

Preventive medications for migraine

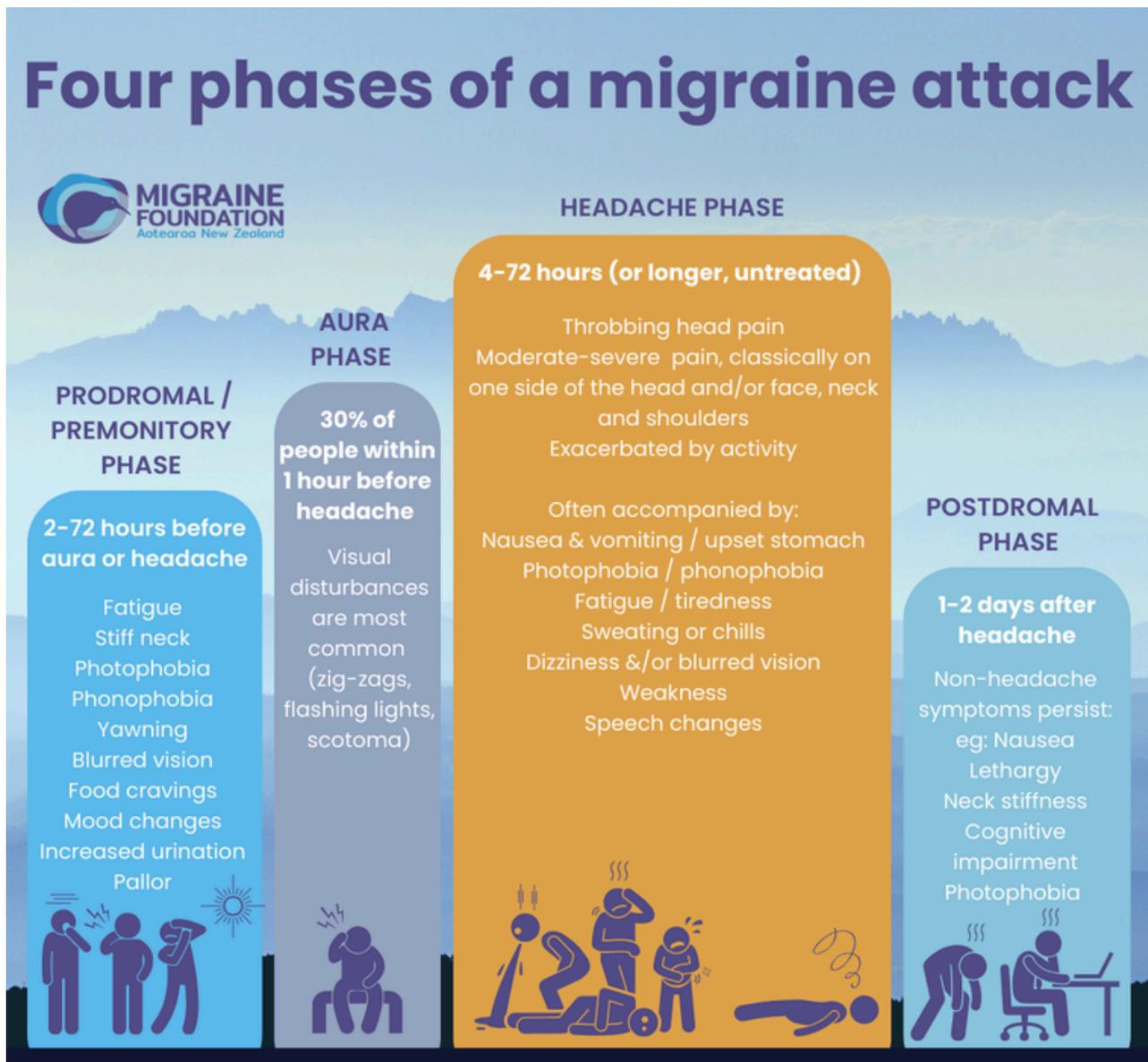
Migraine Foundation Aotearoa New Zealand

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Migraine disease is a neurological condition with a genetic predisposition. Migraine disease causes migraine attacks that typically involve a moderate-severe headache aggravated by physical activity and accompanied by nausea/vomiting and/or sensitivity to light or sound. The headache is commonly on one side of the head and pulsating in nature but can also be all over the head and constant. Migraine with aura includes short-lasting visual or sensory symptoms (generally no longer than 60 minutes), usually followed by headache.



For more information about optimising acute medication for migraine (e.g. triptans, non-steroidal anti-inflammatory drugs), see the factsheet 'Treatment of acute migraine attacks'.

When to start preventive treatment for migraine

Preventive treatment should be considered when a person has:

- 4 or more headache days a month
- debilitating migraine attacks despite appropriate acute treatment
- acute treatments cause side effects, can't be tolerated or are contraindicated (e.g. if non-steroidal anti-inflammatory drugs can't be used because of chronic kidney disease or stomach ulcers)
- medication overuse headache or risk of medication overuse (e.g. taking acute treatment on more than 2 days a week for 3 months or more)
- persistent, disabling aura symptoms including some rare migraine with aura subtypes (e.g. migraine with brainstem aura).

Goals of preventive treatment

Migraine can't be cured but preventive treatment aims to reduce:

- the number of headache days a month
- the severity of migraine attacks
- the amount of acute medication used
- migraine-related disability.

What to expect with oral preventive medications

For most oral preventives, a quick response isn't expected. Start with a low dose and increase the dose slowly, every 1–2 weeks. It takes at least 8 weeks on the highest dose tolerated (without side effects) before medication efficacy can be determined. From research on these medications, a preventive is considered 'effective' if it reduces headache frequency by 50%, which is achieved in at least half of patients.

Side effects can be an issue. As many as half of patients stop taking oral preventives in 2 months because of side effects or lack of effectiveness. Effectiveness can also wane over time. Combining 2 preventive treatments from different drug classes may be required, if one has only a partial effect.

A headache diary or tracking app is useful to record the number of days with headache and other symptoms and days when acute treatment is needed to see whether preventive treatment is working. It can be helpful to use a migraine-disability questionnaire before starting preventive treatment and see whether the results from this have improved after 8 weeks of treatment e.g. the Migraine Disability Assessment Test (MIDAS)¹ or the Headache Impact Test.²

¹ [headaches.org/wp-content/uploads/2018/02/MIDAS.pdf](https://www.headaches.org/wp-content/uploads/2018/02/MIDAS.pdf)

² [headaches.org/wp-content/uploads/2018/02/HIT-6.pdf](https://www.headaches.org/wp-content/uploads/2018/02/HIT-6.pdf).

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Preventive medication options

Choice of medication depends what might best suit the individual, taking into account other health conditions and characteristics. For example, sodium valproate or topiramate aren't recommended for women of child-bearing potential. Beta-blockers (e.g. propranolol) aren't recommended in people with asthma and must be used with caution in heart failure and other vascular conditions. A beta-blocker can be useful in people with anxiety; amitriptyline or venlafaxine may be useful in people with depression. Pizotifen is not a good choice if weight gain is a concern.

The evidence for effectiveness of preventives tends to be stronger or more established for episodic migraine (migraine on 14 or fewer days per month) than chronic migraine (headache on 15 or more days per month). The exception to this is onabotulinumtoxin A, which has been shown to be effective in chronic but not episodic migraine. However, this isn't generally accessible through public neurology clinics and may only be available through private health care. The new anti-calcitonin gene-related peptide treatments (injections galcanezumab, fremanezumab and erenumab and oral atogepant) are effective for both episodic and chronic migraine but aren't funded (at February 2026).

Consider withdrawal of oral preventive medications after 6–12 months, once an effective response has been maintained.

Medication	Starting dose and final effective dose to aim for	Amount to increase by (every 1-2 weeks)
First-line options		
Amitriptyline*	10mg at night, up to 150mg at night	10-25mg
Propranolol**	10mg twice daily, up to 80mg twice daily	10-20mg twice daily
Topiramate	25mg once daily, up to 100mg daily (in divided doses, e.g. morning and night)	25mg
Candesartan	4mg once daily, up to 16mg daily	4mg
Second-line options (evidence limited and/or side effects limiting)		
Venlafaxine	150mg once daily	
Pizotifen	0.5mg at night, up to 1.5mg three times a day	0.5mg
Sodium valproate	200mg twice daily, up to 1500mg in total	200mg
Third-line options (limited access and/or costly/not funded)		
Galcanezumab	240mg loading dose then 120g every 4 weeks (self-injection)	None
Erenumab	70-140mg every 4 weeks (self-injection)	None
Atogepant	60mg once daily	None
Fremanezumab	225mg every 4 weeks or 675mg quarterly (self-injection)	None
Chronic migraine only (headache on 15 days or more a month)		
Onabotulinumtoxin A (Botox™)	Injection into 31 head and neck sites, repeated every 12 weeks by a health professional	None

When to seek specialist advice

Most migraine can be managed by a GP in primary care but there are circumstances where review by a specialist is advisable. These include:

- migraine that is poorly controlled after sufficient trials of 3 or more preventive medications, where these haven't worked or caused side effects
- rare migraine types (e.g. hemiplegic migraine, migraine with brainstem aura)
- where there is a sudden or significant change in migraine symptoms
- where the diagnosis of migraine is in doubt or there is a suspicion of another cause for headache.

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