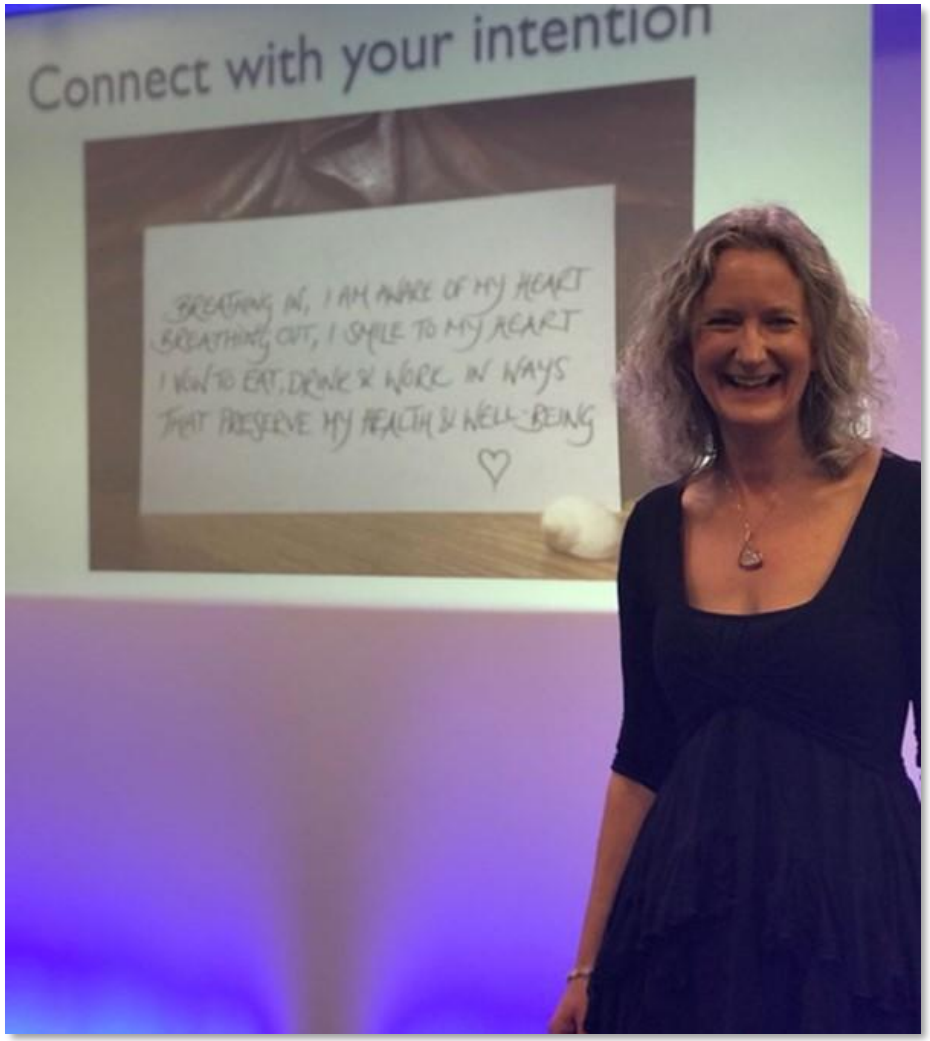
Pharma Nord
Academy

Nutrition for Headaches and Migraines

Webinar – 30th Sept 2025





Today's Speaker

Katie Sheen

FdSc, Dip.ION, PGCert, MA Ed

Registered Nutritional Therapist (CNHC)

- Teaching post graduate nutritional education since 2009
- Private practice at Amaranth in Cheshire – winner of CAM Clinic of the Year 2010
- Began weaving mindfulness into nutritional protocols from 2011, whilst Module Leader for MSc Nutritional Therapy at University of Worcester
- Contributing author 'Tears Become Rain' & ION's 'Colourful Kitchen Collection' cookbook

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Today's agenda

1. Setting the scene with stats
2. ATMs for headaches & migraines
3. Dietary strategies
4. Key nutrients & formulations
5. Q & A

Prevalence of Headache Disorders

- Affect approx. 40% global population
  - Despite some regional variations they affect people of all races, income levels and geographical areas
- According to Global Health Estimates 2019, headache disorders are 3rd highest cause of disability-adjusted life years (DALYs) worldwide, after stroke & dementia



WHO (2024) *Migraine and other headache disorders* https://www.who.int/news-room/fact-sheets/detail/headache-disorders

Prevalence of Migraine

- Affects 10% world population
- In younger children both sexes are affected equally, with 2.7% to 10% younger children experiencing migraine
- As children get older oestrogen affects more females, & migraine prevalence changes to 12−17% females, 4-7% males
    - mechanisms unclear, but oestrogen can have direct effect on pain pathways & believed to be ***fluctuations*** in oestrogen that trigger migraine



Sudershan A, Mahajan K, Singh K, Dhar MK, Kumar P. The complexities of migraine: A debate among migraine researchers: A review. *Clin Neurol Neurosurg*. 2022;214:107136
Migraine Trust (2025) *Migraine and Hormones* https://migrainetrust.org/live-with-migraine/migraine-and-hormones
Khandelwal S, Meeta M, Tanvir T. Menopause hormone therapy, migraines, and thromboembolism. *Best Pract Res Clin Obstet Gynaecol*. 2022;81:31-44

Causes & Contributory Factors for Headaches



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Causes of Secondary Headaches

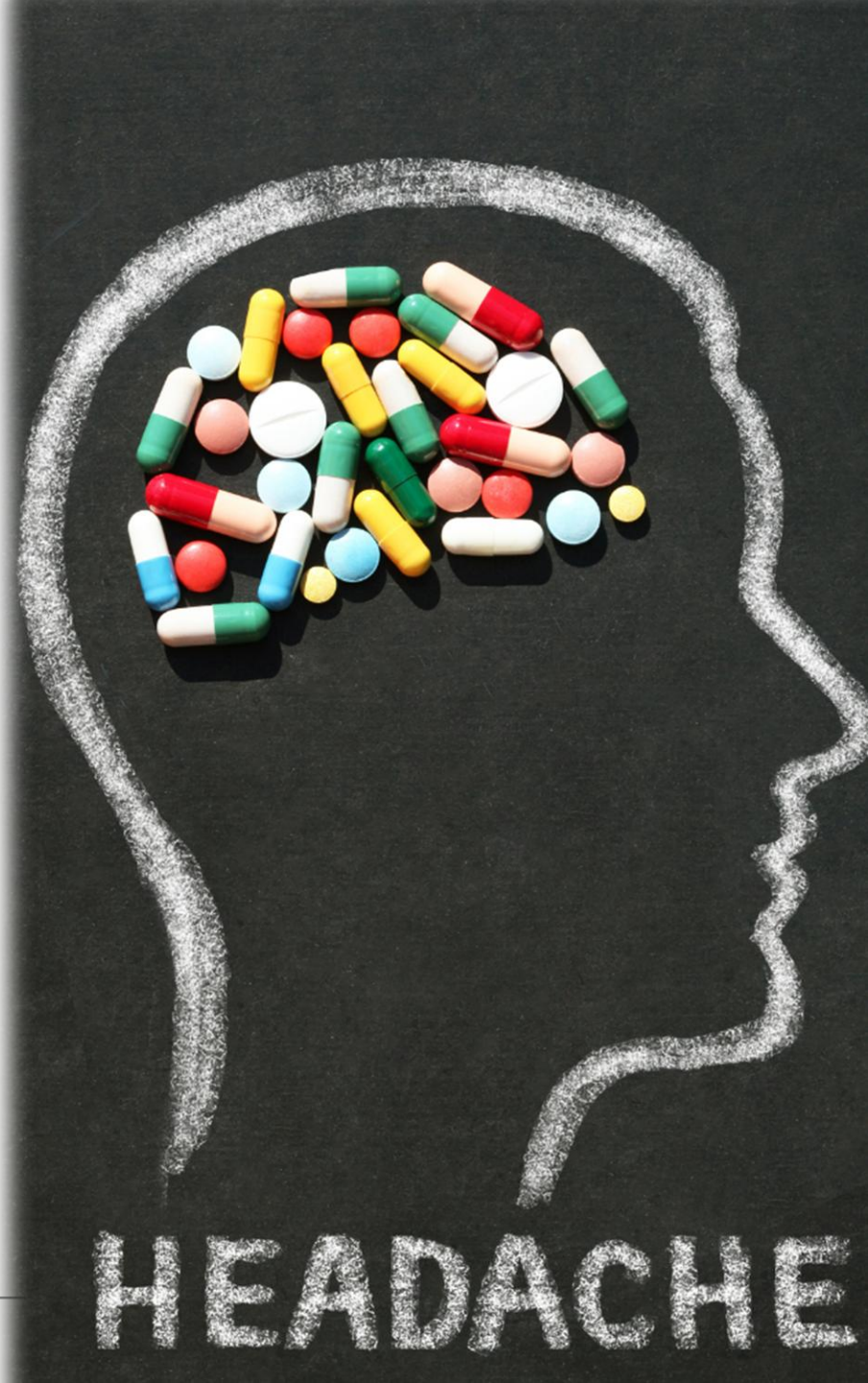
Headaches can be caused by, or occur secondarily to, a long list of conditions, the most common of which are:

- having a cold or flu
- stress
- bad posture
- eyesight problems
- menstruation or menopause
- not eating regular meals
- not drinking enough fluids (dehydration)
- drinking too much alcohol
- taking too many painkillers (medication-overuse headache)

NHS (2025) *Headaches* https://www.nhs.uk/conditions/headaches/

Medication-overuse Headache (MOH)

- Most common *secondary* headache disorder: called “rebound headache”
- Occurs on more days than not
- Oppressive, persistent & often at its worst on awakening
- May affect up to 5% of some populations, women more than men
- Caused by chronic & excessive use of painkillers to treat headache

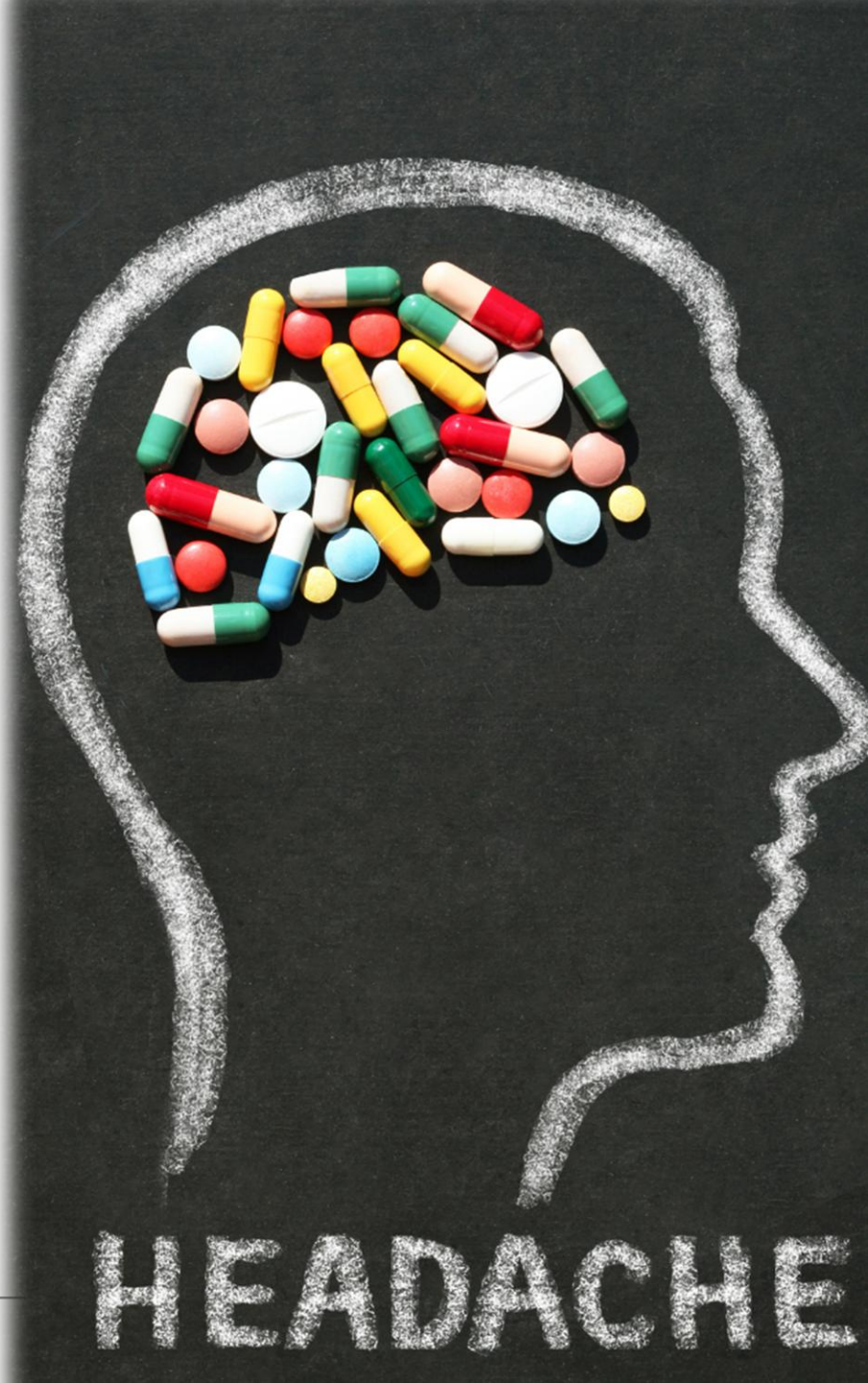


WHO (2024) *Migraine and other headache disorders* https://www.who.int/news-room/fact-sheets/detail/headache-disorders

Medication-overuse Headache (MOH)

Overuse of painkillers can turn an episodic headache into a chronic daily headache, or worsen an already existing daily headache, in approx. 3 consecutive months of overuse

- Any painkiller can produce this effect when used >15 days per month
- Happens quicker with codeine, opiate based drugs, or triptans, which need only 10 days per month to produce this effect

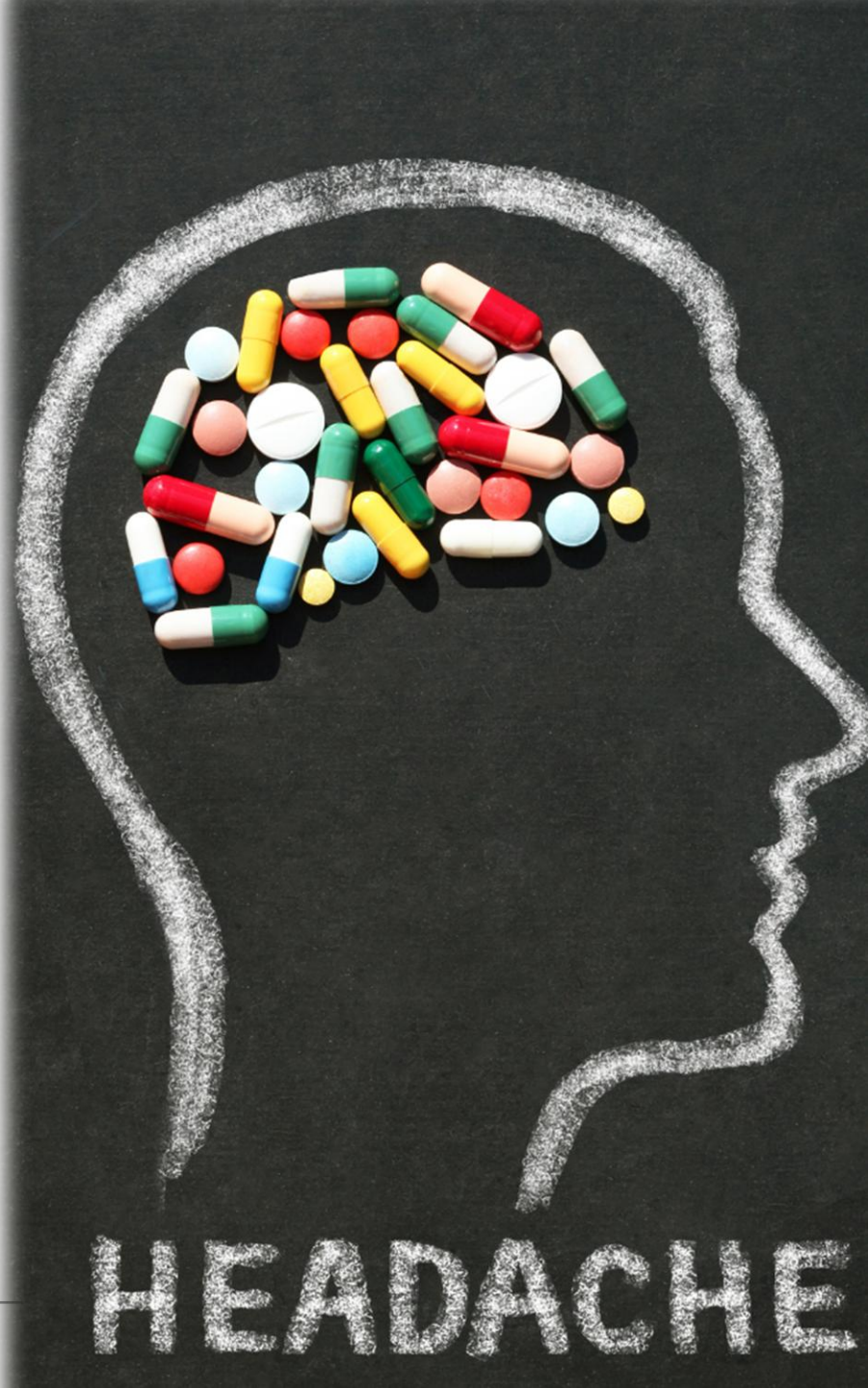


NHS (2022) *Medication Overuse Headache Information sheet*
https://www.swbh.nhs.uk/wp-content/uploads/2023/12/Neurology-Medication-Overuse-Headache-information-sheet-ML6724.pdf

MOH Management

> 50% people enjoy significant improvement after 8-week period of medically supervised withdrawal from all pain relief medication (opiates need a more gradual withdrawal)

- Symptoms likely to get worse before they improve, so need good support in place
- Can then use painkillers for no more than 2 days per week, or max.10 days per month
- Avoid excessive caffeine, which promotes MOH by increasing the absorption of painkillers



NHS (2022) *Medication Overuse Headache Information sheet*
https://www.swbh.nhs.uk/wp-content/uploads/2023/12/Neurology-Medication-Overuse-Headache-information-sheet-ML6724.pdf

Caffeine – positive impact

Improves absorption of pain relief medication:

- Caffeine alone or in combination with paracetamol has analgesic effects for some types of headaches
- For tension-type headaches (TTHs) or migraines, randomized trials indicate that oral caffeine, when combined with other analgesics, is effective at doses ranging from 100mg to 200mg



Narrows blood vessels, reducing pressure & hence pain:

- Even a single dose of 200mg caffeine alone can provide relief for some TTHs
- For other headache types such as hypnic headache (rare type that wakes you up in the night), caffeine has been identified as the most effective *acute* treatment

Migraine Trust (2025) *Hypnic Headache* https://migrainetrust.org/understand-migraine/types-of-migraine/other-headache-disorders/hypnic-headache/
Tu YH, Chang CM, Yang CC, Tsai IJ, Chou YC, Yang CP. Dietary Patterns and Migraine: Insights and Impact. *Nutrients*. 2025;17(4):669

Caffeine – negative impact

- Daily coffee consumption implicated in development of MOH
- Caffeine may be a migraine trigger, as well as contributing to development of *chronic* migraine



It can also manifest in **caffeine withdrawal syndrome**, which closely mimics migraine symptoms:

- If daily caffeine intake > 200mg (2-3 cups instant/ground coffee) & persists for > 2 weeks, interruption or delay of caffeine intake may lead to caffeine withdrawal headaches within 24 hours
- Headache is relieved within 1 hour by intake of caffeine 100mg

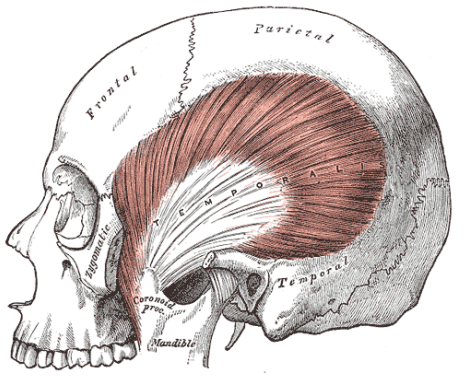
➢ Caffeine withdrawal headache should resolve spontaneously within 7 days in absence of further consumption of caffeine

The International Classification of Headache Disorders 3rd edition (ICHD-3) 8.3.1 (2025) *Caffeine Withdrawal Headache*
Tu YH, Chang CM, Yang CC, Tsai IJ, Chou YC, Yang CP. Dietary Patterns and Migraine: Insights and Impact. *Nutrients*. 2025;17(4):669
Wierzejska RE, Gielecińska I. Evaluation of the Caffeine Content in Servings of Popular Coffees in Terms of Its Safe Intake-Can We Drink 3-5 Cups of Coffee per Day, as Experts Advise?. *Nutrients*. 2024;16(15):2385

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Caffeine mechanisms

- Regarding caffeine withdrawal, abstinence has been shown to increase **cerebral blood flow** velocities:
  - since caffeine narrows the blood vessels that surround your brain, when you stop using it they expand again, causing pain
- Elevates **glutamate** levels, associated with increased **mechanical sensitization of nociceptors** in temporalis muscle, by inhibiting excitatory amino acid transporter type 3
- Competitively antagonizes adenosine A2A receptors, known to potentiate **CGRP**-induced pain signalling
- Diuretic effect can cause **dehydration**: potential migraine trigger
  - …also promotes urinary **magnesium** loss, which may contribute to headache development



temporalis muscle

Tu YH, Chang CM, Yang CC, Tsai IJ, Chou YC, Yang CP. Dietary Patterns and Migraine: Insights and Impact. *Nutrients*. 2025;17(4):669

Focus on Migraines



Migraine

- Headache of moderate or severe intensity, often one-sided or behind the eye, pulsating, & aggravated by routine physical activity
- Usually lasts 4–72 hours, accompanied by nausea, vomiting &/or photophobia & phonophobia & sometimes preceded by an “aura”
- Characterized by recurring attacks, & is often a life-long disorder
- Children typically experience migraine of shorter duration, & abdominal symptoms are usually more prominent



Episodic migraine (EM):

<15 headache days per month

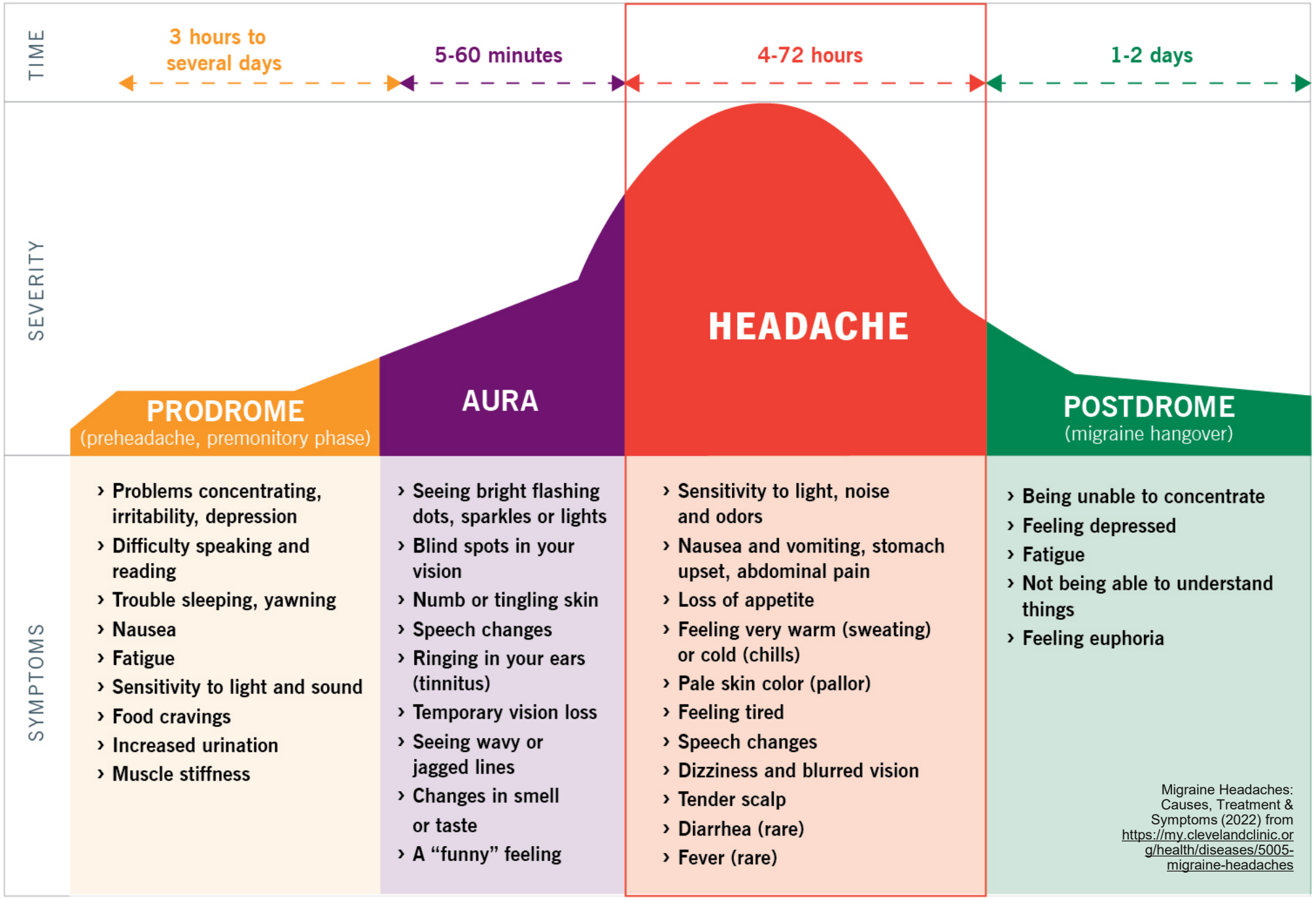
Chronic migraine (CM):

15 or more headache days per month, for > 3 months

WHO (2024) *Migraine and other headache disorders* https://www.who.int/news-room/fact-sheets/detail/headache-disorders
Sudershan A, Mahajan K, Singh K, Dhar MK, Kumar P. The complexities of migraine: A debate among migraine researchers: A review. *Clin Neurol Neurosurg*. 2022;214:107136

Four Phases of a Migraine

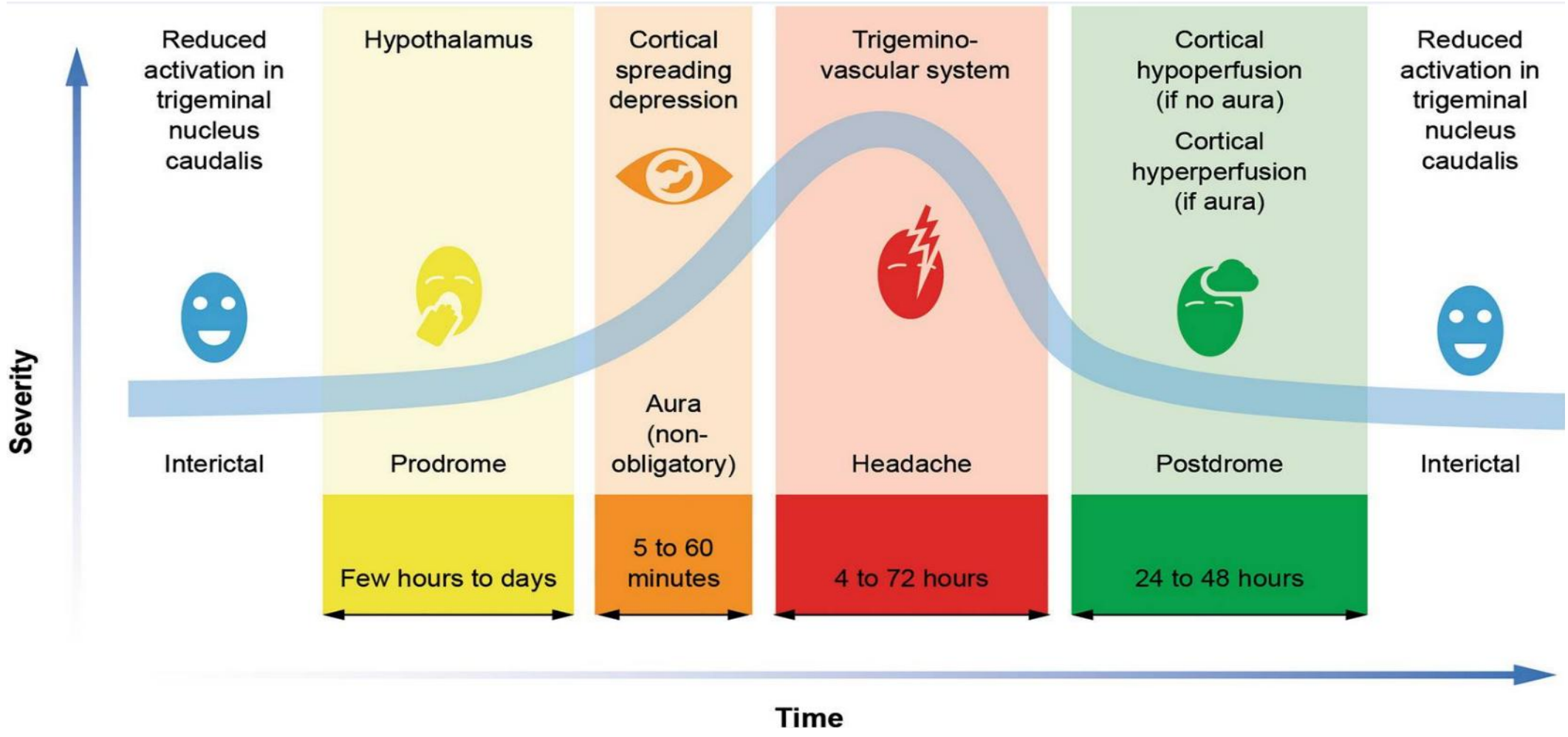
Not all phases are necessarily experienced by everyone with migraines



Migraine Headaches: Causes, Treatment & Symptoms (2022) from https://my.clevelandclinic.org/health/diseases/5005-migraine-headaches

21-NEU-2074429

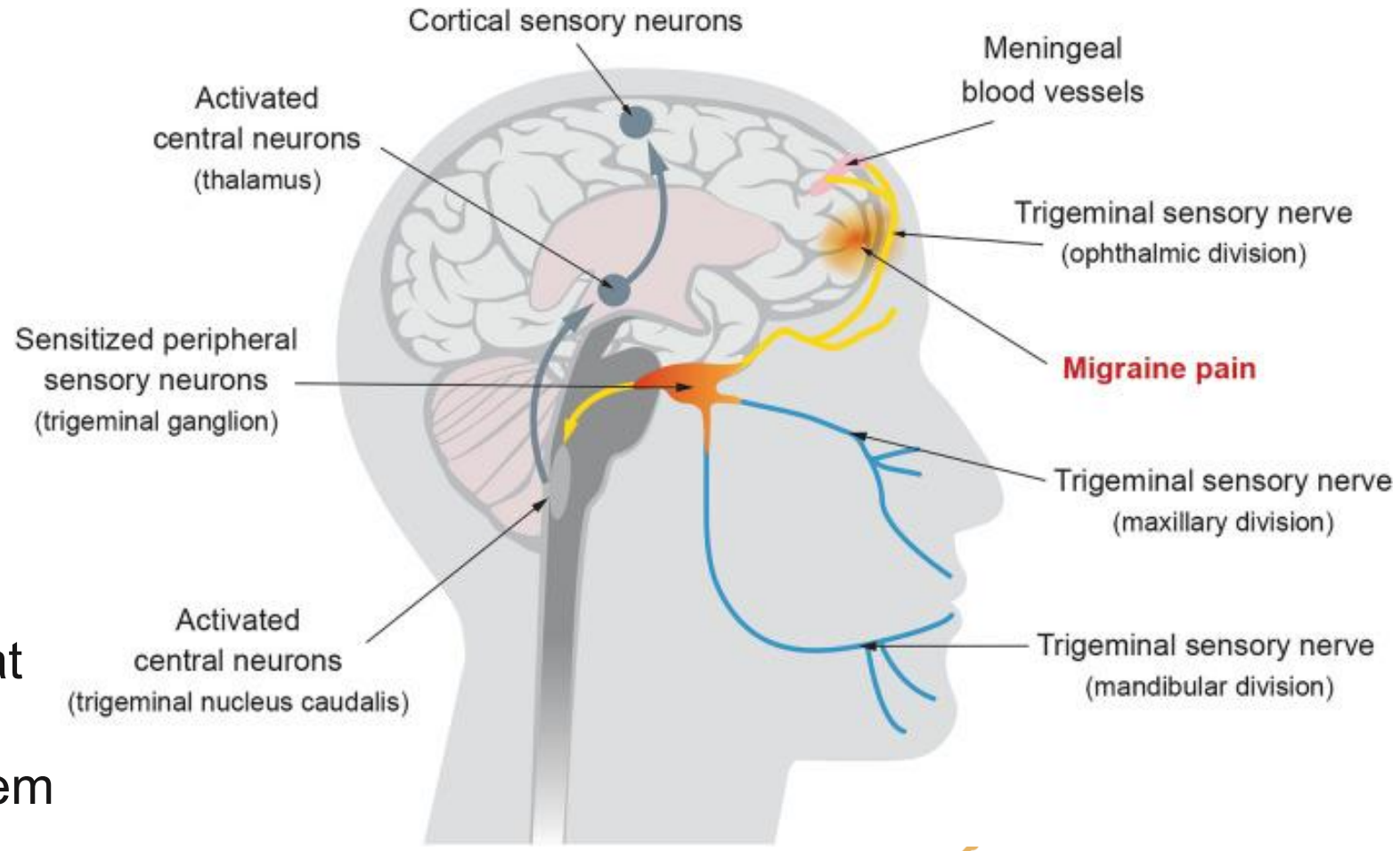
Physiological Phases of a Migraine



Blumenfeld A. et al. Hypervigilance, Allostatic Load, and Migraine Prevention: Antibodies to CGRP or Receptor. *Neurol Ther.* 2021;10(2):469-497

Trigeminovascular (TVS) system

- Activation of TVS → increased release of calcitonin gene-related peptide (CGRP)
- CGRP binds smooth muscle cell receptors, dilating blood vessels supplying the brain
- CGRP also binds to peripheral nerve cells that transmit pain signals throughout nervous system



Blumenfeld A. et al. Hypervigilance, Allostatic Load, and Migraine Prevention: Antibodies to CGRP or Receptor. *Neurol Ther*. 2021;10(2):469-497
Al-Hassany L, et al Calcitonin gene-related peptide-targeting drugs for migraine: how pharmacology might inform treatment decisions. *Lancet Neurol*. 2022;21(3):284-294
Ashina M, Hansen JM, Do TP, Melo-Carrillo A, Burstein R, Moskowitz MA. Migraine and the trigeminovascular system-40 years and counting. *Lancet Neurol*. 2019;18(8):795-804

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Migraine Pathogenesis

- genetic predispositions
- hormonal fluctuations
- elevated homocysteine levels
- obesity
- modifications in cerebral blood circulation
- neuroinflammatory processes
- mitochondrial impairment
- neural damage within the brain

Additional contributing factors

- increased concentrations of specific neuropeptides, particularly CGRP & nitric oxide (NO)
- deficiencies in vit D, CoQ10, Mg, B2
- reduced serotonin synthesis by platelets
- disruptions in gut–brain axis
- enhanced production of noradrenaline
- involvement of various ion channels

How might nutrition help?

- correcting nutrient deficiencies
- reducing levels of CGRP
- reducing homocysteine
- balancing hormones
- improving mitochondrial function
- enhancing neuroprotection
- regulating vascular tone
- inhibiting oxidative stress & neuroinflammation

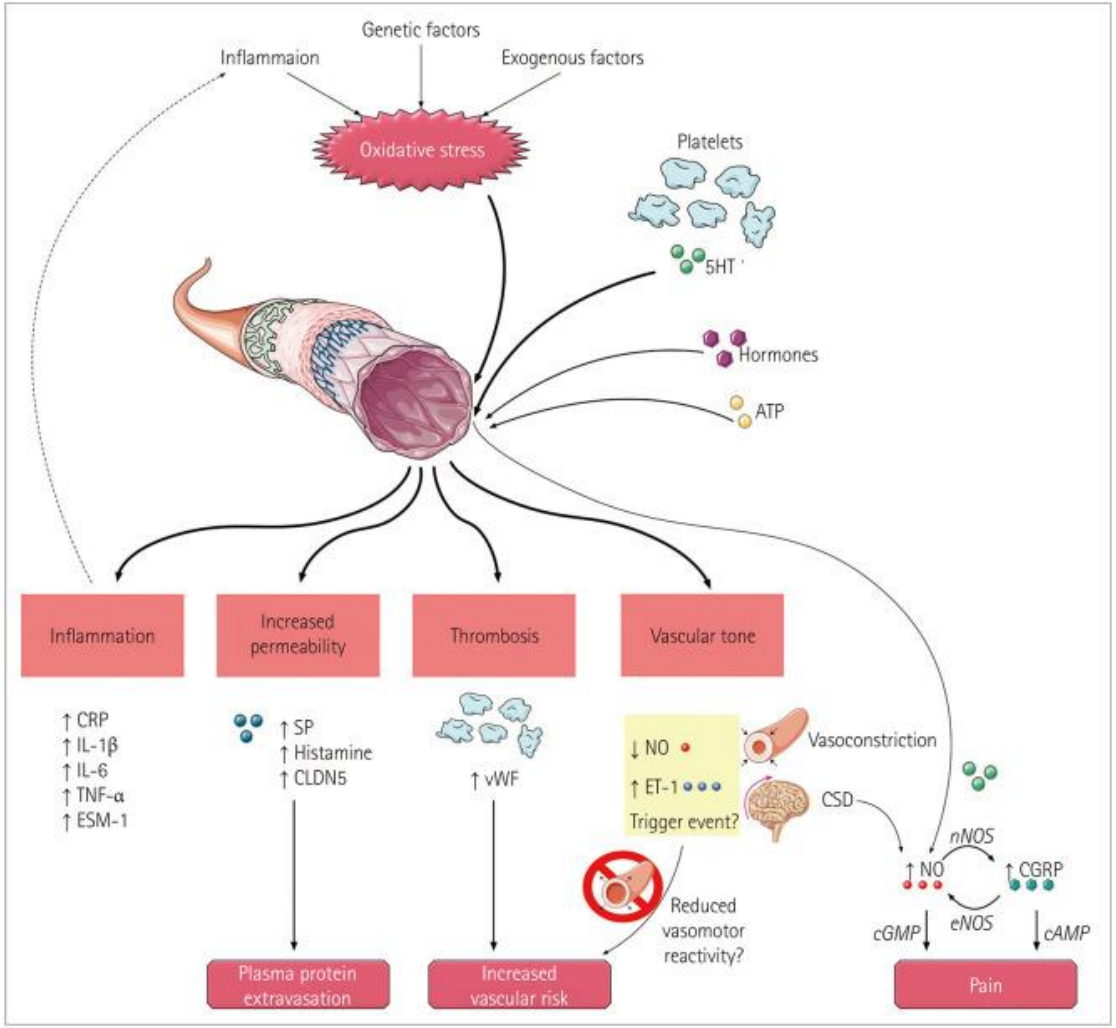
Behrouz V, Hakimi E, Mir E. Impact of Dietary Patterns on Migraine Management: Mechanisms of Action and Recent Literature Insights. *Brain Behav*. 2025;15(7):e70652
Sudershan A, et al The complexities of migraine: A debate among migraine researchers: A review. *Clin Neurol Neurosurg*. 2022;214:107136
Sazali S, Badrin S, Norhayati MN, Idris NS. Coenzyme Q10 supplementation for prophylaxis in adult patients with migraine-a meta-analysis. *BMJ Open*. 2021;11(1):e039358

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Endothelial dysfunction in migraine

2021 narrative review of 115 articles concluded that despite lack of specific biomarkers, there is evidence of **oxidative stress & inflammation** - two of the primary causes of endothelial damage - in migraine (especially migraine with aura), resulting in:

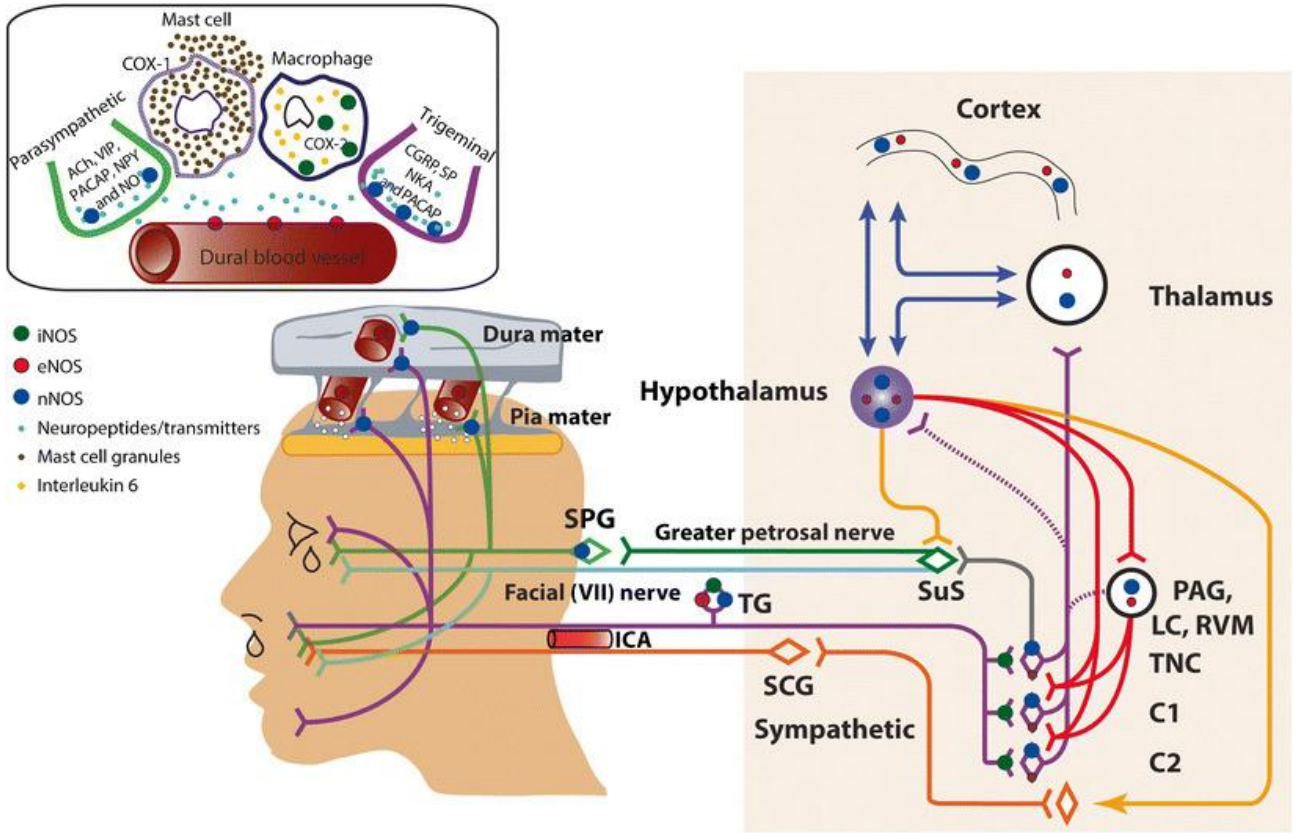
- Increased vascular tone
- Thrombosis
- Inflammation
- Increased vascular permeability



Paolucci M, et al The Role of Endothelial Dysfunction in the Pathophysiology and Cerebrovascular Effects of Migraine: A Narrative Review. *J Clin Neurol*. 2021;17(2):164-175

Nitric oxide (NO)

- Formed from arginine, but release may be stimulated by tyramine
- Key mediator in migraines; regulates neurotransmission & increases vasodilation
- NO levels increase in jugular venous plasma (vein in the neck) during a migraine attack, & stimulates release of neuropeptides such as CGRP
  - Thus triggering neuroinflammation (mast cell activation, IL-6 etc)



Pradhan AA, Bertels Z, Akerman S. Targeted Nitric Oxide Synthase Inhibitors for Migraine. *Neurotherapeutics*. 2018;15(2):391-401
Messlinger K, Lennerz JK, Eberhardt M, Fischer MJ. CGRP and NO in the trigeminal system: mechanisms and role in headache generation. *Headache*. 2012;52(9):1411-1427.
Al-Hassany L, et al Calcitonin gene-related peptide-targeting drugs for migraine: how pharmacology might inform treatment decisions. *Lancet Neurol*. 2022;21(3):284-294

Migraine Triggers

"Beyond serving as triggering factors, specific dietary patterns may potentially mitigate the occurrence of migraine attacks"

Tu YH, Chang CM, Yang CC, Tsai IJ, Chou YC, Yang CP. Dietary Patterns and Migraine: Insights and Impact. *Nutrients*. 2025;17(4):669

Alcohol

Amines

Anxiety

Bright lights

Caffeine

Certain medications

Dehydration

Depression

Excitement

Flickering screens

Hormonal changes

HRT

Hypoglycaemia

Jet lag

Loud noises

Neck or shoulder tension

Poor posture

Poor quality sleep

Shift work

Shock

Sleeping medication

Smoking

Specific foods / dietary patterns

Strenuous exercise

Stress / allostatic load

Strong smells

Tension

Tiredness

Weather changes

Cleveland Clinic (2022) *Migraine Headaches: Causes, Treatment & Symptoms*. https://my.clevelandclinic.org/health/diseases/5005-migraine-headaches

Hindiyeh NA, Zhang N, Farrar M, Banerjee P, Lombard L, Aurora SK. The Role of Diet and Nutrition in Migraine Triggers and Treatment: A Systematic Literature Review. *Headache*. 2020;60(7):1300-1316.

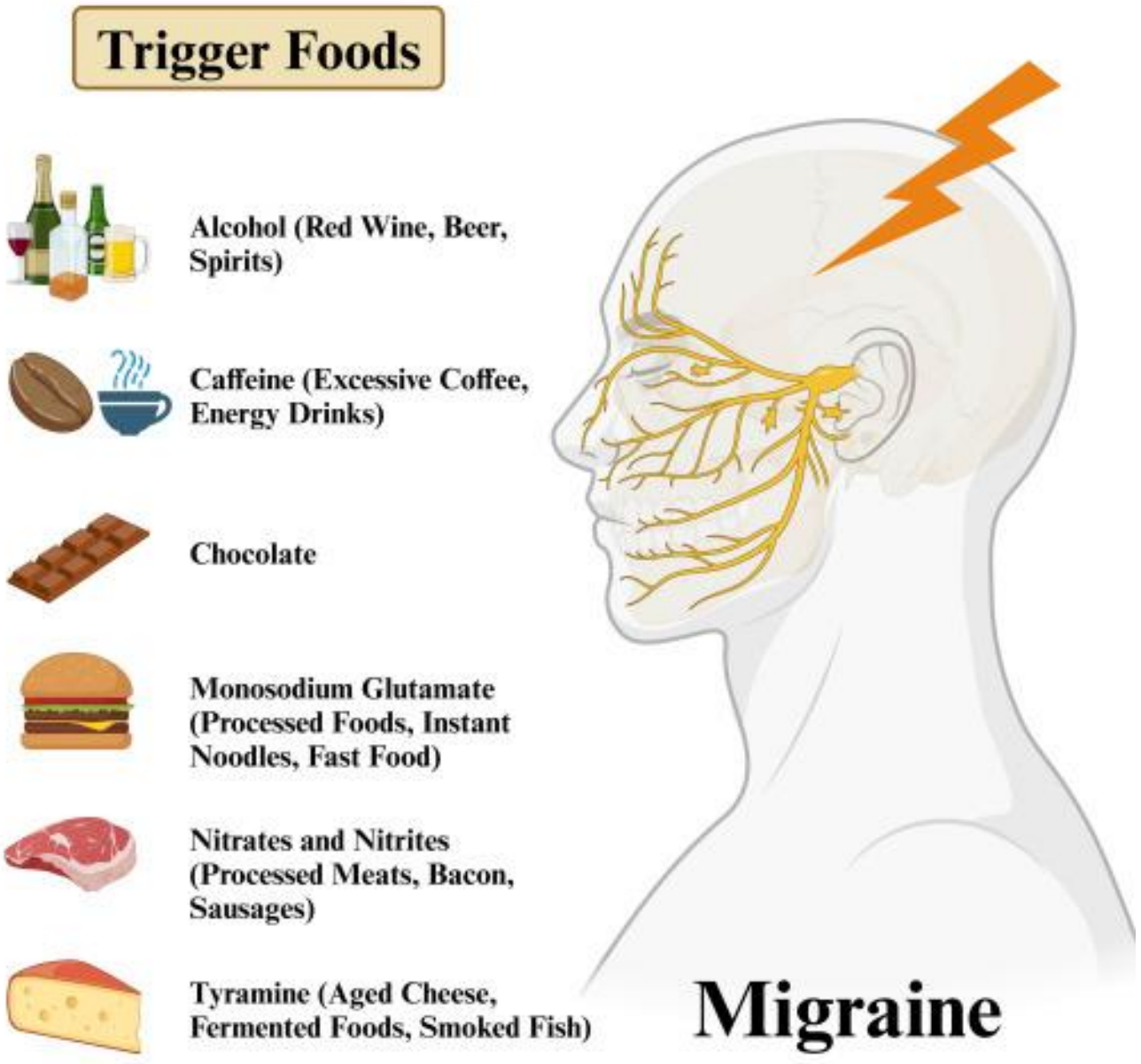
Dietary Models for Migraine

Fasting or skipping meals aggravates migraine attacks,

whilst the following show potential for improving migraine symptoms:

- Mediterranean
- Dietary Approach to Stop Hypertension (DASH)
- Mediterranean-DASH Intervention for Neurogenerative Delay (MIND)
- Ketogenic (with an emphasis on omega-3 fatty acid consumption)
- Low-fat (with an emphasis on omega-3 fatty acid consumption)
- Low-glycaemic
- Gluten-free diet, especially in gluten-sensitive people

Behrouz V, Hakimi E, Mir E. Impact of Dietary Patterns on Migraine Management: Mechanisms of Action and Recent Literature Insights. *Brain Behav*. 2025;15(7):e70652
Gazerani P. Diet and migraine: what is proven?. *Curr Opin Neurol*. 2023;36(6):615-621



Example foods to evaluate using exclusion diet:

- Alcohol & low-alcohol beer & wine
- Citrus fruits & juices
- Cola based drinks
- Caffeine
- Chocolate
- Preservatives / additives
- Meat extracts, gravy granules
- Fromage frais, yoghurt, cheese
- Fermented, charred, grilled, cured, smoked, processed, over ripe, aged foods (inc. leftovers)
- Pork, game meats
- Broad beans & peas
- Prawns, shrimps, crab
- Raisin, avocado, banana, fig, raspberry, pineapple, plum, date

Tu YH, Chang CM, Yang CC, Tsai IJ, Chou YC, Yang CP. Dietary Patterns and Migraine: Insights and Impact. *Nutrients*. 2025;17(4):669
NHS University Hospitals Sussex (2025) *Dietary advice for migraine* https://www.uhsussex.nhs.uk/resources/dietary-advice-for-migraine-2/

Amines

Chemical byproduct of bacteria breaking down amino acids

- contribute to vasodilation within the brain
- effect is cumulative
- usually broken down by monamine oxidase (MAO) enzymes in the gut
    - 1/3 population may struggle to do this as they have a shortfall of, or faulty enzymes; or take MAO inhibitors for depression

3 major contributors to consider:

- Tyramine
- Phenylalanine
- Histamine

Hindiyeh NA, Zhang N, Farrar M, Banerjee P, Lombard L, Aurora SK. The Role of Diet and Nutrition in Migraine Triggers and Treatment: A Systematic Literature Review. *Headache*. 2020;60(7):1300-1316. doi:10.1111/head.13836

Alcohol

Animal studies report that alcohol (regardless of tyramine content):

- Provokes neurogenic **inflammation** within TVS system
- Induces **vasodilation** of meningeal vessels, through release of CGRP
- Inhibits sulfotransferases in gut that metabolize dopamine, leading to increased **dopamine** levels (implicated in migraine pathophysiology)



Note:

Capsaicin (active component of chilli peppers) seems to trigger same mechanisms as alcohol in some animal studies

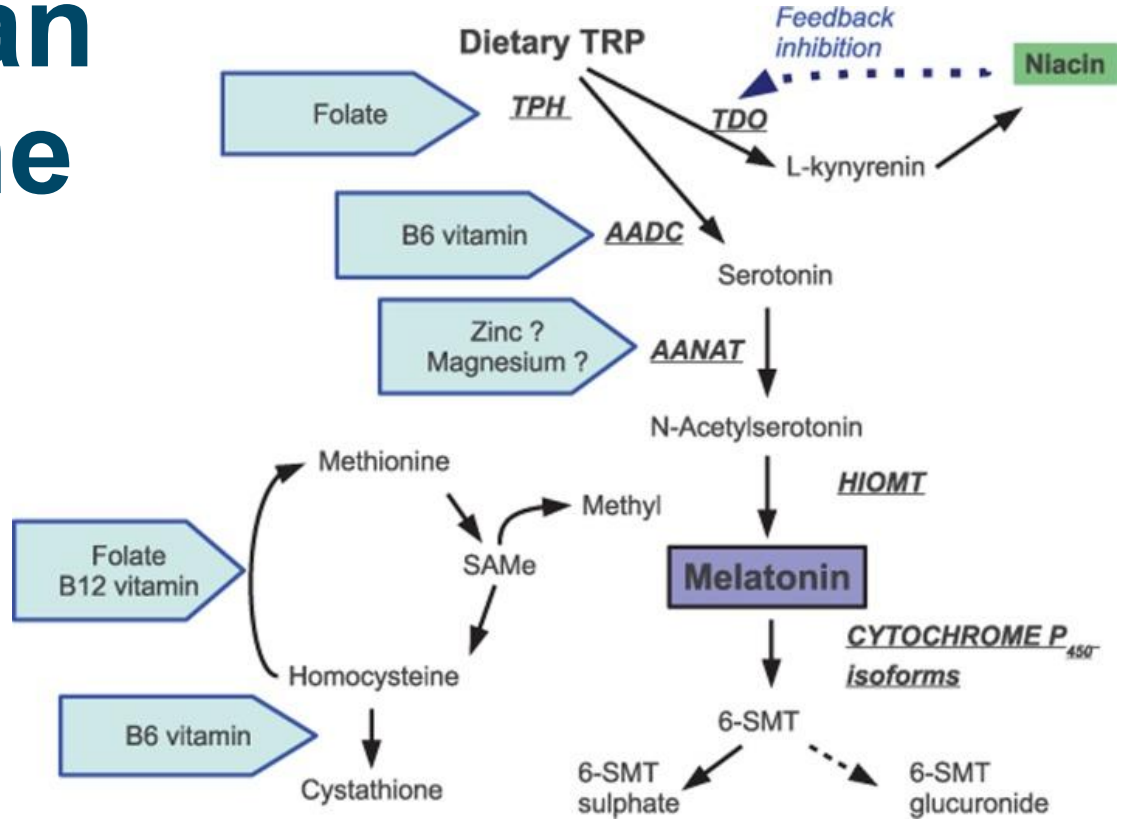
Tu YH, Chang CM, Yang CC, Tsai IJ, Chou YC, Yang CP. Dietary Patterns and Migraine: Insights and Impact. *Nutrients*. 2025;17(4):669

A note on Tryptophan pathways in Migraine

Different metabolites & mechanisms may explain involvement of **TRP metabolism** in migraines, inc:

- Neurovasodilatory processes: immune, oxidative, & inflammatory processes
- Glutamate signalling

- Studies are now focusing on kynurenine pathway, especially in childhood abdominal migraine

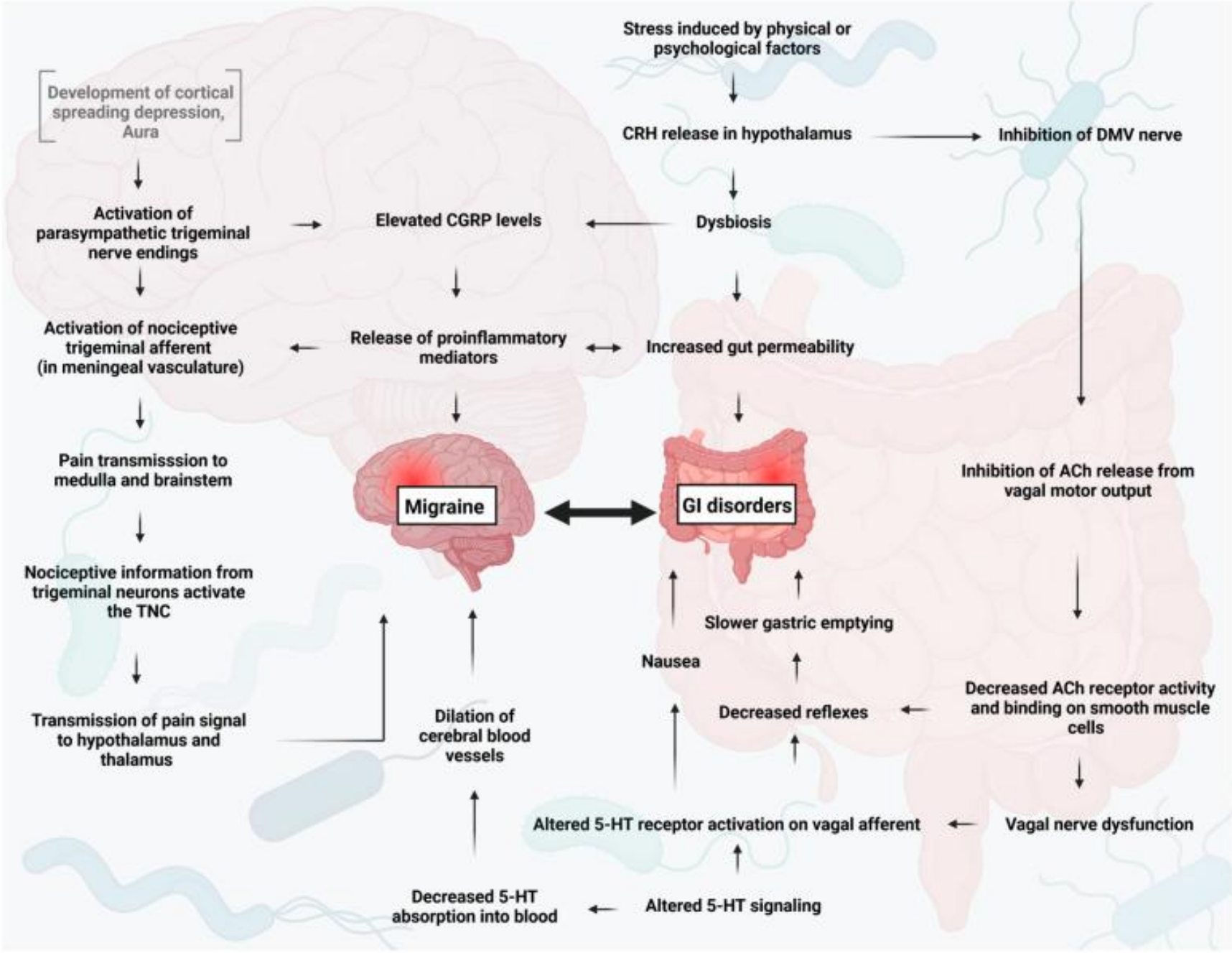


KEY: Enzymes are in underlined capital letters in italics.
TRP, tryptophan;
TPH, tryptophan hydroxylase; TDO, tryptophan dioxygenase;
AADC, aromatic aminoacid decarboxylase;
AANAT, arylalkylamone-N-acetyltransferase;
HIOMT, hydroxyindole-O-methyltransferase;
6-SMT, 6-sulphatoxymelatonin; SAMe, S-adenosylmethionine

Peuhkuri K, Sihvola N, Korpela R. *Food Nutr Res*. 2012;56:10.3402/fnr.v56i0.17252. doi:10.3402/fnr.v56i0.17252
Fila M et al. Kynurenine Pathway of Tryptophan Metabolism in Migraine and Functional Gastrointestinal Disorders. *Int J Mol Sci*. 2021;22(18):10134.
Şahin ŞS, Hataysal EP, Karatoprak EY, et al. Tryptophan metabolism in children with migraine: The role of kynurenine pathway. *Brain Dev*. 2025;47(3):104359
Fila M et al. Tryptophan metabolism in migraine: a review of experimental and clinical studies and a need to enhance research strategies. *Rev Neurosci*. Published online April 11, 2025

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Gut-brain pathways in Migraine



Spekker E, Nagy-Grócz G. All Roads Lead to the Gut: The Importance of the Microbiota and Diet in Migraine. *Neurol Int*. 2023;15(3):1174-1190

Nutritional Supplements for Migraines



Migraine: key nutritional supplements

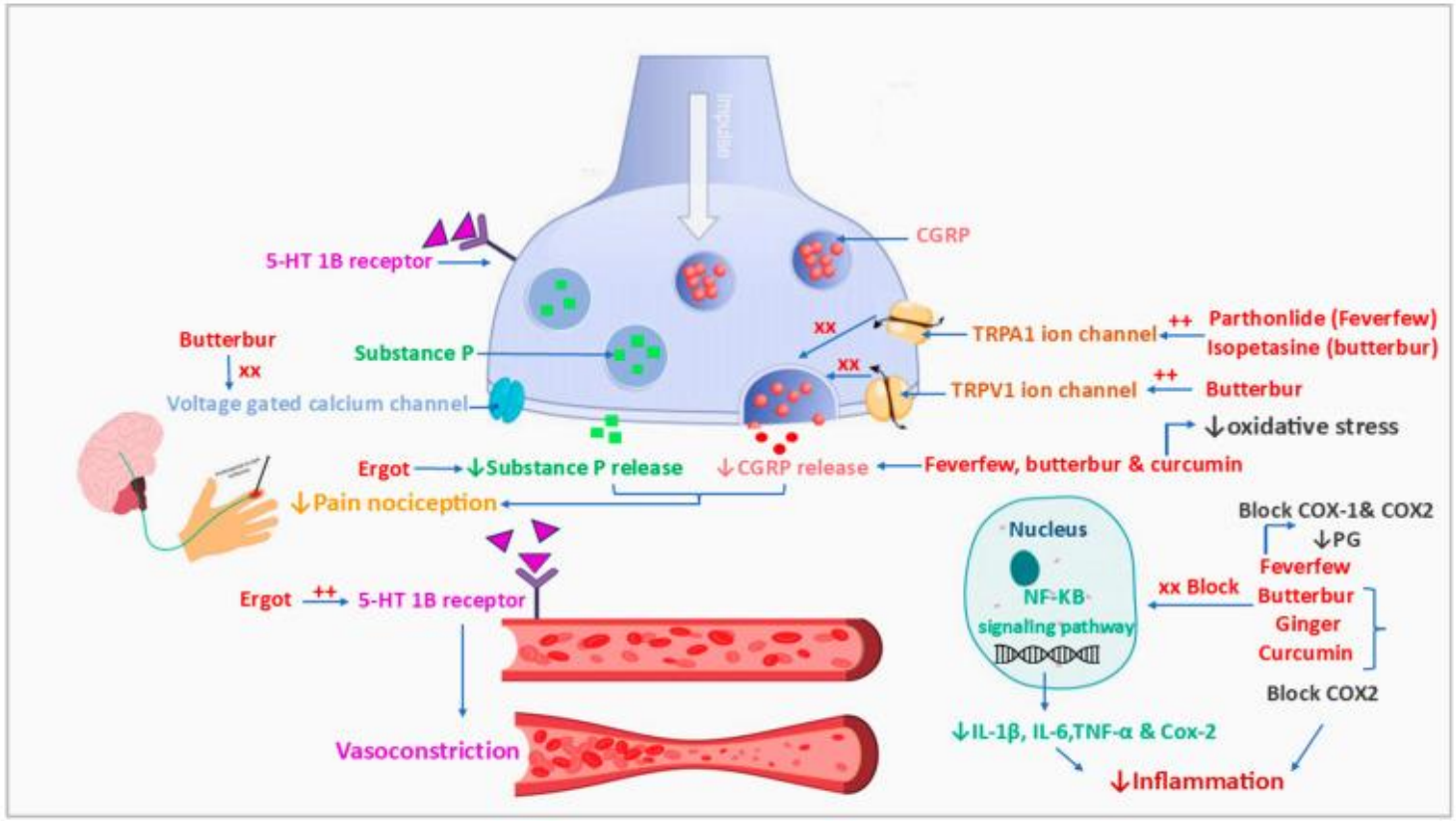
2025 systematic review & dose-response meta-analysis of 22 RCTs studying effects of dietary supplements for migraine concluded significant effects compared to control groups for:

- **Riboflavin (vit B2):** decreased attack frequency
- **Magnesium:** reduced frequency of migraine attacks, severity, & monthly migraine days
- **CoQ10:** decreased frequency, severity, & duration of migraine
- **Alpha-lipoic acid:** decreased attack frequency, & severity
- **Vit D:** reduced migraine frequency, & monthly migraine days
- **Probiotics:** decreased frequency, severity, & monthly migraine days

Talandashti MK, Shahinfar H, Delgarm P, Jazayeri S. Effects of selected dietary supplements on migraine prophylaxis: A systematic review and dose-response meta-analysis of randomized controlled trials. *Neurol Sci*. 2025;46(2):651-670

Other supplements to consider

- **Feverfew**
- **Butterbur**
- **Ergot (fungi)**
- **Ginger**
  - dosage depends on form & preparation
- **Curcumin**
  - 100mg per day for 2 months showed symptom improvement



Abo-Elghiet F, Elosaily H, Hussein DK, et al. Bridging Gaps in Migraine Management: A Comprehensive Review of Conventional Treatments, Natural Supplements, Complementary Therapies, and Lifestyle Modifications. *Pharmaceuticals (Basel)*. 2025;18(2):139

Pharma Nord Formulations

Curcumin

- Featured in extract-specific research, including bioavailability, joint health & cognition
- Patented Solid Lipid Curcumin Particle (SLCP) delivery form
- Documented high bioavailability
- Protected from glucuronidation
- 400 mg patented curcumin extract in each capsule

Dosage: 1 capsule per day



Available in **UK**



Available in **ROI**

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EFSA approved health claims

B vitamins

Riboflavin (vit B2) has wide range of beneficial effects on metabolism relevant to migraine

Health Claim	B Vitamin(s)
Normal energy-yielding metabolism	B1, **B2**, B3, B5, B6, Biotin, B12
Normal functioning of the nervous system	B1, **B2**, B3, B6, Biotin, B12
Normal psychological function	B1, B3, B6, Biotin, B12
Reduction of tiredness and fatigue	**B2**, B3, B5, B6, B12, Folic Acid
Contributes to normal homocysteine metabolism	B6, Folic Acid, B12
Supports normal red blood cell formation	**B2**, B6, B12, Folic Acid
Contributes to normal immune system function	B6, B12, Folic Acid
Helps maintain normal skin	**B2**, B3, Biotin
Supports normal hair maintenance	Biotin
Contributes to normal vision	**B2**
Helps maintain normal mucous membranes	**B2**, B3
Supports normal iron metabolism	**B2**
Helps maintain normal bones	B6
Supports normal teeth	B6

Kohandel Gargari O, Aghajanian S, Togha M, et al. Preventive Medications in Pediatric Migraine: A Network Meta-Analysis. *JAMA Netw Open*. 2024;7(10):e2438666

Vit B2 for Migraine

2022 systematic review & meta-analysis of 8 RCTs & one controlled clinical trial with 673 subjects concluded:

- 400mg of riboflavin (vit B2) per day for 3 months had significant effect on
  - Days
  - Duration
  - Frequency
  - Pain score of migraine attacks



Chen YS, Lee HF, Tsai CH, et al. Effect of Vitamin B2 supplementation on migraine prophylaxis: a systematic review and meta-analysis. *Nutr Neurosci*. 2022;25(9):1801-1812

B Vitamins

B-Complex

A comprehensive B-Complex

- Contains all 8 B vitamins
- One-a-day formula
- Suitable for vegetarians & vegans
- Manufactured to pharmaceutical standards



Available in **UK**



Available in **ROI**

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Alpha-lipoic acid (ALA) for Migraine

Dosages showing benefit in clinical trials include:

- 300mg twice per day for 12 weeks (92 women with episodic migraines)
- 400mg twice per day for 6 months in addition to on-going treatment for insulin resistance (32 adults with IR)
    - *IR is common amongst people with migraines*

Mechanisms:

- Lowering insulin resistance
- Antioxidant properties: increased serum thiol levels *(marker of redox status)*
- Improving mitochondrial function
- Improving endothelial function
- Reducing CGRP levels

Kelishadi MR, Naeini AA, Khorvash F, Askari G, Heidari Z. The beneficial effect of Alpha-lipoic acid supplementation as a potential adjunct treatment in episodic migraines. *Sci Rep*. 2022;12(1):271

Cavestro C, Bedogni G, Molinari F, Mandrino S, Rota E, Frigeri MC. Alpha-Lipoic Acid Shows Promise to Improve Migraine in Patients with Insulin Resistance: A 6-Month Exploratory Study. *J Med Food*. 2018;21(3):269-273

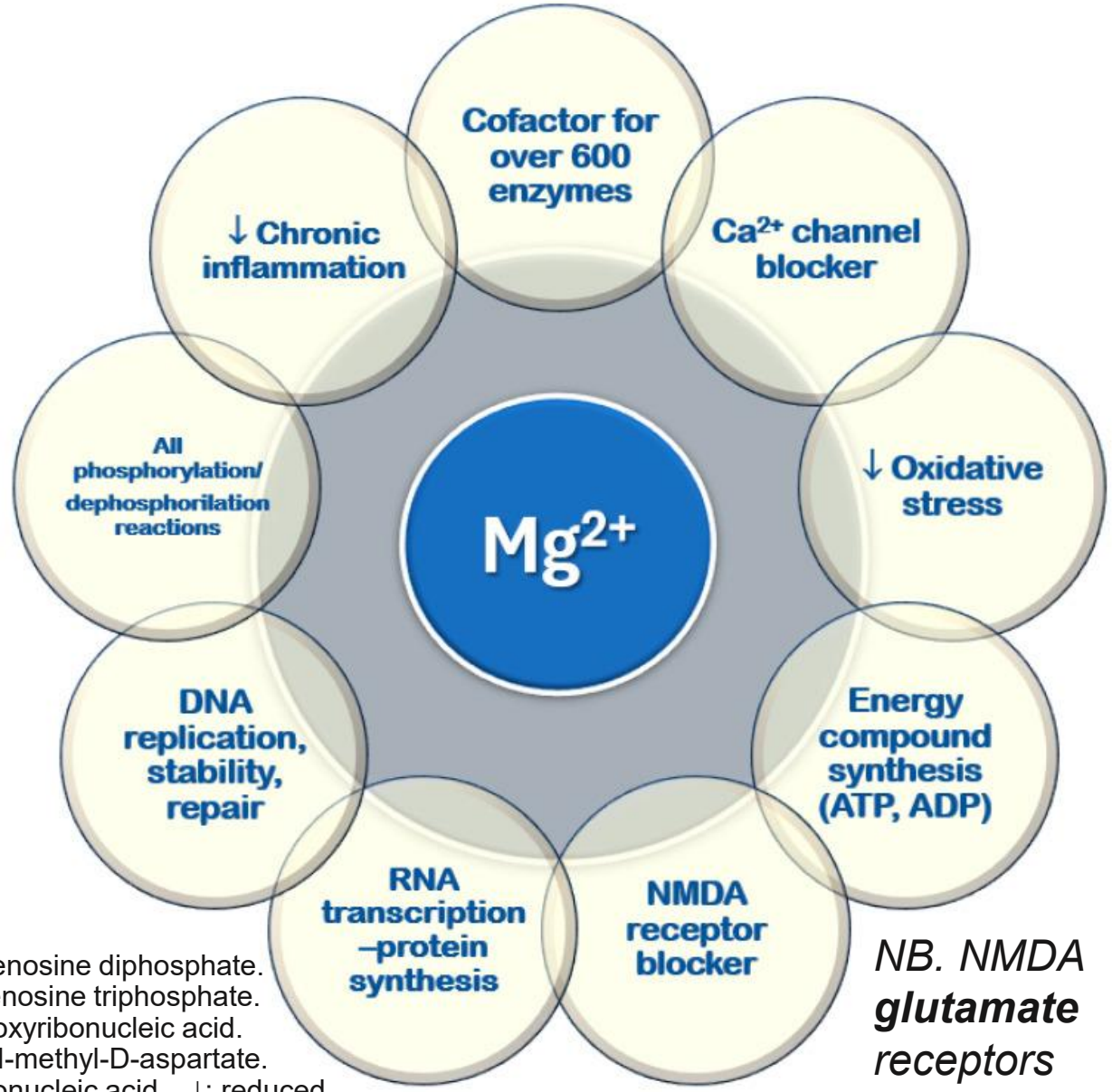
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de Sousa CNS, da Silva Leite CMG, da Silva Medeiros I, et al. Alpha-lipoic acid in the treatment of psychiatric and neurological disorders: a systematic review. *Metab Brain Dis*. 2019;34(1):39-52

Cellular functions of Magnesium

Additional mechanisms in migraine:

- ↓levels of circulating CGRP
- key modulator of serotonin
- supports mitochondrial function
- deficiency triggers release of substance P: functions as both neurotransmitter & neuromodulator, promoting decline in BBB integrity

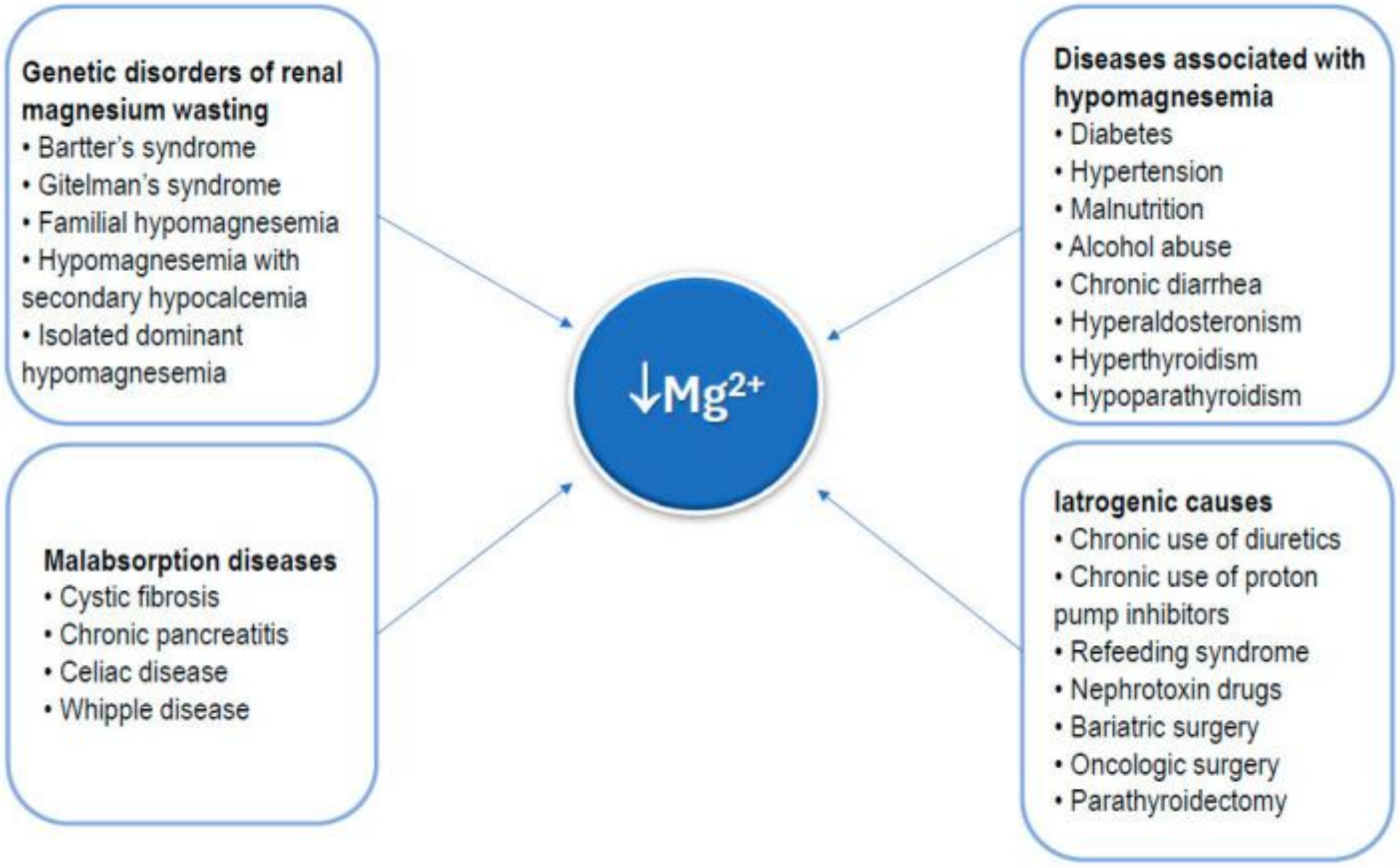


Key:
ADP: adenosine diphosphate.
ATP: adenosine triphosphate.
DNA: deoxyribonucleic acid.
NMDA: N-methyl-D-aspartate.
RNA: ribonucleic acid. ↓: reduced

*NB. NMDA **glutamate** receptors*

Dominguez LJ, Veronese N, Sabico S, Al-Daghri NM, Barbagallo M. Magnesium and Migraine. *Nutrients*. 2025;17(4):725
Domitrz I, Cegielska J. Magnesium as an Important Factor in the Pathogenesis and Treatment of Migraine-From Theory to Practice. Nutrients. 2022;14(5):1089..

Main clinical conditions that can result in Mg deficiency



Mg ***oral dose*** for migraine recommended by International, American & European Headache Societies & the Neurological Academy is

400–600 mg per day

Some trials show therapeutic potential of *intravenous* Mg for acute migraine relief

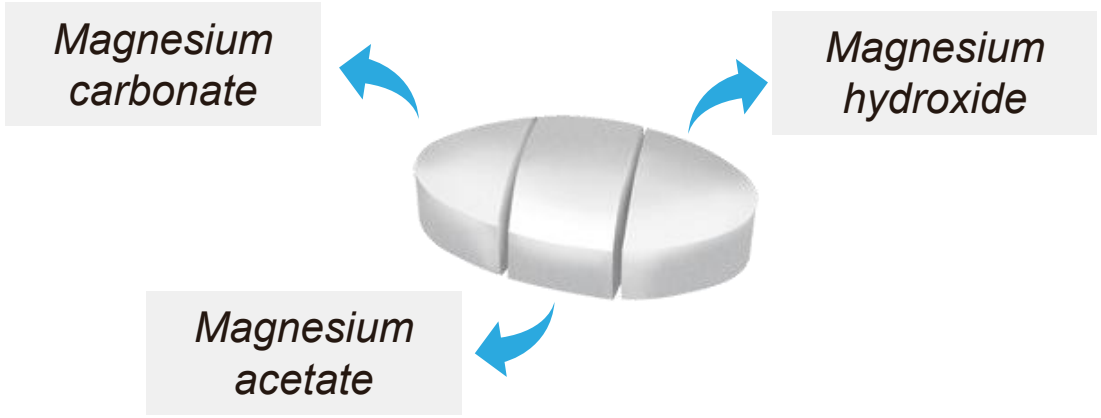
Dominguez LJ, Veronese N, Sabico S, Al-Daghri NM, Barbagallo M. Magnesium and Migraine. *Nutrients*. 2025;17(4):725

Pharma Nord Formulations

Magnesium

- Contains a complex of 3 forms of Mg, resulting in synergistic bioavailability
- Each tablet contains 200mg pure Mg
- Forms a suspension in water
- Manufactured under Danish pharmaceutical control

Dosage: 1 or 2 tablets per day, with food





Available in **UK**



Available in **ROI**

Pharma Nord Academy

CoQ10 for Migraine

- People with migraine are prone to brain energy deficit between attacks
  - due to increased energy demand (hyperexcitable brain) or decreased supply (mitochondrial impairment)
- Triad of brain energy deficit–mitochondria–oxidative stress can be considered as a potential axis in pathways of migraine pathogenesis

CoQ10:

- Antioxidant & anti-inflammatory
- Crucial role in mitochondrial function

Systematic review & meta-analysis of RCTs (2021)

Coenzyme Q10 supplementation for prophylaxis in adult patients with migraine—a meta-analysis

Participants	Six studies with a total of 371 adult participants
Study selection	All randomised control trials (RCTs) comparing CoQ10 with placebo or used as adjunct treatment included. Cross-over designs & controlled clinical trials excluded
Findings	CoQ10 appears to have beneficial effects in reducing **duration** and **frequency** of migraine attack.

Sazali S, Badrin S, Norhayati MN, Idris NS. Coenzyme Q10 supplementation for prophylaxis in adult patients with migraine-a meta-analysis. *BMJ Open*. 2021;11(1):e039358

Borkum JM. Brain Energy Deficit as a Source of Oxidative Stress in Migraine: A Molecular Basis for Migraine Susceptibility. *Neurochem Res*. 2021;46(8):1913-1932
Fila M, Chojnacki C, Chojnacki J, Blasiak J. Nutrients to Improve Mitochondrial Function to Reduce Brain Energy Deficit and Oxidative Stress in Migraine. *Nutrients*. 2021;13(12):4433

CoQ10 for Migraine

Example study:

2019 randomized double-blind placebo-controlled clinical trial 45 non-menopausal women aged 18-50yrs diagnosed for episodic migraine:

- CoQ10 400 mg/day or placebo for 3 months, in addition to any prescribed preventative medication

Results:

- CoQ10 supplementation reduced CGRP & TNF-α
- Significant improvement in frequency, severity & duration of migraine attacks



Dahri M, Tarighat-Esfanjani A, Asghari-Jafarabadi M, Hashemilar M. Oral coenzyme Q10 supplementation in patients with migraine: Effects on clinical features and inflammatory markers. *Nutr Neurosci*. 2019;22(9):607-615

Pharma Nord Formulations

Coenzyme Q10

- Used in 100+ clinical trials, 30+ years
- Reference product of the International Coenzyme Q10 Association
- Documented bioavailability, proven in human clinical trials
- Manufactured under pharmaceutical control
- Dosage: 100mg to 300mg per day, in split doses, with food



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Pharma Nord Academy

Vit D for Migraine

2021 systematic review & meta-analysis of 10 observational studies & 2 RCTs concluded:

- Serum 25-hydroxy vit D level was significantly lower in migraineurs than that in non-migraineurs
  - Hypovitaminosis D significantly associated with migraine
- Oral vit D supplementation significantly reduced migraine-frequency, but not its duration & severity



Mechanisms: Vit D helps

- Improve endothelial functions
- Improve modulation of migraine pain
- Prevent neuronal loss by increasing neurotrophic & neuroprotective factors
- Regulate inflammation & oxidative stress by reducing TNF-α, IL-1β, nitric oxide synthase, & oxidative stress markers

Das S, Roy A, Behera SK, et al. Effects of Vitamin D on Migraine: A Meta-Analysis. *Neurol India*. 2023;71(4):655-661

Pharma Nord Formulations

Vitamin D3

- Small, easy to swallow 'pearl' capsules
- Dissolved in cold pressed organic olive oil to enhance absorption
- Available in a range of strengths from 800IU – 5,000 IU
- Documented bioavailability, proven in clinical trials



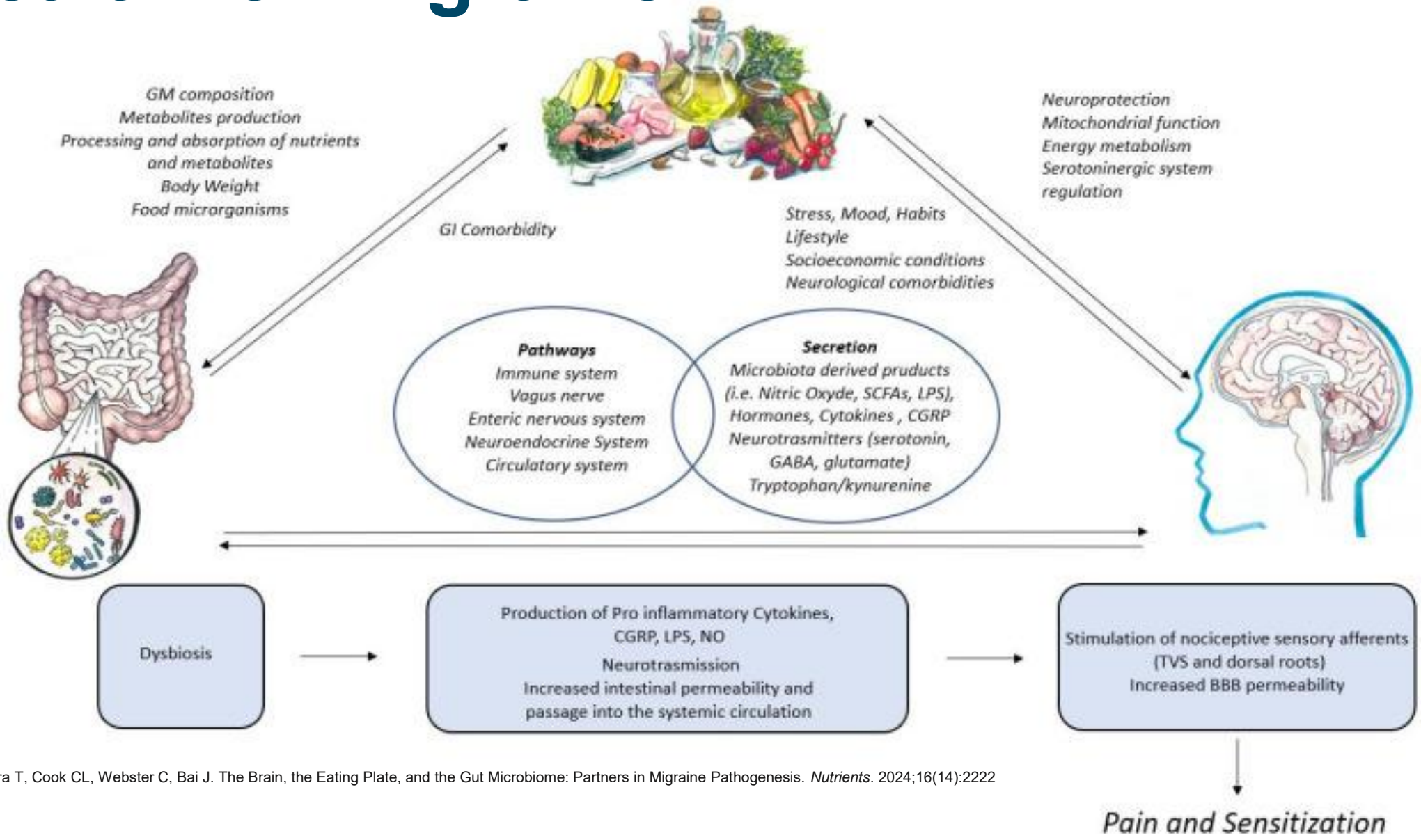
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Pharma Nord Academy

Gut Health for Migraine

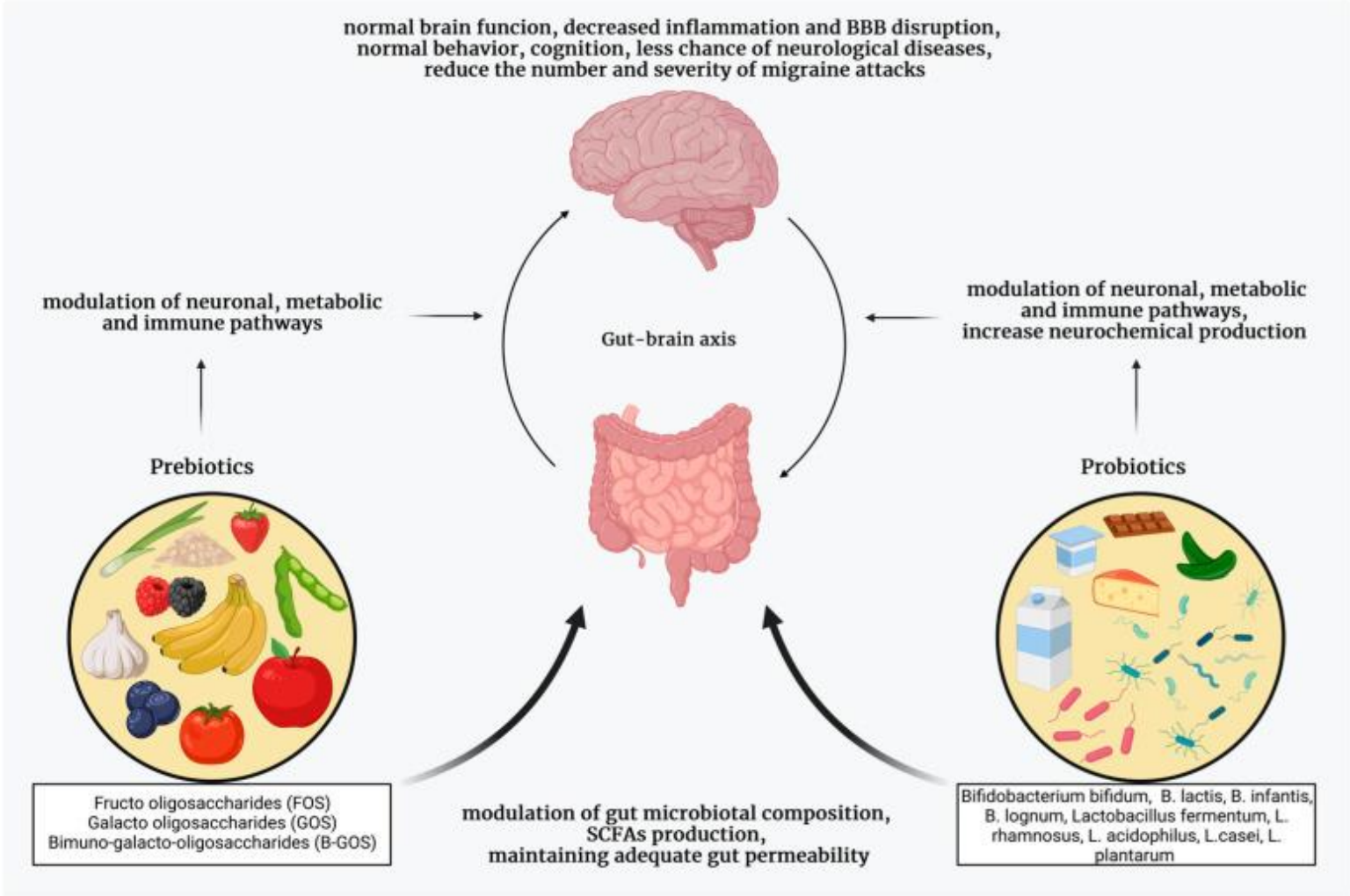


Gazerani P, Papetti L, Dalkara T, Cook CL, Webster C, Bai J. The Brain, the Eating Plate, and the Gut Microbiome: Partners in Migraine Pathogenesis. *Nutrients*. 2024;16(14):2222

Pre & Probiotics for Migraine

2023 cross-sectional study of 12,710 participants with migraines revealed inverse correlation between dietary fibre & migraines:

- for every 10 g/day augmentation in dietary fibre intake, there was 11% reduction in occurrence of migraine



Huang H, He K. The association between dietary fiber intake and severe headaches or migraine in US adults. *Front Nutr*. 2023;9:1044066

Spekker E, Nagy-Grócz G. All Roads Lead to the Gut: The Importance of the Microbiota and Diet in Migraine. *Neurol Int*. 2023;15(3):1174-1190

Pharma Nord Formulation

Bio-Fibre

- Blend of soluble & insoluble natural fibres from sugar beets & lemon peel
- Helps to support regular bowel movements
- Manufactured under Danish pharmaceutical control
- Suitable for vegans & vegetarians



Dosage: 4 to 12 tablets per day, depending on the feeling of wellbeing that is obtained as correct dietary level is reached

Available in **UK**

Pharma Nord Academy

Pharma Nord Formulations

Cultures

- Contains scientifically documented lactic acid bacteria
  - Lactobacillus acidophilus (La-5®)
  - Bifidobacterium lactis (BB-12®)
- Does not require refrigeration
- Small enteric-coated capsules that are easy to swallow
- A special delivery technique ensures the viability of the bacteria in the gut

Dosage: 1 capsule 3 times per day, with food



Available in **UK**



Available in **ROI**

Pharma Nord Academy

1. Setting the scene with stats
2. ATMs for headaches & migraines
3. Dietary strategies
4. Key nutrients & formulations
5. Q & A

Summary of today's webinar

Our next Webinar!

Unlocking the Power of Pycnogenol

- Tuesday **7th October 2025**
- 10:00 am – 11:00 am GMT
- Free CPD certified webinar



Speaker

Sue Camp

Registered Nutritional Therapist and Certified Functional Medicine Practitioner

Sign-up at **pharmanord.co.uk/webinars**

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Our latest Seminar programme

Nutrition for **Healthy Body Barriers**



- Full-day deep dive
- CPD approved for 5 hours (BANT, NNA, NTOI)
- Complimentary refreshments, lunch, vouchers & products
- Various dates until Nov 27th
- Sign up at **pharmanord.co.uk/events**

Exclusive VIP Event

Heart Failure Management

- Symposia 1: Tues, 7th October, **University of Glasgow**
- Symposia 2: Wed, 8th October, **RSM London**

Sign-up at
pharmanord.co.uk/vip25



Professor John Cleland, University of Hull

CORAL study

Can Coenzyme Q10 alleviate symptoms of heart failure and improve ejection fraction?



Professor Urban Alehagen, Linköping University

Can interventions with Q10 and selenium slow down the ageing process, prevent cardiovascular disease, and perhaps improve quality of life?

Pharma Nord Academy

Thank you!

Please email

pro@pharmanord.com

For any queries!



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