

## Occipital Neuralgia vs Migraine: Comparing Diagnoses and Treatments

*Our easy-to-read fact sheets provide clinicians with reliable information to share with patients and their caregivers.*

Pain occurring in the back can be a symptom of occipital neuralgia, migraine, or other causes. Pain from occipital neuralgia can cause headaches or migraine as a result of inflamed nerves that go from the top of the head down to the spinal cord. While there are many symptoms that overlap between occipital neuralgia and migraine, the treatments vary.

### Occipital Neuralgia

Occipital neuralgia is a condition in which the nerves that run through the scalp are injured or inflamed, resulting in sudden stabbing or shooting pain that can be felt on the back of the head, upper neck, and forehead.<sup>1</sup> Occipital neuralgia is a rare cause of severe headaches and can be difficult to treat.<sup>2</sup>

Pain can be felt on one or both sides of the head.<sup>1</sup> In some patients, the scalp becomes extremely sensitive to even the slightest touch, making hair washing or lying on a pillow painful.<sup>2</sup> In other patients, there may be numbness to the affected area or pain radiating toward one eye in particular.<sup>1</sup> According to the International Headache Society, common triggers for occipital neuralgia include compression of the greater occipital nerve (90% of the time) or the lesser occipital nerve (10% of the time).<sup>3</sup>

### Migraine Headache

A migraine headache, or migraine, is a disabling headache characterized by recurrent throbbing on one or both sides of the head and often associated with nausea and sensitivity to light or sound. Other symptoms can include mood and cognitive changes.<sup>4</sup>

Triggers for migraines include stress, sleep disturbances, menstrual cycle changes, weather changes, alcohol consumption, and emotional influences.<sup>4,5</sup> Migraines are about 3 times more common in women than in men and research suggests that triggers may vary based on sex at birth.<sup>6</sup> The most common triggers for women include menstruation, stress, and bright lights; common triggers for men include sleep deprivation, stress, and bright lights.<sup>4</sup> There are 4 phases of a migraine:<sup>7</sup>

1. **Prodromal:** Stage where symptoms normally appear. This occurs approximately 24 to 48 hours before the headache starts.
2. **Aura:** Approximately 25% of patients with migraine experience aura, which can be present visually (eg, bright lights), through sound (eg, music, noises,

tinnitus), through feel (eg, tingling or numbness), or through motor changes (eg, weakness on one side of the face or body).

3. **Headache:** A painful throbbing or pulsating on one or both sides of the head with or without nausea or vomiting.
4. **Postdromal:** Stage that includes residual headaches and is accompanied by extreme tiredness or exhaustion.

A diagnosis for migraine without aura includes at least 5 migraine attacks that fulfill the below criteria:<sup>8</sup>

- lasts at least 4 to 72 hours if untreated;
- has at least 2 of the following characteristics: unilateral location, pulsating, moderate or severe pain intensity, and aggravated by or leads to avoidance of routine physical activity; and
- is associated with nausea and/or vomiting, avoidance of light, or avoidance of sound.

A diagnosis for migraine with aura includes at least 2 attacks that fulfill the below criteria:<sup>8</sup>

- patient experiences at least 1 fully reversible aura symptom: visual, sensory, speech/language, motor, brainstem, retinal; and
- has at least 3 of the following characteristics:
  - at least 1 aura symptom spreads gradually over at least 5 minutes,
  - 2 or more aura symptoms occurring in order,
  - at least 1 aura symptom is unilateral,
  - at least 1 aura symptom is positive, and
  - the aura occurs during or within 60 minutes of a headache.

## Frequently Asked Patient Questions

### How are occipital neuralgia and migraine diagnosed?

There isn't one test to diagnose occipital neuralgia. A magnetic resonance imaging (MRI) test, CT scan, or X-ray allow for the visualization of surrounding soft tissues and can rule out underlying causes of pain. Your doctor may make a diagnosis using a physical examination to find tenderness and may temporarily treat it with an occipital nerve block. Relief from a nerve block may help confirm the diagnosis.<sup>2</sup>

A diagnosis for migraine with or without aura requires that the patient experience multiple migraine attacks that fulfill the criteria determined by the International Headache Classification Disorders III edition. A summary of the fulfillment criteria is outlined above.

## What over-the-counter (OTC) medications can I use to treat my symptoms?

OTC management options for occipital neuralgia include nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen ([Advil®](#)) or naproxen ([Aleve®](#)). Other treatments may include heating pads or devices that are placed at the location of pain. Physical therapy and massage therapy can also help to relieve pain caused by occipital neuralgia.<sup>2</sup>

Migraine can be treated with NSAIDs similar to those used to treat occipital neuralgia. Other medications that can be used to treat migraine include aspirin ([Bayer®](#)), caffeine, acetaminophen ([Tylenol®](#)), or a combination of all 3 ([Excedrin® Extra Strength](#)).<sup>8</sup>

## If OTC medications are not improving my symptoms, what other options are available?

There is no clear consensus on the management of occipital neuralgia. If pain associated with occipital neuralgia continues to persist, your doctor may prescribe tricyclic antidepressants, serotonin reuptake inhibitors, anticonvulsants, or opioids. More invasive options include local anesthetic agent with a steroid, botulinum toxin A, or surgery such as occipital nerve stimulation.<sup>2</sup>

If migraine continues to persist despite the use of OTC medications, your doctor may prescribe medications such as:<sup>8</sup>

- **Triptans:** sumatriptan ([Imitrex®](#)) and rizatriptan ([Maxalt®](#))
- **Injectables:** erenumab ([Aimovig®](#)) and galcanezumab-gnlm ([Emgality®](#))
- **Ergot derivatives:** [ergotamine with caffeine](#); [dihydroergotamine](#)
- **Emerging therapies:** ubrogepant ([Ubrovelvy®](#)); rimegepant ([Nurtec ODT®](#)); lasmiditan ([Reyvow®](#))

Doctors may also recommend external trigeminal nerve stimulation, single-pulse transcranial magnetic stimulation (to be administered during aura), non-invasive vagal nerve stimulation, or non-invasive multichannel electrical stimulation of the trigeminal and occipital nerves for adults.