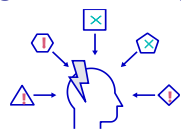




How Can Patients With Migraine Identify and Manage Their Unique Triggers?

Migraine is a complex disorder of the brain that may be caused by a variety of factors or triggers¹



Multiple factors can culminate in a migraine episode^{2,3}

Different triggers may be responsible through distinct mechanisms²

Not all patients respond to the same triggers²

Migraine triggers, protective factors and symptoms may be unique and specific to each patient

- **Triggers:** measurable exposures associated with increased probability of an attack over a brief period of time^{4,5}
- **Protective factors:** events associated with decreased probability of attacks, e.g., high quality sleep and use of preventive medication⁴
- **Premonitory symptoms of migraine/Prodrome:** typically precede the migraine attack by up to 48 hours and **can make it difficult to identify triggers**³

Commonly reported triggers include^{1a}:



Stress
80%



Weather
53%



Hormones in women
65%



Sleep disturbance
50%



Not eating
57%



Self-management strategies for identification and mitigation of triggers³



RECORD: Keeping a diary or calendar may help patients to identify triggers



ACT: Trigger avoidance is often unsuccessful and may disrupt participation in social and leisure activities. Advise patients to consider healthy lifestyle choices, improvement in diet and sleep



FIND OUT ABOUT FEAR: Worrying about the next attack may lead to patients avoiding or reducing their activities. This is an important predictor of migraine chronification^b and medication overuse, meaning identification and treatment are crucial



Identification of specific triggers may not always be possible
Encourage positive health behaviors and shared decision-making for a preventive approach

Types of triggers and recommendations for multidisciplinary support

POTENTIAL TRIGGERS^c

PATHOPHYSIOLOGY

RECOMMENDATIONS^d



Stress

- Stress is one of the **most reported** migraine triggers, reported in up to 80% of patients¹
- The **bidirectional relationship** between stress and migraine has the potential to create a **vicious cycle** and may contribute to **chronification**^b of migraine⁶

- **Neurochemical changes** in the brain or **physiological stress response** are likely underlying mechanisms for stressors triggering a migraine attack⁶

- ✓ Patients may try **relaxation training, cognitive behavioral therapy, and biofeedback**⁶



Hormones/
menstruation^e

- **>1 in 5** females aged 30–34 years with migraine report experiencing migraine in at least 50% of menstruations⁷
- Menstruation represents one of the few triggers thought to be **sufficient on its own to trigger a migraine attack**⁸

- ~50% of women have been estimated to have an increased risk of migraine during the **premenstrual phase**, associated with **decreasing estrogen levels**⁹
- **Sustained changes in estrogen levels** have also been reported to impact headaches, e.g., periodic discontinuation of oral contraceptive/menopausal hormone replacement therapy⁹

- ✓ Encourage patients to keep a **headache diary or calendar** including their menstrual cycle³



Light

- Commonly reported **light-associated triggers** include flickering, glare, bright or reflected sunlight, contrasting light and shade, as well as fluorescent or artificial light from screens^{10,11}

- Photic signals carried by the optic nerve are processed as **nociceptive signals** by central neurons, exacerbating migraine headache¹²

- ✓ Suggest that patients be **aware of surrounding lighting and take appropriate action**¹⁰

Types of triggers and recommendations for multidisciplinary support

POTENTIAL TRIGGERS^c

PATHOPHYSIOLOGY

RECOMMENDATIONS^d

Diet/meals

- Many foods and drinks have been reported as triggers of migraine; the most commonly reported include:^{13,14}



Dairy (milk and cheese)
Citrus fruits
Nuts
Processed meats and fatty foods
Alcohol
Dehydration
Caffeine

- Fasting and skipping meals** can trigger migraine and **increase the number of migraine days**¹³

- Diet may play a role in different migraine mechanisms by influencing **cerebral glucose metabolism**, initializing **inflammation** and modulating **neuroactive substances**¹³
- The role of caffeine in migraine is unclear: some studies indicate a protective effect, while others report it as a trigger¹⁴

- ✓ Encourage patients to **limit eating of trigger foods**¹³
- ✓ **Increased water intake** can reduce the severity, duration and frequency of migraines¹⁵
- ✓ Encourage a well-balanced diet and **avoidance of fasting or skipped meals**¹⁶
- ✓ Low glycaemic index snacks between meals and before bedtime may be beneficial¹⁶

Sleep

- Epidemiologic** and clinical studies have demonstrated a relationship between **migraine and sleep disturbance**^{1,17,18}
- Sleep disturbance** has been associated with an **increase in migraine frequency**¹⁸
- Sleep and migraine **may have a bidirectional relationship** considering some shared underlying pathophysiology¹⁹

- The **complex relationship** between **disrupted sleep and migraine** suggests a **shared pathophysiology** that may involve the hypothalamus as well as the glymphatic system that is involved in interstitial waste removal¹⁹

- ✓ Help the patient to **identify and reduce unhealthy sleep behaviors**¹⁹

Weather

- Weather phenomena associated with migraine include **lightning**,²⁰ **atmospheric pressure and dust**²¹ and **temperature changes**,²² though the influence of weather may vary between patients³

- Barometric pressure changes may trigger a migraine attack as a result of **cerebral sensitivity**²³

- ✓ Be aware of the **weather forecast** and alter plans for outdoor activity as needed
- ✓ Refer to **migraine forecasts** on some weather apps for weather-related and environmental triggers

Exercise

- Exercise, in particular, **high intensity exercise** and exercise following an insufficient warm-up period can trigger migraine attacks²⁴
- Regular exercise** may reduce migraine pain intensity and frequency and improve the ability to engage in physical activity²⁴

- Calcitonin gene-related peptide (CGRP) levels rise during exercise; **regular exercise** may decrease pro-inflammatory markers and increase anti-inflammatory markers in the brain²⁴

- ✓ Patients should **start with slow, gentle exercise** and increase intensity, frequency and duration over time²⁵

^a based on a retrospective study of 1750 patients with migraine; ^b Chronification defined as transformation of migraine into a chronic daily headache pattern (headache on ≥ 15 days/month)⁶; ^c Shown below are potential migraine triggers; the list is not exhaustive; ^d Medical judgment based on each patient's health history and clinical status should inform healthcare practitioner decision-making; ^e Diagnostic criteria differentiate between pure menstrual migraine (attacks purely confined to the perimenstrual period) and menstrually related migraine (attacks during the perimenstrual period as well as other times of the cycle).²⁶; ^f Medication overuse defined as triptans, opioids or combination analgesics on ≥ 10 days/month for >3 months, or non-steroidal anti-inflammatory drugs or simple analgesics on ≥ 15 days/month for >3 months²⁷

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