

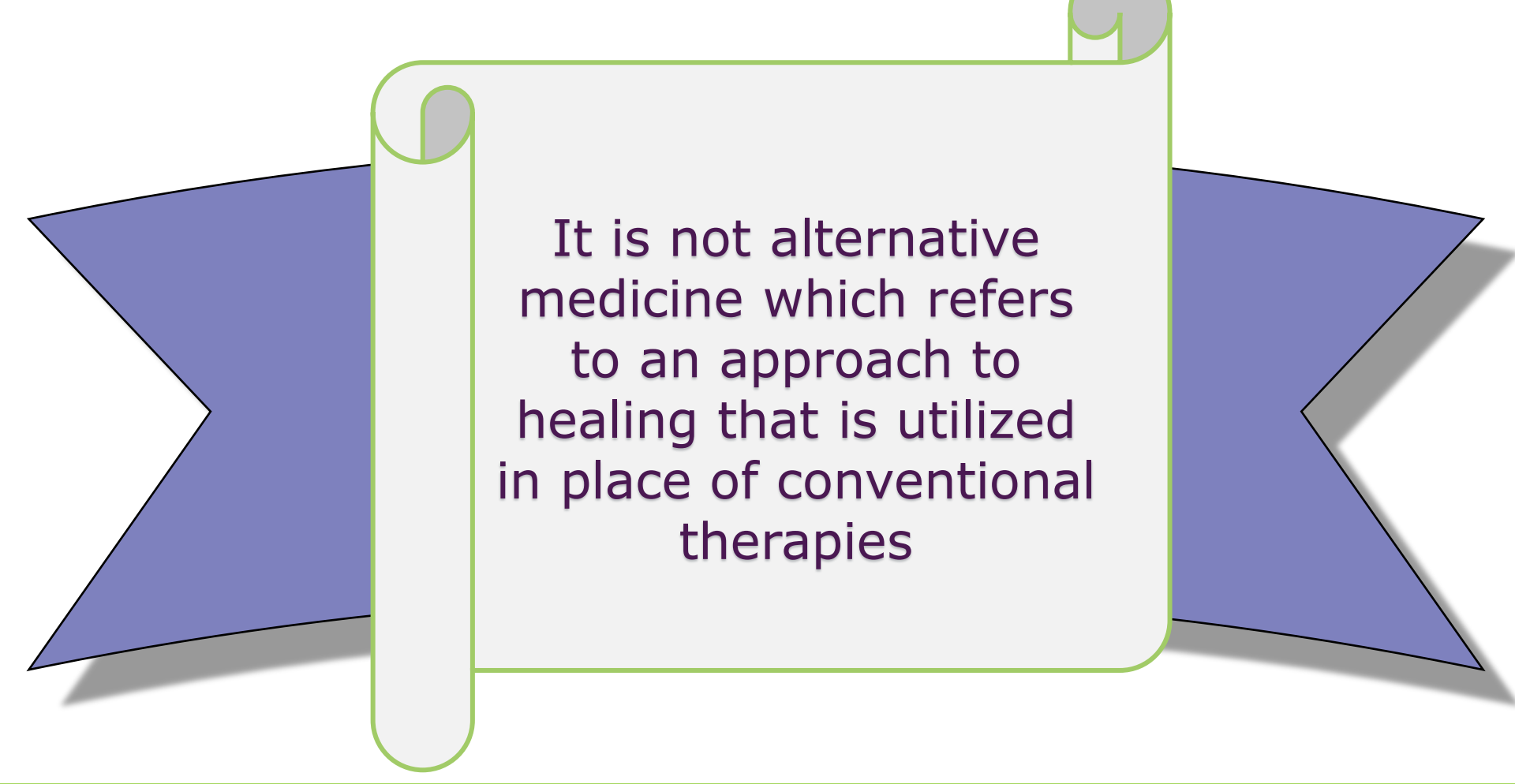
Integrative Pain Approaches

Headaches

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It is not alternative medicine which refers to an approach to healing that is utilized in place of conventional therapies

Headache

- **4 categories of headache**
 - Primary
 - Trigeminal
 - Secondary
 - Painful Cranial Neuropathies
- **Tension headache most prevalent**
- **10% of the general population suffer from migraines**
 - F > M
 - Most common trigger is stress

Migraine without Aura

- **F > M**
- **Duration: 4-72 hours**
 - Last a minimum of 5 minutes
- **Unilateral**
 - Pediatrics more likely to be bilateral
- **Character: pulsating**
- **Pain level: moderate to severe**
- **Aggravated by physical activity**
- **Nausea/Vomiting**
- **Photophobia**
- **Phonophobia**



At least 2

At least 1

Migraine with Aura

- Needs to have occurred at least 2 times
- 30% of patients with migraines
- Aura occurs before the headache
- Visual or sensory
 - Visual aura the most common
- Speech or motor
- Brainstem or retinal
- Aura lasts 5 - 60 minutes
- Aura usually gradual spreads over 5 minutes
- At least 1 aura symptoms is unilateral
 - Aphasia is considered unilateral
- Headache occurs within 60 minutes of aura



At least 1

Migraines and OCPs

- **Should be avoided in patients with migraine with aura**
 - May consider if patient only has visual aura
 - If it is sensory or motor need non-estrogen alternatives
 - With traditional OCPs can have a 10-fold increase risk of ischemic and hemorrhagic stroke
- **Migraine is some women can be due to estrogen withdrawal**
 - Late luteal phase
 - Tend to be more severe and refractory to abortive treatments
 - Newer OCPs tend to be better tolerated
 - Headaches associated with OCPs due to estrogen withdrawal tend to improve over time
 - Typically occurs 5 days after estrogen is stop, resolves within 3 days

Medication Overuse Headache

- **Headache for 15 or more days in patient with pre-existing primary headache**
- **Use of abortive headache medication 10 or more times per month for 3 months**
 - Common Culprits
 - Caffeine
 - Butalbital
 - Opioids

Chronic Migraine

- **15 days per month for 3 months**
- **At least 8 days have classical migraine features**
- **Most of the time with good history you realize it is actually medication overuse**

Cluster

- **At least 5 attacks**
- **Typical Age 20-40 years old**
- **M > F**
- **Duration: 15-180 mins**
- **Unilateral**
- **Pain level: severe**
- **Frequency: one every other day to 8 times per day**
- **At least one of the following: Ipsilateral conjunctival injection, lacrimation, nasal congestion, rhinorrhea, facial sweating, miosis, ptosis, edema, agitation, restlessness**

Paroxysmal Hemicrania

- **Similar to cluster but more severe and frequent**
- **Duration: 2- 30 minutes**
- **> 5 per day**
- **Prevented with indomethacin**
 - 150-225mg daily

Common Triggers for Migraine

- **Stress**
- **Childhood abuse**
- **Diet**



- ETOH, caffeine
- Foods that trigger serotonin or norepi release
 - Sugar and refined starches cause a fast increase in tryptophan entering the blood brain barrier which results in a fast increase in serotonin
 - Tryptophan is the precursor to serotonin
 - Uses B6, folate and B12 to convert
 - Protein rich meals even those rich in tryptophan do not cause a rapid increase serotonin because of the competition with other amino acids vs a high carb meal which there is no competition= rapid increase
- Gluten
- Food Additives – MSG, aspartame
- Tyramine found in aged cheese
- High histamine foods: processed meats, fermented foods, spinach, shellfish

Specialize diets for Headaches

- **High Omega 3 diets with low Omega 6**
 - Decrease severity of headaches
- **Ketogenic diets**
 - Possibly help with cluster headaches
- **High or low sodium diets**
 - If patient is hypertensive
 - lower sodium = better BP control = ↓HA
 - If patient is normotensive
 - high sodium = ↑CSF flow = ↓HA

Other Treatments

- **Grade A evidence**

- CBT
- Relaxation training
- Thermal biofeedback
- EMG biofeedback

- **Acupuncture**

- Good evidence for tension, migraine and possible cluster

- **Aromatherapy**

- lavender
- peppermint
- eucalyptus
- chamomile



HERBAL REMEDY FOR MIGRAINE HEADACHES



FEVERFEW



GINGER



ROSEMARY



VALERIAN



DONG QUAI



TEABERRY



HOPS



LAVENDER



PEPPERMINT



CORIANDER



ELDERBERRY



YARROW



BETONY



BASIL

Botanicals



BUTTERBUR



WILLOW BARK



LINDEN



HORSERADISH



MULLEIN



CATNIP



CHAMOMILE

Botanicals – Preparations

- **Water Extracts**

- Water extracts many but not all medicinal constituents from plants
 - Resins and alkaloids are not extracted
- Teas
 - Typically, flowers and leaves are used (chamomile)
- Decoction
 - Simmering roots and bark in water (ginger)
- Requires daily preparations

- **Glycerin extracts**

- Used for preparations for children and adults that want to avoid alcohol
- Advantage of being sweet
- Sourced typically from coconuts which also is a good preservative
- Not good at extracting essential oils, resins or alkaloids

Botanicals – Preparations

- **Alcohol extracts AKA tinctures**

- Most common
- Uses specific water to ETOH ratio for each plant
- Extraction of all active constituents of the plant
- Plant is macerated in ETOH for specific period of time
- Mixture is either pressed or percolated to remove the spent herb
- Strength of the mixture is denoted as a ratio
 - Common tincture strength is 1:5
 - 5 mL final extract = 1gm of herb
 - A 1:3 ratio would be more potent; for every 3ml there is 1gm of herb
- Long shelf life- but do not taste very good

Botanicals – Preparations

- **Standardized extracts**

- A particular compound is isolated and concentrated to guarantee a certain level in the final product
- The particular compound level is raised higher than what would be found in the plant, its tea or its tincture
- Main advantage is reliability and potency
- Disadvantage you lose the whole herb value
 - Example:
 - Green tea extract standardized to contain a minimum of 80% total tea catechins of which 50% is epigallocatechin (EGCG)
 - One capsule is 275mg
 - This means that 80% of each 275mg capsule is catechins
 - Each capsule contains 220mg catechins.
 - Of the catechins, 50%, or 110mg is EGCG

Botanicals – Preparations

- **Powders**
 - Dried herb
 - Short half life
 - Easy to mix into other foods (flax seed, slippery elm)
- **Essential Oils**
 - Extracted from plants to make potent distillates
 - Medicinal actions on the limbic system, digestive system, musculoskeletal system
 - Most are used topically some orally (peppermint, lavender)
- **Poultices & Compresses & Ointments**
 - Dried or fresh plants mixed with water or oil and applied topically
 - Prepared for each use
 - Example: Plantain poultice (bruised fresh plantain leaves in cheese cloth applied to bruise).

Botanicals

Butterbur without Pyrrolizidine

- **Inhibits lipoxygenase and leukotriene synthesis = ↓ inflammation**
- **↓ Histamine**
- **Level A evidence but was withdrawn due to concern for hepatotoxicity**
 - Not seen with butterbur without pyrrolizidine
- **Check LFTs**
- **Used as prophylaxis**
 - Dose 50-75mg BID
 - Trade name studied Petadolex ®



Botanicals

Feverfew

- **Level B evidence for migraine prophylaxis**
- **Inhibits prostaglandin synthesis, decrease of vascular smooth muscle spasm, and blockage of platelet granule secretion**
- **Requires weaning do not abruptly stop**
 - Joint pain, myalgias with abrupt discontinuation
- **Used as prophylaxis**
 - 50-300mg daily standardized to 0.2 to 0.35% parthenolides
 - If using extract MIG 99 – dose is 2-18mg po TID



Botanicals

Ginger

- Acute treatment
- Some studies have shown ginger is as effective as sumatriptan
- Dose 500mg- 4 grams



Botanicals

Ginkgo

- **Great for pediatric specific migraine**
- **120-240mg QD or divided BID**
- **Better results when combined CoQ10, magnesium, riboflavin**
 - decreased pediatric migraine by 50%





Supplements

Supplements

Magnesium

- **Level B evidence**
- **Blocks the spreading of cortical depression induced by glutamate**
- **1 gram IV for abortive treatment**
- **Citrate, Maleate, Glycinate preferred**
- **Patients ≥ 12 y/o**
 - 400-600mg po QD for prophylaxis
- **Patients < 12 y/o**
 - 200mg po QD for prophylaxis
- **Magnesium when combined with carnitine may be more effective than magnesium alone**



Supplements

Riboflavin (B2)

- Level B evidence
- 400mg daily



Supplements

- **CoQ10**
 - Level c
 - 100mg TID
 - Ideally liposomal bound or ubiquinol formulation
 - Pediatric dosing 1-3mg/kg max 300mg per day
- **Omega 3 Fatty Acids**
 - 1-3 grams per day of EPA and DHA- best to achieve through diet if possible
- **Vitamin D**
 - ???- only if levels are low
- **Melatonin**
 - ???- conflicting results, high doses required 3-10mg QHS
 - Vivid dreams

Combination Formulations

Migrelief by Akeso
available in
pediatric and adult
formulation

Supplement Facts			
Serving Size: 2 Caplets			
		% Daily Value for Children 1 through 3 Years of Age	% Daily Value for Adults and Children 4 or more Years of Age
Amount Per Serving			
Riboflavin (Vitamin B-2)	200mg	40,000%	15,385%
Magnesium (Citrate and Oxide)	180mg	225%	43%
Puracol™ Feverfew (whole leaf and extract) **	50mg		*

* Daily Value Not Established
** Puracol™ is a proprietary combination of whole leaf feverfew that contains a broad spectrum of naturally occurring phytochemicals and a unique feverfew extract.

Other Ingredients: Powdered cellulose, grape seed extract, silica, magnesium stearate, hydroxypropyl methylcellulose, water, (vegetarian capsule).

Distributed by: Akeso Health Sciences, LLC
1-800-758-8746 • Westlake Village, CA 91361
www.Migrelief.com/FAQs

Other Important Interventions

- **Sleep**

- Normal sleep patterns (even on weekends)
- 8-10 hours per night
- Optimum room temperature 65 degrees
 - Range 60-70 degrees
 - Assists in melatonin release
 - Higher core temperature during sleep decreases time spent in slow wave and REM sleep
- Dark room
- Avoid screens before bed
 - Blue light interferes with the natural circadian rhythm



Other Important Interventions

- **Diet**

- Keep hydrated
- Avoid meal skipping
- Avoid excess caffeinated beverages
- Encourage foods high in Omega 3 fatty acids
 - Fish, Chia seeds, Flax seeds, walnuts, soybeans, avocados, spinach, broccoli, brussels sprouts, raspberries, strawberries, blackberries
- Organic when possible, if not vegetable wash works too!
 - Dirty Dozen
 - Clean Fifteen

- **Keep a headache journal to identify any possible triggers**

2021 Environmental Working Group

Dirty Dozen

1. Strawberries
2. Spinach
3. Kale, collard and mustard greens
4. Nectarines
5. Apples
6. Grapes
7. Cherries
8. Peaches
9. Pears
10. Bell and hot peppers
11. Tomatoes
12. Celery

Clean 15

1. Avocados
2. Sweet corn
3. Pineapples
4. Onions
5. Papayas
6. Sweet peas (frozen)
7. Eggplants
8. Asparagus
9. Broccoli
10. Cabbages
11. Kiwis
12. Cauliflower
13. Mushrooms
14. Honeydew melons
15. Cantaloupes



Quality of Supplements or Herbals

- **The Dietary Supplement Health and Education Act of 1994 ("DSHEA")**
 - FDA regulates both finished dietary supplement products and dietary ingredient
 - Companies are not allowed to claim the products prevent or treat a disease
 - Fiber promotes bowel regularly, cannot say treats constipation
 - Manufacturers and distributors of dietary supplements and dietary ingredients are prohibited from marketing products that are adulterated or misbranded
 - Good manufacturing practice = GMP
 - Companies are required to test the raw material, but DSHEA does not say how
 - Allows for skip lot testing

“Good” Companies

- **Follow DSHEA and GMP**
- **Do not perform skip lot testing**
- **Using chromatography to identify components or DNA testing**
- **Test for potency of herbal products**
- **Meet United States Pharmacopeial Convention (USP) standards**
 - Creates standards for identifying, potency and purity
 - Voluntary program
 - Companies submit their final product
- **National Sanitation Foundation (NSF International)**
 - Assurance of no containments in the product
 - They also confirm that DSHEA and GMP have been followed
- **No economically motivated Adulterants (EMAs)**
 - If the company does not use chromatography these will not be picked up
 - Examples: Erectile dysfunction supplements that contain sildenafil or anabolic steroids in sports supplements



Quality Brands

- **NOW**
- **Gaia**
- **Nature's Way**
- **Kirkland**
- **Integrative Therapeutics**
- **Pure Encapsulations**
- **Nordic Naturals**

- **Advocate Aurora's Online Preferred Herbal Dispensary: Wellevate**
 - For more information contact the Integrative Medicine Department at IntegrativeMedicine@aah.org phone number 4142915900

Botanical/Supplement Resources

- **Emerson Ecologics/Wellevate**
 - <https://www.emersonecologics.com/>
- **Natural Medicine Comprehensive Database**
 - <https://naturalmedicines.therapeuticresearch.com/>
- **HerbMed Pro**
 - <https://www.herbalgram.org/resources/herbmedpro/>
- **Consumer Lab**
 - <https://www.consumerlab.com/account/login/group/>

One Last Thing

Stop Using Fioricet®

American Academy of Neurology

Caveat: You can not abruptly stop Fioricet because it is a barbiturate. Barbiturate withdrawal can lead to seizures similar to benzodiazepine withdrawal

Butalbital and opioids
(available through prescription only)

- May work as rescue medication when nothing else has worked

- Less effective with repeat use
- Headaches get much worse and happen more often with frequent use
- Habit forming
- Expensive

Questions????