



HEADACHE

ACCORDING TO THE ICHD-3 (INTERNATIONAL CLASSIFICATION OF HEADACHE DISORDERS, 3RD EDITION), HEADACHE IS PAIN IN ANY REGION OF THE CRANIUM AND MAY INCLUDE: MIGRAINE, TENSION TYPE HEADACHE, CLUSTER, TRIGEMINAL AUTONOMIC CEPHALGIA, AND SECONDARY HEADACHE SYNDROMES

(ADVENTISTHEALTH.INTERNAL)

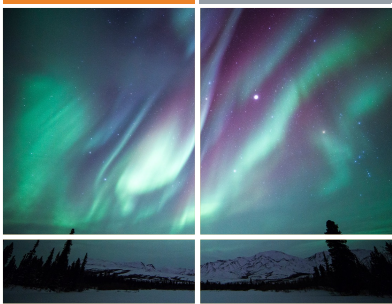
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WHAT IS MIGRAINE?

A complex neurologic disease occurring in 4 phases: prodrome; aura; headache and postdrome.

Migraine is characterized by the presence of: Severe headache; Nausea; photophobia; phonophobia; fatigue; dizziness or vertigo.

Migraine is a progressive neurologic disease with recurrent attacks that are often incapacitating and characterized by headache pain.



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HOW COMMON IS MIGRAINE?

- In the US 14.4% of adults experience the pain and disability of migraine disease.
- 39 Million Americans
- Migraine is 3x more prevalent in women than men
- 1 in every 4 homes is affected by migraine
- Headache is the most common reason for neurology consultation.

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MIGRAINE IS A COMPLEX NEUROLOGIC DISEASE

1. Migraine is a sensory processing disease involving both peripheral and central nerves.
2. Migraine starts with the activation of the Trigeminal system
3. The pain starts in the meninges and trigeminal nerves in the trigeminovascular system.

Mechanisms involved in the pathophysiology of migraine.

- Prodrome- hypothalamic processing dysfunction
- Aura- cortical spreading depression
- Headache- Activation of trigeminal nerves and release of neuropeptides including CGRP and PACAP as well as neurotransmitters such as Glutamate and Nitrous oxide.
- The release of Neuropeptides results in vasodilation and neurogenic inflammation as well as contributes to Central sensitization.

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NONPHARMACOLOGIC APPROACHES TO MIGRAINE CARE MANAGEMENT

- Lifestyle:
 - Regular exercise
 - Adequate water intake
 - Consistent eating and sleeping schedules
 - Headache diary to identify patterns
- Alternative Therapies
 - Acupuncture
 - Yoga/Tai Chi
 - Mindfulness/Meditation
 - Biofeedback
 - Dietary supplements

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PHARMACOLOGIC MIGRAINE MANAGEMENT

Acute Treatments: Goal to stop the progression of an attack as they occur.	Preventative Treatments (Prophylaxis): Goal to reduce migraine attack frequency and severity Taken proactively on a regular basis
Examples: • Non-specific pain relievers (NSAIDs) • Triptans • CGRP receptor antagonists (gepants)	Examples: • Oral generic preventatives (AEDs; Beta blockers; antidepressants) • Monoclonal antibodies directed against CGRP (mAbs) ligand and receptor • Chemodeneration for CM prophylaxis • CGRP receptor antagonists (gepants)
Acute Migraine Treatments MOA • NSAIDs: Cox-1 and Cox-2 inhibition • IV magnesium: Calcium channel antagonist, affects neuropeptides like serotonin, NO, CGRP • Triptans: 5-HT_{1B/1D} receptor agonist • Gepants: CGRP receptor antagonist • Lasmiditan: 5-HT_{1F} receptor agonist	Preventative Treatments and MOA • AEDs: Targets GABA, glutamate and NO to reduce excitability • Beta blockers: B1 and B2 receptor antagonist • Antidepressants: block serotonin and NE reuptake • CGRP mAbs: CGRP receptor antagonists and CGRP ligand blockade • Gepants: CGRP receptor antagonists

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CALCITONIN GENE RELATED PEPTIDE

- 1. CGRP is the main neuropeptide released around leptomeningeal and pericranial vessels upon activation of the TVA (trigeminovascular system) during a migraine attack.



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THANK YOU

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