

NAC- N-acetylcysteine

Description

N-acetylcysteine (NAC)

NAC replenishes intracellular glutathione, which is lower as we age.

NAC also appears to help prevent & treat COPD, idiopathic pulmonary fibrosis (IPF), cystic fibrosis (CF), emphysema, bronchitis, lower respiratory infections like the flu by stopping the virus & the inflammation, etc, especially as an inhalant.

NAC appears to help against stomach ulcers, liver failure, & acetaminophen toxicity.

NAC appears to improve workout recovery & insulin sensitivity.

NAC appears to prevent & treat cancer at multiple stages in multiple ways.

Studies on COPD used 2.8 grams per day safely & effectively.

Mental health & NAC

NAC is an amino acid that appears to help schizophrenia, autism, Alzheimer's, cocaine and cannabis addiction, bipolar disorder, depression, trichotillomania, nail biting, skin picking, obsessive-compulsive disorder, drug-induced neuropathy and progressive myoclonic epilepsy.

Lee T-M, Lee K-M, Lee C-Y, Lee H-C, Tam K-W, Loh E-W. Effectiveness of N-acetylcysteine in autism spectrum disorders: A meta-analysis of randomized controlled trials. Australian & New Zealand Journal of Psychiatry. 2021;55(2):196-206. doi:10.1177/0004867420952540

journals.sagepub.com/doi/abs/10.1177/0004867420952540?journalCode=anpa

Biol Psychiatry. 2008 Sep 1;64(5):361-8. doi: 10.1016/j.biopsych.2008.03.004. Epub 2008 Apr 23.

N-acetyl cysteine as a glutathione precursor for schizophrenia—a double-blind, randomized, placebo-controlled trial.

Berk M, Copolov D, Dean O, Lu K, Jeavons S, Schapkaitz I, Anderson-Hunt M, Judd F, Katz F, Katz P, Ording-Jespersen S, Little J, Conus P, Cuenod M, Do KQ, Bush AI

J Psychiatry Neurosci. 2011 Mar; 36(2): 78–86.

doi: 10.1503/jpn.100057

PMCID: PMC3044191

N-acetylcysteine in psychiatry: current therapeutic evidence and potential mechanisms of action

Olivia Dean et al.

Neuroscience & Biobehavioral Reviews

Volume 55, August 2015, Pages 294–321

Clinical trials of N-acetylcysteine in psychiatry and neurology: A systematic review

Deepmala et al.

doi:10.1016/j.neubiorev.2015.04.015

Innov Clin Neurosci. 2011 Jan; 8(1): 10–14.

PMCID: PMC3036554

Getting a Knack for NAC

N-Acetyl-Cysteine

Randy A. Sansone and Lori A. Sansone

Depression-

Neuroscience & Biobehavioral Reviews

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flu nac

lifeextension.com/magazine/2010/5/N-Acetyl-Cysteine/Page-01

addiction, compulsive and grooming disorders, schizophrenia and bipolar disorder

J Psychiatry Neurosci. 2011 Mar; 36(2): 78–86.

doi: 10.1503/jpn.100057

PMCID: PMC3044191

N-acetylcysteine in psychiatry: current therapeutic evidence and potential mechanisms of action

Olivia Dean et al.

schizophrenia, bipolar disorder) as well as psychiatric syndromes characterized by impulsive/compulsive symptoms (e.g., trichotillomania, pathological nail biting, gambling, substance misuse

Innov Clin Neurosci. 2011 Jan; 8(1): 10–14.

PMCID: PMC3036554

Getting a Knack for NAC

N-Acetyl-Cysteine

Randy A. Sansone and Lori A. Sansone

Schiz epadha

Transl Psychiatry. 2015 Jan 13;5:e495. doi: 10.1038/tp.2014.134.

Predictors of treatment response in young people at ultra-high risk for psychosis who received long-chain omega-3 fatty acids.

Amminger GP et al.

BMC Psychiatry. 2010 May 26;10:38. doi: 10.1186/1471-244X-10-38.

Dietary intake of fish, omega-3, omega-6 polyunsaturated fatty acids and vitamin D and the prevalence of psychotic-like symptoms in a cohort of 33,000 women from the general population.

Hedelin M, Löf M, Olsson M, Lewander T, Nilsson B, Hultman CM, Weiderpass E.

Schizophr Res. 2003 Aug 1;62(3):195-204.

Supplementation with a combination of omega-3 fatty acids and antioxidants (vitamins E and C) improves the outcome of schizophrenia.

Arvindakshan M1, Ghate M, Ranjekar PK, Evans DR, Mahadik SP

Mol Psychiatry. 2014 Mar;19(3):317-24. doi: 10.1038/mp.2013.7. Epub 2013 Mar 12.

Omega-3 fatty acid supplementation changes intracellular phospholipase A2 activity and membrane fatty acid profiles in individuals at ultra-high risk for psychosis.

Smesny S et al.

Early Interv Psychiatry. 2014 Aug;8(3):199-208. doi: 10.1111/eip.12151. Epub 2014 May 27.

Polyunsaturated fatty acids in emerging psychosis: a safer alternative?

Schlögelhofer M1, Amminger GP, Schaefer MR, Fusar-Poli P, Smesny S, McGorry P, Berger G, Mossaheb N.

Long-chain omega-3 fatty acids for indicated prevention of psychotic disorders: a randomized, placebo-controlled trial.

Amminger GP, Schäfer MR, Papageorgiou K, Klier CM, Cotton SM, Harrigan SM, Mackinnon A, McGorry PD, Berger GE

Arch Gen Psychiatry. 2010 Feb; 67(2):146-54.

Decreased antioxidant enzymes and membrane essential polyunsaturated fatty acids in schizophrenic and bipolar mood disorder patients.

Ranjekar PK, Hinge A, Hegde MV, Ghate M, Kale A, Sitasawad S, Wagh UV, Debsikdar VB, Mahadik SP

Psychiatry Res. 2003 Dec 1; 121(2):109-22.

Hamazaki K, Hamazaki T, Inadera H. Abnormalities in the fatty acid composition of the postmortem entorhinal cortex of patients with schizophrenia, bipolar disorder, and major depressive disorder. Psychiatry Res. 2013;210:346–350. doi: 10.1016/j.psychres.2013.05.006

Prog Neuropsychopharmacol Biol Psychiatry. 2001 Apr;25(3):463-93.

Oxidative stress and role of antioxidant and omega-3 essential fatty acid supplementation in schizophrenia.

Mahadik SP, Evans D, Lal H.

Prog Neuropsychopharmacol Biol Psychiatry. 2007 Oct 1;31(7):1493-9. Epub 2007 Jul 13.

The impact of omega-3 fatty acids, vitamins E and C supplementation on treatment outcome and side effects in schizophrenia patients treated with haloperidol: an open-label pilot study.

Sivrioglu EY1, Kirli S, Sipahioglu D, Gursoy B, Sarandöl E.

gluten schiz

Dickerson F, Stallings C, Origoni A, et al. Markers of gluten sensitivity and celiac disease in recent-onset psychosis and multi-episode schizophrenia. *Biol Psychiatry*. 2010;68(1):100-104.

Dickerson F, Stallings C, Origoni A, et al. Markers of gluten sensitivity and celiac disease in bipolar disorder. *Bipolar Disord*. 2011;13(1):52-58.

Dickerson F, Stallings C, Origoni A, et al. Elevated serum levels of C-reactive protein are associated with mania symptoms in outpatients with bipolar disorder. *Prog Neuropsychopharmacol Biol Psychiatry*. 2007;31(4):952-955.

A Study of Circulating Gliadin Antibodies in Schizophrenia Among a Chinese Population

Shun-Zi Jin et al.

Schizophr Bull. 2012 May; 38(3): 514–518.

Published online 2010 Sep 30. doi: 10.1093/schbul/sbq111

Psychiatr Q. 2012 Mar; 83(1): 91–102.

doi: 10.1007/s11126-011-9186-y

Neurologic and Psychiatric Manifestations of Celiac Disease and Gluten Sensitivity

Jessica R. Jackson

vitamin schiz

CNS Drugs. 2014 Jul;28(7):611-22. doi: 10.1007/s40263-014-0172-4.

Vitamin supplementation in the treatment of schizophrenia.

Brown HE1, Roffman JL.

Author information

Abstract

This article reviews the current literature addressing the treatment of schizophrenia with vitamin supplementation. It describes the important roles that vitamins play in normal metabolism, and reviews

the evidence pertaining to vitamin deficiency and supplementation in patients with schizophrenia. There is mounting evidence suggesting that vitamin supplementation, in particular with folic acid, vitamin B12 and vitamin D,

ala

bp

arteries

Acute Effects of High-Fat Meals Enriched With Walnuts or Olive Oil on Postprandial Endothelial Function

Berenice Cortés, BS^{1,†}; Isabel Núñez, MD[‡]; Montserrat Cofán, PhD[†]; Rosa Gilabert, MD, PhD[‡]; Ana Pérez-Heras, RD[†]; Elena Casals, MD, PhD[§]; Ramón Deulofeu, PhD[§]; Emilio Ros, MD, PhD[†]

[+] Author Information

J Am Coll Cardiol. 2006;48(8):1666-1671. doi:10.1016/j.jacc.2006.06.057

EPA & DHA prostate

Clin Cancer Res. 2009 Apr 1;15(7):2559-66. doi: 10.1158/1078-0432.CCR-08-2503. Epub 2009 Mar 24.

Dietary omega-3 fatty acids, cyclooxygenase-2 genetic variation, and aggressive prostate cancer risk.

Fradet V, Cheng I, Casey G, Witte JS.

JAMA. 2007 Sep 26;298(12):1420-8.

Omega-3 polyunsaturated fatty acid intake and islet autoimmunity in children at increased risk for type 1 diabetes.

Norris JM, Yin X, Lamb MM, Barriga K, Seifert J, Hoffman M, Orton HD, Barón AE, Clare-Salzler M, Chase HP, Szabo NJ, Erlich H, Eisenbarth GS, Rewers M.

kidneys in type I & EPA DHA

Dietary intake of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) and diabetic nephropathy – cohort analysis of the Diabetes Control and Complications Trial (DCCT)

Cheetin C Lee et al.

Diabetes Care. 2010 Jul; 33(7): 1454–1456.

Published online 2010 Mar 31. doi: 10.2337/dc09-2245

type2

Fish-oil supplement has neutral effects on vascular and metabolic function but improves renal function in patients with Type 2 diabetes mellitus

C.-Y. Wong et al.

DOI: 10.1111/j.1464-5491.2009.02869.x

Diabetic Medicine Volume 27, Issue 1, pages 54–60, January 2010

epadah homocysteine

Nutr Metab Cardiovasc Dis. 2010 Jun;20(5):326-31. doi: 10.1016/j.numecd.2009.04.002. Epub 2009 Jun 21.

The efficacy of omega-3 fatty acid supplementation on plasma homocysteine and malondialdehyde levels of type 2 diabetic patients.

Pooya Sh, Jalali MD, Jazayery AD, Saedisomeolia A, Eshraghian MR, Toorang F.

epadha heart attacks

Leaf A. Prevention of sudden cardiac death by n-3 polyunsaturated fatty acids. J Cardiovasc Med. (Hagerstown). 2007; 8 Suppl 1:S27-29.

less heart attack, stroke, sudden cardiac death 50% less

Dietary supplementation with n-3 polyunsaturated fatty acids and vitamin E after myocardial infarction: results of the GISSI-Prevenzione trial. Gruppo Italiano per lo Studio della Sopravvivenza nell'Infarto miocardico. Lancet. 1999; 354:447-55.

Yokoyama M, Origasa H, Matsuzaki M, et al. Effects of eicosapentaenoic acid on major coronary events in hypercholesterolaemic patients (JELIS): a randomised open-label, blinded endpoint analysis. Lancet. 2007; 369:1090-98.

Curr Drug Discov Technol. 2013 Sep;10(3):233-44.

Long-chain omega-3 fatty acid deficiency in mood disorders: rationale for treatment and prevention.

McNamara RK

dha parkinsons

The FASEB Journal • Research Communication

Beneficial effects of dietary omega-3 polyunsaturated fatty acid on toxin-induced neuronal degeneration in an animal model of Parkinson's disease

1. Bousquet et al.

The FASEB Journal Vol. 22 April 2008 pp. 1213-1225

vit d3 type I diabetes

Arch Dis Child. 2008 Jun;93(6):512-7. doi: 10.1136/adc.2007.128579. Epub 2008 Mar 13.

Vitamin D supplementation in early childhood and risk of type 1 diabetes: a systematic review and meta-analysis.

Zipitis CS, Akobeng AK.

zinc increased in depression

Acta Psychiatr Scand. 1990 Dec;82(6):451-3.

Zinc in depressive disorder.

McLoughlin IJ, Hodge JS.

Author information

Abstract

Plasma zinc levels were measured in 14 patients with primary affective disorder on admission to hospital; they were compared with plasma zinc levels in group of 14 age- and sex-matched controls. A significant difference in zinc levels was found between the 2 groups. Plasma zinc levels of 9 of the depressed patients on admission to hospital and at the point of discharge were compared; a significant increase in zinc levels was detected.

zinc suppl reduced depression

J Affect Disord. 2012 Jan;136(1-2):e31-9. doi: 10.1016/j.jad.2011.06.022. Epub 2011 Jul 27.

The efficacy of zinc supplementation in depression: systematic review of randomised controlled trials.

Lai J, Moxey A, Nowak G, Vashum K, Bailey K, McEvoy M

“These nutrients include ?3 fatty acids, antioxidants (vitamin C and zinc), members of the vitamin B family (Vitamin B12 and folic acid) and magnesium. Accumulating data have shown that these nutrients can enhance neurocognitive function, and may have therapeutic benefits for depression and suicidal behaviors. A growing body of studies suggests the intriguing possibility that regular consumption of these nutrients may help prevent the onset of mood disorders and suicidal behaviors in vulnerable individuals, or significantly augment the therapeutic effect of available antidepressants”

The Role of Nutrients in Protecting Mitochondrial Function and Neurotransmitter Signaling: Implications for the Treatment of Depression, PTSD, and Suicidal Behaviors.

Du J, Zhu M, Bao H, Li B, Dong Y, Xiao C, Zhang GY, Henter I, Rudorfer M, Vitiello B.

Bipolar” “St Marks 1st&3rd Thur 7p Val 2-7164 9-1551”

Pre/postnatal herpes, T.gondii

psychodynamic transference focus

splitting

past affecting present

view self & others

good for suicidal & aggress

” “

schema focused 2yrs

abandoned/abused

angry/impulsive

detached protector

punitive parent

guided imagery

assertiveness, role play

2X better than transference in a 2Xweekly 3yr study

dialectical behavior therapy

prob solve, mindful medit, muscle relax, breath train

good for suicidal

default watermark

low dose

NAC- n-acetyl cysteine

^glutathione

online cog same as reg

weekly email, forum w/other people depr

6online lessons, weekly homework

over65 SSRIs ^ death vs tricyclics

” “

lithium effect 2/3rds

bipolar 20X ^ suicides, w/lithium only10X

.6-.8mmol/L safer longterm 4 kidney/renal

quick stop severe risk of mania/depression&suicide

valproate(Depakote)

carbamazepine(Tegretol)

lamotrigene(Lamictal)

“ “

same sleep start & end daily controls bipolar

acute mania antipsych ^ mood stabilizers

best combo effective & tolerable in order- risperidone, olanzapine, haloperidol, quetiapine, carbamazepine

“ “

life review Tx

older & extrovert ^ review of past & narrative Tx

^heart attacks & strokes

celexa QT prolong

“ “

antiepilept drugs no incr suicide

Iran

TMS not as effective as bilateral ECT

default watermark

fast

inj scopolamine

ketamine

“ “

tDCS V depres no seiz or mem loss

leucine, valine, & isoleucine help thinking in people w/bipolar

modafinil helps bipolar not unipolar depr

theanine/gaba/valerian

dbt for bipolar

bipolar school later

brief motiv interv for bioolar med compliance

choline helps lithium

acetyl l carnitine great research depr & bipolar?

kale activating?

NAC Acetylcysteine & inositol & choline & modafinil & vitB100s help bipolar?

avoid bpa

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Category

1. Uncategorized

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Author

biggs