. Biol Trace Elem Res, 2021,199(5):1754-1761.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32743763/)

[60] Gonoodi K, Moslem A, Ahmadnezhad M, et al. Relationship of dietary and serum zinc with depression score in Iranian adolescent girls[J]. Biol Trace Elem Res, 2018,186(1):91-97.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29603100/)

[61] Tarleton E K, Littenberg B. Magnesium intake and depression in adults[J]. J Am Board Fam Med, 2015,28(2):249-256.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25748766/)

[62] Jandhyala S M, Talukdar R, Subramanyam C, et al. Role of the normal gut microbiota[J]. World J Gastroenterol, 2015,21(29):8787-8803.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26269668/)

[63] Wang J, Um P, Dickerman B A, et al. Zinc, magnesium, selenium and depression: A review of the evidence, potential mechanisms and implications[J]. Nutrients, 2018,10(5):584.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29747386/)

[64] Ford T C, Downey L A, Simpson T, et al. The effect of a high-dose vitamin B multivitamin supplement on the relationship between brain metabolism and blood biomarkers of oxidative stress: A randomized control trial[J]. Nutrients, 2018,10(12):1860.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30513795/)

[65] Juszczyk G, Mikulska J, Kasperek K, et al. Chronic stress and oxidative stress as common factors of the pathogenesis of depression and Alzheimer's disease: The role of antioxidants in prevention and treatment[J]. Antioxidants (Basel, Switzerland), 2021,10(9):1439.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34573069/)

[66] Máčová L, Kancheva R, Bičíková M. Molecular Regulation of the CNS by Vitamin D[J]. Physiol Res, 2023,72(S4):S339-S356.[PubMed](https://pubmed.ncbi.nlm.nih.gov/38116771/)

[67] Anjum I, Jaffery S S, Fayyaz M, et al. The role of vitamin d in brain health: A mini literature review[J]. Cureus, 2018,10(7):e2960.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30214848/)

[68] Berridge M J. Vitamin D and depression: Cellular and regulatory mechanisms[J]. Pharmacol Rev, 2017,69(2):80-92.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28202503/)

[69] Chu M P, Alagiakrishnan K, Sadowski C. The cure of ageing: Vitamin D--magic or myth?[J]. Postgrad Med J, 2010,86(1020):608-616.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20971712/)

[70] Ellison D L, Moran H R. Vitamin D: Vitamin or Hormone?[J]. Nurs Clin North Am, 2021,56(1):47-57.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33549285/)

[71] Eyles D W, Smith S, Kinobe R, et al. Distribution of the vitamin D receptor and 1 alpha-hydroxylase in human brain[J]. J Chem Neuroanat, 2005,29(1):21-30.[PubMed](https://pubmed.ncbi.nlm.nih.gov/15589699/)

[72] Landel V, Stephan D, Cui X, et al. Differential expression of vitamin D-associated enzymes and receptors in brain cell subtypes[J]. J Steroid Biochem Mol Biol, 2018,177:129-134.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28893622/)

[73] Christakos S, Dhawan P, Verstuyf A, et al. Vitamin D: Metabolism, molecular mechanism of action, and pleiotropic effects[J]. Physiol Rev, 2016,96(1):365-408.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26681795/)

[74] Kasatkina L A, Tarasenko A S, Krupko O O, et al. Vitamin D deficiency induces the excitation/inhibition brain imbalance and the proinflammatory shift[J]. Int J Biochem Cell Biol, 2020,119:105665.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31821883/)

[75] Ceolin G, Mano G P R, Hames N S, et al. Vitamin D, depressive symptoms, and Covid-19 pandemic[J]. Front Neurosci, 2021,15:670879.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34054418/)

[76] Patrick R P, Ames B N. Vitamin D and the omega-3 fatty acids control serotonin synthesis and action, part 2: relevance for ADHD, bipolar disorder, schizophrenia, and impulsive behavior[J]. FASEB J, 2015,29(6):2207-2222.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25713056/)

[77] Samad N, Imran A, Bhatti S A, et al. Vitamin D2 protects acute and repeated noise stress induced behavioral, biochemical, and histopathological alterations: Possible antioxidant effect[J]. Saudi J Biol Sci, 2022,29(1):601-609.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35002456/)

[78] Hahn J, Cook N R, Alexander E K, et al. Vitamin D and marine omega 3 fatty acid supplementation and incident autoimmune disease: VITAL randomized controlled trial[J]. BMJ, 2022,376:e66452.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35082139/)

[79] Peelen E, Knippenberg S, Muris A H, et al. Effects of vitamin D on the peripheral adaptive immune system: a review[J]. Autoimmun Rev, 2011,10(12):733-743.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21621002/)

[80] Müller N. Immunological aspects of the treatment of depression and schizophrenia[J]. Dialogues Clin Neurosci, 2017,19(1):55-63.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28566947/)

[81] Groves N J, McGrath J J, Burne T H. Vitamin D as a neurosteroid affecting the developing and adult brain[J]. Annu Rev Nutr, 2014,34:117-141.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25033060/)

[82] Saji P N, Krishna P V, Gupta A, et al. Depression and vitamin D: A peculiar relationship[J]. Cureus, 2022,14(4):e24363.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35637805/)

[83] von Känel R, Fardad N, Steurer N, et al. Vitamin D deficiency and depressive symptomatology in psychiatric patients hospitalized with a current depressive episode: A factor analytic study[J]. PLoS One, 2015,10(9):e138550.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26397113/)

[84] Fava M, Mischoulon D. Folate in depression: efficacy, safety, differences in formulations, and clinical issues[J]. J Clin Psychiatry, 2009,70 Suppl 5:12-17.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19909688/" \t "_new)

[85] Esnafoglu E, Ozturan D D. The relationship of severity of depression with homocysteine, folate, vitamin B12, and vitamin D levels in children and adolescents[J]. Child Adolesc Ment Health, 2020,25(4):249-255.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32304285/)

[86] Sangle P, Sandhu O, Aftab Z, et al. Vitamin B12 supplementation: Preventing onset and improving prognosis of depression[J]. Cureus, 2020,12(10):e11169.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33251075/)

[87] Blom H J, Smulders Y. Overview of homocysteine and folate metabolism. With special references to cardiovascular disease and neural tube defects[J]. J Inherit Metab Dis, 2011,34(1):75-81.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20814827/)

[88] Maruyama K, S E E, Kinuta M, et al. Association between vitamin B group supplementation with changes in % flow-mediated dilatation and plasma homocysteine levels: A randomized controlled trial[J]. J Clin Biochem Nutr, 2019,64(3):243-249.

[89] Figueroa-Méndez R, Rivas-Arancibia S. Vitamin C in health and disease: Its role in the metabolism of cells and redox state in the brain[J]. Front Physiol, 2015,6:397.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26779027/)

[90] Alesci A, Pergolizzi S, Fumia A, et al. Immune system and psychological state of pregnant women during COVID-19 pandemic: Are micronutrients able to support pregnancy?[J]. Nutrients, 2022,14(12):2534.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35745263/)

[91] Harrison F E, May J M. Vitamin C function in the brain: vital role of the ascorbate transporter SVCT2[J]. Free Radic Biol Med, 2009,46(6):719-730.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19162177/)

[92] Ferreira N R, Vitorino C, Fortuna A. From antioxidant to neuromodulator: The role of ascorbate in the management of major depression disorder[J]. Biochem Pharmacol, 2022,206:115300.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36261067/)

[93] Moritz B, Schmitz A E, Rodrigues A, et al. The role of vitamin C in stress-related disorders[J]. J Nutr Biochem, 2020,85:108459.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32745879/)

[94] de Oliveira I J, de Souza V V, Motta V, et al. Effects of oral vitamin C supplementation on anxiety in students: A double-blind, randomized, placebo-controlled trial[J]. Pak J Biol Sci, 2015,18(1):11-18.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26353411/)

[95] Han Q, Shen T, Wang F, et al. Preventive and therapeutic potential of vitamin C in mental disorders[J]. Curr Med Sci, 2018,38(1):1-10.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30074145/)

[96] Manosso L M, Camargo A, Dafre A L, et al. Vitamin E for the management of major depressive disorder: possible role of the anti-inflammatory and antioxidant systems[J]. Nutr Neurosci, 2020:1-15.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33314993/)

[97] Ding J, Zhang Y. Associations of dietary vitamin C and E intake with depression. A Meta-analysis of observational studies[J]. Front Nutr, 2022,9:857823.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35464032/)

[98] Manosso L M, Neis V B, Moretti M, et al. Antidepressant-like effect of α-tocopherol in a mouse model of depressive-like behavior induced by TNF-α[J]. Prog Neuropsychopharmacol Biol Psychiatry, 2013,46:48-57.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23816813/)

[99] Bourre J M. Effects of nutrients (in food) on the structure and function of the nervous system: Update on dietary requirements for brain. Part 1: micronutrients[J]. J Nutr Health Aging, 2006,10(5):377-385.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17066209/)

[100] Khayyatzadeh S S, Omranzadeh A, Miri-Moghaddam M M, et al. Dietary antioxidants and fibre intake and depressive symptoms in Iranian adolescent girls[J]. Public Health Nutr, 2021,24(17):5650-5656.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33256873/)

[101] Baldessarini R J, Tondo L, Davis P, et al. Decreased risk of suicides and attempts during long-term lithium treatment: A Meta-analytic review[J]. Bipolar disorders, 2006,8(5 Pt 2):625-639.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17042835/)

[102] Guzzetta F, Tondo L, Centorrino F, et al. Lithium treatment reduces suicide risk in recurrent major depressive disorder[J]. J Clin Psychiatry, 2007,68(3):380-383.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17388706/)

[103] Tondo L, Baldessarini R J, Hennen J, et al. Lithium treatment and risk of suicidal behavior in bipolar disorder patients[J]. J Clin Psychiatry, 1998,59(8):405-414.[PubMed](https://pubmed.ncbi.nlm.nih.gov/9721820/)

[104] Brus O, Cao Y, Hammar Å, et al. Lithium for suicide and readmission prevention after electroconvulsive therapy for unipolar depression: Population-based register study[J]. BJPsych open, 2019,5(3):e46.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31189487/)

[105] Tondo L, Baldessarini R J, Hennen J, et al. Lithium maintenance treatment of depression and mania in bipolar I and bipolar II disorders[J]. Am J Psychiatry, 1998,155(5):638-645.[PubMed](https://pubmed.ncbi.nlm.nih.gov/9585715/)

[106] Crossley N A, Bauer M. Acceleration and augmentation of antidepressants with lithium for depressive disorders: two meta-analyses of randomized, placebo-controlled trials[J]. J Clin Psychiatry, 2007,68(6):935-940.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17592920/)

[107] Bauer M, Döpfmer S. Lithium augmentation in treatment-resistant depression: Meta-analysis of placebo-controlled studies[J]. J Clin Psychopharmacol, 2000,20(2):287.[PubMed](https://pubmed.ncbi.nlm.nih.gov/10770484/)

[108] Rana A K, Sharma S, Patial V, et al. Lithium therapy subdues neuroinflammation to maintain pyramidal cells arborization and rescues neurobehavioural impairments in ovariectomized rats[J]. Mol Neurobiol, 2022,59(3):1706-1723.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35018576/)

[109] Motaghinejad M, Seyedjavadein Z, Motevalian M, et al. The neuroprotective effect of lithium against high dose methylphenidate: Possible role of BDNF[J]. Neurotoxicology, 2016,56:40-54.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27343358/)

[110] de Sousa R T, Zanetti M V, Talib L L, et al. Lithium increases platelet serine-9 phosphorylated GSK-3β levels in drug-free bipolar disorder during depressive episodes[J]. J Psychiatr Res, 2015,62:78-83.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25691093/)

[111] Crisponi G, Nurchi V M, Cappai R, et al. The Potential Clinical Properties of Magnesium[J]. Curr Med Chem, 2021,28(35):7295-7311.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33200694/)

[112] Dickerman B, Liu J. Do the micronutrients zinc and magnesium play a role in adult depression?[J]. Top Clin Nutr, 2011,26(3):257-267.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29151671/)

[113] Guerrera M P, Volpe S L, Mao J J. Therapeutic uses of magnesium[J]. Am Fam Physician, 2009,80(2):157-162.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19621856/)

[114] Rotter I, Wiatrak A, Rył A, et al. The relationship between the concentration of magnesium and the presence of depressive symptoms and selected metabolic disorders among men over 50 years of age[J]. Life (Basel), 2021,11(3):196-206.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33802529/)

[115] Rajizadeh A, Mozaffari-Khosravi H, Yassini-Ardakani M, et al. Effect of magnesium supplementation on depression status in depressed patients with magnesium deficiency: A randomized, double-blind, placebo-controlled trial[J]. Nutrition, 2017,35:56-60.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28241991/)

[116] Sowa-Kućma M, Szewczyk B, Sadlik K, et al. Zinc, magnesium and NMDA receptor alterations in the hippocampus of suicide victims[J]. J Affect Disord, 2013,151(3):924-931.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24055117/)

[117] Du J, Zhu M, Bao H, et al. The role of nutrients in protecting mitochondrial function and neurotransmitter signaling: Implications for the treatment of depression, PTSD, and suicidal behaviors[J]. Crit Rev Food Sci Nutr, 2016,56(15):2560-2578.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25365455/)

[118] Ranjbar E, Shams J, Sabetkasaei M, et al. Effects of zinc supplementation on efficacy of antidepressant therapy, inflammatory cytokines, and brain-derived neurotrophic factor in patients with major depression[J]. Nutr Neurosci, 2014,17(2):65-71.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23602205/)

[119] Ranjbar E, Kasaei M S, Mohammad-Shirazi M, et al. Effects of zinc supplementation in patients with major depression: A randomized clinical trial[J]. Iran J Psychiatry, 2013,8(2):73-79.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24130605/)

[120] Da S L, de Santana M, Costa P, et al. Zinc supplementation combined with antidepressant drugs for treatment of patients with depression: A systematic review and Meta-analysis[J]. Nutr Rev, 2021,79(1):1-12.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32885249/)

[121] Yosaee S, Clark C, Keshtkaran Z, et al. Zinc in depression: From development to treatment: A comparative/ dose response Meta-analysis of observational studies and randomized controlled trials[J]. Gen Hosp Psychiatry, 2022,74:110-117.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32829928/)

[122] Petrilli M A, Kranz T M, Kleinhaus K, et al. The emerging role for zinc in depression and psychosis[J]. Front Pharmacol, 2017,8:414.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28713269/)

[123] Solati Z, Jazayeri S, Tehrani-Doost M, et al. Zinc monotherapy increases serum brain-derived neurotrophic factor (BDNF) levels and decreases depressive symptoms in overweight or obese subjects: a double-blind, randomized, placebo-controlled trial[J]. Nutr Neuroscience, 2015,18(4):162-168.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24621065/)

[124] Nowak G. Zinc, future mono/adjunctive therapy for depression: Mechanisms of antidepressant action[J]. Pharmacological reports : PR, 2015,67(3):659-662.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25933983/)

[125] Siodłak D, Nowak G, Mlyniec K. Interaction between zinc, the GPR39 zinc receptor and the serotonergic system in depression[J]. Brain Res Bull, 2021,170:146-154.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33549699/)

[126] Morgese M G, Schiavone S, Maffione A B, et al. Depressive-like phenotype evoked by lifelong nutritional omega-3 deficiency in female rats: Crosstalk among kynurenine, Toll-like receptors and amyloid beta oligomers[J]. Brain Behav Immun, 2020,87:444-454.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31987923/)

[127] Cherubini A, Andres-Lacueva C, Martin A, et al. Low plasma N-3 fatty acids and dementia in older persons: the InCHIANTI study[J]. J Gerontol A Biol Sci Med Sci, 2007,62(10):1120-1126.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17921425/)

[128] Deligiannidis K M, Freeman M P. Complementary and alternative medicine for the treatment of depressive disorders in women[J]. Psychiatr Clin North Am, 2010,33(2):441-463.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20385346/)

[129] Nemets B, Stahl Z, Belmaker R H. Addition of omega-3 fatty acid to maintenance medication treatment for recurrent unipolar depressive disorder[J]. Am J Psychiatry, 2002,159(3):477-479.[PubMed](https://pubmed.ncbi.nlm.nih.gov/11870016/)

[130] Nemets H, Nemets B, Apter A, et al. Omega-3 treatment of childhood depression: A controlled, double-blind pilot study[J]. Am J Psychiatry, 2006,163(6):1098-1100.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16741212/)

[131] Dyall S. Long-chain omega-3 fatty acids and the brain: A review of the independent and shared effects of EPA, DPA and DHA[J]. Front Aging Neurosci, 2015,7:52.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25954194/)

[132] Cetin I, Alvino G, Cardellicchio M. Long chain fatty acids and dietary fats in fetal nutrition[J]. J Physiol, 2009,587(14):3441-3451.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19528253/)

[133] Cao D, Kevala K, Kim J, et al. Docosahexaenoic acid promotes hippocampal neuronal development and synaptic function[J]. J Neurochem, 2009,111(2):510-521.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19682204/)

[134] Crowe F L, Skeaff C M, Green T J, et al. Serum phospholipid n 3 long-chain polyunsaturated fatty acids and physical and mental health in a population-based survey of New Zealand adolescents and adults[J]. Am J Clin Nutr, 2007,86(5):1278-1285.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17991636/)

[135] Currenti W, Godos J, Alanazi A M, et al. Dietary fats and depressive symptoms in Italian adult[J]. Nutrients, 2023,15(3):675.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36771380/)

[136] Wu M, Tian T, Mao Q, et al. Associations between disordered gut microbiota and changes of neurotransmitters and short-chain fatty acids in depressed mice[J]. Transl Psychiatry, 2020,10(1):350.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33067412/)

[137] Huang Y, Shi X, Li Z, et al. Possible association of Firmicutes in the gut microbiota of patients with major depressive disorder[J]. Neuropsychiatr Dis Treat, 2018,14:3329-3337.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30584306/)

[138] Ning T, Gong X, Xie L, et al. Gut microbiota analysis in rats with methamphetamine-induced conditioned place preference[J]. Front Microbiol, 2017,8:1620.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28890714/)

[139] van de Wouw M, Boehme M, Lyte J M, et al. Short-chain fatty acids: Microbial metabolites that alleviate stress-induced brain-gut axis alterations[J]. J Physiol, 2018,596(20):4923-4944.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30066368/)

[140] Sun J, Wang F, Hong G, et al. Antidepressant-like effects of sodium butyrate and its possible mechanisms of action in mice exposed to chronic unpredictable mild stress[J]. Neurosci Lett, 2016,618:159-166.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26957230/)

[141] Valles-Colomer M, Falony G, Darzi Y, et al. The neuroactive potential of the human gut microbiota in quality of life and depression[J]. Nat Microbiol, 2019,4(4):623-632.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30718848/)

[142] Maqsood R, Stone T W. The Gut-Brain Axis, BDNF, NMDA and CNS Disorders[J]. Neurochem Res, 2016,41(11):2819-2835.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27553784/)

[143] Mishra S P, Wang B, Wang S, et al. Microbiota induces aging-related leaky gut and inflammation by dampening mucin barriers and butyrate-FFAR2/3 signaling[J]. bioRxiv, 2021,18(8):456856.[bioRxiv](https://www.biorxiv.org/content/10.1101/2021.08.18.456856v1)

[144] Liang L, Liu L, Zhou W, et al. Gut microbiota-derived butyrate regulates gut mucus barrier repair by activating the macrophage/WNT/ERK signaling pathway[J]. Clin Sci (Lond), 2022,136(4):291-307.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35194640/)

[145] Niswender C M, Conn P J. Metabotropic glutamate receptors: physiology, pharmacology, and disease[J]. Annu Rev Pharmacol Toxicol, 2010,50:295-322.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20055706/)

[146] Yüksel C, Öngür D. Magnetic resonance spectroscopy studies of glutamate-related abnormalities in mood disorders[J]. Biol Psychiatry, 2010,68(9):785-794.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20728076/)

[147] Sanacora G, Kendell S F, Levin Y, et al. Preliminary evidence of riluzole efficacy in antidepressant-treated patients with residual depressive symptoms[J]. Biol Psychiatry, 2007,61(6):822-825.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17141740/)

[148] Diazgranados N, Ibrahim L, Brutsche N E, et al. A randomized add-on trial of an N-methyl-D-aspartate antagonist in treatment-resistant bipolar depression[J]. Arch Gen Psychiatry, 2010,67(8):793-802.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16894061/" \t "_new)

[149] Murrough J W, Iosifescu D V, Chang L C, et al. Antidepressant efficacy of ketamine in treatment-resistant major depression: A two-site randomized controlled trial[J]. Am J Psychiatry, 2013,170(10):1134-1142.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23982301/" \t "_new)

[150] Murrough J W, Perez A M, Pillemer S, et al. Rapid and longer-term antidepressant effects of repeated ketamine infusions in treatment-resistant major depression[J]. Biol Psychiatry, 2013,74(4):250-256.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30278319/" \t "_new)

[151] Maeng S, Zarate C J, Du J, et al. Cellular mechanisms underlying the antidepressant effects of ketamine: role of alpha-amino-3-hydroxy-5-methylisoxazole-4-propionic acid receptors[J]. Biol Psychiatry, 2008,63(4):349-352.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17643398/)

[152] Zarate C J, Brutsche N E, Ibrahim L, et al. Replication of ketamine's antidepressant efficacy in bipolar depression: A randomized controlled add-on trial[J]. Biol Psychiatry, 2012,71(11):939-946.[PubMed](https://pubmed.ncbi.nlm.nih.gov/22297150/)

[153] Young S N. Use of tryptophan in combination with other antidepressant treatments: a review[J]. J Psychiatry Neurosci, 1991,16(5):241-246.[PubMed](https://pubmed.ncbi.nlm.nih.gov/1797098/" \t "_new)

[154] Schwarcz R, Bruno J P, Muchowski P J, et al. Kynurenines in the mammalian brain: when physiology meets pathology[J]. Nat Rev Neurosci, 2012,13(7):465-477.[PubMed](https://pubmed.ncbi.nlm.nih.gov/22678511/" \t "_new)

[155] Chen L M, Bao C H, Wu Y, et al. Tryptophan-kynurenine metabolism: A link between the gut and brain for depression in inflammatory bowel disease[J]. J Neuroinflammation, 2021,18(1):135.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34127024/" \t "_new)

[156] Heyes M P, Saito K, Major E O, et al. A mechanism of quinolinic acid formation by brain in inflammatory neurological disease. Attenuation of synthesis from L-tryptophan by 6-chlorotryptophan and 4-chloro-3-hydroxyanthranilate[J]. Brain, 1993,116 ( Pt 6):1425-1450.[PubMed](https://pubmed.ncbi.nlm.nih.gov/8293279/)

[157] Bressa G M. S-adenosyl-l-methionine (SAMe) as antidepressant: Meta-analysis of clinical studies[J]. Acta Neurol Scand Suppl, 1994,154:7-14.[PubMed](https://pubmed.ncbi.nlm.nih.gov/7941964/)

[158] Bak L K, Schousboe A, Sonnewald U, et al. Glucose is necessary to maintain neurotransmitter homeostasis during synaptic activity in cultured glutamatergic neurons[J]. J Cereb Blood Flow Metab, 2006,26(10):1285-1297.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16467783/)

[159] Buro A W, Stern M, Carson T L. Reported mental health, diet, and physical activity in young adult cancer survivors[J]. Nutrients, 2023,15(4):1005.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36839363/)

[160] Avena N M, Rada P, Hoebel B G. Sugar and fat bingeing have notable differences in addictive-like behavior[J]. J Nutr, 2009,139(3):623-628.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19176748/)

[161] Benton D. Carbohydrate ingestion, blood glucose and mood[J]. Neurosci Biobehav Rev, 2002,26(3):293-308.[PubMed](https://pubmed.ncbi.nlm.nih.gov/12034132/)

[162] Spring B. Recent research on the behavioral effects of tryptophan and carbohydrate[J]. Nutr Health, 1984,3(1-2):55-67.[PubMed](https://pubmed.ncbi.nlm.nih.gov/6400041/)

[163] Aparicio A, Robles F, Lopez-Sobaler A M, et al. Dietary glycaemic load and odds of depression in a group of institutionalized elderly people without antidepressant treatment[J]. Eur J Nutr, 2013,52(3):1059-1066.[PubMed](https://pubmed.ncbi.nlm.nih.gov/22791180/)

[164] Wurtman J J. Carbohydrate craving. Relationship between carbohydrate intake and disorders of mood[J]. Drugs, 1990,39 (s3):49-52.[PubMed](https://pubmed.ncbi.nlm.nih.gov/2197075/)

[165] Hryhorczuk C, Sharma S, Fulton S E. Metabolic disturbances connecting obesity and depression[J]. Front Neurosci, 2013,7:177.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24109426/)

[166] 王和亿. 碳水化合物会使更年期女性抑郁[J]. 东方药膳, 2018,0(6):10.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2Eg95c3NseWoyMDE4MDYwMDgaCDNsdXc1N3pl)

[167] Goletzke J, Buyken A E, Joslowski G, et al. Increased intake of carbohydrates from sources with a higher glycemic index and lower consumption of whole grains during puberty are prospectively associated with higher IL-6 concentrations in younger adulthood among healthy individuals[J]. J Nutr, 2014,144(10):1586-1593.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25080538/)

[168] Martínez L E, Peñafiel A M, Hernández E V, et al. Ultra-processed diet, systemic oxidative stress, and breach of immunologic tolerance[J]. Nutrition, 2021,91-92:111419.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34399404/)

[169] Holt R I, Phillips D I, Jameson K A, et al. The relationship between depression, anxiety and cardiovascular disease: Findings from the Hertfordshire Cohort Study[J]. J Affect Disord, 2013,150(1):84-90.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23507368/)

[170] Alzoubi A, Abunaser R, Khassawneh A, et al. The bidirectional relationship between diabetes and depression: A Literature Review[J]. Korean J Fam Med, 2018,39(3):137-146.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29788701/)

[171] Hooker S A, O'Connor P J, Sperl-Hillen J M, et al. Depression and cardiovascular risk in primary care patients[J]. J Psychosom Res, 2022,158:110920.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35461074/)

[172] Guo X, Park Y, Freedman N D, et al. Sweetened beverages, coffee, and tea and depression risk among older US adults[J]. PLoS One, 2014,9(4):e94715.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24743309/)

[173] Vermeulen E, Stronks K, Snijder M B, et al. A combined high-sugar and high-saturated-fat dietary pattern is associated with more depressive symptoms in a multi-ethnic population: the HELIUS (Healthy Life in an Urban Setting) study[J]. Public Health Nutr, 2017,20(13):2374-2382.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28724468/)

[174] Shimmura N, Nanri A, Kashino I, et al. Prospective association of confectionery intake with depressive symptoms among Japanese workers: the Furukawa Nutrition and Health Study[J]. Br J Nutr, 2022,128(1):139-144.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34380580/)

[175] Kashino I, Kochi T, Imamura F, et al. Prospective association of soft drink consumption with depressive symptoms[J]. Nutrition, 2021,81:110860.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32791444/)

[176] Zhang X, Huang X, Xiao Y, et al. Daily intake of soft drinks is associated with symptoms of anxiety and depression in Chinese adolescents[J]. Public Health Nutr, 2019,22(14):2553-2560.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31097051/)

[177] Sanchez-Villegas A, Zazpe I, Santiago S, et al. Added sugars and sugar-sweetened beverage consumption, dietary carbohydrate index and depression risk in the Seguimiento Universidad de Navarra (SUN) Project[J]. Br J Nutr, 2018,119(2):211-221.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29268815/)

[178] Souza C G, Moreira J D, Siqueira I R, et al. Highly palatable diet consumption increases protein oxidation in rat frontal cortex and anxiety-like behavior[J]. Life Sci, 2007,81(3):198-203.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17574275/)

[179] Reis D J, Ilardi S S, Namekata M S, et al. The depressogenic potential of added dietary sugars[J]. Med Hypotheses, 2020,134:109421.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31634771/)

[180] Inam Q U, Jabeen B, Haleem M A, et al. Long-term consumption of sugar-rich diet decreases the effectiveness of somatodendritic serotonin-1A receptors[J]. Nutr Neurosci, 2008,11(6):277-282.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19000381/)

[181] Inam Q U, Haleem M A, Haleem D J. Attenuation of somatodendritic responses to 8-hydroxy-2-di-npropylamino tetralin following long-term dietary sugar consumption in rats[J]. J Coll Physicians Surg Pak, 2009,19(7):401-405.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19576144/)

[182] Inam Q U, Ikram H, Shireen E, et al. Effects of sugar rich diet on brain serotonin, hyperphagia and anxiety in animal model of both genders[J]. Pak J Pharm Sci, 2016,29(3):757-763.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27166525/)

[183] Molteni R, Barnard R J, Ying Z, et al. A high-fat, refined sugar diet reduces hippocampal brain-derived neurotrophic factor, neuronal plasticity, and learning[J]. Neuroscience, 2002,112(4):803-814.[PubMed](https://pubmed.ncbi.nlm.nih.gov/12088740/)

[184] de França S A, Dos S M, Przygodda F, et al. A low-protein, high-carbohydrate diet stimulates thermogenesis in the brown adipose tissue of rats via ATF-2[J]. Lipids, 2016,51(3):303-310.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26781764/)

[185] Malheiros R T, Delgado H O, Felber D T, et al. Mood disorders are associated with the reduction of brain derived neurotrophic factor in the hypocampus in rats submitted to the hipercaloric diet[J]. Metab Brain Dis, 2021,36(1):145-151.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33025299/)

[186] Hussain Y, Jain S K, Samaiya P K. Short-term westernized (HFFD) diet fed in adolescent rats: Effect on glucose homeostasis, hippocampal insulin signaling, apoptosis and related cognitive and recognition memory function[J]. Behav Brain Res, 2019,361:113-121.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30584898/)

[187] Siddiqee M H, Bhattacharjee B, Siddiqi U R, et al. High prevalence of vitamin D deficiency among the South Asian adults: A systematic review and Meta-analysis[J]. BMC Public Health, 2021,21(1):1823.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34627207/)

[188] Liu X, Zhao W, Hu F, et al. Comorbid anxiety and depression, depression, and anxiety in comparison in multi-ethnic community of west China: Prevalence, metabolic profile, and related factors[J]. J Affect Dis, 2022,298(A):381-387.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34732339/)

[189] Cheng Y C, Huang Y C, Huang W L. The effect of vitamin D supplement on negative emotions: A systematic review and Meta-analysis[J]. Depress Anxiety, 2020,37(6):549-564.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32365423/)

[190] Alavi N M, Khademalhoseini S, Vakili Z, et al. Effect of vitamin D supplementation on depression in elderly patients: A randomized clinical trial[J]. Clin Nutr, 2019,38(5):2065-2070.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30316534/)

[191] Vellekkatt F, Menon V, Rajappa M, et al. Effect of adjunctive single dose parenteral Vitamin D supplementation in major depressive disorder with concurrent vitamin D deficiency: A double-blind randomized placebo-controlled trial[J]. J Psychiatr Res, 2020,129:250-256.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32823218/)

[192] Bahrami A, Bahrami-Taghanaki H, Khorasanchi Z, et al. The association between neuropsychological function with serum vitamins A, D, and E and hs-CRP concentrations[J]. J Mol Neurosci, 2019,68(2):243-250.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30972539/)

[193] Wu M, Xie J, Zhou Z, et al. Fine particulate matter, vitamin D, physical activity, and major depressive disorder in elderly adults: Results from UK Biobank[J]. Affect Disord, 2022,299:233-238.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34879260/)

[194] Xu Y, Liang L. Vitamin D3/vitamin D receptor signaling mitigates symptoms of post-stroke depression in mice by upregulating hippocampal BDNF expression[J]. Neurosci Res, 2021,170:306-313.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32882254/)

[195] Toffanello E D, Sergi G, Veronese N, et al. Serum 25-hydroxyvitamin d and the onset of late-life depressive mood in older men and women: the Pro.V.A. study[J]. J Gerontol A Biol Sci Med Sci, 2014,69(12):1554-1561.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24899526/)

[196] van den Berg K S, Marijnissen R M, van den Brink R, et al. Adverse health outcomes in vitamin D supplementation trials for depression: A systematic review[J]. Ageing Res Rev, 2021,71:101442.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34390851/)

[197] Spedding S. Vitamin D and depression: A systematic review and Meta-analysis comparing studies with and without biological flaws[J]. Nutrients, 2014,6(4):1501-1518.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24732019/)

[198] Downey L A, Simpson T N, Ford T C, et al. Increased posterior cingulate functional connectivity following 6-month high-dose B-vitamin multivitamin supplementation: A randomized, double-blind, placebo-controlled trial[J]. Frontiers in nutrition, 2019,6:156.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31612139/)

[199] Silverstein W K, Lin Y, Dharma C, et al. Prevalence of inappropriateness of parenteral vitamin B12 administration in Ontario, Canada[J]. JAMA Intern Med, 2019,179(10):1434-1436.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31305876/)

[200] Altaf R, Gonzalez I, Rubino K, et al. Folate as adjunct therapy to SSRI/SNRI for major depressive disorder: Systematic review & Meta-analysis[J]. Complement Ther Med, 2021,61:102770.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34450256/)

[201] Stahl S M. Combining antidepressant therapies from the initiation of treatment: A paradigm shift for major depression[J]. J Clin Psychiatry, 2009,70(11):1493-1494.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20031093/)

[202] Stanger O, Fowler B, Piertzik K, et al. Homocysteine, folate and vitamin B12 in neuropsychiatric diseases: Review and treatment recommendations[J]. Expert Rev Neurother, 2009,9(9):1393-1412.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19769453/)

[203] Firth J, Teasdale S B, Allott K, et al. The efficacy and safety of nutrient supplements in the treatment of mental disorders: A Meta-review of meta-analyses of randomized controlled trials[J]. World Psychiatry, 2019,18(3):308-324.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31496103/)

[204] Fava M, Shelton R C, Zajecka J M. Evidence for the use of l-methylfolate combined with antidepressants in MDD[J]. J Clin Psychiatry, 2011,72(8):e25.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21899813/)

[205] Zajecka J M, Fava M, Shelton R C, et al. Long-term efficacy, safety, and tolerability of L-methylfolate calcium 15 mg as adjunctive therapy with selective serotonin reuptake inhibitors: A 12-month, open-label study following a placebo-controlled acute study[J]. J Clin Psychiatry, 2016,77(5):654-660.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27035404/)

[206] Maruf A A, Poweleit E A, Brown L C, et al. Systematic review and meta-analysis of L-methylfolate augmentation in depressive disorders[J]. Pharmacopsychiatry, 2022,55(3):139-147.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34794190/)

[207] Borges-Vieira J G, Cardoso C. Efficacy of B-vitamins and vitamin D therapy in improving depressive and anxiety disorders: A systematic review of randomized controlled trials[J]. Nutr Neurosci, 2023,26(3):187-207.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35156551/)

[208] Brown M A, Goldstein-Shirley J, Robinson J, et al. The effects of a multi-modal intervention trial of light, exercise, and vitamins on women's mood[J]. Women Health, 2001,34(3):93-112.[PubMed](https://pubmed.ncbi.nlm.nih.gov/11708689/)

[209] Ghaleiha A, Davari H, Jahangard L, et al. Adjuvant thiamine improved standard treatment in patients with major depressive disorder: Results from a randomized, double-blind, and placebo-controlled clinical trial[J]. Eur Arch Psychiatry Clin Neurosci, 2016,266(8):695-702.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26984349/)

[210] Brown R P, Gerbarg P L. Herbs and nutrients in the treatment of depression, anxiety, insomnia, migraine, and obesity[J]. J Psychiatr Pract, 2001,7(2):75-91.[PubMed](https://pubmed.ncbi.nlm.nih.gov/15990509/)

[211] Duc H N, Oh H, Yoon I M, et al. Association between levels of thiamine intake, diabetes, cardiovascular diseases and depression in Korea: A national cross-sectional study[J]. J Nutr Sci, 2021,10:e31.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34094512/)

[212] Wu Y, Zhang L, Li S, et al. Associations of dietary vitamin B1, vitamin B2, vitamin B6, and vitamin B12 with the risk of depression: A systematic review and Meta-analysis[J]. Nutr Rev, 2022,80(3):351-366.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33912967/)

[213] Wu Y, Li S, Wang W, et al. Associations of dietary B vitamins intakes with depression in adults[J]. Int J Vitam Nutr Res, 2021,93(2):142-153.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34233510/)

[214] Aly J, Engmann O. The way to a human's brain goes through their stomach: Dietary factors in major depressive disorder[J]. Front Neurosci, 2020,14:582853.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33364919/)

[215] Campisi S C, Zasowski C, Shah S, et al. Assessing the evidence of micronutrients on depression among children and adolescents: An evidence gap map[J]. Adv Nutr, 2020,11(4):908-927.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32193537/)

[216] Coppen A, Bolander-Gouaille C. Treatment of depression: time to consider folic acid and vitamin B12[J]. J Psychopharmacol, 2005,19(1):59-65.[PubMed](https://pubmed.ncbi.nlm.nih.gov/15671130/)

[217] Hintikka J, Tolmunen T, Tanskanen A, et al. High vitamin B12 level and good treatment outcome may be associated in major depressive disorder[J]. BMC Psychiatry, 2003,3:17.[PubMed](https://pubmed.ncbi.nlm.nih.gov/14641930/)

[218] Syed E U, Wasay M, Awan S. Vitamin B12 supplementation in treating major depressive disorder: A randomized controlled trial[J]. Open Neurol J, 2013,7:44-48.[PubMed](https://pubmed.ncbi.nlm.nih.gov/24339839/)

[219] Walker J G, Batterham P J, Mackinnon A J, et al. Oral folic acid and vitamin B-12 supplementation to prevent cognitive decline in community-dwelling older adults with depressive symptoms--the Beyond Ageing Project: a randomized controlled trial[J]. Am J Clin Nutr, 2012,95(1):194-203.[PubMed](https://pubmed.ncbi.nlm.nih.gov/22170358/)

[220] Khosravi M, Sotoudeh G, Amini M, et al. The relationship between dietary patterns and depression mediated by serum levels of Folate and vitamin B12[J]. BMC Psychiatry, 2020,20(1):63.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32054533/)

[221] Ueland P M, McCann A, Midttun Ø, et al. Inflammation, vitamin B6 and related pathways[J]. Mol Aspects Med, 2017,53:10-27.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27593095/)

[222] Jung H Y, Kim W, Hahn K R, et al. Effects of pyridoxine deficiency on hippocampal function and its possible association with V-type proton ATPase subunit B2 and heat shock cognate protein 70[J]. Cells, 2020,9(5):1067.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32344819/)

[223] McCarty M F. High-dose pyridoxine as an 'anti-stress' strategy[J]. Med Hypotheses, 2000,54(5):803-807.[PubMed](https://pubmed.ncbi.nlm.nih.gov/10859691/)

[224] Williamson C. Dietary factors and depression in older people[J]. Br J Community Nurs, 2009,14(10):422, 424-426.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19966681/)

[225] Durrani D, Idrees R, Idrees H, et al. Vitamin B6: A new approach to lowering anxiety, and depression?[J]. Ann Med Surg (Lond), 2022,82:104663.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36268413/)

[226] Sim M, Hong S, Jung S, et al. Vitamin C supplementation promotes mental vitality in healthy young adults: Results from a cross-sectional analysis and a randomized, double-blind, placebo-controlled trial[J]. Eur J Nutr, 2022,61(1):447-459.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34476568/)

[227] Kocot J, Luchowska-Kocot D, Kielczykowska M, et al. Does vitamin C influence neurodegenerative diseases and psychiatric disorders?[J]. Nutrients, 2017,9(6597):659.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28654017/)

[228] Li D, Xu W, Wu Q, et al. Ascorbic acid intake is inversely associated with prevalence of depressive symptoms in US midlife women: A cross-sectional study[J]. J Affect Disord, 2022,299:498-503.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34942225/)

[229] Wang A, Luo J, Zhang T, et al. Dietary vitamin C and vitamin C derived from vegetables are inversely associated with the risk of depressive symptoms among the general population[J]. Antioxidants (Basel), 2021,10(12):1984.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34943087/)

[230] Pullar J M, Carr A C, Bozonet S M, et al. High vitamin C status is associated with elevated mood in male tertiary students[J]. Antioxidants (Basel), 2018,7(7):91.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30012945/)

[231] Carr A C, Bozonet S M, Pullar J M, et al. Mood improvement in young adult males following supplementation with gold kiwifruit, a high-vitamin C food[J]. J Nutr Sci, 2013,2:e24.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25191573/)

[232] Arab A, Khorvash F, Kazemi M, et al. Effects of the dietary approaches to stop hypertension (DASH) diet on clinical, quality of life and mental health outcomes in women with migraine: A randomised controlled trial[J]. Br J Nutr, 2022,128(8):1535-1544.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34763733/)

[233] Billows M, Kakoschke N, Zajac I T. The role of kiwifruit in supporting psychological well-being: A rapid review of the literature[J]. Nutrients, 2022,14(21):4657.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36364918/)

[234] Amr M, El-Mogy A, Shams T, et al. Efficacy of vitamin C as an adjunct to fluoxetine therapy in pediatric major depressive disorder: A randomized, double-blind, placebo-controlled pilot study[J]. Nutr J, 2013,12:31.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23510529/)

[235] Maes M, Galecki P, Chang Y S, et al. A review on the oxidative and nitrosative stress (O&NS) pathways in major depression and their possible contribution to the (neuro)degenerative processes in that illness[J]. Prog Neuropsychopharmacol Biol Psychiatry, 2011,35(3):676-692.[PubMed](https://pubmed.ncbi.nlm.nih.gov/20471444/)

[236] Carr A C, Rosengrave P C, Bayer S, et al. Hypovitaminosis C and vitamin C deficiency in critically ill patients despite recommended enteral and parenteral intakes[J]. Crit Care, 2017,21(1):300.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29228951/)

[237] Muzina D J, Calabrese J R. Maintenance therapies in bipolar disorder: focus on randomized controlled trials[J]. Aust N Z J Psychiatry, 2005,39(8):652-661.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16050919/)

[238] Rybakowski J K. Antiviral, immunomodulatory, and neuroprotective effect of lithium[J]. J Integr Neurosci, 2022,21(2):68.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35364656/)

[239] Chen S, Underwood B R, Jones P B, et al. Association between lithium use and the incidence of dementia and its subtypes: A retrospective cohort study[J]. PLoS medicine, 2022,19(3):e1003941.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35298477/)

[240] Velosa J, Delgado A, Finger E, et al. Risk of dementia in bipolar disorder and the interplay of lithium: A systematic review and Meta-analyses[J]. Acta Psychiatr Scand, 2020,141(6):510-521.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31954065/)

[241] Fornaro M, Anastasia A, Novello S, et al. Incidence, prevalence and clinical correlates of antidepressant-emergent mania in bipolar depression: a systematic review and meta-analysis[J]. Bipolar disord, 2018,20(3):195-227.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29441650/)

[242] Golden J C, Goethe J W, Woolley S B. Complex psychotropic polypharmacy in bipolar disorder across varying mood polarities: A prospective cohort study of 2712 inpatients[J]. J Affect Disord, 2017,221:6-10.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28628769/)

[243] Fountoulakis K N, Tohen M, Zarate C J. Lithium treatment of Bipolar disorder in adults: A systematic review of randomized trials and meta-analyses[J]. Eur Neuropsychopharmacol, 2022,54:100-115.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34980362/)

[244] Bauer M, Dopfmer S. Lithium augmentation in treatment-resistant depression: Meta-analysis of placebo-controlled studies[J]. J Clin Psychopharmacol, 1999,19(5):427-434.[PubMed](https://pubmed.ncbi.nlm.nih.gov/10505584/)

[245] Lambrichts S, Detraux J, Vansteelandt K, et al. Does lithium prevent relapse following successful electroconvulsive therapy for major depression? A systematic review and Meta-analysis[J]. Acta psychiatrica Scandinavica, 2021,143(4):294-306.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33506961/)

[246] Oya K, Sakuma K, Esumi S, et al. Efficacy and safety of lithium and lamotrigine for the maintenance treatment of clinically stable patients with bipolar disorder: A systematic review and meta-analysis of double-blind, randomized, placebo-controlled trials with an enrichment design[J]. Neuropsychopharmacology reports, 2019,39(3):241-246.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31026388/)

[247] Vázquez G H, Bahji A, Undurraga J, et al. Efficacy and tolerability of combination treatments for major depression: Antidepressants plus second-generation antipsychotics vs. esketamine vs. lithium[J]. J Psychopharmacol, 2021,35(8):890-900.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34238049/)

[248] Tiihonen J, Tanskanen A, Hoti F, et al. Pharmacological treatments and risk of readmission to hospital for unipolar depression in Finland: A nationwide cohort study[J]. Lancet Psychiatry, 2017,4(7):547-553.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28578901/)

[249] Yatham L N, Kennedy S H, O'Donovan C, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) guidelines for the management of patients with bipolar disorder: Consensus and controversies[J]. Bipolar Disord, 2005,7 Suppl 3:5-69.[PubMed](https://pubmed.ncbi.nlm.nih.gov/15952957/)

[250] Yatham L N, Kennedy S H, O'Donovan C, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) guidelines for the management of patients with bipolar disorder: Update 2007[J]. Bipolar Disord, 2006,8(6):721-739.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17156158/)

[251] Yatham L N, Kennedy S H, Schaffer A, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) collaborative update of CANMAT guidelines for the management of patients with bipolar disorder: Update 2009[J]. Bipolar Disord, 2009,11(3):225-255.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19419382/)

[252] Yatham L N, Kennedy S H, Parikh S V, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) collaborative update of CANMAT guidelines for the management of patients with bipolar disorder: Update 2013[J]. Bipolar Disord, 2013,15(1):1-44.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23237061/)

[253] Yatham L N, Kennedy S H, Parikh S V, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder[J]. Bipolar Disord, 2018,20(2):97-170.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29536616/)

[254] Verdolini N, Hidalgo-Mazzei D, Del M L, et al. Long-term treatment of bipolar disorder type I: A systematic and critical review of clinical guidelines with derived practice algorithms[J]. Bipolar Disord, 2021,23(4):324-340.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33354842/)

[255] Jacka F N, Overland S, Stewart R, et al. Association between magnesium intake and depression and anxiety in community-dwelling adults: the Hordaland Health Study[J]. Aust N Z J Psychiatry, 2009,43(1):45-52.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19085527/)

[256] Derom M L, Sayón-Orea C, Martínez-Ortega J M, et al. Magnesium and depression: A systematic review[J]. Nutr Neurosci, 2013,16(5):191-206.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23321048/)

[257] Yary T, Lehto S M, Tolmunen T, et al. Dietary magnesium intake and the incidence of depression: A 20-year follow-up study[J]. J Affect Disord, 2016,193:94-98.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26771950/)

[258] Tarleton E K, Littenberg B, MacLean C D, et al. Role of magnesium supplementation in the treatment of depression: A randomized clinical trial[J]. PLoS One, 2017,12(6):e180067.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28654669/)

[259] Mehdi S M, Atlas S E, Qadir S, et al. Double-blind, randomized crossover study of intravenous infusion of magnesium sulfate versus 5% dextrose on depressive symptoms in adults with treatment-resistant depression[J]. Psychiatry Clin Neurosci, 2017,71(3):204-211.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27862658/)

[260] Miller E S, Sakowicz A, Roy A, et al. Is peripartum magnesium sulfate associated with a reduction in postpartum depressive symptoms?[J]. Am J Obstet Gynecol MFM, 2021,3(5):100407.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34058422/)

[261] Noah L, Dye L, Bois D F B, et al. Effect of magnesium and vitamin B6 supplementation on mental health and quality of life in stressed healthy adults: Post-hoc analysis of a randomised controlled trial[J]. Stress Health, 2021,37(5):1000-1009.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33864354/)

[262] Afsharfar M, Shahraki M, Shakiba M, et al. The effects of magnesium supplementation on serum level of brain derived neurotrophic factor (BDNF) and depression status in patients with depression[J]. Clin Nutr ESPEN, 2021,42:381-386.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33745609/)

[263] Hamedifard Z, Farrokhian A, Reiner Z, et al. The effects of combined magnesium and zinc supplementation on metabolic status in patients with type 2 diabetes mellitus and coronary heart disease[J]. Lipids Health Dis, 2020,19(1):112.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32466773/)

[264] Abiri B, Sarbakhsh P, Vafa M. Randomized study of the effects of vitamin D and/or magnesium supplementation on mood, serum levels of BDNF, inflammation, and SIRT1 in obese women with mild to moderate depressive symptoms[J]. Nutr Neurosci, 2022,25(10):2123-2135.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34210242/)

[265] Nazarinasab M, Behrouzian F, Abdi L, et al. Investigating the effect of magnesium supplement in patients with major depressive disorder under selective serotonin reuptake inhibitor treatment[J]. J Family Med Prim Care, 2022,11(12):7800-7805.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36994048/)

[266] Skalski M, Mach A, Januszko P, et al. Pharmaco-electroencephalography-based assessment of antidepressant drug efficacy: The use of magnesium ions in the treatment of depression[J]. J Clin Med, 2021,10(14):3135.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34300299/)

[267] Bhatia N Y, Ved H S, Kale P P, et al. Importance of exploring N-methyl-D-aspartate (NMDA) as a future perspective target in depression[J]. CNS Neurol Disord Drug Targets, 2022,21(10):1004-1016.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35352638/)

[268] Inglebert Y, Debanne D. Calcium and Spike Timing-Dependent Plasticity[J]. Front Cell Neurosci, 2021,15:727336.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34616278/)

[269] Chen M, Chen G, Tian H, et al. Brain neural activity patterns in an animal model of antidepressant-induced manic episodes[J]. Front Behav Neurosci, 2021,15:771975.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35250499/)

[270] Du C, Hsiao P Y, Ludy M J, et al. Relationships between dairy and calcium intake and mental health measures of higher education students in the united states: Outcomes from moderation analyses[J]. Nutrients, 2022,14(4):775.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35215428/)

[271] Huang J, Xiao X, Zhang L, et al. The effect of serum calcium on the association of depression with infertility among U.S. women[J]. Heliyon, 2023,9(11):e22220.[PubMed](https://pubmed.ncbi.nlm.nih.gov/38045116/)

[272] Edwards R, Peet M, Shay J, et al. Omega-3 polyunsaturated fatty acid levels in the diet and in red blood cell membranes of depressed patients[J]. J Affect Disord, 1998,48(2-3):149-155.[PubMed](https://pubmed.ncbi.nlm.nih.gov/9543204/)

[273] Parletta N, Zarnowiecki D, Cho J, et al. A Mediterranean-style dietary intervention supplemented with fish oil improves diet quality and mental health in people with depression: A randomized controlled trial (HELFIMED)[J]. Nutr Neurosci, 2019,22(7):474-487.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29215971/)

[274] Anonymous. Do omega-3 fatty acids help in depression?[J]. Drug Ther Bull, 2007,45(2):9-12.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17357473/)

[275] Mocking R J, Harmsen I, Assies J, et al. Meta-analysis and meta-regression of omega-3 polyunsaturated fatty acid supplementation for major depressive disorder[J]. Transl Psychiatry, 2016,6(3):e756.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26978738/)

[276] Bae J H, Kim G. Systematic review and Meta-analysis of omega-3-fatty acids in elderly patients with depression[J]. Nutrition research (New York, N.Y.), 2018,50:1-9.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29540267/)

[277] Bai Z G, Bo A, Wu S J, et al. Omega-3 polyunsaturated fatty acids and reduction of depressive symptoms in older adults: A systematic review and Meta-analysis[J]. J Affect Disord, 2018,241:241-248.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30138808/)

[278] Bozzatello P, Rocca P, Mantelli E, et al. Polyunsaturated fatty acids: What is their role in treatment of psychiatric disorders?[J]. Int J Mol Sci, 2019,20(21):5257.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31652770/)

[279] Ceolin G, Rockenbach G, Confortin S C, et al. Association between the consumption of omega-3-rich fish and depressive symptoms in older adults living in a middle-income country: EpiFloripa Aging cohort study[J]. Cad Saude Publica, 2022,38(11):e11422.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36449749/)

[280] Clayton E H, Hanstock T L, Hirneth S J, et al. Long-chain omega-3 polyunsaturated fatty acids in the blood of children and adolescents with juvenile bipolar disorder[J]. Lipids, 2008,43(11):1031-1038.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18781353/)

[281] Clayton E H, Hanstock T L, Garg M L, et al. Long chain omega-3 polyunsaturated fatty acids in the treatment of psychiatric illnesses in children and adolescents[J]. Acta Neuropsychiatr, 2007,19(2):92-103.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26952820/)

[282] Clayton E H, Hanstock T L, Hirneth S J, et al. Reduced mania and depression in juvenile bipolar disorder associated with long-chain omega-3 polyunsaturated fatty acid supplementation[J]. Eur J Clin Nutr, 2009,63(8):1037-1040.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19156158/)

[283] Cao Y, Wei Q, Zou L, et al. Postpartum dietary intake, depression and the concentration of docosahexaenoic acid in mature breast milk in Wuhan, China[J]. Food Funct, 2023,14(5):2385-2391.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36779540/)

[284] Correa C R, Schena C, Lopes S C, et al. Combined effects of caloric restriction and fish oil attenuated anti-depressant and anxiolytic-like effects of fish oil: Association with hippocampal BDNF concentrations[J]. Behav Brain Res, 2020,393:112770.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32561388/)

[285] Rondanelli M, Opizzi A, Antoniello N, et al. Effect of essential amino acid supplementation on quality of life, amino acid profile and strength in institutionalized elderly patients[J]. Clin Nutr, 2011,30(5):571-577.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21636183/)

[286] Weinberg M M. Aminoacetic acid (glycine) in the treatment of depression[J]. J Nerv Ment Dis, 1945,102:601-610.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21007716/)

[287] Javelle F, Lampit A, Bloch W, et al. Effects of 5-hydroxytryptophan on distinct types of depression: A systematic review and meta-analysis[J]. Nutr Rev, 2020,78(1):77-88.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31504850/)

[288] Wong P T, Ong Y P. Acute antidepressant-like and antianxiety-like effects of tryptophan in mice[J]. Pharmacology, 2001,62(3):151-156.[PubMed](https://pubmed.ncbi.nlm.nih.gov/11287816/)

[289] Winston F. Letter: Treatment of unipolar depression[J]. Lancet, 1975,2(7940):868.[PubMed](https://pubmed.ncbi.nlm.nih.gov/53349/)

[290] Autry A E, Adachi M, Nosyreva E, et al. NMDA receptor blockade at rest triggers rapid behavioural antidepressant responses[J]. Nature, 2011,475(7354):91-95.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21677641/)

[291] Popoli M, Yan Z, McEwen B S, et al. The stressed synapse: The impact of stress and glucocorticoids on glutamate transmission[J]. Nat Rev Neurosci, 2011,13(1):22-37.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18425072/)

[292] Sanacora G, Zarate C A, Krystal J H, et al. Targeting the glutamatergic system to develop novel, improved therapeutics for mood disorders[J]. Nat Rev Drug Discov, 2008,7(5):426-437.[PubMed](https://pubmed.ncbi.nlm.nih.gov/18425072/)

[293] Sanacora G, Treccani G, Popoli M. Towards a glutamate hypothesis of depression: An emerging frontier of neuropsychopharmacology for mood disorders[J]. Neuropharmacology, 2012,62(1):63-77.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21827775/)

[294] Sidor M M, Macqueen G M. Antidepressants for the acute treatment of bipolar depression: A systematic review and Meta-analysis[J]. J Clin Psychiatry, 2011,72(2):156-167.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21034686/)

[295] Papakostas G I. Evidence for S-adenosyl-L-methionine (SAM-e) for the treatment of major depressive disorder[J]. J Clin Psychiatry, 2009,70 Suppl 5:18-22.[PubMed](https://pubmed.ncbi.nlm.nih.gov/30359969/)​​

[296] Potter M, Moses A, Wozniak J. Alternative treatments in pediatric bipolar disorder[J]. Child Adolesc Psychiatr Clin N Am, 2009,18(2):483-514.[PubMed](https://pubmed.ncbi.nlm.nih.gov/19264275/)

[297] Yokogoshi H, Wurtman R J. Meal composition and plasma amino acid ratios: Effect of various proteins or carbohydrates, and of various protein concentrations[J]. Metabolism, 1986,35(9):837-842.[PubMed](https://pubmed.ncbi.nlm.nih.gov/3747840/)

[298] Swann O G, Kilpatrick M, Breslin M, et al. Dietary fiber and its associations with depression and inflammation[J]. Nutr Rev, 2020,78(5):394-411.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31750916/)

[299] Kräuchi K, Wirz-Justice A, Graw P. The relationship of affective state to dietary preference: Winter depression and light therapy as a model[J]. J Affect Disord, 1990,20(1):43-53.[PubMed](https://pubmed.ncbi.nlm.nih.gov/2147189/)

[300] Mwamburi D M, Liebson E, Folstein M, et al. Depression and glycemic intake in the homebound elderly[J]. J Affect Disord, 2011,132(1-2):94-98.[PubMed](https://pubmed.ncbi.nlm.nih.gov/21396718/)

[301] Menni C, Jackson M A, Pallister T, et al. Gut microbiome diversity and high-fibre intake are related to lower long-term weight gain[J]. Int J Obes (Lond), 2017,41(7):1099-1105.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28286339/)

[302] Taylor A M, Holscher H D. A review of dietary and microbial connections to depression, anxiety, and stress[J]. Nutr Neurosci, 2020,23(3):237-250.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29985786/)

[303] Kim S, Park S, Choi T G, et al. Role of short chain fatty acids in epilepsy and potential benefits of probiotics and prebiotics: Targeting "health" of epileptic patients[J]. Nutrients, 2022,14(14):2982.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35889939/)

[304] Saghafian F, Sharif N, Saneei P, et al. Consumption of dietary fiber in relation to psychological disorders in adults[J]. Front Psychiatry, 2021,12:587468.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34248690/)

[305] Loughman A, Staudacher H M, Rocks T, et al. Diet and mental health[J]. Mod Trends Psychiatry, 2021,32:100-112.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34032648/)

[306] 张中启, 袁莉, 赵楠, 等. 菊淀粉型六聚糖对鼠强迫性游泳和低速率差式强化程序的影响[J]. 中国药理学通报, 2001,17(2):164-166.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2EhB6Z3lseHRiMjAwMTAyMDEyGghnNDZiOHNkag%3D%3D)

[307] 崔承彬, 杨明, 姚志伟, 等. 中药巴戟天中抗抑郁活性成分的研究[J]. 中国中药杂志, 1995,20(1):36-39.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2Eg5RSzE5OTUwMDYzNTc3OBoIc2xvemU4YTc%3D)

[308] 李云峰, 赵楠, 张有志, 等. 抗抑郁剂作用机制的研究及其在新药研发中的应用[J]. 中国药理通讯, 2004,21(2):12-13.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2Eg5RSzIwMDQwMjY4MzU0MBoINHlnNHFnaDc%3D)

[309] 陈萌, 杨春娟, 郭鹏, 等. 紫苏降糖降脂有效成分及作用机制的研究进展[J]. 中华中医药学刊, 2023,41(3):142-146.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2Eg56eXl4azIwMjMwMzAzMRoIZWpxY3dzenU%3D)

[310] 何育佩, 郝二伟, 谢金玲, 等. 紫苏药理作用及其化学物质基础研究进展[J]. 中草药, 2018,49(16):3957-3968.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2Egx6Y3kyMDE4MTYwMzMaCDJ3dzNkajF4)

[311] 李艳凤, 刘雅舒, 李艳生. 柴胡的化学成分与药理作用研究进展[J]. 西北药学杂志, 2022,37(5):186-192.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2Eg94Ynl4enoyMDIyMDUwMzYaCGh2aGN4cW00)

[312] 刘鹏, 林志健, 张冰. 百合的化学成分及药理作用研究进展[J]. 中国实验方剂学杂志, 2017,23(23):201-211.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2EhJ6Z3N5Zmp4enoyMDE3MjMwMzUaCG9rZnFkZ3ln)

[313] 张丹丹, 李亚妮, 王金龙, 等. 酸枣仁中有效成分抗抑郁作用的实验研究[J]. 山西中医学院学报, 2013,14(5):16-18.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2EhRzaGFueHp5eHl4YjIwMTMwNTAwOBoIdnpqcG95cnc%3D)

[314] Liu Z, Li L, Ma S, et al. High-dietary fiber intake alleviates antenatal obesity-induced postpartum depression: Roles of gut microbiota and microbial metabolite short-chain fatty acid involved[J]. J Agric Food Chem, 2020,68(47):13697-13710.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33151669/)

[315] Chang T T, Lung F W, Yen Y C. Depressive symptoms, cognitive impairment, and metabolic syndrome in community-dwelling elderly in Southern Taiwan[J]. Psychogeriatrics, 2015,15(2):109-115.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25521171/)

[316] Chen Z, Yuan Z, Yang S, et al. Brain energy metabolism: Astrocytes in neurodegenerative diseases[J]. CNS Neurosci Ther, 2023,29(1):24-36.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36193573/)

[317] Cunnane S C, Trushina E, Morland C, et al. Brain energy rescue: An emerging therapeutic concept for neurodegenerative disorders of ageing[J]. Nat Rev Drug Discov, 2020,19(9):609-633.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32709961/)

[318] Trivedi M K, Branton A, Trivedi D, et al. Efficacy of a novel proprietary dietary supplement (TRI 360(TM)) on psychological symptoms and stress-related quality of life in adult subjects: A randomized controlled clinical trial[J]. Front Psychiatry, 2022,13:919284.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36032243/)

[319] Chang J P, Su K P. Nutritional neuroscience as mainstream of psychiatry: The evidence-based treatment guidelines for using omega-3 fatty acids as a new treatment for psychiatric disorders in children and adolescents[J]. Clin Psychopharmacol Neurosci, 2020,18(4):469-483.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33124582/)

[320] Vreijling S R, Penninx B, Bot M, et al. Effects of dietary interventions on depressive symptom profiles: Results from the MooDFOOD depression prevention study[J]. Psychol Med, 2021,52(15):1-10.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33823960/)

[321] Senior A M, Legault V, Lavoie F B, et al. Multidimensional associations between nutrient intake and healthy ageing in humans[J]. BMC Biol, 2022,20(1):196.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36050730/)

[322] Sarris J, Logan A C, Akbaraly T N, et al. Nutritional medicine as mainstream in psychiatry[J]. Lancet Psychiatry, 2015,2(3):271-274.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26359904/)

[323] Kunugi H. Depression and lifestyle: Focusing on nutrition, exercise, and their possible relevance to molecular mechanisms[J]. Psychiatry Clin Neurosci, 2023,77(8):420-433.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36992617/)

[324] Businaro R, Vauzour D, Sarris J, et al. Therapeutic opportunities for food supplements in neurodegenerative disease and depression[J]. Front Nutr, 2021,8:669846.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34055858/)

[325] Sparling T M, Cheng B, Deeney M, et al. Global Mental Health and Nutrition: Moving Toward a Convergent Research Agenda[J]. Front Public Health, 2021,9:722290.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34722437/)

[326] Nogueira-de-Almeida C A, Zotarelli-Filho I J, Nogueirade-Almeida M E, et al. Neuronutrients and Central Nervous System: A Systematic Review[J]. Cent Nerv Syst Agents Med Chem, 2023,23(1):1-12.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36411563/)

[327] Hoepner C T, McIntyre R S, Papakostas G I. Impact of supplementation and nutritional interventions on pathogenic processes of mood disorders: A review of the evidence[J]. Nutrients, 2021,13(3):767.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33652997/)

[328] Woo J, Lynn H, Lau W Y, et al. Nutrient intake and psychological health in an elderly Chinese population[J]. Int J Geriatr Psychiatry, 2006,21(11):1036-1043.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16955432/)

[329] Lim S Y, Kim E J, Kim A, et al. Nutritional Factors Affecting Mental Health[J]. Clin Nutr Res, 2016,5(3):143-152.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27482518/)

[330] Marx W, Moseley G, Berk M, et al. Nutritional psychiatry: the present state of the evidence[J]. Proc Nutr Soc, 2017,76(4):427-436.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28942748/)

[331] Sarris J. Nutritional psychiatry: From concept to the clinic[J]. Drugs, 2019,79(9):929-934.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31114975/)

[332] Grosso G. Nutritional psychiatry: How diet affects brain through gut microbiot[J]. Nutrients, 2021,13(4):1282.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33919680/)

[333] Takahashi S, Maeda T, Sano Y, et al. Active form of vitamin D directly protects the blood–brain barrier in multiple sclerosis[J]. Clin Exp Neuroimmunol, 2017,8(3):244-254.[Wiley](https://onlinelibrary.wiley.com/doi/full/10.1111/cen3.12398)

[334] Liang Q, Cai C, Duan D, et al. Postnatal vitamin D intake modulates hippocampal learning and memory in adult mice[J]. Front Neurosci, 2018,12:141.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29666565/)

[335] Vellekkatt F, Menon V. Efficacy of vitamin D supplementation in major depression: A Meta-analysis of randomized controlled trials[J]. J Postgrad Med, 2019,65(2):74-80.[PubMed](https://pubmed.ncbi.nlm.nih.gov/29943744/)

[336] Xie F, Huang T, Lou D, et al. Effect of vitamin D supplementation on the incidence and prognosis of depression: An updated meta-analysis based on randomized controlled trials[J]. Front Public Health, 2022,10:903547.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35979473/)

[337] Revez J A, Lin T, Qiao Z, et al. Genome-wide association study identifies 143 loci associated with 25 hydroxyvitamin D concentration[J]. Nat Commun, 2020,11(1):1647.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32242144/)

[338] Markun S, Gravestock I, Jager L, et al. Effects of vitamin B12 supplementation on cognitive function, depressive symptoms, and fatigue: A systematic review, meta-analysis, and meta-regression[J]. Nutrients, 2021,13(9233):923.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33809274/)

[339] Klimova B, Novotny M, Valis M. The impact of nutrition and intestinal microbiome on elderly depression-A systematic review[J]. Nutrients, 2020,12(3):710.[PubMed](https://pubmed.ncbi.nlm.nih.gov/32156003/)

[340] Wong C W. Vitamin B12 deficiency in the elderly: Is it worth screening?[J]. Hong Kong Med J, 2015,21(2):155-164.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25756278/)

[341] Sechi G, Sechi E, Fois C, et al. Advances in clinical determinants and neurological manifestations of B vitamin deficiency in adults[J]. Nutr Rev, 2016,74(5):281-300.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27034475/)

[342] Dułak N A, Rytlewska M, Jaskólska M, et al. A new perspective on vitamin B12 deficiency in rheumatology: A case-based review[J]. Rheumatol Int, 2024,44(4):737-741.[PubMed](https://pubmed.ncbi.nlm.nih.gov/38294542/)

[343] Bärebring L, Lamberg-Allardt C, Thorisdottir B, et al. Intake of vitamin B12 in relation to vitamin B12 status in groups susceptible to deficiency: A systematic review[J]. Food Nutr Res, 2023,67.[PubMed](https://pubmed.ncbi.nlm.nih.gov/37441514/)

[344] Yosaee S, Keshtkaran Z, Abdollahi S, et al. The effect of vitamin C supplementation on mood status in adults: A systematic review and meta-analysis of randomized controlled clinical trials[J]. Gen Hosp Psychiatry, 2021,71:36-42.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33932734/)

[345] Brandon A R, Crowley S K, Gordon J L, et al. Nonpharmacologic treatments for depression related to reproductive events[J]. Curr Psychiatry Rep, 2014,16(52612):526.[PubMed](https://pubmed.ncbi.nlm.nih.gov/25308394/)

[346] Freeman M P, Hibbeln J R, Wisner K L, et al. Omega-3 fatty acids: Evidence basis for treatment and future research in psychiatry[J]. J Clin Psychiatry, 2006,67(12):1954-1967.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17194275/)

[347] Soares-Weiser K, Bravo V Y, Beynon S, et al. A systematic review and economic model of the clinical effectiveness and cost-effectiveness of interventions for preventing relapse in people with bipolar disorder[J]. Health Technol Assess, 2007,11(39):206.[PubMed](https://pubmed.ncbi.nlm.nih.gov/17903393/)

[348] Reifman A, Wyatt R J. Lithium: a brake in the rising cost of mental illness[J]. Arch Gen Psychiatry, 1980,37(4):385-388.[PubMed](https://pubmed.ncbi.nlm.nih.gov/7362424/)

[349] Post R M. The new news about lithium: An underutilized treatment in the united states[J]. Neuropsychopharmacology, 2018,43(5):1174-1179.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28976944/)

[350] Yatham L N, Chakrabarty T, Bond D J, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) recommendations for the management of patients with bipolar disorder with mixed presentations[J]. Bipolar Disord, 2021,23(8):767-788.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34599629/)

[351] Zarate C J, Singh J B, Carlson P J, et al. A randomized trial of an N-methyl-D-aspartate antagonist in treatment-resistant major depression[J]. Arch Gen Psychiatry, 2006,63(8):856-864.[PubMed](https://pubmed.ncbi.nlm.nih.gov/16894061/" \t "_new)

[352] Zarate C, Duman R S, Liu G, et al. New paradigms for treatment-resistant depression[J]. Ann N Y Acad Sci, 2013,1292:21-31.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23876043/)

[353] Popper C W. Mood disorders in youth: Exercise, light therapy, and pharmacologic complementary and integrative approaches[J]. Child Adolesc Psychiatr Clin N Am, 2013,22(3):403-441.[PubMed](https://pubmed.ncbi.nlm.nih.gov/23806312/)

[354] Wurtman R J, Wurtman J J. Carbohydrates and depression[J]. Sci Am, 1989,260(1):68-75.[PubMed](https://pubmed.ncbi.nlm.nih.gov/2642626/)

[355] Huang Q, Liu H, Suzuki K, et al. Linking what we eat to our mood: A review of diet, dietary antioxidants, and depression[J]. Antioxidants (Basel), 2019,8(9):376.[PubMed](https://pubmed.ncbi.nlm.nih.gov/31491962/)

[356] Dowlati Y, Meyer J H. Promising leads and pitfalls: A review of dietary supplements and hormone treatments to prevent postpartum blues and postpartum depression[J]. Arch Womens Ment Health, 2021,24(3):381-389.[PubMed](https://pubmed.ncbi.nlm.nih.gov/33205315/)

[357] Schefft C, Kilarski L L, Bschor T, et al. Efficacy of adding nutritional supplements in unipolar depression: A systematic review and Meta-analysis[J]. Eur Neuropsychopharmacol, 2017,27(11):1090-1109.[PubMed](https://pubmed.ncbi.nlm.nih.gov/28988944/)

[358] Sarris J, Murphy J, Mischoulon D, et al. Adjunctive nutraceuticals for depression: A systematic review and meta-analyses[J]. Am J Psychiatry, 2016,173(6):575-587.[PubMed](https://pubmed.ncbi.nlm.nih.gov/27113121/)

[359] Gianfredi V, Dinu M, Nucci D, et al. Association between dietary patterns and depression: An umbrella review of Meta-analyses of observational studies and intervention trials[J]. Nutr Rev, 2023,81(3):346-359.[PubMed](https://pubmed.ncbi.nlm.nih.gov/36240456/)

[360] 高标, 蔡梦宇, 屈易萃, 等. 食物防治抑郁症的研究现状及趋势分析[J]. 食品与生物技术学报, 2022,41(8):53-64.[万方](https://d.wanfangdata.com.cn/periodical/ChlQZXJpb2RpY2FsQ0hJTmV3UzIwMjMxMjI2EhF3eHFnZHh4YjIwMjIwODAwNhoIdGVyd2dscjE%3D)

[361] Strasser B, Gostner J M, Fuchs D. Mood, food, and cognition: role of tryptophan and serotonin[J]. Curr Opin Clin Nutr Metab Care, 2016,19(1):55-61.[PubMed](https://pubmed.ncbi.nlm.nih.gov/26560523/)

[362] Gao B, Qu Y C, Cai M Y, et al. Phytochemical interventions for post-traumatic stress disorder: A cluster co-occurrence network analysis using CiteSpace[J]. J Integr Med, 2023,21(4):385-396.[PubMed](https://pubmed.ncbi.nlm.nih.gov/37380564/)

[363] Ceolin G, Breda V, Koning E, et al. A possible antidepressive effect of dietary interventions: Emergent findings and research challenges[J]. Curr Treat Options Psychiatry, 2022,9(3):151-162.[PubMed](https://pubmed.ncbi.nlm.nih.gov/35496470/)

[364] Xu Y, Zeng L, Zou K, et al. Role of dietary factors in the prevention and treatment for depression: An umbrella review of Meta-analyses of prospective studies[J]. Transl Psychiatry, 2021,11(1):478.[PubMed](https://pubmed.ncbi.nlm.nih.gov/34531367/)

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