

## Headaches & migraines

### Description

85% reduction in migraines (w just R lipoic acid)

Green light therapy incandescent or no flicker LEDs (test with slow motion video camera setting on phone)

R lipoic acid 300mg after each meal 4x a day (1.2g) or 600mg 2x per day after meal

magnesium threonate

vitamin B complex or high dose vitB2, B9 methyl, B12 methyl (not ethyl)

feverfew

butterbur

Ubiquinol

Nerivio

Neyo

Nigella sativa oil

Noni capsules

Lately multiple people have told me they have killed their migraines repeatedly (even full migraines they wake up to) or prevented an oncoming migraine by taking 300mg or more (as much as needed) of alpha lipoic acid, magnesium (citrate is most common), vitamins B2 (niacin) & B9 (folate). Some people may get better than an 85% reduction by adding the next best studied- coQ10 (ubiquinol may be most effective version), feverfew, & butterbur (treatment) one at a time during the 15% of migraines

that may not be completely eliminated to see in one or a combination will improve response.

Magnesium threonate may be more effective as it is supposed to be better absorbed into the brain but to start the magnesium citrate is what people have been using. Magnesium threonate may also be added to improve the 85% response.

Also I have read that many people say their morning migraines (and sometimes all migraines) are fully prevented with inclined bed therapy (prevention) after they get to six inches elevation.

The more things that are tried increase the chances of getting to 100% suppression/treatment. Usually people try only one new thing at a time every week to every month.

Use this with your own research, and share with your doctor as appropriate.

Saving this to a "Health" folder can help access.

You can use drugs.com or other trusted health websites to look up the latest information on prescription drugs, herbs, foods or other treatments possible side & interaction effects.

Migraines/headaches

Physical devices

Green light treatment

<https://allaylamp.com/blogs/light-reading/green-light-therapy>

The above link has the best explanation & links to research. Red at 670nm & infrared at 820nm triple ATP (energy) production & doubles the speed of healing in my writeup on it, so this may be the real deal, especially green light at 520nm.

Because yellow tinted blue blocking sunglasses (Harbor freight & NAPA auto parts \$2) turn things more green, it's possible they may work for pain as well, and because they block the blue light that increases pain perception. Also \$2!

<https://doi.org/10.1177/0333102420956711>

<https://doi.org/10.1093/pm/pnaa329>

Nerivio cheapest prescription device at often \$0 copays, over 65% effective

<https://virtualheadachespecialist.com/migraine-and-cluster-headache-neuromodulatory-devices-what-are-the-differences-do-they-really-work-and-which-is-best-fo>

Neyo cheapest device at \$40

[Neyo™ Migraine Relief](#)

Vagal nerve stimulation

Occipital nerve stimulation (ONS)

External Trigeminal Nerve Stimulation device (e-TNS) like Cefaly

Russian microcurrent

Frequency specific microcurrent

Transcranial direct current stimulation (tDCS)

Transcranial magnetic stimulation (TMS)

Migraine sunglasses

Acupuncture, acupressure

Biofeedback & meditation

Wim Hof breathing

Binaural beats

Botox- only if 15 headaches a month with at least 8 of them migraines.

What alternatives may help (in order of effectiveness):

Migraine diary- what happened before, what ate

Nerve pain suppressors- R lipoic acid

Opiate receptors (no addiction)- noni

Anti-inflammatories: R lipoic acid, noni, turmeric (with a little black pepper), ginger, astaxanthin, resveratrol, boswellia, papain, bromelain, MSM, nigella sativa, corydalis

Magnesium threonate

Vitamin B complex (high dosage) especially B2, B9 & B12

Vitamin D3 2.5mg (50k) under tongue weekly

feverfew

butterbur

coQ10 (ubiquinol)

Lithium orotate/aspartate

Nigella sativa

ginger

cannabidiol (CBD) oil

essential oils/Aromatherapy

lemon juice, 2tb of Himalayan salt, water

green apples (smell)

celery & cherries

melatonin (for sleep)

exercise

Avoiding dehydration

kudzu

morning glory seeds

Forskohlii

bitterroot

grapeseed extract

dmso is a topical anti-inflammatory that can sometimes help on the temples

willowbark

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mistletoe

nigella sativa/black cumin

potatoe slices soaked in vinegar

peppermint

ginkgo

cayenne

lemon balm

valerian

rosemary

willow bark

Here is a Consumer Reports research article on migraine treatments

<http://www.consumerreports.org/cro/2012/02/know-your-headache/index.htm>

Note that amitriptyline is a level 3 anticholinergic, increases mortality and may cause dementia like symptoms.

[http://www.agingbraincare.org/uploads/products/ACB\\_scale\\_-\\_legal\\_size.pdf](http://www.agingbraincare.org/uploads/products/ACB_scale_-_legal_size.pdf)

Headache dangers

Headaches need attending by a doctor when accompanied by slurred speech, constant pain, blurred vision, dizziness, weakness or paralysis on one side of the body.

Blurred vision, pins & needles, vomiting, and a sudden enormous headache may signal an aneurism-call 911 immediately.

A migraine with an aura indicates a 3.5X higher chance of stroke and increased mortality, especially if using hormonal birth control (the Pill). Let your doctor know & work to lower stroke factors.

Migraines in pregnant women who are obese increase the chances of preclapsia.

### Migraines & heart disease

Women who have migraines have a 50% greater risk of heart disease. Taking care of heart health and aggressively treating & preventing migraines may help.

### Causes of migraines/headaches

The cause of migraines may be mostly genetic, 50% if one-75% if both parents had migraines. If genetic, there is less need for a confirmatory MRI. Migraines can cause visual loss, nausea, dizziness, aura, strokelike symptoms, even without the headache. Inflammatory expansion of blood vessels might cause the pain of some migraines. They usually lessen in severity & intensity at 45-50 yrs.

### Hormones



Migraines can increase by 60% during perimenopause, when hormone levels change and menstrual cycles can become irregular. Hormone replacement with bioidentical hormones may help.

## Mercury

One major cause of migraines is mercury amalgams (often called silver but can be 50% mercury). Here is the protocol for getting them out.

<http://www.naturalhealth365.com/amalgam-mercury-baby-boomers-1643.html>

It's All in Your Head: The Link between Mercury Fillings and Illness by Hal Huggins

Health and Nutrition Secrets by Russell Blaylock, M.D.

The Complete Guide to Mercury Toxicity from Dental Fillings by Joyal Taylor, DDS

Headache triggers-

Nutrasweet(aspartame)

monosodium glutamate-MSG

caffeine/coffee/tea

nitrites in processed meats

cocoa/chocolate

alcohol

citrus fruits

onions

sauerkraut

lentils

tempeh

miso

italian/lima/fava/navy beans

soy

dairy like yogurt, cheese

nuts

red wine

fresh bread

bananas

tomato

tartrazine (yellow food dye)

rye

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It's good to eat organic food you cook yourself to avoid the food additives & food colorings that can trigger headaches.

Environment-light, noise, odors

It's very important to make a list of triggers and rate them in importance. Avoiding triggers is the most important way to prevent future migraines.

Some prescription drugs can cause rebound headaches. Note which ones do when keeping track of triggers.

Often migraine pressure is mistaken for sinus probs, and sometimes sinus problems trigger migraine headaches. Snorting a very small amount of pepper can sometimes relieve sinus headaches.

Sinus headaches may be helped by bromelain, a mucus thinner & anti-inflammatory.

If intranasal contact points are rubbing together in a CT scan & an injected analgesic at that point relieves pain (or lidocaine on qtips up nose held for 15min), then endoscopic surgery cuts frequency/intensity of headaches by half.

Salt & blood pressure

Reducing salt may help reduce headaches in people with moderate to high blood pressure.

BMJ Open 2014. doi:10.1136/bmjopen-2014-006671

Erectile dysfunction medication

Avoiding viagra (sildenafil) may help if headaches occur after orgasm.

Medications & rebound headaches/migraines

Some medications may cause rebound headaches and should be used only for an active migraine.. Medications that cause rebound headaches/migraines appear to be responsible for more migraines than natural causes- they INCREASE the number of migraines over time.

Rebound migraines can be caused by-

#### Triptans

Imitrex (Sumatriptan)

Zomig (Zolmitriptan)

Maxalt (Rizatriptan)

Relpax (Eletriptan)

Treximet (Sumatriptan and Naproxen Sodium Tablets)

Amerge (Naratriptan)

Frova (Frovatriptan)

Axert (Almotriptan)

Sumavel DosePro (sumatriptan)

Zecuity (sumatriptan iontophoretic transdermal system)

<https://migraine.com/migraine-treatment/triptans/>

#### Decongestants

Afrin, Dristan, Vicks Sinex (oxymetazoline)

Sudafed PE, Suphedrin PE (phenylephrine)

Silfedrine, Sudafed, Suphedrin (pseudoephedrine)

<http://www.webmd.com/allergies/decongestants>

#### Ergotamines

Ergotamine- Belcomp-PB, Cafatine PB, Micomp-PB, Ergocomp-PB, Cafergot, Ercaf, Migergot, Wigraine

Dihydroergotamine-Migranal, D.H.E. 45

Narcotics- (inc. Ultram)

Barbituates

Butalbital- Axocet, Bucet, Bupap, Cephadyn, Dolgic, Phrenilin, Phrenilin Forte, Sedapap, Fioricet, Esgic, Esgic-Plus, Axotal, Fiorinal, Fiormor, Fiortal, Fortabs, Laniroif, Fioricet#3 with Codeine, Cafergot-PB

Isometheptene-Amidrine, Midrin

Prescription drugs that may not cause rebound migraines:

Painkillers/anti-inflammatories

NSAIDs & related- aspirin, acetaminophen, naproxen, celecoxib, diclofenac, diflunisal, etodolac, ibuprofen, indomethacin, ketoprofen, ketorolac, nabumetone, oxaprozin, piroxicam, salsalate, sulindac, tolmetin

The NSAIDs may increase heart attacks (except aspirin), ulcers, and strokes

Drugs that lower blood pressure:

Beta blockers-

Propanol (Inderal)

Atenolol

Verapamil-Calan, Verelan, Covera-HS

Anticonvulsants- low dose

Valproate- Convulex, Depakote, Epilim, Stavzor & Topamax

Topiramate- Topamax

Gabapentin-(Neurontin)

Tricyclic antidepressants-

amitriptyline (Elavil)

amoxapine

clomipramine (Anafranil)

desipramine (Norpramin)

doxepin (Sinequan)

imipramine (Tofranil)

nortriptyline (Pamelor)

protriptyline (Vivactil)

trimipramine (Surmontil)

While tricyclics are suspected of being strong anticholinergics, one study shows that the higher the dosage, the less the dementia. Tricyclics may increase mortality in women. Desipramine (Norpramin) may have the lowest anticholinergic effects.

Antidepressant use and risk of adverse outcomes in older people: population based cohort study

BMJ 2011; 343 doi: <https://doi.org/10.1136/bmj.d4551>

J Clin Psychiatry. 2016 Jan;77(1):117-22; quiz 122. doi: 10.4088/JCP.14m09580.

Antidepressant treatment and risk of dementia: a population-based, retrospective case-control study.

Lee CW<sup>1,2</sup>, Lin CL, Sung FC, Liang JA, Kao CH.

Arch Intern Med. 2009 Dec 14;169(22):2128-39. doi: 10.1001/archinternmed.2009.436.

Antidepressant use and risk of incident cardiovascular morbidity and mortality among postmenopausal women in the Women's Health Initiative study.

Smoller JW, Allison M, Cochrane BB, Curb JD, Perlis RH, Robinson JG, Rosal MC, Wenger NK, Wassertheil-Smoller S.

<http://www.medscape.com/viewarticle/790522?pa=Pe4WJplylWLYaSDHtSBuTS5aHzNBkl0hloRgXDUVs>

Serotonin Agonists (5HT)

pizotifen (Sanomigran) and methysergide (Deseril)

Treatment is usually withdrawn

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Prevention and Treatment

Magnesium

Magnesium is #1 for the prevention & treatment of headaches/migraines. Many doctors inject it into their patients if they are having a migraine. The upper limit for doses is usually found when it causes a laxative effect, and studies may indicate benefits start at 600mg a day.

Magnesium can also be used topically for absorption in the form of magnesium oil. The fastest way may be to use DMSO (an anti-inflammatory solvent) first then apply the magnesium oil right after.

<http://www.migrainetrust.org/factsheet-supplements-and-herbs-for-migraine-the-evidence-10897>

Ramadan NM, Halvorson H, Vande-Linde A. Low brain magnesium in migraine. Headache. 1989;29:590–593.

Trautinger A, Pfund Z, Koszegi T, et al. Oral magnesium load test in patients with migraine. Headache. 2002;42: 114–119.

Mauskop A, Altura BM. Role of magnesium in the pathogenesis and treatment of migraine. Clin Neurosci. 1998; 5:24–27.

Mauskop A, Altura BT, Altura BM. Serum ionized magnesium in serum ionized calcium/ionized magnesium ratios in women with menstrual migraine. Headache. 2001;42:242–248.

Facchinetti F, Sances G, Borella P, et al. Magnesium prophylaxis of menstrual migraine: effects on intracellular magnesium. Headache. 1991; 31:298–301.

Peikert A, Wilimzig C, Kohne-Volland R. Prophylaxis of migraine with oral magnesium: results from a prospective, multicenter, placebo-controlled and double-blind randomized study. Cephalalgia. 1996;16:257–263.

Pfaffenrath V, Wessely P, Meyer C, et al. Magnesium in the prophylaxis of migraine—a double-blind placebo-controlled study. Cephalalgia. 1996; 16:436–440.

Vitamin B9 (folate)



High homocysteine levels (perhaps above 8  $\mu\text{mol/L}$ ) appear to increase migraines. Many people (60% of the population, and 90% of people with depression) can't use regular folate well which may contribute to high homocysteine levels. Taking methylfolate (methyl version of vitamin B9) may increase folate blood levels 700% higher than synthetic folate and may reduce homocysteine levels much lower. Lowering homocysteine may also reduce depression, dementia, anxiety, bipolar disorder, schizophrenia, cardiovascular disease, congestive heart failure, stroke, age-related macular degeneration, and hearing loss.

What else lowers homocysteine-

vitamin B6, vitamin B12 (methylcobalamin may be best), betaine (TMG), vitamin B2, and magnesium

n-acetyl L-cysteine (NAC)

S-adenosylmethionine (SAME)

taurine

green vegetables, especially dark green leafy vegetables

oranges

beans

exercise

What to avoid

the prescription drugs cholestyramine, colestipol, fenofibrate, levodopa, metformin, methotrexate, niacin, nitrous oxide, pemetrexed, phenytoin, sulfasalazine

red meat and dairy products

smoking

coffee

alcohol consumption

advancing age

obesity

Reduced B Vitamin Therapy in MTHFR C677T/A1298C Patients with Major Depressive Disorder – Clinical Response Correlates with Homocysteine Reduction: A Double-Blind, Placebo-Controlled Study

Arnie Mech and Andrew Farah

<http://enlyterx.com/wp-content/uploads/2015/11/EnLyte-Clinical-Study-Reprint.pdf>

<https://globenewswire.com/news-release/2015/07/29/756168/10143796/en/Breakthrough-Depression-Study-Shows-42-Remission-Rate-With-EnLyte.html>

<http://www.drweil.com/health-wellness/body-mind-spirit/heart/elevated-homocysteine/>

Riboflavin (vitamin B2)

Taking riboflavin appears to reduce migraine headaches in multiple studies.

Schoenen J, Jacquy J, Lenaerts M. Effectiveness of high-dose riboflavin in migraine prophylaxis. A randomized controlled trial. *Neurology*. 1998; 50:466-470.

Boehnke, C., Reuter, U., Flach, U., Schuh-Hofer, S., Einhäupl, K. M. and Arnold, G. (2004), High-dose riboflavin treatment is efficacious in migraine prophylaxis: an open study in a tertiary care centre. *European Journal of Neurology*, 11: 475–477. doi:10.1111/j.1468-1331.2004.00813.x

Effectiveness of high?dose riboflavin in migraine prophylaxis A randomized controlled trial

J. Schoenen, MD, PhD, J. Jacquy, MD and M. Lenaerts, MD

doi: <http://dx.doi.org/10.1212/WNL.50.2.466>

Neurology February 1998 vol. 50 no. 2 466-470

Maizels, M., Blumenfeld, A. and Burchette, R. (2004), A Combination of Riboflavin, Magnesium, and Feverfew for Migraine Prophylaxis: A Randomized Trial. Headache: The Journal of Head and Face Pain, 44: 885–890. doi:10.1111/j.1526-4610.2004.04170.x

Neurology. 1998 Feb;50(2):466-70.

Effectiveness of high-dose riboflavin in migraine prophylaxis. A randomized controlled trial.

Schoenen J, Jacquy J, Lenaerts M.

Can Fam Physician. 2003 Oct; 49: 1291–1293.

High-dose riboflavin for prophylaxis of migraine.

Corinne Breen, Adrian Crowe, Heather J. Roelfsema, Inderpal Singh Saluja, and Dale Guenter

Vitamin D3

90% of teens & young adults with migraines in one study had low vitamin D3 levels (below 40ng/ml). They also had low riboflavin & coQ10 levels.

<http://www.naturalhealth365.com/migraine-headache-2127.html>

[https://www.eurekalert.org/pub\\_releases/2016-06/cchm-mw060816.php](https://www.eurekalert.org/pub_releases/2016-06/cchm-mw060816.php)

Men with low levels of vitamin D3 in one study (2600 men) reported a 200% higher rate of chronic headaches.

Low serum 25-hydroxyvitamin D is associated with higher risk of frequent headache in middle-aged and older men

Jyrki K. Virtanen, Rashid Giniatullin, Pekka Mäntyselkä, Sari Voutilainen, Tarja Nurmi, Jaakko Mursu, Jussi Kauhanen & Tomi-Pekka Tuomainen

Scientific Reports 7, Article number: 39697 (2017)

doi:10.1038/srep39697

## Feverfew

Feverfew may reduce headaches by lowering inflammation, blood vessel constriction, and serotonin release. Taking a minimum of 250mg daily of the feverfew extract parthenolide may work best.

Johnson ES, Kadam NP, Hylands DM, Hylands PJ. Efficacy of feverfew as prophylactic treatment of migraine. BMJ. 1985; 291:569-573.

Murphy JJ, Heptinstall S, Mitchell JRA. Randomized, double-blind, placebo-controlled trial of feverfew in migraine prevention. Lancet. 1988; 2:189-192

<http://www.migrainetrust.org/factsheet-supplements-and-herbs-for-migraine-the-evidence-10897>

<http://health.howstuffworks.com/wellness/natural-medicine/herbal-remedies/herbal-remedies-for-headaches.htm>

## Butterbur

Butterbur may reduces migraines up to 48%. Butterbur also appears to reduce allergies as well.

Lipton RB, Göbel H, Einhäupl KM, Wilks K, Mauskop A Petasites hybridus root (butterbur) is an effective preventive treatment for migraine. Neurology. 2004 Dec 28;63(12):2240-4.

Diener HC, Rahlfs VW, Danesch U. The first placebo-controlled trial of a special butterbur root extract for the prevention of migraine: reanalysis of efficacy criteria. Eur Neurol. 2004;51:89-97.

Lipton RB, Göbel H, Wilks K, Mauskop A. Efficacy of Petasites (an extract from Petasites rhizoma) 50 and 75 mg for prophylaxis of migraine: results of a randomized, double-blind, placebo-controlled study. Neurology. 2002;58(suppl 3):A472.

Migraine Prevention in Children and Adolescents: Results of an Open Study With a Special Butterbur Root Extract Raymund Pothmann, MD; Ulrich Danesch, PhD (Headache 2005;45:196-203).

[http://articles.mercola.com/sites/articles/archive/2014/06/30/ginger-health-benefits.aspx?e\\_cid=20140630Z1\\_DNL\\_art\\_2&utm\\_source=dnl&utm\\_medium=email&utm\\_content=art2&](http://articles.mercola.com/sites/articles/archive/2014/06/30/ginger-health-benefits.aspx?e_cid=20140630Z1_DNL_art_2&utm_source=dnl&utm_medium=email&utm_content=art2&)

CoQ10 (ubiquinol)

CoQ10 (ubiquinol is the best form) helps the heart & increases energy, and multiple studies show that taking 150mg/day greatly reduces migraines in most.

Open label trial of coenzyme Q10 as a migraine preventive

TD Rozen, ML Oshinsky, CA Gebeline, KC Bradley, WB Young, AL Shechter andSD Silberstein

DOI: 10.1046/j.1468-2982.2002.00335.x

Cephalalgia

Volume 22, Issue 2, pages 137–141, April 2002

Sandor S, Di Clemente L, Coppola G, et al. Efficacy of coenzyme Q10 in migraine prophylaxis: A randomized controlled trial. *Neurology*. 2005; 64:713.

Hershey AD, Powers SW, Vockell AL, Lecates SL, Ellinor PL, Segers A, Burdine D, Manning P, Kabbouche MA. Coenzyme Q10 deficiency and response to supplementation in pediatric and adolescent migraine. *Headache*. 2007 Jan; 47(1):73-80.

<http://www.migrainetrust.org/factsheet-supplements-and-herbs-for-migraine-the-evidence-10897>

Cannabidiol (CBD) oil

CBD oil helps prevent & treat migraines/headaches for some.

Essential oils/Aromatherapy

Essential oils should be organic to ensure safety & reliability. They are just herbs in oil that can usually be inhaled, ingested, or used topically. Because so little is used if just a little is dabbed under the nose, you can go years on just one bottle of the ones that work for you. Ask your friends first if they have any you can try, so you don't have to buy any one until you know it works to help your migraine.

Peppermint oil, lavender oil, eucalyptus oil, & rosemary oil helped headaches in studies, just a drop or two on the forehead and/or under the nose.

<http://draxe.com/essential-oils-for-headaches/>

Essential plant oils and headache mechanisms.

Göbel H, Schmidt G, Dworschak M, Stolze H, Heuss D.

Phytomedicine. 1995 Oct;2(2):93-102. doi: 10.1016/S0944-7113(11)80053-X.

Effect of Eucalyptus Oil Inhalation on Pain and Inflammatory Responses  
after Total Knee Replacement: A Randomized Clinical Trial

Yang Suk Jun et al.

Evid Based Complement Alternat Med. 2013; 2013: 502727.

Published online 2013 Jun 18. doi: 10.1155/2013/502727

Lavender essential oil in the treatment of migraine headache: a  
placebo-controlled clinical trial.

Sasannejad P, Saeedi M, Shoeibi A, Gorji A, Abbasi M, Foroughipour M.

Eur Neurol. 2012;67(5):288-91. doi: 10.1159/000335249. Epub 2012 Apr 17.

Beneficial Effects of Rosmarinus Officinalis for Treatment of Opium  
Withdrawal Syndrome during Addiction Treatment Programs: A Clinical  
Trial

Hassan Solhi et al.

Addict Health. 2013 Summer-Autumn; 5(3-4): 90–94.

PMCID: PMC3905473

[Effectiveness of Oleum menthae piperitae and paracetamol in therapy

of headache of the tension type].

[Article in German]

Göbel H, Fresenius J, Heinze A, Dworschak M, Soyka D.

Nervenarzt. 1996 Aug;67(8):672-81.

Lavender and the Nervous System

Peir Hossein Koulivand, Maryam Khaleghi Ghadiri, and Ali Gorji

Evid Based Complement Alternat Med. 2013; 2013: 681304.

Published online 2013 Mar 14. doi: 10.1155/2013/681304

PMCID: PMC3612440

Alpha lipoic acid (ALA)

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There are 4000 studies on Pubmed & NIH and hundreds of thousands around the world on ALA.

Humans make alpha lipoic acid, but less and less as we get older. Taking ALA, carnitine (an amino acid), vitamin B100 complex, and omega3 fatty acids (spirulina with a vegetable) in three human studies brought down aging markers to much younger levels. ALA appears to help moderate blood sugar and stop diabetes symptoms like peripheral neuropathy. ALA appears to reduce inflammation and chronic pain and migraines/headaches.

The PDR for dietary supplements says ALA has no significant side effects with no known drug interactions (has sulfur).

Studies have used 300mg-2400mg per day. Taking vitamin B6, vitamin E (mixed), vitamin C, omega 3 fatty acids (spirulina with a meal) concurrently may help ALAs effectiveness.

Dr. Richard Becker with Cindy Becker "Your Health" 01/27/17 #1557 The Many Uses of ALA



## Other techniques

wearing a tight, wet headband

swing arms back & forth 100X

hyperbaric oxygen chamber

Inhaling pure oxygen for 5-10min during may help cluster headaches & migraines.

## Vagal nerve stimulation

Noninvasive vagal nerve stimulation after two hours has been shown to reduce migraine pain in 65% and eliminate it in 23%.

Effect of noninvasive vagus nerve stimulation on acute migraine: an open-label pilot study.

Goadsby PJ et al.

Cephalalgia. 2014 Oct;34(12):986-93. doi: 10.1177/0333102414524494. Epub 2014 Mar 7.

Non-invasive vagus nerve stimulation for acute treatment of high-frequency and chronic migraine: an open-label study.

Barbanti P et al.

J Headache Pain. 2015 Dec;16:61. doi: 10.1186/s10194-015-0542-4. Epub 2015 Jun 30.

<http://spectrum.ieee.org/biomedical/devices/the-vagus-nerve-a-back-door-for-brain-hacking>

## Zonisamide

Zonisamide is a seizure reducing medication that also appears to help Parkinson's & Lewy Body disease motor symptoms as well as tardive dyskinesia & migraines.

## Transcranial direct current stimulation (tDCS)

tDCS is used by professional athletes to improve motor coordination (Golden State Warriors), pilots to improve learning, and patients to reduce pain.

tDCS for depression & anxiety is usually done with a small 9 volt battery with a circuit and dial to regulate between 0.5-2milliamps and wires with clips to two small sponges & a headband. The sponges are soaked in salt water (1cup water 1/4 ts salt works) and placed above the left eye around inch & a half above the hairline (positive red clip) at the F3 left dorsolateral prefrontal cortex (DLPFC) about an inch & a half above the hairline above the left eyebrow (the main target for depression) and the other above the right eyebrow (negative black clip). This placement appears to stimulate an area in the brain that is understimulated and understimulate an area that is overstimulated in depression.

People usually start at 0.5 milliamps and within the session or succeeding sessions ramp it up eventually to 2 milliamps, depending on comfort & side effects. I have only noticed a buzz if the sponges are very wet at 2 milliamps. People can use a lower amperage or frequency if they experience side effects. Sponges can get very salty & conduct too strongly if not rinsed off each time.

I bought the kit off ebay for just under \$80, and there are other kits available on the internet & Amazon for more money. If you know someone who has one you can ask them to meet you to try it out & see if it lifts your depression before buying it. Some people start off using it more frequently, then eventually use it less & less & until they find their best maintenance schedule. If you own the kit you can use it whenever you feel you need it, if you aren't experiencing side effects. The clips & sponges last longer if rinsed thoroughly to get rid of the salt, and the battery replacement costs only a couple dollars for an

alkaline.

People who are lefthanded may wish to try this on the other side of the head as well, if the F3 location doesn't work, start with a shorter term so the effects won't be as great if the normal spot doesn't work, and put the cathode (negative, black clamp) on the opposite arm instead of right above the right eyebrow.

tDCS may be safe (but not recommended) up to 60 minutes and 4 mA, but the safe frequency of use has not been fully studied.

Contraindications/dangers are if you have open wounds at the sponge placement, seizures, are pregnant, have metal/implants in your head, have an infection in/on the head. A normal itch & tingle may occur during the treatment. Rarer chances of a headache or skin problems may be reduced with a lower amperage and/or lower frequency.

Clinical Neurophysiology Practice Volume 2, 2017, Pages 19-25

Adverse events of tDCS and tACS: A review

Hideyuki Matsumotoa et al.

Safety aspects of transcranial direct current stimulation concerning healthy subjects and patients

CsabaPoreisz et al.

Brain Research Bulletin Volume 72, Issues 4–6, 30 May 2007, Pages 208-214

<https://doi.org/10.1016/j.brainresbull.2007.01.004>

Antal, A. et al. (June 2017). "Low intensity transcranial electric stimulation: Safety, ethical, legal regulatory and application guidelines". Clinical Neurophysiology. doi:10.1016/j.clinph.2017.06.001.

Usefulness:

It works very fast, reliably, and is inexpensive per treatment. It can be used when needed and on a set schedule. Personally it worked stronger than any other treatment I've used for depression & anxiety, by a large amount. It is like other treatments- if it works for you, add it to your treatments and use them in combination.

Because it doesn't take up to a month or two to work like some of the antidepressant drugs, having it available for immediate use for someone in deep depression &/or suicidal could help save a life if it works for them.

Transcranial direct current stimulation in severe, drug-resistant major depression

R.Ferruccia et al.

Journal of Affective Disorders Volume 118, Issues 1–3, November 2009, Pages 215-219

<https://doi.org/10.1016/j.jad.2009.02.015>

<http://happierhuman.wpengine.netdna-cdn.com/wp-content/uploads/2014/07/Experimental-Neurology-219-2009-14%E2%80%93Treatment-of-depression-with-transcranial-direct-current-stimulation-tDCS-A-Review.pdf>

Exp Neurol. 2009 Sep;219(1):14-9. doi: 10.1016/j.expneurol.2009.03.038. Epub 2009 Apr 5.

Treatment of depression with transcranial direct current stimulation (tDCS): a review.

Nitsche MA, Boggio PS, Fregni F, Pascual-Leone A.

Brain Stimulation Volume 1, Issue 3, July 2008, Pages 206-223

Transcranial direct current stimulation: State of the art 2008.

Michael A.Nitsche et al.

<https://doi.org/10.1016/j.brs.2008.06.004>

Transcranial direct current stimulation for depression: 3-week, randomised, sham-controlled trial

Colleen K. Loo, Angelo Alonzo, Donel Martin, Philip B. Mitchell, Veronica Galvez, Perminder Sachdev

The British Journal of Psychiatry Jan 2012, 200 (1) 52-59; DOI: 10.1192/bjp.bp.111.097634

Kalu, U., Sexton, C., Loo, C., & Ebmeier, K. (2012). Transcranial direct current stimulation in the treatment of major depression: A meta-analysis. *Psychological Medicine*, 42(9), 1791-1800.  
doi:10.1017/S0033291711003059

Transcranial direct current stimulation for major depression: an updated systematic review and meta-analysis

Pedro Shiozawa Felipe Fregni Isabela M. Benseñor Paulo A. Lotufo Marcelo T. Berlim Jeff Z. Daskalakis Quirino Cordeiro André. R. Brunoni

*International Journal of Neuropsychopharmacology*, Volume 17, Issue 9, 1 September 2014, Pages 1539, <https://doi.org/10.1017/S1461145714000807>

What placement may have quicker and stronger effects?

The F3 area an inch and a half above the hairline above the left eyebrow anode (positive, red clip) has also been paired with placing the cathode (negative, black clip) on the right shoulder (extracephalic-outside the head). There isn't as much research, but the effects may be faster & stronger than placing the cathode above the right eyebrow.

Fronto-extracephalic transcranial direct current stimulation as a treatment for major depression: an open-label pilot study.

*J Affect Disord.* 2011 Nov;134(1-3):459-63. doi: 10.1016/j.jad.2011.05.018.

Martin DM, Alonzo A, Mitchell PB, Sachdev P, Gálvez V, Loo CK.

*IEEE Trans Biomed Eng.* 2014 Sep;61(9):2488-98.

Comparison of cephalic and extracephalic montages for transcranial direct current stimulation—a numerical study.

Noetscher GM, Yanamadala J, Makarov SN, Pascual-Leone A.

Hypomania Induction in a Patient With Bipolar II Disorder by Transcranial Direct Current Stimulation (tDCS)

Gálvez, Verónica et al.

Journal of ECT: September 2011 – Volume 27 – Issue 3 – pp 256-258

doi: 10.1097/YCT.0b013e3182012b89

Migraines & tDCS

tDCS stimulation of the primary motor cortex appears to significantly reduce the intensity of migraines in multiple studies.

tDCS-Induced Analgesia and Electrical Fields in Pain-Related Neural Networks in Chronic Migraine

Alexandre F. DaSilva et al.

Headache Volume 52, Issue 8 September 2012 Pages 1283–1295

Reduced Threshold for Inhibitory Homeostatic Responses in Migraine Motor Cortex? A tDCS/TMS Study

Giuseppe Cosentino et al.

Volume 54, Issue 4 April 2014 Pages 663–674

DOI: 10.1111/head.12249

Efficacy of Noninvasive Brain Stimulation on Pain Control in Migraine Patients: A Systematic Review and Meta-Analysis

Livia Shirahige et al.

Headache Volume 56, Issue 10 November/December 2016 Pages 1565–1596

DOI: 10.1111/head.12981

Transcranial magnetic stimulation (TMS)

TMS transcranial magnetic stimulation may successfully treat 1/3rd of migraines when used at the prodromal or early stage

Transcranial Magnetic Stimulation for Migraine: A Safety Review

David W. Dodick MD, Carol T. Schembri MS, Michele Helmuth RN, MN, CANP and Sheena K. Aurora MD

Headache: The Journal of Head and Face Pain

Volume 50, Issue 7, pages 1153–1163, July/August 2010

DOI: 10.1111/j.1526-4610.2010.01697.x

Single-pulse transcranial magnetic stimulation for acute treatment of migraine with aura: a randomised, double-blind, parallel-group, sham-controlled trial

Richard B Lipton et al.

Volume 9, No. 4, p373–380, April 2010

DOI: [http://dx.doi.org/10.1016/S1474-4422\(10\)70054-5](http://dx.doi.org/10.1016/S1474-4422(10)70054-5)

Single-pulse transcranial magnetic stimulation (sTMS) for the acute treatment of migraine: evaluation of outcome data for the UK post market pilot program

Ria Bhola et al.

The Journal of Headache and Pain 2015, 16:51 doi:10.1186/s10194-015-0535-3

<http://www.headachejournal.org/SpringboardWebApp/userfiles/headache/file/Toolboxes/Stimulators%20fo>

## Occipital nerve stimulation (ONS)

ONS may help treat migraines.

Saper J, et al. Occipital nerve stimulation (ONS) for treatment of intractable migraine headache: 3-month results from the ONSTIM feasibility study. American Academy of Pain Medicine. 2009; Abstract 155.

B. Burns, L. Watkins, P. J. Goadsby (2009). Treatment of intractable chronic cluster headache by occipital nerve stimulation in 14 patients Neurology, 72 (4), 341-345 DOI: 10.1212/01.wnl.0000341279.17344.c9

## Cefaly

Cefaly is an External Trigeminal Nerve Stimulator (e-TNS) FDA approved and available by prescription (\$300 at Costco). It seems to help reduce migraines by 30% as a preventative and lower the intensity when used during a migraine attack, at least for a number of months. It has not been tested long term.

[https://www.diditreallywork.com/dirw\\_site/website/cefaly/report1](https://www.diditreallywork.com/dirw_site/website/cefaly/report1)

<http://www.cefaly.us/>

<http://www.blog.migrainepal.com/blog/2014/12/10/cefaly-review-part-two-results-after-2-5-months>

[Pain Med. 2015 Sep; 16\(9\): 1827–1834.](#)

Published online 2015 Jul 14. doi: [10.1111/pme.12792](https://doi.org/10.1111/pme.12792)



Neurostimulation for Treatment of Migraine and Cluster Headache  
[Todd J. Schwedt\\*](#) and [Bert Vargas](#)

Lemon juice, 2tb of Himalayan salt, water

This mixture may reduce migraine pain.

Ginger

The pain-relieving potential of ginger appears to be far-reaching. Along with help for muscle and joint pain, ginger in one study has been found to reduce the severity of migraine headaches as well as the migraine medication Sumatriptan – with fewer side effects.

Phytother Res. 2013 May 9

[http://articles.mercola.com/sites/articles/archive/2014/06/30/ginger-health-benefits.aspx?e\\_cid=20140630Z1\\_DNL\\_art\\_2&utm\\_source=dnl&utm\\_medium=email&utm\\_content=art2&](http://articles.mercola.com/sites/articles/archive/2014/06/30/ginger-health-benefits.aspx?e_cid=20140630Z1_DNL_art_2&utm_source=dnl&utm_medium=email&utm_content=art2&)

Green apples

On study found that for people who like the smell of green apples, it also reduced migraine severity.

Other smells

Smells that may help migraines-

pepper

steamed coriander seeds

lavender

peppermint

green apples

Anti-inflammatories/painkillers

Turmeric (with a little black pepper) & astaxanthin may also help prevents & treat migraines/headaches. The other strong herbal anti-inflammatory painkillers are ginger/resveratrol (Japanese knotwood or Hu Zhang)

Cherries & celery are anti-inflammatories like aspirin without the side effects.

Sleep & melatonin

Melatonin by itself may stop migraines for 25% of people and reduce symptoms in over 80%.

Melatonin also helps sleep. One strategy for getting through migraines faster is to take a combination of dark cherries, melatonin, honey, chamomille, valerian, gaba, theanine, passionflower, hops, and/or any nonaddicting sleep aides to help the brain recover faster from the migraine by sleeping through it.

Dark cherries also have melatonin which helps sleep.

Chamomille and valerian- both help anxiety during the day & sleep at night as well.

## Exercise

Exercise is one of the strongest preventatives. It works against stress and hormone imbalance. Meditation, yoga, & relaxation techniques helps as well. Getting a full and restfull sleep helps prevent migraines.

## Botox

Botox helps migraines, frequent episodic migraines, TMJ related, cluster, cervicogenic & post-traumatic, giving 70% relief. Eye affecting migraines respond to botox over nose bridge, eyebrows, temples.

## Dehydration

People who get headaches can be oversensitive to dehydration. Drinking extra water every 1.5hrs daily decreases pain.

## Acupuncture/acupressure

Acupuncture & acupressure (pressing on the acupuncture spots) often help reduce migraines. In the back of the head below the skull on both sides of the spine are two major nerve centers, & pressing them temporarily relieves headaches. One way to do it is to sit on the edge of a hardbacked chair & use the top of the chair to press on your nerve center points.

## Biofeedback & meditation

Biofeedback & meditation have been shown to reduce headache frequency & intensity.

## Wim Hof breathing

The Wim Hof method- no longer feel cold/hot/stress/autoimmune overreaction

Wim Hof is a Dutch man who learned to become immune to cold, heat, & control his immune response to a strong degree. He has been in ice up to the neck in a tub for almost 2 hours. He has ran a marathon in a desert at 104 degrees with no water or food, and one above the Arctic circle barefoot. He has killed an injected bacteria that should have made him very sick in a medical experiment. Now he is teaching others how to do it, and it only takes one minute a day & people get big benefits after just the first time.

In this link is an explanation of how to do this his way, which includes meditation, a breathing method, and cold exposure:

Here is the simplified one minute a day version-

If you have a heart or lung condition ask your doctor if fast breathing & holding your (non) breath is ok for you. If you are sick you can wait until healthy before starting. Wim Hof wisely recommends only doing this from a secure sitting position for safety and NEVER around water.

What I found important is heavy breathing for oxygenation for 30 breaths/30-60 seconds, then breathing out completely & holding the nonbreath (empty lungs) until my body makes me take a breath (15-30 seconds). It's ok if the first time is only 15 seconds, our ability gets a little better every time.

Wim Hof recommends exercising during the breath holding like pushups or some other exercise on the ground to avoid falling. I do it after eating my rice (carbs) so I have the energy for the exercise, but if people would rather just hold the (empty) breath it appears to work nearly as well. Wim Hof has people do this six times a day, but once a day is fine for the long run.

After I did this once for one minute I was able to be comfortable in my apartment at three degrees colder than ever before for a full day (57 degrees). Every time I do this I am able to experience greater & greater amounts of cold. Wim Hof recommends testing ourselves with cold showers or ice buckets, but I have seen all the benefits without.

I have tested myself by being very comfortable after one week in my apartment in the low 50s for hours. Most people don't like the cold and the knowledge they don't have to do the cold challenge but will still lose their sensitivity to cold makes it more likely they will do the exercise. We know its working when we walk outside in the cold & it doesn't bother us anymore & we don't feel like turning on our car to warm it up anymore.

One funny thing about the ability to endure cold- my knees still don't like long exposure to cold temperatures even if the rest of my body has no problem:-)

Conscious control of cold & heat

Wim Hof suggests paying attention to how the body feels & consciously giving energy to different parts, especially if they are cold. This is supposed to give conscious control of our body temperature. I did this in a sauna when too hot to stay in & thought about being cool inside & I was soon comfortable enough to stay another 40 minutes. Meditating seems to improve the conscious control of body temperature. I've also done this when out in the cold & it works just as well. It may also be useful to breath out & hold an empty breath once or twice whenever feeling too cold, hot, or stressed in order to get immediate relief as well as the long term benefit. Holding (empty) breath after an exhale is also supposed to help cramping when exercising.

### Control of stress

I and others have found that our stress levels have gone down measurably since doing the breathing exercise once a day.

### Autoimmune responses

Wim Hof & the people he trains have been able to kill bacterial infections that should have made them very sick in an experiment after just 90 repetitions. That's three months when doing it once a day. It appears that their bodies are shutting down the overactive immune response to the bacterial infection. Other people have noted their autoimmune disorders (like rheumatoid arthritis) being helped greatly by the breathing method.

<http://www.medicaldaily.com/natural-inflammation-treatment-breathing-exercises-and-ice-baths-may-quell-immune-337890>

<https://www.newscientist.com/article/dn26102-three-ways-the-iceman-controls-his-immune-system/>

[Science Said You Couldn't, but Now it's Proven That You Can Influence Your Immune System at Will](#)

[Wim Hof Method: New Hope for Autoimmune Disease & Rheumatoid Arthritis Sufferers?](#)

Cold exposure?

So I suspect that we get many of the benefits even if we don't do the extreme cold exposure that Wim Hof suggests and that holding our nonbreath/empty lungs is the key. Doing this once a day is easily possible (I do it after eating so I have the energy) and results start immediately, after the first time.

Conscious control over internal temperature

What Wim Hof's suggestion of the extreme cold exposure (explained in the link) coupled with meditating on being warm appears to do is give conscious control over body temperature, especially with practice. We can all use this when we are in a situation we feel cold in.

Migraines

Here's how the method may help prevent migraines. Included is also the most effective way to treat migraines I've ever seen so far (cold pack on neck, feet in hot water).

[3dayheadachecure.com/blog/can-the-iceman-freeze-migraines-forever/](https://3dayheadachecure.com/blog/can-the-iceman-freeze-migraines-forever/)

[3dayheadachecure.com/blog/10-reasons-why-the-wim-hof-method-freezes-migraines/](https://3dayheadachecure.com/blog/10-reasons-why-the-wim-hof-method-freezes-migraines/)

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[3dayheadachecure.com/blog/10-reasons-why-the-wim-hof-method-freezes-migraines](https://3dayheadachecure.com/blog/10-reasons-why-the-wim-hof-method-freezes-migraines)

[reddit.com/r/migraine/comments/3s7jwb/hyperventilation\\_migraine\\_stopped\\_in\\_its\\_tracks/](https://reddit.com/r/migraine/comments/3s7jwb/hyperventilation_migraine_stopped_in_its_tracks/)

Binaural beats for migraines/headaches

For sleep, I use earbuds, headphones, or speakers on each side of the bed plugged into a music player with an mp3 or computer or phone connected to youtube and search for theta binaural beats. I also use apps that have binaural beats. I have used half hour theta beats to help me get to sleep, it works very well for me & other people I've introduced it to, and it makes me feel good for hours after waking up, very calm. If I wake up in the middle of the night I turn the half hour back on again, and it puts me to sleep for hours more.

Binaural beats also significantly reduce anxiety, both at bedtime & during the day. The key is to find what frequency keeps you alert & relaxed during the day. For bedtime I've found the delta frequency (2-3Hz for me), on a 30 minute timer, not only helps sleep but helps to stop anxiety when trying to fall asleep.

The science behind binaural beats



The gamma EEG pattern of cerebral activity as recorded by EEG has a frequency of 17 Hz to 100Hz associated with concentration, alertness, arousal and cognition; the beta frequency at 14-16Hz, the alpha pattern (8–13 Hz) with relaxation, meditation and creativity; the theta pattern (4–8 Hz) with random eye movement (REM) sleep; and the delta EEG pattern (0.1–4 Hz) is associated with deep, dreamless sleep. The Hz of a binaural beat trains the brain to produce a corresponding beat, and the more its used the better the synchronicity between them. Then name of the different frequencies aren't important- experimenting with how the different frequencies affect each individual person is what matters.

In a double blind study of 29 people, binaural beats (16 and 24 Hz) improved performance on a visual vigilance task and subjects had a better mood than people exposed to beats at the theta/delta range (1.5 and 4 Hz) while studying.

#### Binaural Auditory Beats Affect Vigilance Performance and Mood

James D Lane, Stefan J Kasian, Justine E Owens, Gail R Marsh

Physiology & Behavior

Volume 63, Issue 2, January 1998, Pages 249–252

In a study of 108 patients about to undergo surgery, those that listened to a 10 Hz binaural beat had half of the anxiety as those listening to music without the beat.

A prospective, randomised, controlled study examining binaural beat audio and pre-operative anxiety in patients undergoing general anaesthesia for day case surgery

R. Padmanabhan, A. J. Hildreth and D. Laws

Anaesthesia Volume 60, Issue 9, pages 874–877, September 2005

DOI: 10.1111/j.1365-2044.2005.04287.x

In another study people who listened to binaural beats in the delta/theta range had a significant reduction in anxiety.

Use of binaural beat tapes for treatment of anxiety: A pilot study of tape preference and outcomes

Rene-Pierre Le Scouranec; Roger-Michel Poirier; Owens, Justine E; Gauthier, Jules; et al. Alternative Therapies in Health and Medicine 7.1 (Jan 2001): 58-63.

In a small study theta binaural beats increased theta activity in the brain and significantly increased the hypnotic susceptibility of people as measured on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C).

Binaural-Beat Induced Theta EEG Activity and Hypnotic Susceptibility

Brian Brady & Larry Stevens

American Journal of Clinical Hypnosis Volume 43, Issue 1, 2000 pages 53-69

DOI:10.1080/00029157.2000.10404255

Eight people over sixty days listened to a delta binaural beat and experienced decreased anxiety, increased quality of life, and a decrease in insulin-like growth factor and dopamine.

In a blind study (eight participants) of binaural beats' effects on meditation, 7 Hz frequencies were found to enhance meditative focus while 15 Hz frequencies harmed it.

Migraines and binaural beats

For migraines people may find a specific frequency that helps their migraine, and a delta frequency

that lets them sleep through the most difficult parts. A review of binaural beat studies found them effective against cognitive functioning deficits, stress, pain, headache/migraines, PMS, and behavioral problems.

A comprehensive review of the psychological effects of brainwave entrainment.

Huang TL, Charyton C.

Altern Ther Health Med. 2008 Sep-Oct;14(5):38-50.

## Herbal Remedies for Headaches

<http://health.howstuffworks.com/wellness/natural-medicine/herbal-remedies/herbal-remedies-for-headaches.htm>

## Kudzu for cluster headaches & migraines

Kudzu may help increase cerebral blood flow & reduce the intensity of cluster headaches & migraines at 1.5g 3x/day.

<http://www.reuters.com/article/us-cluster-headache-kudzu-idUSTRE51162Y20090202>

<https://www.healthy.co.nz/ailment/2056-kudzu-alcoholism-migraines.html>

<http://www.curezone.org/forums/am.asp?i=1469273>

## Morning glory seeds

Morning glory seeds may help cluster headaches.

Forskohlii

Forskohlii may help migraines. It may be far more effective if taken with artichoke concentrate.

<http://www.curezone.org/forums/am.asp?i=1531562>

Other herbs that may help:

bitterroot

grapseed extract

dmso is a topical anti-inflammatory that can sometimes help on the temples

willowbark

mistletoe

nigella sativa/black cumin

potatoe slices soaked in vinegar

peppermint

ginkgo

cayenne

lemon Balm

valerian

rosemary

default watermark

willow bark

<http://www.getholistichealth.com/53253/how-lemon-juice-with-himalayan-sea-salt-can-stop-migraine-headache-within-minutes/>

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