Miles for Migraine Education Day

Migraine: what is it and what matters for the patient?

Marius Birlea, MD, FAHS

Associate professor of Neurology clinical practice

University of Colorado Anschutz Medical Campus

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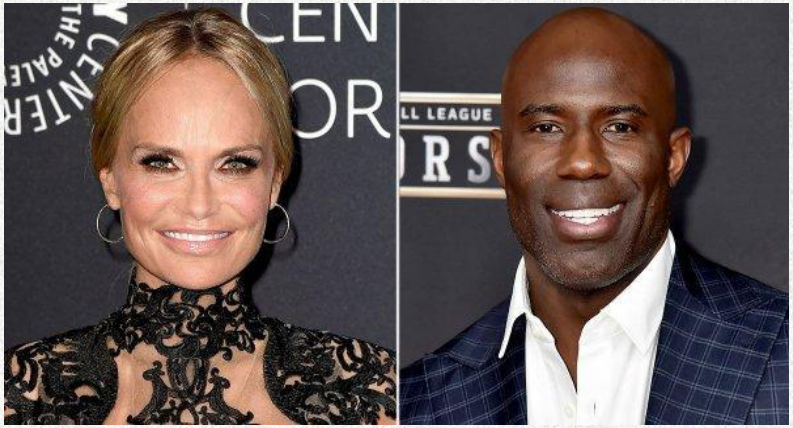
Impact

Migraine: 6th most common disease on the planet and 2nd most disabling

Lancet Neurology, 2018; 17;954-976- GBD study

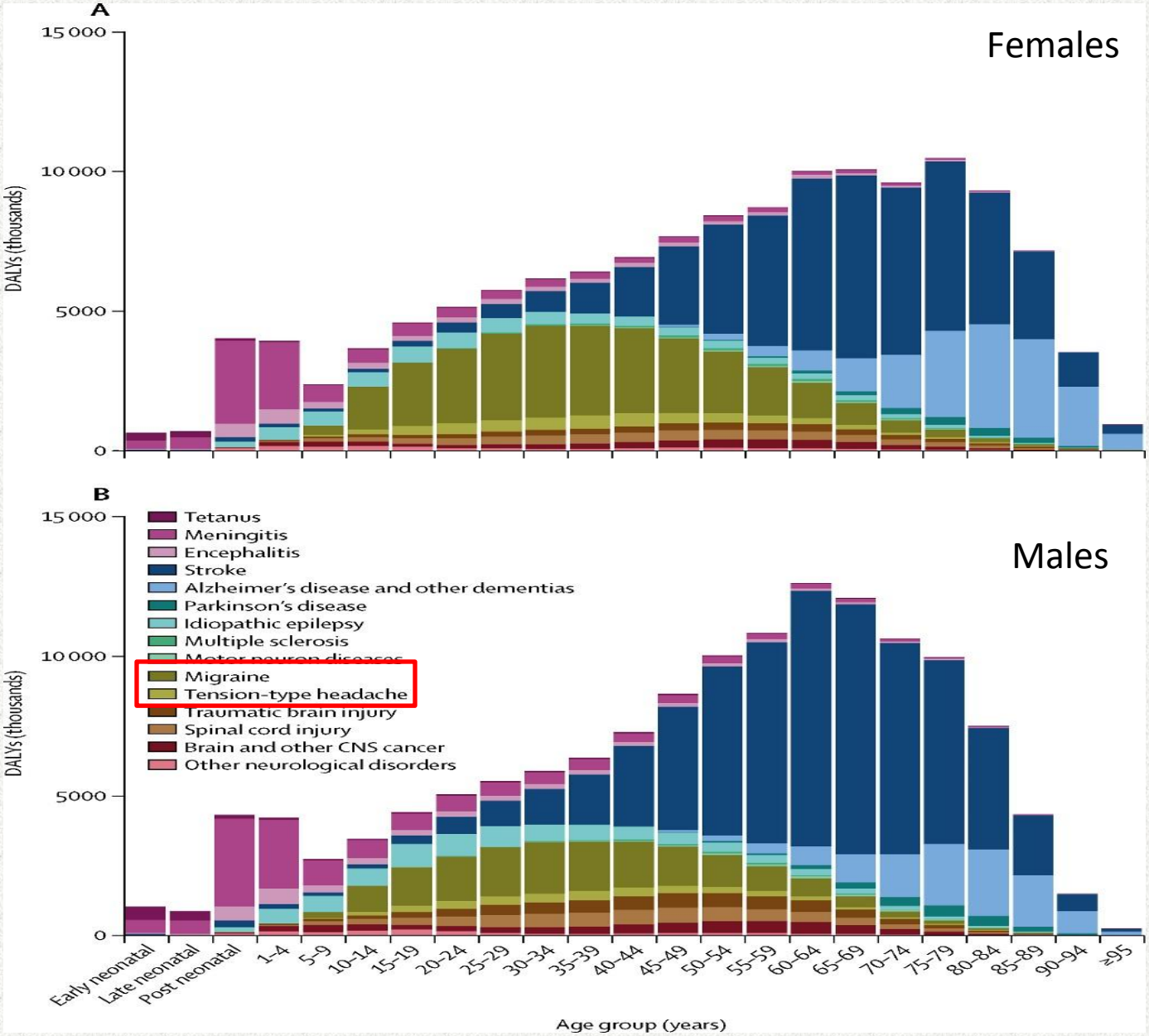


Kristin Chenoweth and Terrell Davis bond over Living with Migraine:

"You Have Somebody that Understands"

Migraine World Summit, 2019

Disability



Global, regional, and national burden of neurological disorders, 1990-2016:

Lancet Neurol. 2019

What do the patients say?

Cause

- “I want to get to the root of the problem”
- “What is causing my headaches?”

Treatment

- “I want to get rid of my migraines”
- “How can I stop my migraines?”
- “I don’t want to have a headache every day”
- “I am at my wit’s end with the headaches”
- “Tried everything”

Function

- “I want to be able to work and take care of my family”

Indiference

- “I don’t know, my doctor sent me here”

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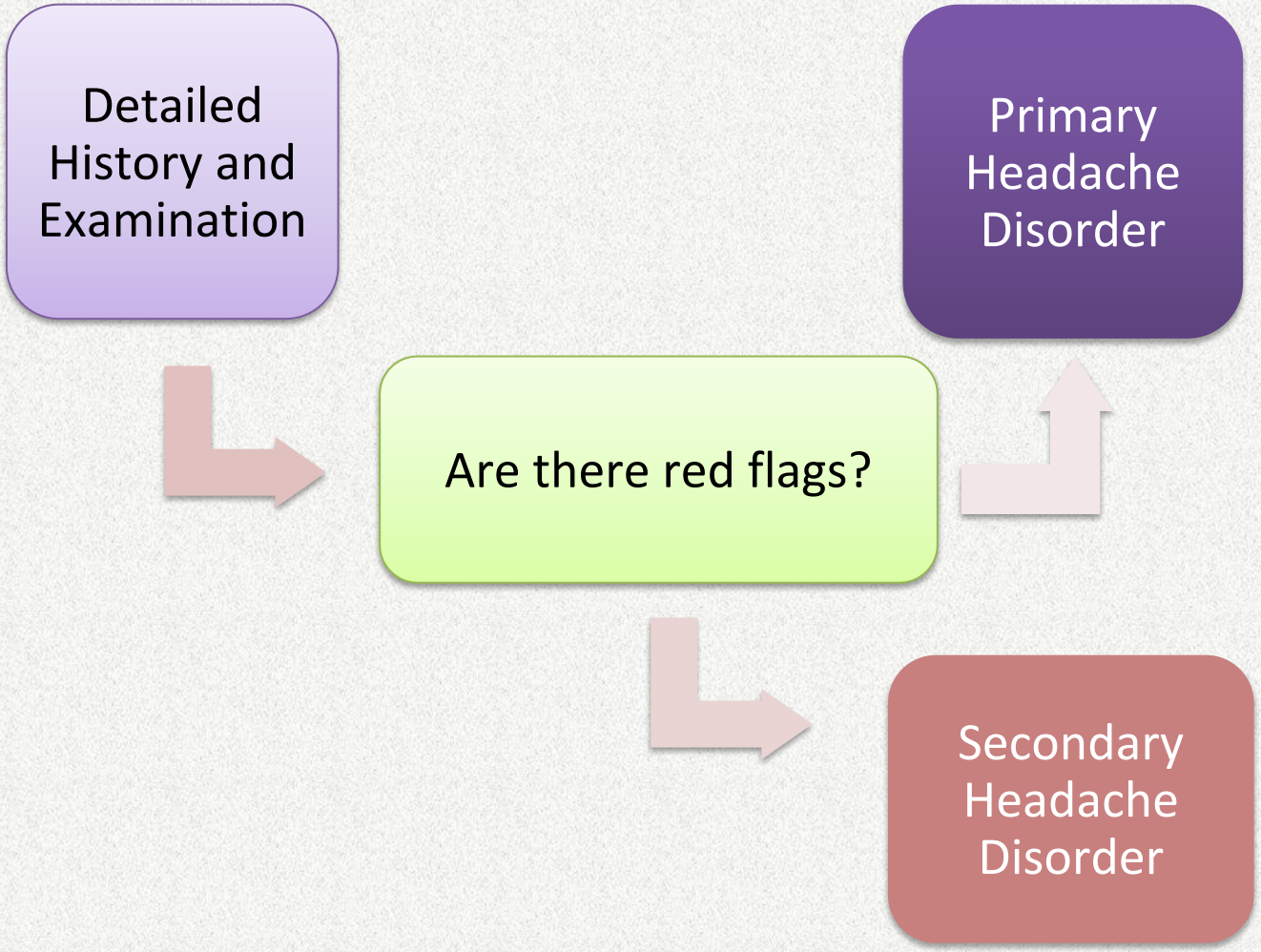
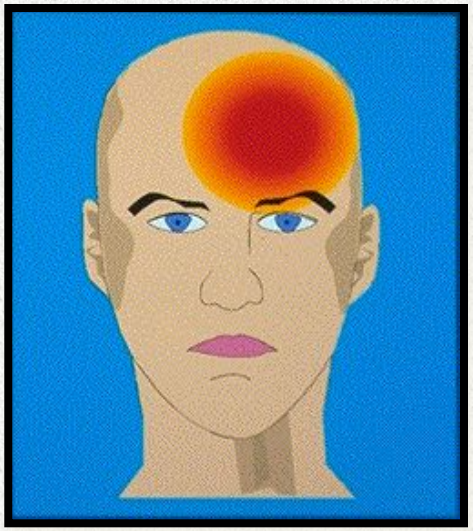
Diagnostic algorithm



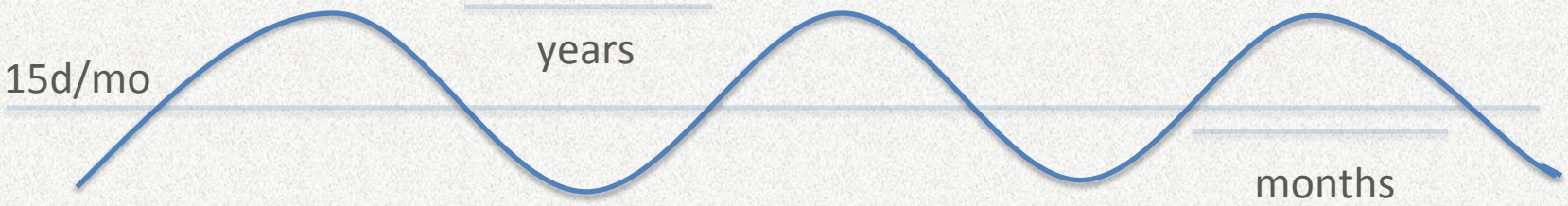
“Doctor, I have a sinus headache”

“Doctor, I have a migraine”



Heather

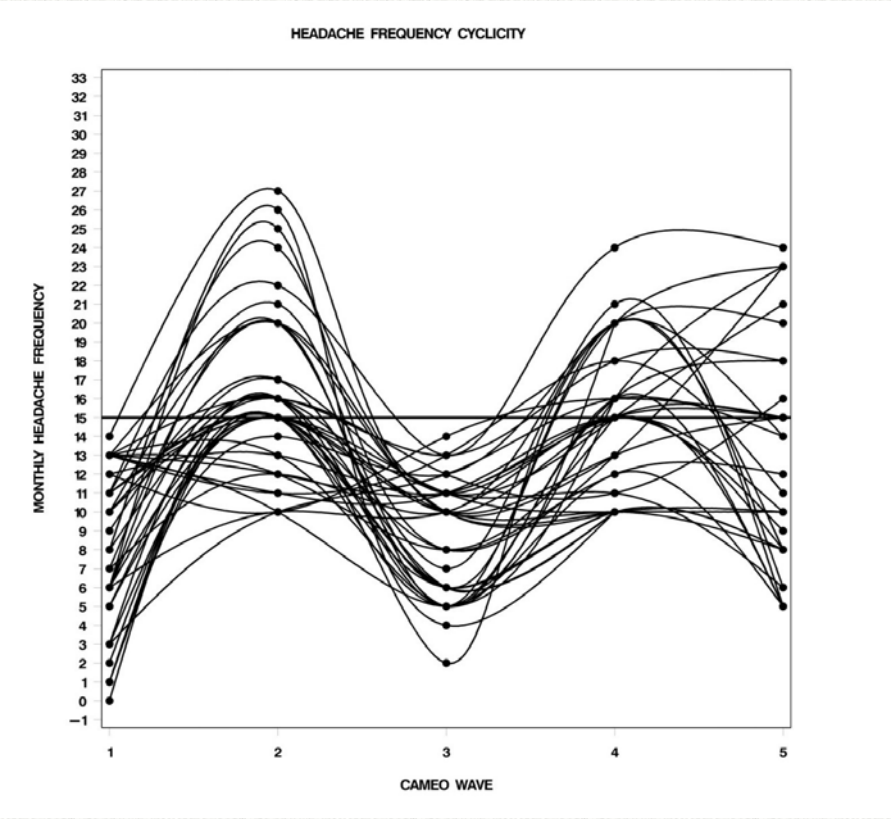
- 28 yo woman with hx. of migraine since age 13, had to interrupt high school at age 17-18 due to frequent and severe headaches.
- Pressure or throbbing, front-temples, with radiation to the back. Most of the days, her headaches are manageable and respond to OTC analgesics.

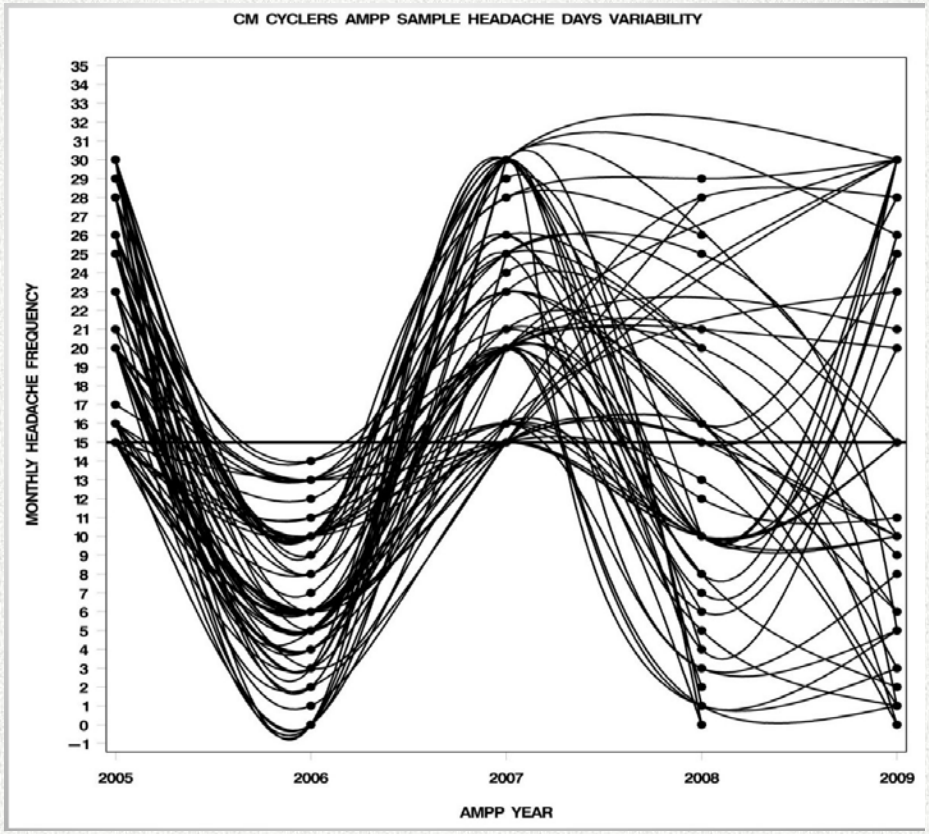


- High scores for impact and disability (HIT 6 and MIDAS)
- Low score for depression (PHQ9)
- Exam normal.
- Meds: Oral contraceptives, simple analgesics, Frova, rare Norco, rarely goes to ED

- Offered preventive treatment

Variable evolution

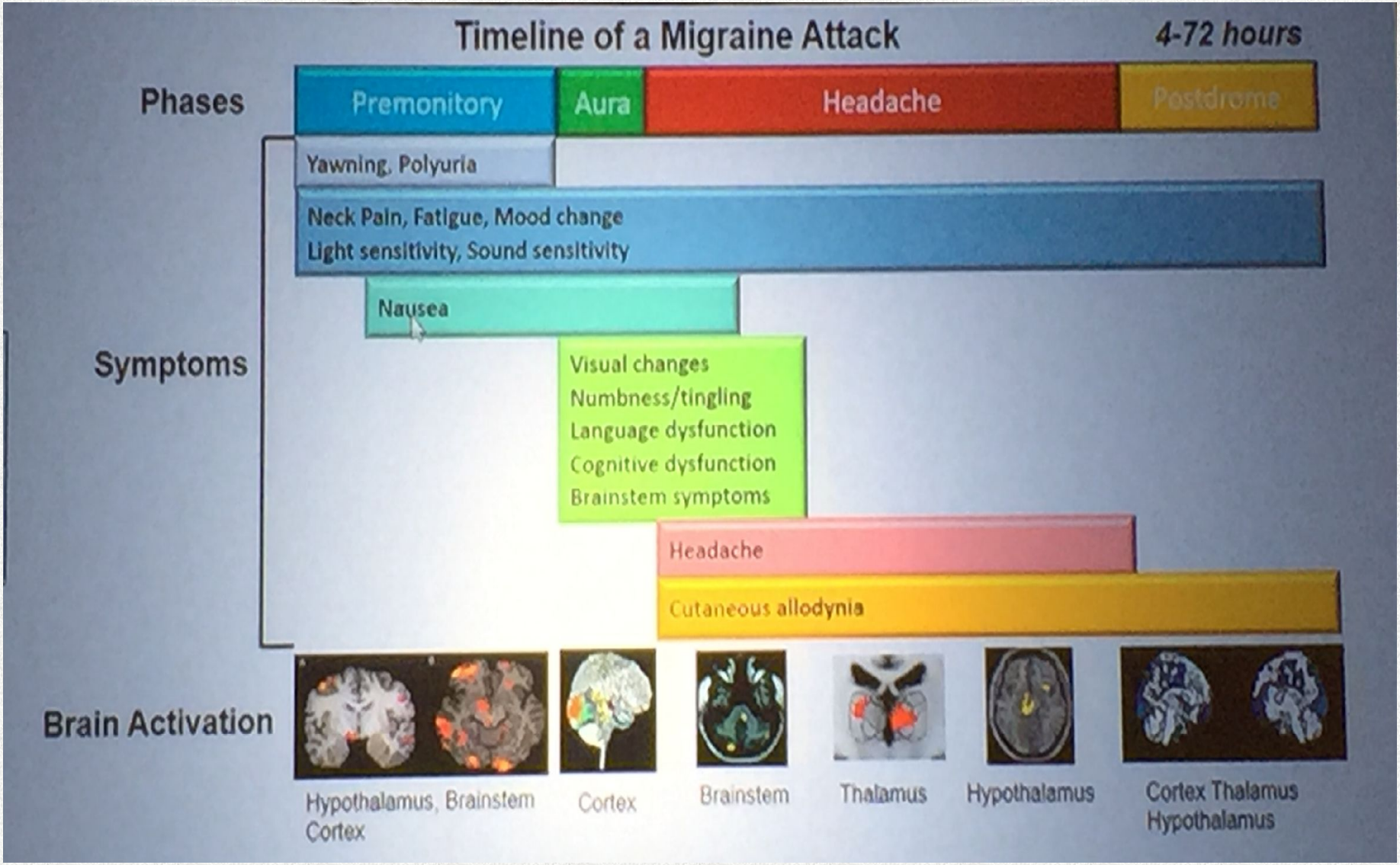




Individual trajectories of episodic and chronic migraine

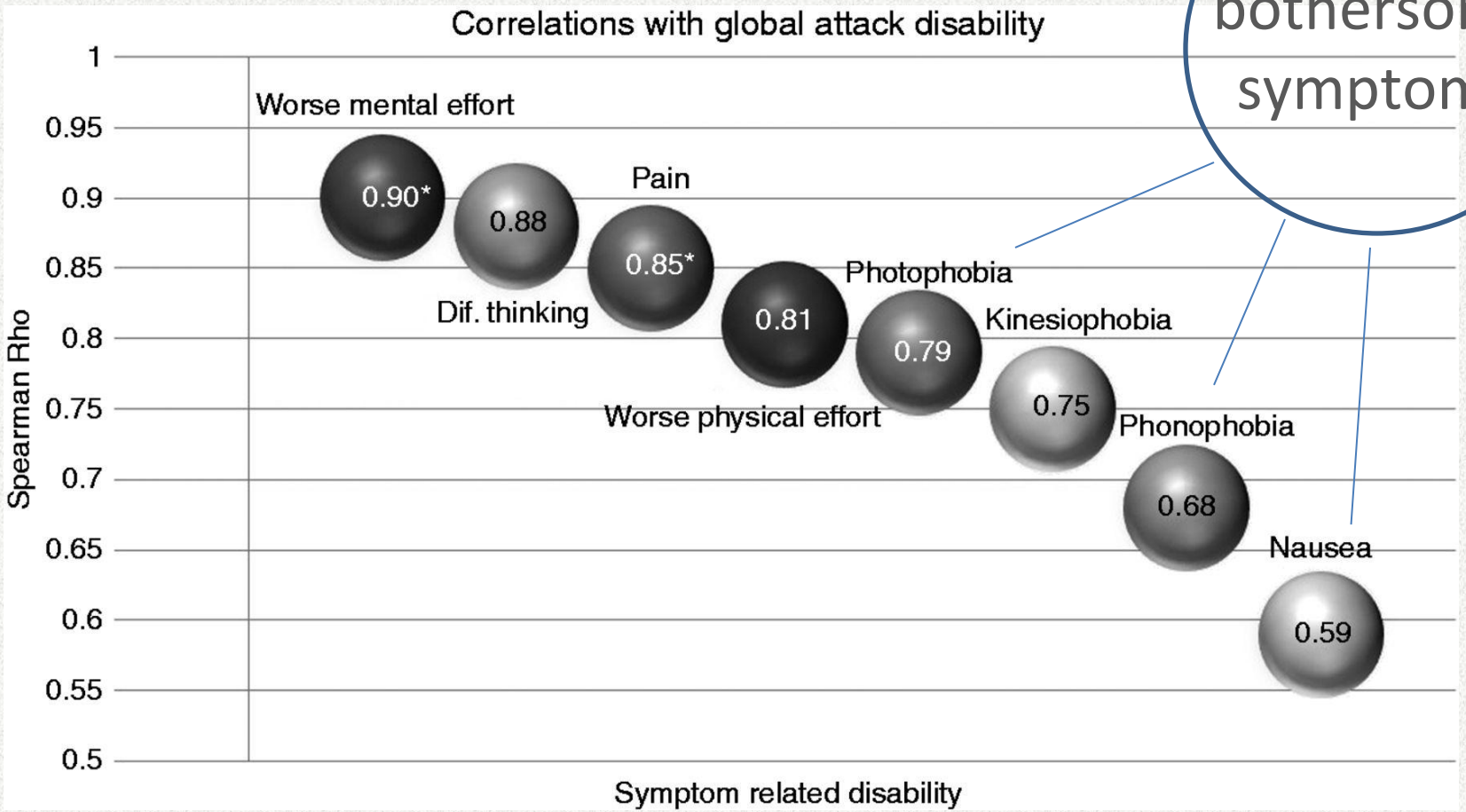
Serrano et al, Journal of Headache and Pain, 2017

Phases of a migraine attack



Dr. Andrew Charles, UCLA

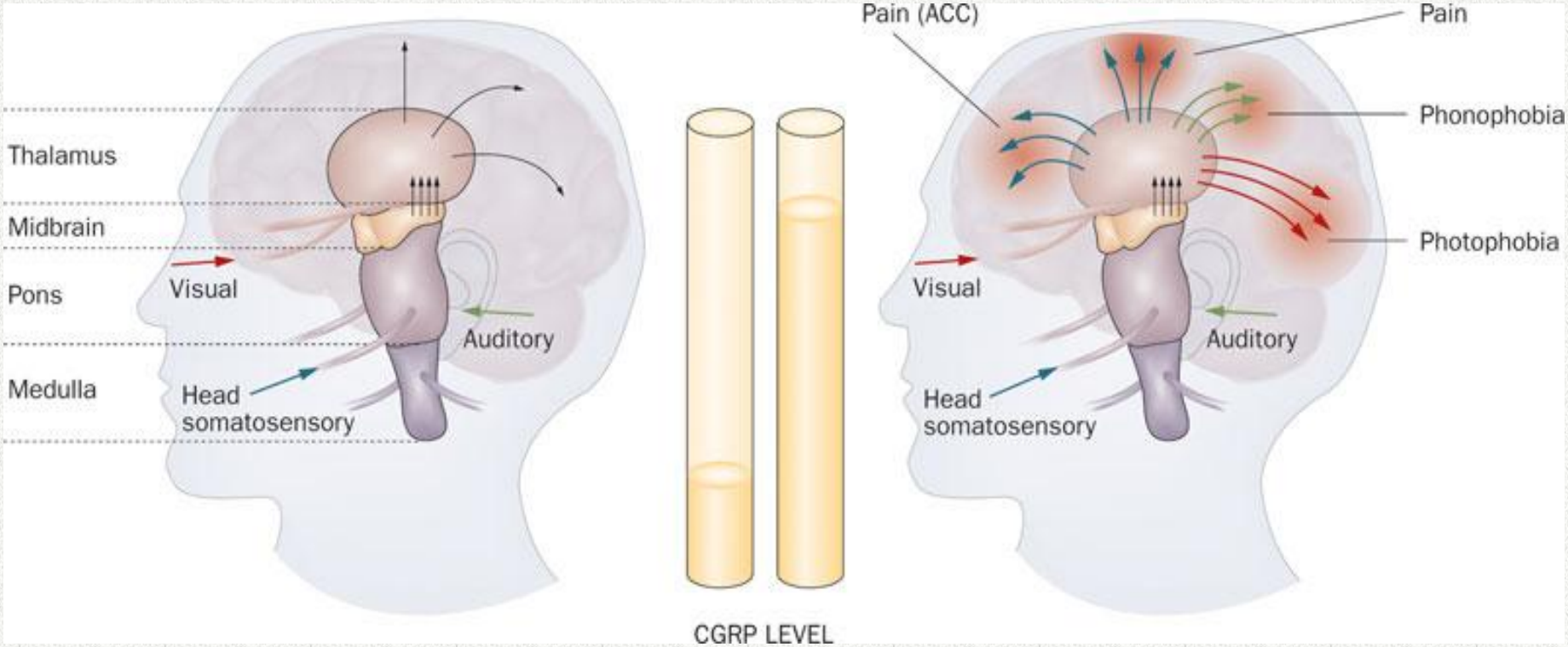
Disability during attack



"Most bothersome symptom"

Gil-Gouvela et al, Cephalalgia 2016

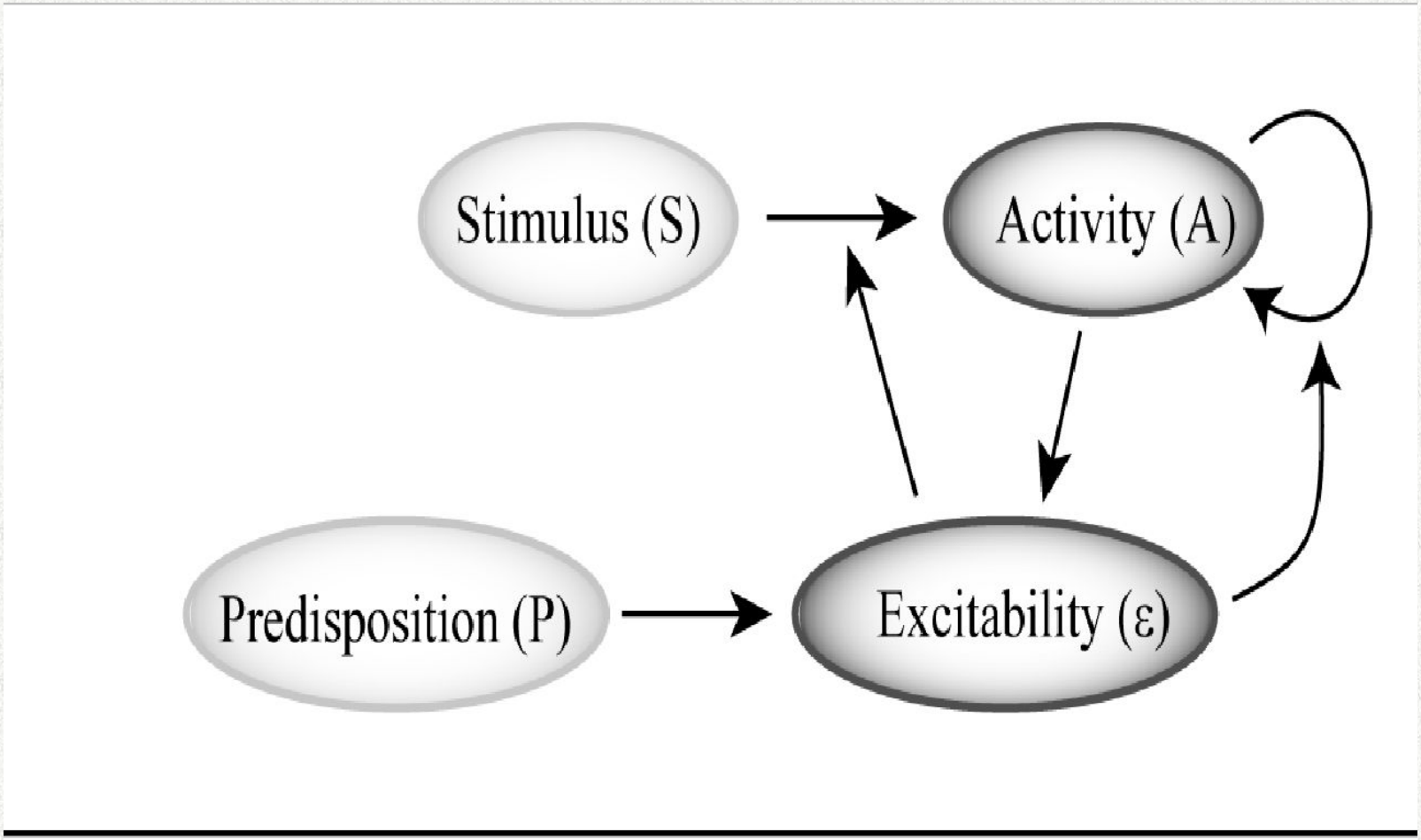
Migraine pathophysiology



Migraine as a deficit in filtering of sensory inputs—a model

Ho et al, Nat Rev Neurol 2010

Migraine Strikes as Neuronal Excitability Reaches a Tipping Point



mathematical model

Scheffer et al, PlosOne 2013

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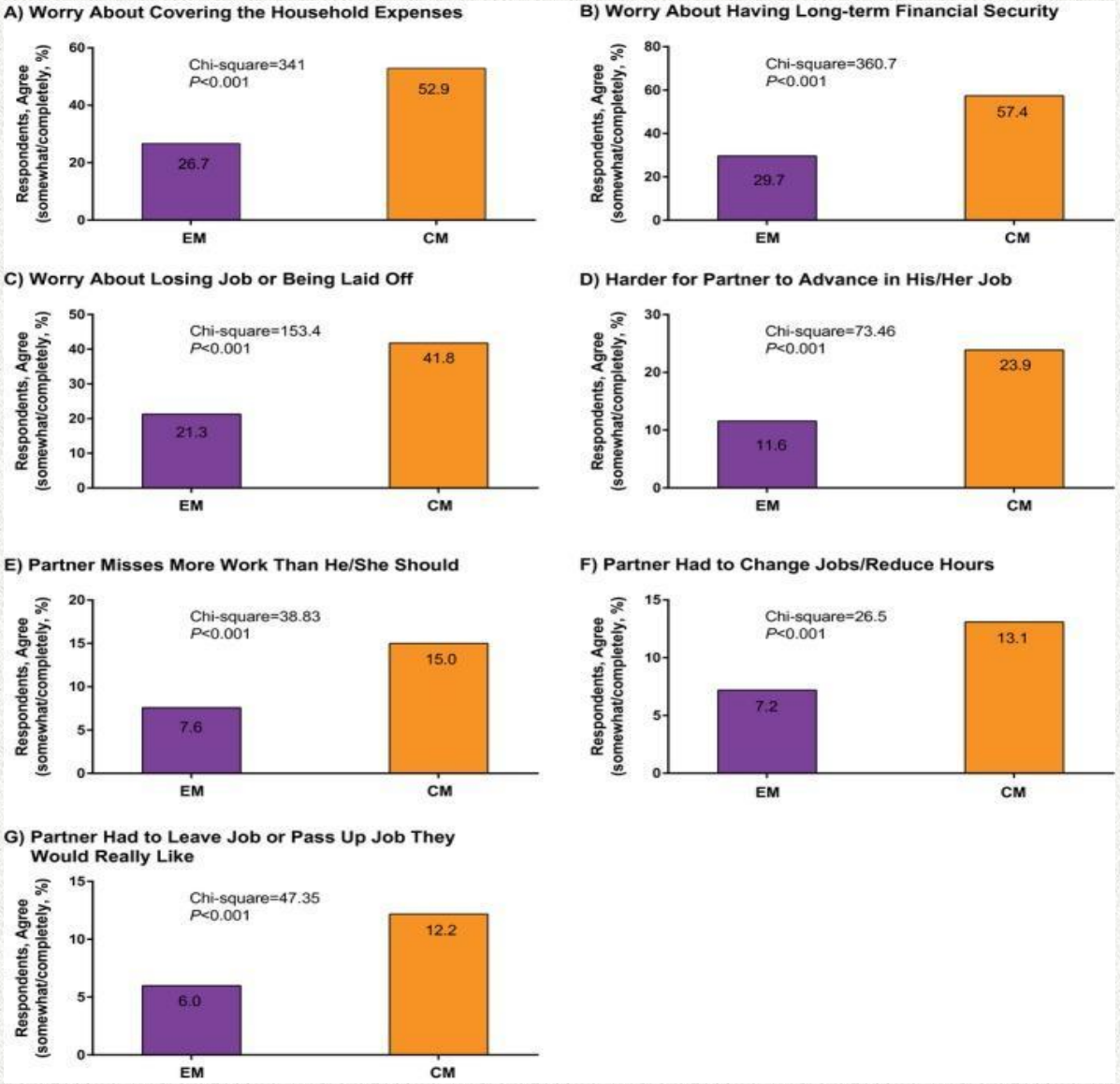
Life with migraine



Buse et al, Headache, 2019 - CAMEO

Headache acceptance

Headache Acceptance Questionnaire (HAQ).

Instructions: Below you will find a list of statements. Please rate how true each statement is for you using the scale below.

1	2	3	4	5	6	7
Never true	Very rarely true	Rarely true	Sometimes true	Frequently true	Almost always true	Always true

1. I must limit my activities to avoid anything that might trigger a headache.
2. I avoid making plans if I think I might get a headache.
3. I avoid putting myself in situations where I might get a headache.
4. My headaches keep me from trying to be productive.
5. I would gladly sacrifice important things in my life to better control my headaches.
6. I am doing my best to live a normal life with my headaches.

Scoring: Items 1–5 are reverse scored in order to obtain a total headache acceptance score. Total scores range from 6 to 42, with higher scores indicating greater acceptance of headache.

Hammer et al, Cephalalgia 2020

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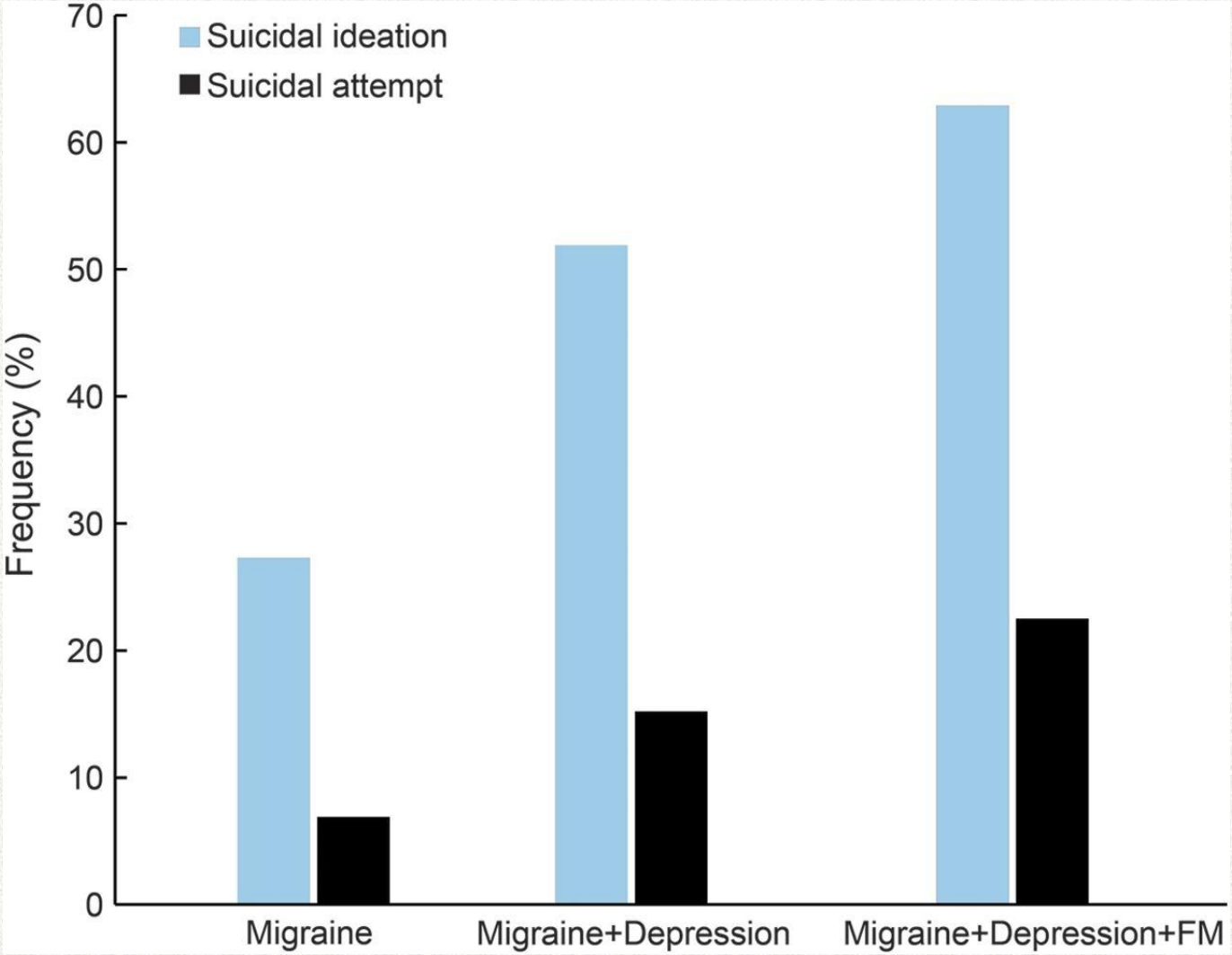
Suicide risk in patients with migraine, migraine with comorbid depression, and migraine with comorbid depression and fibromyalgia



Liu et al, Neurology 2015

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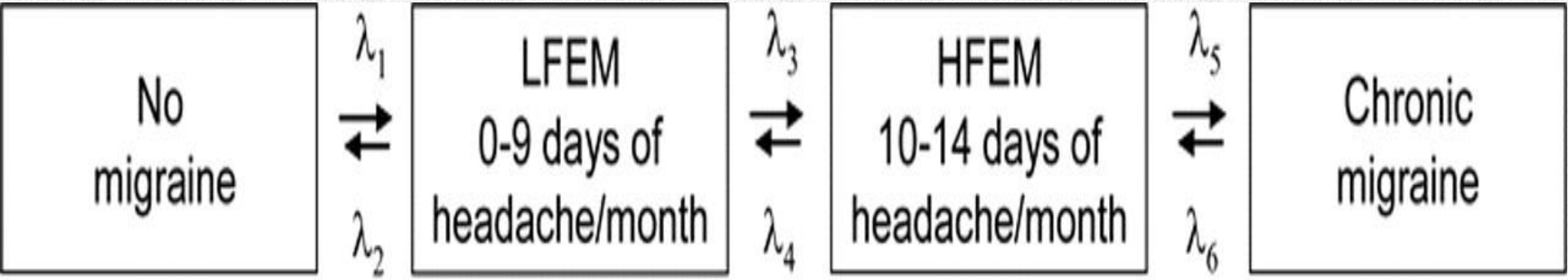
Framework for transitions in migraine

Nonmodifiable: age, female, white, low educational/socioeconomic status, genetics

Modifiable: attack frequency, suboptimal treatment of attacks, obesity, analgesics and caffeine overuse, sleep apnea, psychiatric comorbidities, stressful life events



Bigal and Lipton, Neurology 2008

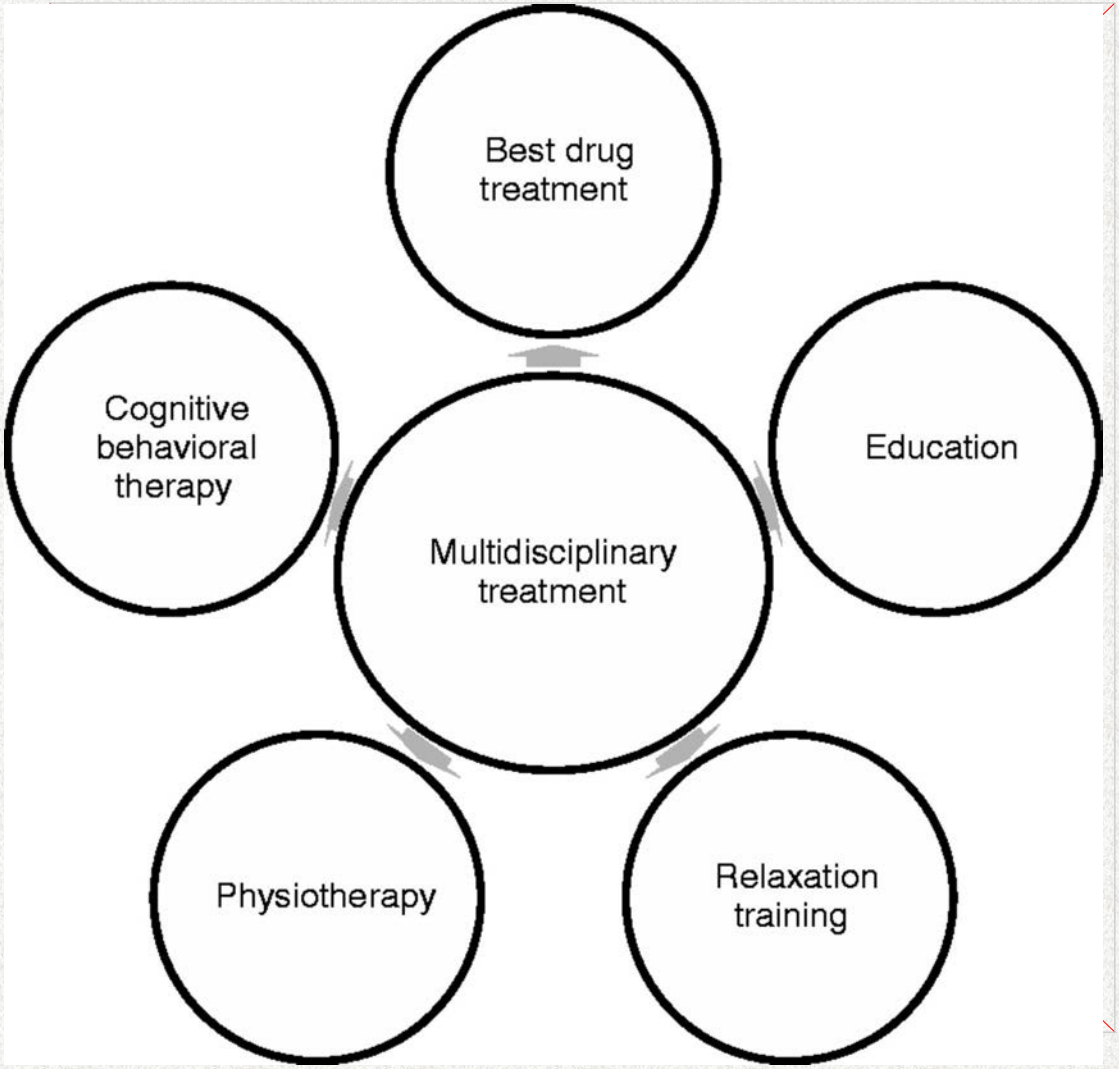
Weight loss
"Detoxification"
CPAP
Decrease caffeine intake
Treatment of other chronic pain

Abortive and preventive therapy

Behavioral treatments

Non-pharmacological treatments

Team players against migraine

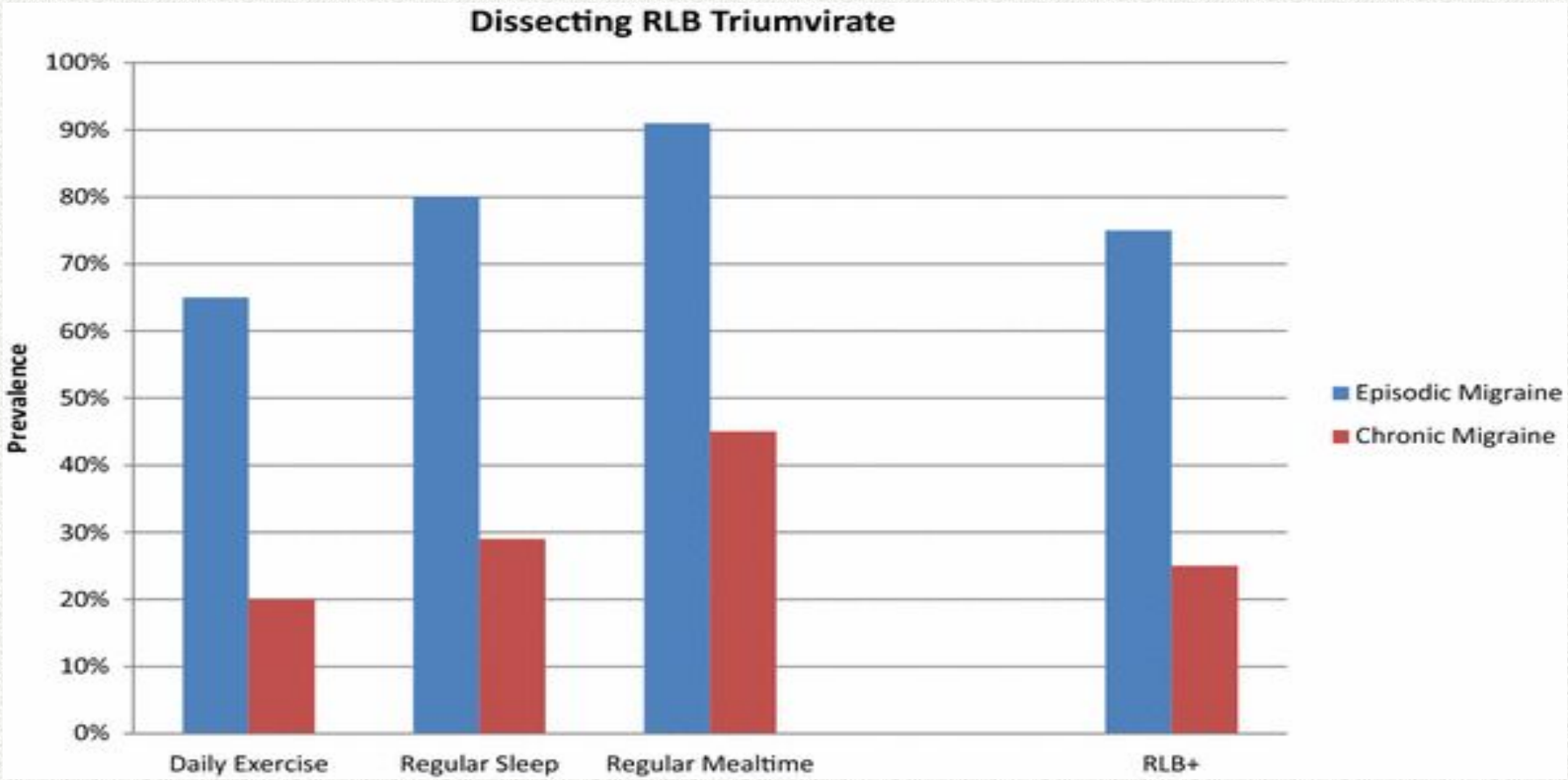


Patient education

Advocacy

Gaul et al, Plos One 2013

Preventive treatment: to ↓ attacks frequency/severity



Regular lifestyle behavior

Yohannes et al, J Neurol 2016

Preventive treatment: to ↓ attacks frequency/severity

Anticonvulsants	Antihypertensives	Antidepressants	Anti CGRP Antibodies MIGRAINE SPECIFIC	Other Prescriptions
Topiramate (Topamax, Tro.)	Candesartan (Atacand)	Amitriptyline (Elavil)	Erenumab (AIMOVIG)	Memantine (Namenda)
Gabapentin (Neurontin)	Metoprolol (Lopressor)	Nortriptyline (Pamelor)	Fremanezumab (AJOVY)	Methylergonovine (Methergine)
Valproic acid (Depakote)	Propranolol (Inderal)	Venlafaxine (Effexor)	Galcanezumab (EMGALITY)	Aspirin
Other	Other	Other	Eptinezumab (VYEPTI)	Other
Botox injections for Chronic Migraine (Onabotulinium toxin A)			MIGRAINE SPECIFIC	

Supplements	Boswellia; CoQ10; Melatonin; Magnesium; Vitamin B2 (Riboflavin)		
Devices	eTNS	Gammacore	eTNSTranscranial magnetic stimulator, TMS

Abortive treatment: to stop an attack

MIGRAINE SPECIFIC		Non-specific pain relievers			
Triptans	Gepants	NSAIDs	Antinausea	Other	Opipids/barbiturate
Almotriptan (Axert) **Eletriptan (Relpax)** **Frovatriptan (Frova)** **Naratriptan (Amerge)** **Rizatriptan (Maxalt)** **Sumatriptan (Imitrex)** tb, inj, ns **Treximet (Pernix)** **Zolmitriptan (Zomig)**tb, ns	**Ubrogepant (Ubrelvy)** **Rimegepant (Nurtec)** Ditans **Lasmiditan (Reyvow)** Ergots (nonselective) **Dihydroergotamine (DHE)** inj, ns	**Aspirin**	**Chlorpromazine (Thorazine)**	**Acetaminophen (APAP)(Tylenol)**	APAP & Oxycodone (Percocet)
		Celecoxib (Celebrex)	**Metoclopramide (Reglan)**	**Cyclobenzaprine (Flexeryl)**	Butalbital/APAP/Caffeine (Fioricet)
		Diclofenac (Cambia)	**Ondansetron (Zofran)**	**Dexamethasone (Decadron)**	Hydromorphone (Dilaudid)
		Ibuprofen (Motrin)	**Promethazine (Phenergan)**	**Excedrin**	Hydrocodone/APAP (Norco/Vicodin)
		Indomethacin (Indocid)	**Prochlorperazine (Compazine)**	**Lidocaine** ns	Oxycodone (Oxycontin)
		Ketorolac (Toradol) tb,inj, ns		**Prednisone**	Tramadol (Ultram)
		Meloxicam (Mobic)			Tylenol/Codeine
		Naproxen (Naprosyn)			
Devices	**eTNS (CEFALY)**	**Gammacore (SAPPHIRE)**	**Nerivio (MIGRA)**	**eTNSTranscranial magnetic stimulator, TMS (eNEURA)**	

Preventive and abortive: devices

CEFALY

TMS

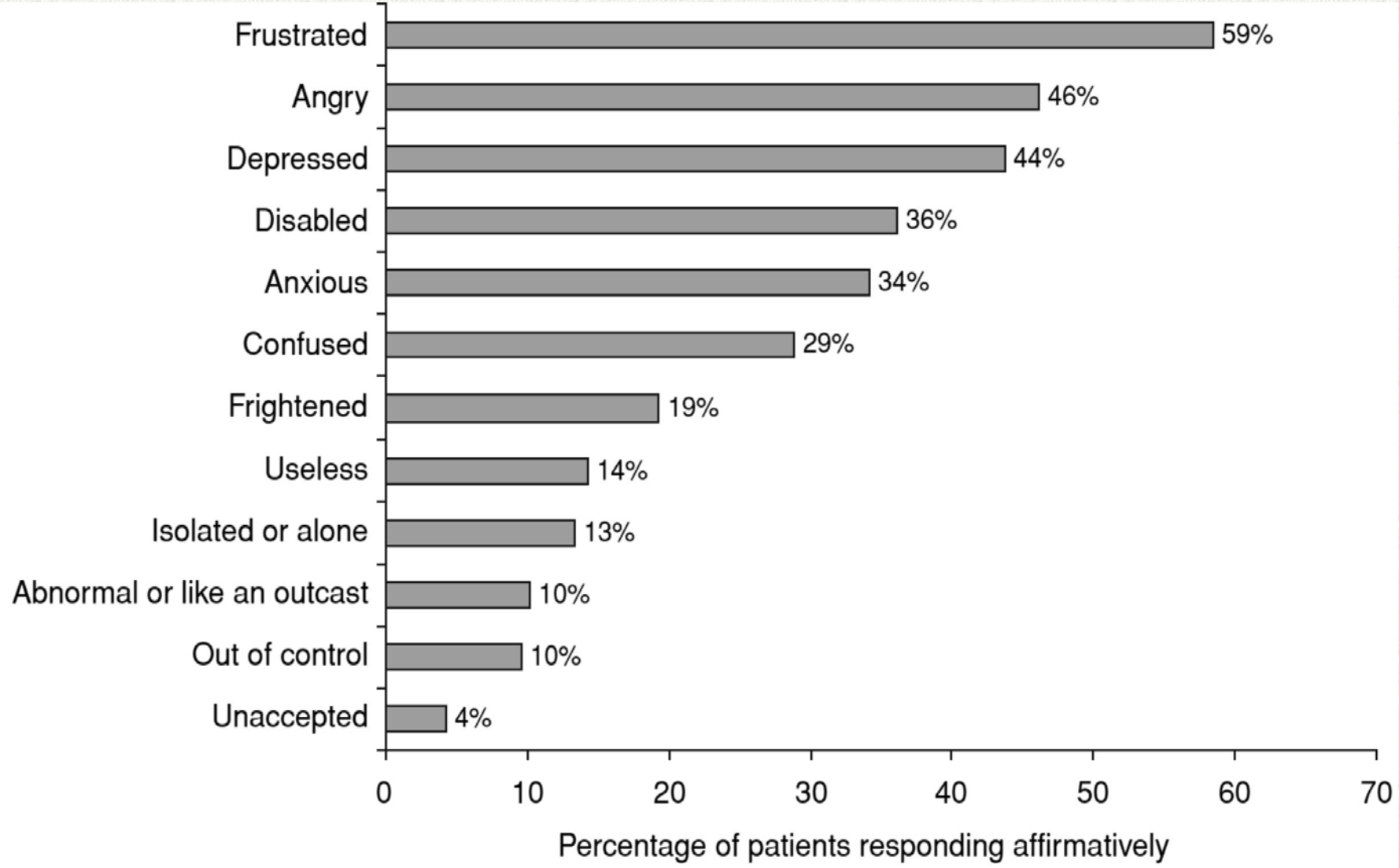
GammaCore

Nerivio

THANK YOU!

Questions?

"The impact of migraine on psychological well-being of young women and their communication with physicians about migraine: a multinational study"



Dueland et al, Curr Medical Research and Opinion 2005

ID Migraine

During the last 3 months, did you have any of the following with your headaches?*

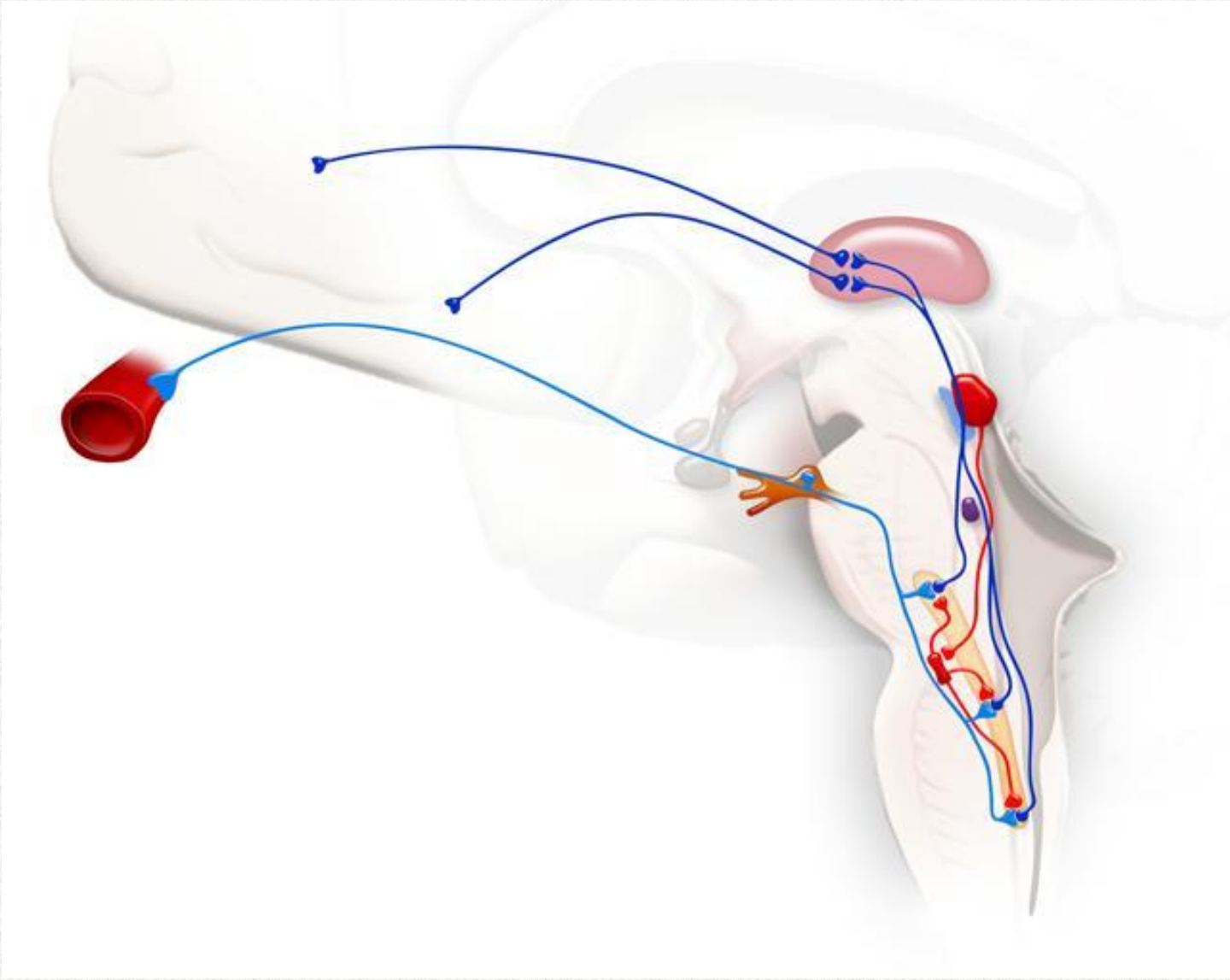
1. You felt **nauseated** or sick to your stomach when you had a headache?

2. **Light bothered you** (a lot more than when you don't have headaches)?

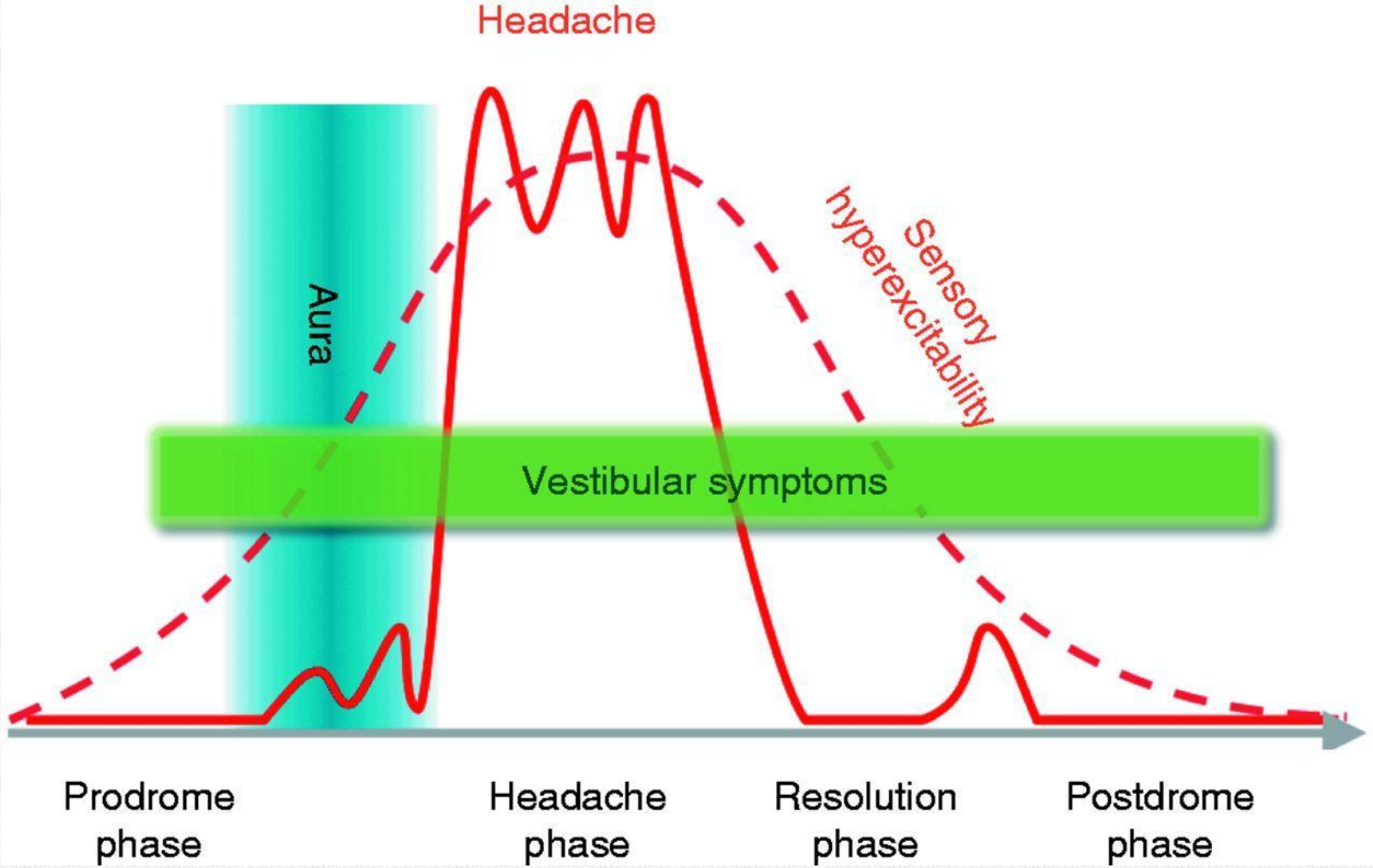
3. Your headaches **limited your ability** to work, study, or do what you needed to do for at least 1 day?

A self-administered screener for migraine in primary care / Lipton RB. Neurology. 2003

Migraine pathways



Vestibular migraine



Stolte et al, Cephalalgia 2014