

## Migraine and other Headache disorders

A migraine is a headache that can cause

- **severe throbbing pain**
- or a **pulsing sensation**,
- **Usually on one side of the head.**
- Often accompanied by nausea, vomiting, and extreme sensitivity to light and sound.
- Migraine attacks can last for hours to days, and the pain can be so bad that it interferes with your daily activities.

For some people, a **warning symptom** known as an **aura** occurs before or with the headache. An aura can include *visual disturbances*, such as flashes of light or blind spots, or other disturbances, such as tingling on one side of the face or in an arm or leg and difficulty speaking.

Medications can help prevent some migraines and make them less painful. The right medicines, combined with self-help remedies and lifestyle changes, might help.

Migraine attacks may be triggered by any of the following:

- Caffeine withdrawal
- Changes in hormone levels during a woman's menstrual cycle or with the use of birth control pills
- Changes in sleep patterns, such as not getting enough sleep
- Drinking alcohol
- Exercise or other physical stress
- Loud noises or bright lights
- Missed meals
- Odors or perfumes
- Smoking or exposure to smoke
- Stress and anxiety

Migraines can also be triggered by **certain foods**. Most common are:

- Chocolate
  - Dairy foods, especially certain cheeses
  - Foods with monosodium glutamate (MSG)
  - Foods with tyramine, which includes red wine, aged cheese, smoked fish, chicken livers, figs, and certain beans
  - Fruits (avocado, banana, citrus fruit)
  - Meats containing nitrates (bacon, hot dogs, salami, cured meats)
  - Onions
  - Peanuts and other nuts and seeds
  - Processed, fermented, pickled, or marinated foods
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## **Symptoms**

Migraines, which affect children and teenagers as well as adults, can progress through four stages: **prodrome, aura, attack and post-drome**. Not everyone who has migraines goes through all stages.

### **Prodrome**

One or two days before a migraine, you might notice subtle changes that warn of an upcoming migraine, including:

- Constipation.
- Mood changes, from depression to euphoria.
- Food cravings.
- Neck stiffness.
- Increased urination.
- Fluid retention.
- Frequent yawning.

## **Aura**

For some people, an **aura** might occur **before or during migraines**. Auras are reversible symptoms of the nervous system. They are usually visual but can also include other disturbances. Each symptom usually begins gradually, builds up over several minutes and can last up to 60 minutes.

Examples of migraine auras include:

- Visual phenomena, such as seeing various shapes, bright spots or flashes of light.
- Vision loss.
- Pins and needles sensations in an arm or leg.
- Weakness or numbness in the face or one side of the body.
- Difficulty speaking.

## **Attack**

A migraine usually lasts from 4 to 72 hours if untreated. How often migraines occur varies from person to person. Migraines might occur rarely or strike several times a month.

During a migraine, you might have:

- Pain usually on one side of your head, but often on both sides.
- Pain that throbs or pulses.
- Sensitivity to light, sound, and sometimes smell and touch.
- Nausea and vomiting.

## **Post-drome**

After a migraine attack, you might feel drained, confused and washed out for up to a day. Some people report feeling elated. Sudden head movement might bring on the pain again briefly.

## **Tension-type headache (TTH)**

- TTH is the most common primary headache disorder.
- Episodic TTH, occurring on fewer than 15 days per month, is reported by more than 70% of some populations.
- Chronic TTH, occurring on more than 15 days per month, affects 1-3% of adults.
- TTH often begins during the teenage years, affecting three women to every two men.
- Its mechanism may be stress-related or associated with musculoskeletal problems in the neck.
- Episodic TTH attacks usually last a few hours, but can persist for several days.
- Chronic TTH can be unremitting and is much more disabling than episodic TTH.
- This headache is described as pressure or tightness, often like a band around the head, sometimes spreading into or from the neck.

## **Cluster Headache (CH)**

- A primary headache disorder.
- CH is relatively uncommon affecting fewer than 1 in 1000 adults, affecting six men to each woman.
- Most people developing CH are in their 20s or older.
- It is characterized by frequently recurring (up to several times a day), brief but extremely severe headache, usually focused in or around one eye, with tearing and redness of the eye, the nose runs or is blocked on the affected side and the eyelid may droop.
- CH has episodic and chronic forms.

## Medication-overuse headache (MOH)

- MOH caused by chronic and excessive use of medication to treat headache.
  - MOH is the most common secondary headache disorder.
  - It may affect up to 5% of some populations, women more than men.
  - MOH occurs by definition on more days than not, is oppressive, persistent and often at its worst on awakening.
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## Treatment

Migraine treatment is aimed at stopping symptoms and preventing future attacks.

Many medications have been designed to treat migraines. Medications used to combat migraines fall into two broad categories:

- **Pain-relieving medications.** Also known as **acute or abortive treatment**, these types of drugs are taken during migraine attacks and are designed to stop symptoms.
- **Preventive medications.** These types of drugs are taken regularly, often daily, to reduce the severity or frequency of migraines.

Your treatment choices depend on the frequency and severity of your headaches, whether you have nausea and vomiting with your headaches, how disabling your headaches are, and other medical conditions you have.

## Medications for relief

Medications used to relieve migraine pain **work best when taken at the first sign of an oncoming migraine** — as soon as symptoms of a migraine begin. Medications that can be used to treat it include:

- **Pain relievers.** These over-the-counter or prescription pain relievers include aspirin or ibuprofen (Advil, Motrin IB, others). When taken too long, these might cause medication-overuse headaches, and possibly ulcers and bleeding in the gastrointestinal tract.

Migraine relief medications that combine caffeine, aspirin and acetaminophen (Excedrin Migraine) may be helpful, but usually only against mild migraine pain.

- **Triptans.** Prescription drugs such as **sumatriptan** (Imitrex, Tosymra) and rizatriptan (Maxalt, Maxalt-MLT) are used to treat migraine because they block pain pathways in the brain. Taken as pills, shots or nasal sprays, they can relieve many symptoms of migraine. They might not be safe for those at risk of a stroke or heart attack.
- **Dihydroergotamine (Migranal, Trudhesa).** Available as a nasal spray or injection, this drug is most effective when taken shortly after the start of migraine symptoms for migraines that tend to last longer than 24 hours. Side effects can include worsening of migraine-related vomiting and nausea.

People with coronary artery disease, high blood pressure, or kidney or liver disease should avoid dihydroergotamine.

- **Lasmiditan (Reyvow).** This newer oral tablet is approved for the treatment of migraine with or without aura. In drug trials, lasmiditan significantly improved headache pain. Lasmiditan can have a sedative effect and cause dizziness, so people taking it are advised not to drive or operate machinery for at least eight hours.
- **Oral calcitonin gene-related peptides antagonists, known as gepants.** Ubrogепant (Ubroгeрvу) and rimegepant (Nurtec ODT) are oral gepants approved for the treatment of migraine in adults. In drug trials, medicines from this class were more effective than placebo at relieving pain two hours after taking them. They also were effective at treating migraine symptoms such as nausea and sensitivity to light and sound. Common side effects include dry mouth, nausea and too much sleepiness. Ubrogепant and rimegepant should not be taken with strong CYP3A4 inhibitor medicines such as some medicines used to treat cancer.
- **Intranasal zavegepant (Zavzpret).** The Food and Drug Administration recently approved this nasal spray to treat migraines. Zavegepant is a gepant and the only migraine medicine that comes as a nasal spray. It brings migraine pain relief within 15 minutes to 2 hours after taking a single dose. The medicine continues working for up to 48 hours. It also can improve other symptoms related to migraine, such as nausea and sensitivity to light and sound.

Common side effects of zavegepant include a change in sense of taste, nasal discomfort and throat irritation.

- **Opioid medications.** For people who can't take other migraine medications, **narcotic opioid medications** might help. Because they can be highly addictive, these are usually used only if no other treatments are effective.

- **Anti-nausea drugs.** These can help if your migraine with aura is accompanied by nausea and vomiting. Anti-nausea drugs include chlorpromazine, metoclopramide (Gimoti, Reglan) or prochlorperazine (Compro, Compazine). These are usually taken with pain medications.

Some of these medications are not safe to take during pregnancy. If you're pregnant or trying to get pregnant, don't use any of these medications without first talking with your health care provider.

## Preventive medications

Medications can help prevent frequent migraines. Your health care provider might recommend preventive medications if you have frequent, long-lasting or severe headaches that don't respond well to treatment.

Preventive medication is aimed at reducing how often you get a migraine, how severe the attacks are and how long they last. Options include:

- **Blood pressure-lowering medications.** These include beta blockers such as propranolol (Inderal, InnoPran), Hemangeol) and metoprolol (Lopressor). Calcium channel blockers such as verapamil (Verelan, Calan) can be helpful in preventing migraines with aura.
- **Antidepressants.** A tricyclic antidepressant, amitriptyline, can prevent migraines. Because of the side effects of amitriptyline, such as sleepiness, other antidepressants might be prescribed instead.
- **Anti-seizure drugs.** Valproate and topiramate (Topamax, Qudexy, others) might help if you have less frequent migraines, but can cause side effects such as dizziness, weight changes, nausea and more. These medications are not recommended for pregnant women or women trying to get pregnant.
- **Botox injections.** Injections of onabotulinumtoxinA (Botox) about every 12 weeks help prevent migraines in some adults.
- **Calcitonin gene-related peptides (CGRP) monoclonal antibodies.** Erenumab-aooe (Aimovig), fremanezumab-vfrm (Ajovy), galcanezumab-gnlm (Emgality), and eptinezumab-jjmr (Vyepiti) are newer medicines approved by the Food and Drug Administration to treat migraines. They're given monthly or quarterly by injection. The most common side effect is a reaction at the injection site.
- **Atogepant (Qulipta).** This medicine is a gepant that helps prevent migraines. It's a tablet taken by mouth daily. Potential side effects of the medicine may include nausea, constipation and fatigue.

- **Rimegepant (Nurtec ODT).** This medicine is unique in that it's a gepant that helps prevent migraines in addition to treating migraines as needed.

Ask your health care provider if these medications are right for you. Some of these medications are not safe to take during pregnancy. If you're pregnant or trying to get pregnant, don't use any of these medications without first talking with your provider.