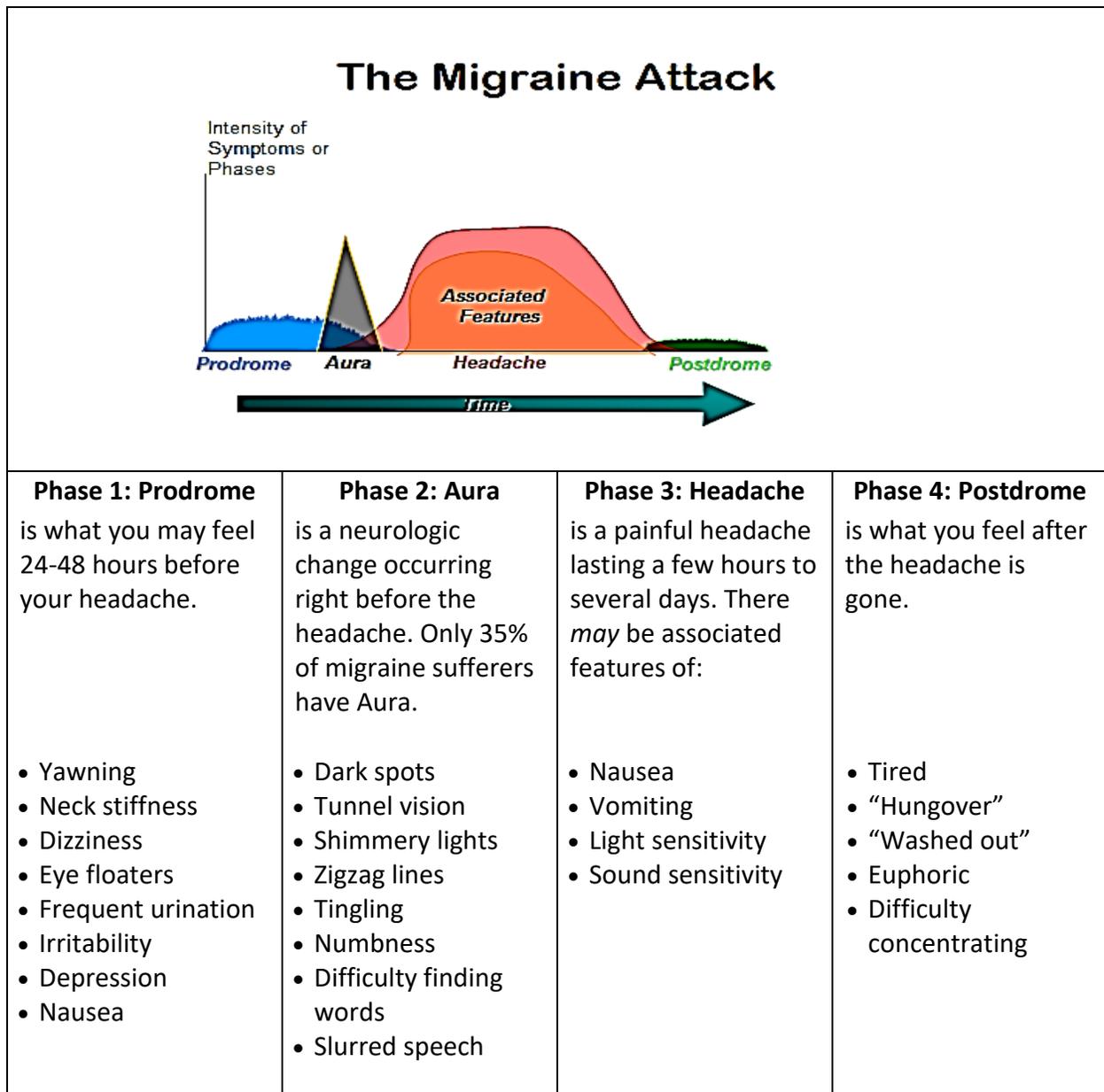




Understanding Migraines

- Migraine is a severe headache *syndrome* that recurs.
- Migraine headaches are usually throbbing, but may also be described as “exploding,” “shooting,” or “squeezing.”
- Migraine headaches usually occur on one side of the head, but can affect both sides.
- Migraines make you want to lay down and rest, usually in a dark room.
- Migraine may be accompanied by nausea, vomiting, light sensitivity, or sound sensitivity.





How Migraines Work

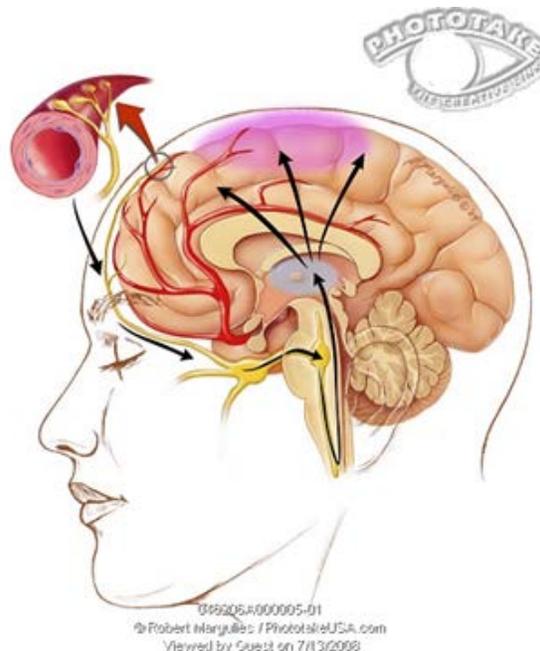
Migraines start deep in the brain.

Electrical impulses spread to other areas of the brain.

Changes in nerve cell activity and blood flow may result in symptoms such as vision changes or tingling.

Chemicals in the brain cause blood vessel dilation and inflammation of surrounding tissue.

The inflammation irritates the Trigeminal Nerve, resulting in pain.

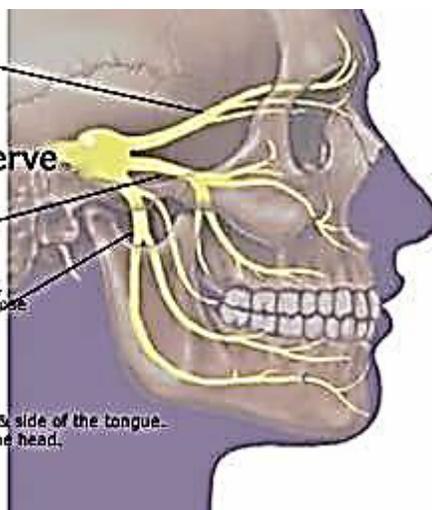


I. Ophthalmic:
eye, eyebrow,
forehead and
frontal portion of scalp

The Trigeminal Nerve & its 3 branches

II. Maxillary:
Upper lip, upper teeth, upper gum,
cheek, lower eyelid & side of the nose

III. Mandibular:
Lower lip, lower teeth, lower gum & side of the tongue.
Also the lower jaw to the side of the head.

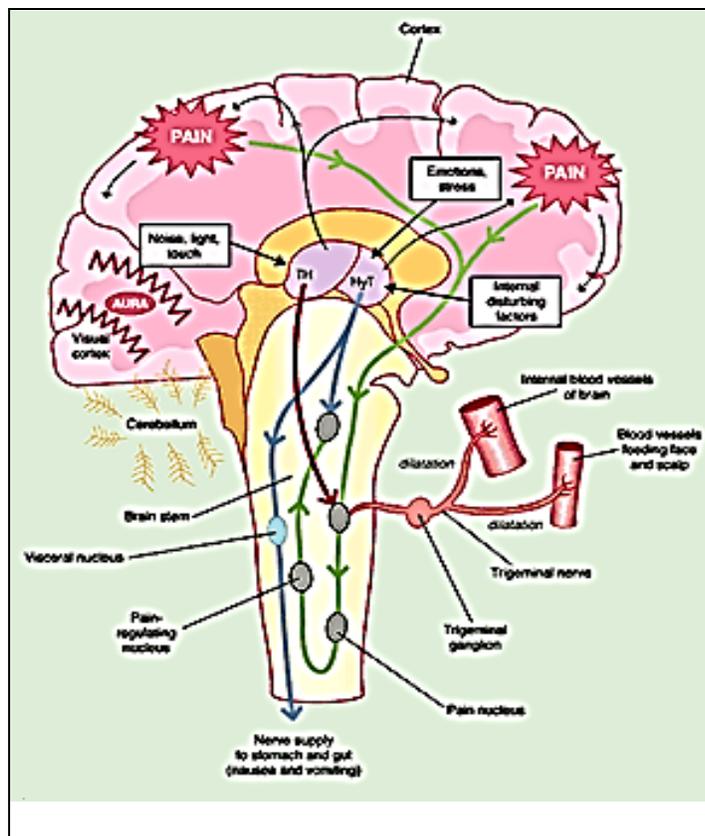


The Trigeminal Nerve

The Trigeminal Nerve supplies sensation to various areas of the face.

The Trigeminal Nerve innervates all areas of the head including the skin, sinuses, teeth, eyeballs, blood vessels, and lining of the brain.

These are the same locations that migraine sufferers have pain because it's coming from an overactive Trigeminal Nerve.



Migraine is Complex

The thalamus is a sensation relay center for the brain. In people with migraines, this center is overactive.

This is why people with migraines are sensitive to light, and may experience some visual patterns and sensitivity to noise, smells, and movement.

The hypothalamus is the homeostasis center of the brain. In people with migraines, this center is overly sensitive.

This is why people with migraines are sensitive to certain foods, eating changes, sleep changes, weather changes, hormone changes, and stress changes; anything that **CHANGES** goes through the hypothalamus.

Migraine Triggers

Triggers are specific factors that may increase your risk of having a migraine attack.

Triggers do not “cause” migraines.

A certain trigger will not induce a migraine in every person.

A single trigger may not cause a migraine every time.

By keeping a Headache Log, you may be able to identify your triggers, making it easier for you to avoid them and reduce your chance of having a migraine attack.

Triggers	Examples
Foods	Aged cheese, alcohol, red wine, MSG, processed meats (with nitrates), caffeine, chocolate
Skipping meals	
Change in sleep patterns	Napping, oversleeping, lack of sleep
Weather changes	Temperature, barometric changes, altitude
Lights	Sun glare, flickering lights, movie theaters
Odors, pollution	Perfumes, smog, chemicals, cigarette smoke
Estrogen level changes	Menstruation, birth control pills, ovulation, menopause
Work, home, family	Unrealistic goals, financial issues, job changes, loss
Stress let-down	Ending a project, vacations, weekends
Injuries	Neck or head trauma
Lack of exercise	“Couch potato” or sedentary lifestyle
Overexertion	Exercising in extreme heat/cold



Treatments for Migraines

- **Lifestyle changes**
 - Actions you take to prevent a migraine
- **Acute / abortive therapies**
 - Medications you take only at the onset of a migraine headache
- **Preventive therapies**
 - Medications you take every day to prevent frequent migraine headaches

Lifestyle Changes

- Migraine is not a predictable disorder for all people.
- Simple changes to a normal routine can lead to a severely disabling migraine attack.
- Understanding how lifestyle affects the severity and frequency of attacks can be a large part of successful migraine prevention.

It is unrealistic to expect anyone to completely change their lifestyle. However, certain things are relatively easy to do. For example:

- **Maintain regular sleep patterns.** Go to sleep and wake up at the same time each day.
- **Exercise regularly.** For example, aerobic exercise for at least 30 minutes three times a week will help reduce frequency or severity of migraine.
- **Eat regular meals.** Do not skip meals, and eat a good, healthy breakfast.
- **Reduce stress.** Limit stress by avoiding conflicts and resolving disputes calmly. Some people find it helpful to take a daily "stress break."
- **Avoid known triggers.** See section "Migraine Triggers."
- **Drink plenty of water.** Drink at least 32 ounces of water daily with added electrolyte-enhanced beverages as needed.
- **Establish daily routines.** This helps reduce migraine attacks and is important for long-term migraine prevention. For example:
 - **Schedule a relaxation period.** Include relaxation strategies such as:
 - Slow, deep breaths
 - Focusing the mind on a relaxing image or scene
 - Soft, relaxing lighting and sounds
 - **Exercise on a regular basis.** Maintain this even if your daily routine changes (such as when traveling, when you have house guests, or when your workload increases).
 - **Maintain the medication treatment plan designed by you and your physician.** Early intervention may help prevent the migraine from progressing into a severe, disabling attack.



Acute / Abortive Therapies

- **Non-prescription medications**
 - NSAIDs – ibuprofen (Advil, Motrin), naproxen sodium (Aleve), aspirin
 - Acetaminophen (Tylenol), combination products (such as Excedrin Migraine)
- **Prescription medications**
 - “Triptans” – Imitrex, Maxalt, Zomig, Relpax, Axert, Amerge, Frova
 - Ergotamine preparations – dihydroergotamine (DHE-45, Migranal) injection and nasal spray
 - Barbiturates – Fioricet, Fiorinal
 - Others – Midrin, Diclofenac (Cambia)

Preventative Therapies

- **Lifestyle changes**
- **Blood pressure medications**
 - Propranolol, Atenolol, Nadolol, Verapamil, Lisinopril, etc.
- **Anticonvulsants**
 - Topamax, Gabapentin, Lyrica, Lamictal, Zonegran, Depakote, etc.
- **Antidepressants**
 - Nortriptyline, Lexapro, Paxil, Remeron, etc.
- **Other**
 - Toxin injections (Botox, Xeomin, Dysport)

Alternative Therapies

- Magnesium gluconate and/or Mg citrate and/or Mg oxide 400-600 mg daily
- Riboflavin (Vitamin B2) 400 mg daily
- Feverfew 100-300 mg three times a day
- CoEnzyme Q10 (CoQ10) 100 mg three times a day
- Alpha lipoic acid 600 mg daily
- Folic acid 2 mg daily
- Pyridoxine (Vitamin B6) 25 mg daily
- Cobalamin (Vitamin B12) 400 micrograms daily
- Melatonin 0.5-5 mg at nighttime
- Petadolex® 75 mg twice a day - Pioneered by Weber & Weber, Petadolex® is the only butterbur extract that uses a patented refining process to deliver the **highest potency** of pharmacologically beneficial substances — petasin and isopetasin — while also removing the root’s naturally occurring pyrrolizidine alkaloids (PAs) which can be toxic to the liver. This is why it is the only brand of butterbur used in medical studies.



Chronic Daily Headache – Medication Overuse Headache

- Many people with frequent migraine or tension-type headaches are at risk of developing Rebound Headache, also called Medication Overuse Headache, if they take pain relievers three days per week or more.
- The stage is set for developing rebound headache when headache sufferers increase the amount and frequency of over-the-counter or prescription pain medication and take them almost every day. After awhile, the medication becomes less effective and the patient may feel worse rather than better.
- In addition, overuse of pain relievers can reduce the effectiveness of medications that have been prescribed to prevent headache or to stop them when they begin, making headaches refractory to the preventive and abortive medications.
- One study* comparing those who continued their offending medications versus those who discontinued them, showed that:
 - 73% of those who discontinued their offending medication had improvement in their headaches
 - 17% of those who continued their offending medication had improvement of their headaches

*[Bigal ME, Rapoport AM, Sheftell FD, Tepper SJ, Lipton RB](#). Transformed Migraine and medication overuse in a tertiary headache centre--clinical characteristics and treatment outcomes. *Cephalalgia*. 2004 Jun;24(6):483-90.

Medications that Cause Rebound Headaches (AKA Medication Overuse Headache)

- **NSAIDs (Nonsteroidal Anti-Inflammatory Drugs) or combinations:**
 - [Ibuprofen](#) (Advil, Motrin), [Fiorinal](#) (aspirin, butalbital, caffeine), [Naproxen](#) (Aleve), [Diclofenac](#) (Voltarin/Cataflan), [Aspirin](#), [Ketorolac](#) (Toradol)
- **Acetaminophen (Tylenol) or combinations:** [Acetaminophen](#) (Tylenol), [Fioricet](#) (acetaminophen, butalbital, caffeine), [Midrin](#) (acetaminophen, dichlor., isometh.), [Excedrin](#)
- **Triptans:** Imitrex, Maxalt, Zomig, Relpax, Axert, Amerge, Frova
- **Ergotamines:** DHE, Migranal, Cafergot-ergotamine/caffeine
- **Codeine and prescription narcotics :** Oxycodone, Percocet, Hydrocodone, Vicodin, Norco, Darvocet, Ultram, Tramadol, Fentanyl, Demerol, Dilaudid, Methadone, Morphine

Interested in further reading? Try one of these migraine books:

- [*The Migraine Brain*](#) by Carolyn Bernstein
- [*Heal Your Headache: The 1-2-3 Program for Taking Charge of Your Pain*](#) by David Buchholtz
- [*Breaking the Headache Cycle: A Proven Program for Treating and Preventing Recurring Headaches*](#) by Ian Livingstone and Donna Novak