

Migraine pathways heading off the pain

Medicine^{fx}

MIGRAINE is ranked as the **THIRD** most prevalent disorder **WORLDWIDE**⁶

MIGRAINE is among the **TOP TEN** **DISABLING MEDICAL CONDITIONS IN THE WORLD**⁷

over **1 IN 10** Australians suffer from **MIGRAINE**⁸

WOMEN are more than **TWICE AS LIKELY** to suffer from migraines **THAN MEN**⁸

up to **90%** of migraine sufferers have a **FAMILY HISTORY** of migraine attacks⁹

WHAT IS MIGRAINE?^{5,6,9,10}

Migraine is characterised by a severe, painful headache that is often preceded or accompanied by sensory warning signs such as flashes of light, blind spots, tingling in the arms and legs, nausea, vomiting, and increased sensitivity to light and sound.

The pain can last for hours or even days.

CAUSES^{5,6,9,10}

Although the exact cause of migraines has yet to be elucidated, genetics and environmental factors appear to play a role.

Potential causes include:

- brainstem activation and its interactions with the trigeminal nerve
- neurotransmitter imbalance – particularly serotonin
- MTHFR polymorphisms
- cortical spreading depression
- neurovascular dysfunction.

TRIGGERS^{5,6,9,10}

Some people who suffer from migraines can clearly identify triggers or factors that cause the headaches.

Common triggers include:

- bright lights, loud noises and certain odours or perfumes, smoking or exposure to smoke
- physical or emotional stress
- changes in wake-sleep pattern
- hormonal changes in women, e.g. menstrual cycle fluctuations, oral contraceptive pill, pregnancy, menopause
- foods:
 - containing tyramine, e.g. red wine, aged cheese, smoked fish, chicken livers
 - containing nitrates, e.g. bacon, hot dogs, salami
 - chocolate, nuts, peanut butter, avocado, banana, citrus, onions, dairy products and fermented or pickled foods
- food additives, e.g. monosodium glutamate (MSG), artificial sweeteners (aspartame)
- skipping meals or fasting
- alcohol, caffeine
- weather changes.



MIGRAINE PATHWAYS

Figure 1. Methylation⁵⁻¹²

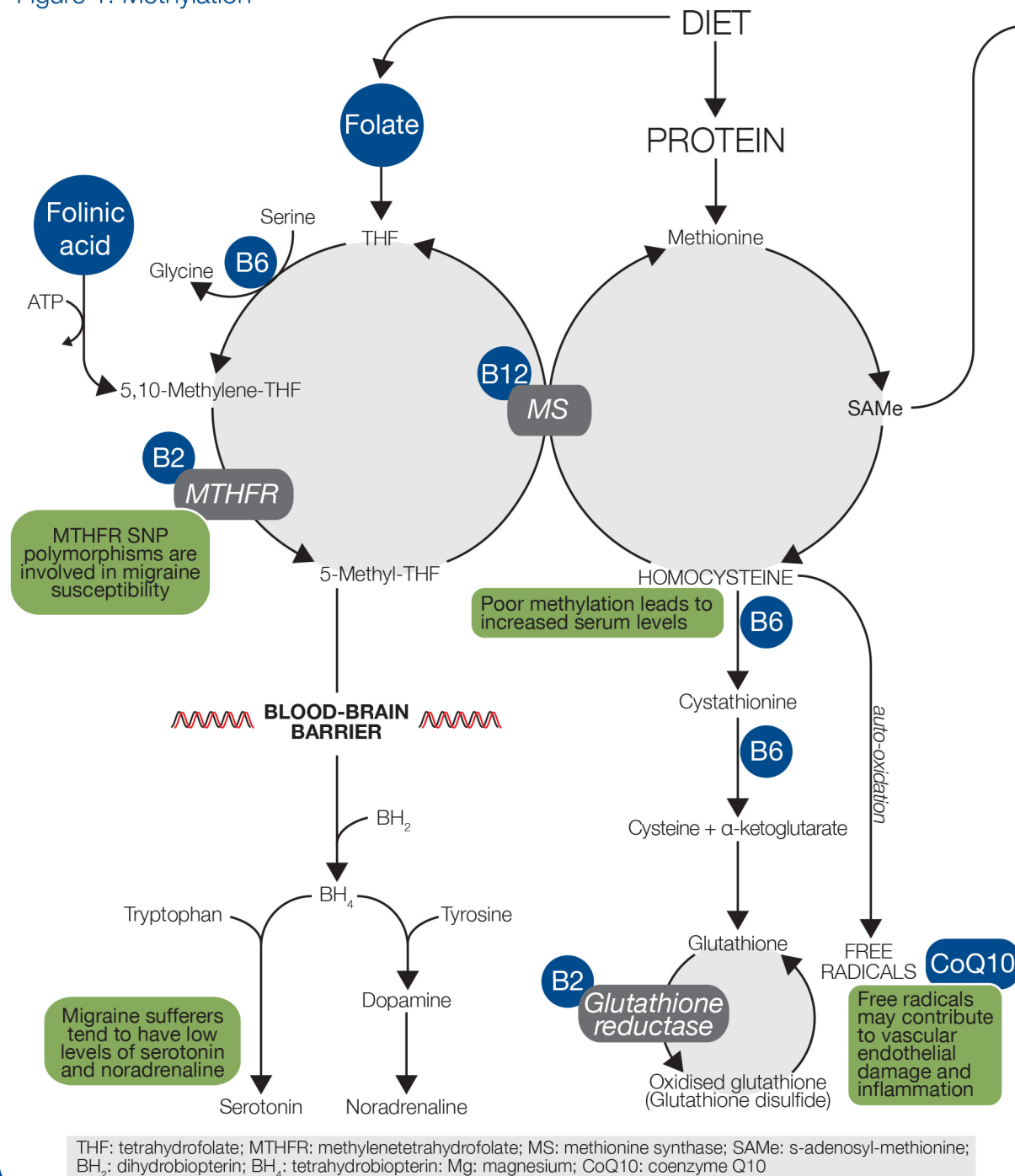


Figure 2. Neurovascular pathway¹³

