

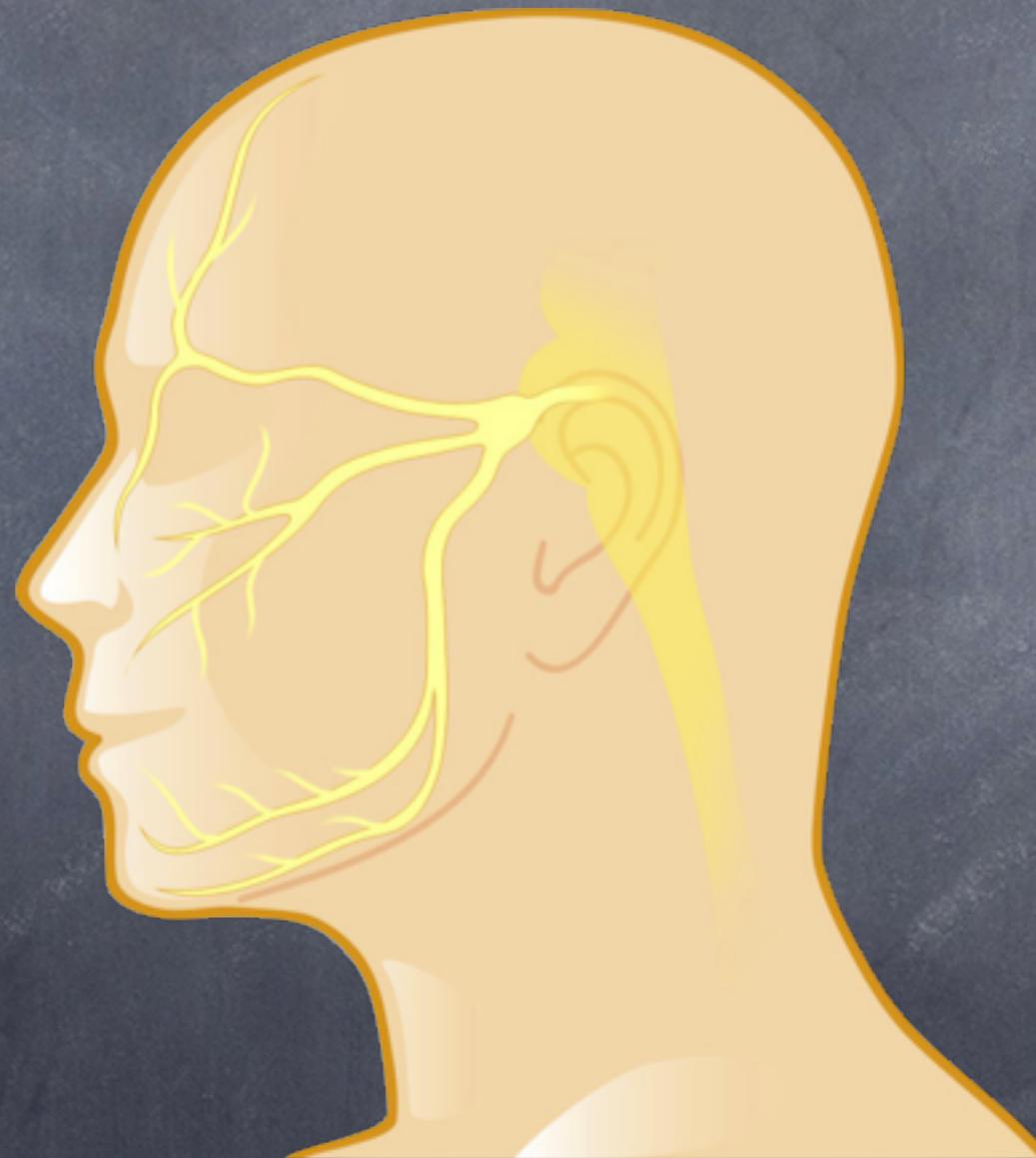
Headache 101: Nutrition

Dr. Molly Timmerman

Normally pain tells us something is wrong.
It is our bodies early warning system

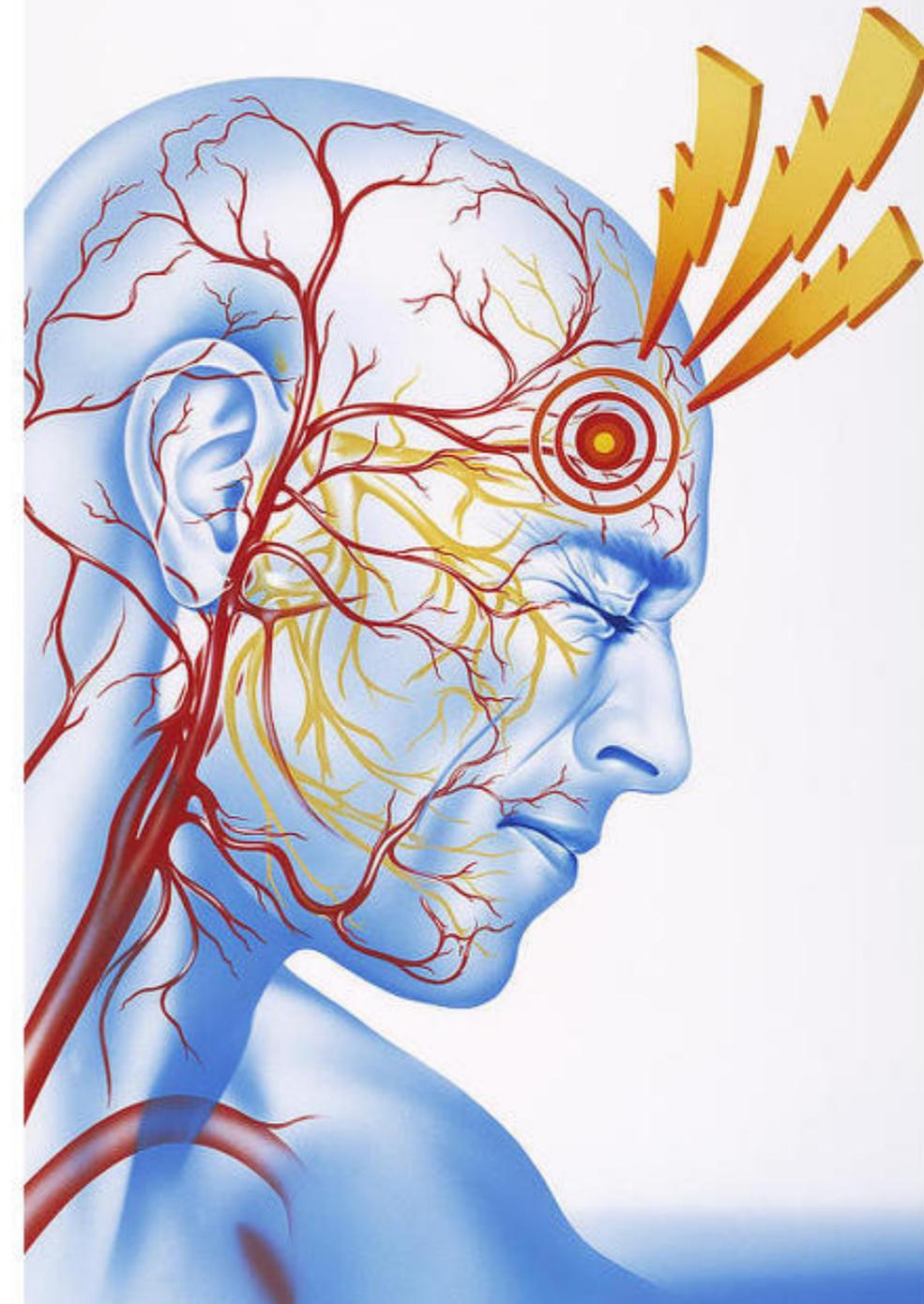
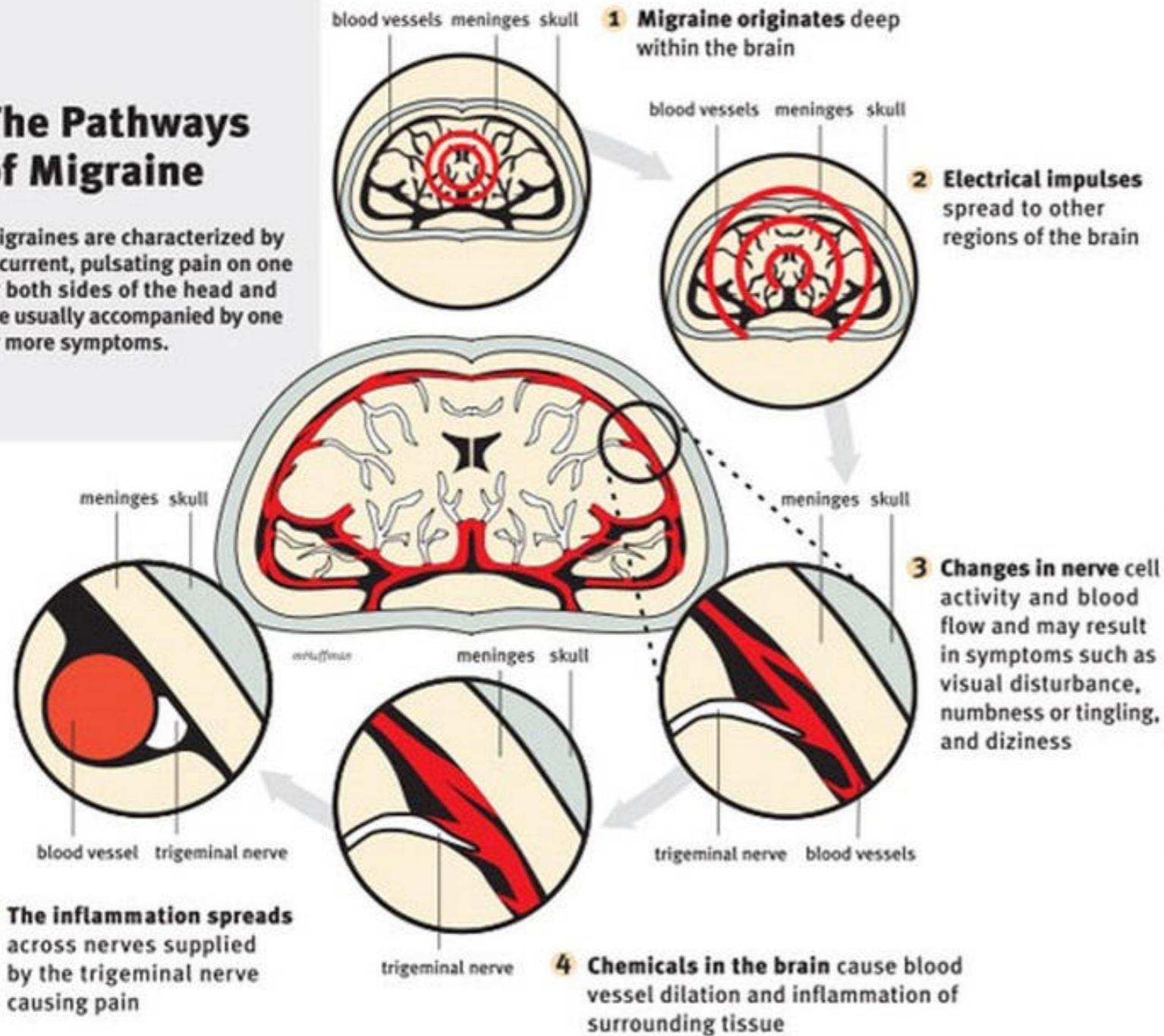


When your bodies warning system is too sensitive it can trigger migraine



The Pathways of Migraine

Migraines are characterized by recurrent, pulsating pain on one or both sides of the head and are usually accompanied by one or more symptoms.



Common Triggers

Food	Daily Habits	Environment	Body
Aged cheese	Tired	Air pollution	Asthma medication
Alcohol	Inconsistent eating	Bright/flickering	Birth control pills
Artificial sweeteners	Inconsistent sleep	lights	Blood pressure medicine
Beans	Travel	Complex visual patterns	Head/neck injury
Caffeine	Stress	Motion	Hormone replacement
Chocolate		Perfume or cologne	Menstruation or menopause
Citrus fruits		Gasoline	Pregnancy
Dairy		Smoke	Physical exertion
Fatty foods		Strong odors	Water pills
Fish		Weather changes	
MSG			
Lunch meats			
Nuts			
Onions			
Sour cream			
Yogurt			
Yeast			

Aged Cheese

Often contains **Tyramine**

Tyramine =naturally occurring amino acid formed when foods age.

Generally, the longer a high-protein food ages, the greater the tyramine content.

The following types of cheeses have been reported to be high in tyramine:

- Blue cheeses
- Brie
- Cheddar
- English stilton
- Feta
- Gorgonzola
- Mozzarella
- Muenster
- Parmesan
- Swiss



Alcohol

Blood flow to your brain increases when you drink alcohol. Some scientists blame the headache on impurities in alcohol or by-products produced as your body metabolizes alcohol. **Sulfites** used as a preservative may also cause headache. The higher the sulfite content, the greater the chance of developing migraine. Alcohol also causes dehydration, which may also cause migraine. Red wine, beer, whiskey, Scotch, and champagne are the most commonly identified headache triggers.



Food additives – Nitrates

Food preservatives (or additives) contained in certain foods can trigger headaches.

Nitrates dilate (widen) blood vessels, causing headaches in some people.

and nitrites are additives in:

- Hot dogs
- Ham
- Sausage
- Bacon
- Lunch meats and deli-style meats
- Pepperoni
- Other cured or processed meats
- Some heart medicines



Food additives – MSG

Monosodium glutamate (MSG) is a food additive/ flavor enhancer that may trigger headaches. MSG is one of the active ingredients in soy sauce, meat tenderizer, Asian foods, and a variety of packaged foods. Be aware of labeling such as "hydrolyzed fat" or "hydrolyzed protein" or "all natural preservatives" since these are terms used synonymously with MSG.

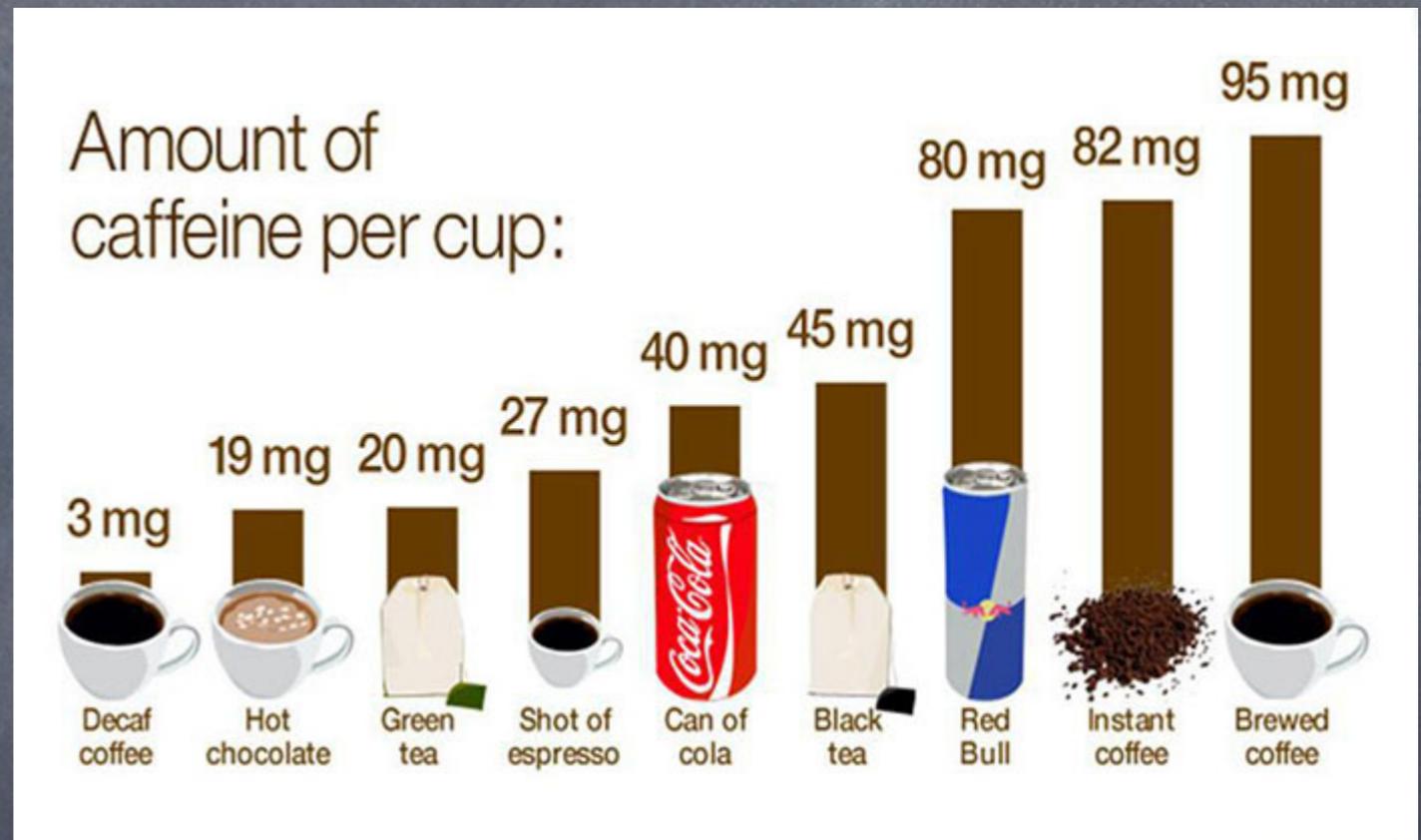
Most symptoms begin within 20 to 25 minutes after consuming MSG. They include:

- Pressure in the chest
- Tightening and pressure in the face
- Burning sensation in the chest, neck, or shoulders
- Facial flushing
- Dizziness
- Headache pain across the front or sides of the head
- Abdominal discomfort



Caffeine

Caffeine is found in chocolate and cocoa, beverages such as coffee, tea, and colas, and in certain medications. Small amounts may improve a migraine, but limit the amount to 200 mg /day or the amount of caffeine in 1 10 oz cup of coffee. Too much caffeine or caffeine withdrawal can also provoke a headache.



Sugar Substitutes

Aspartame and other artificial sweeteners are linked to headaches in some people.

Artificial sweeteners are widely used in processed foods, including baked goods. Some artificial sweeteners



may affect gut bacteria and some may affect the brain.



Harvard Healthy Plate

Plant-based

Fruits & vegetables
whole grains,
legumes, nuts

Healthy proteins:

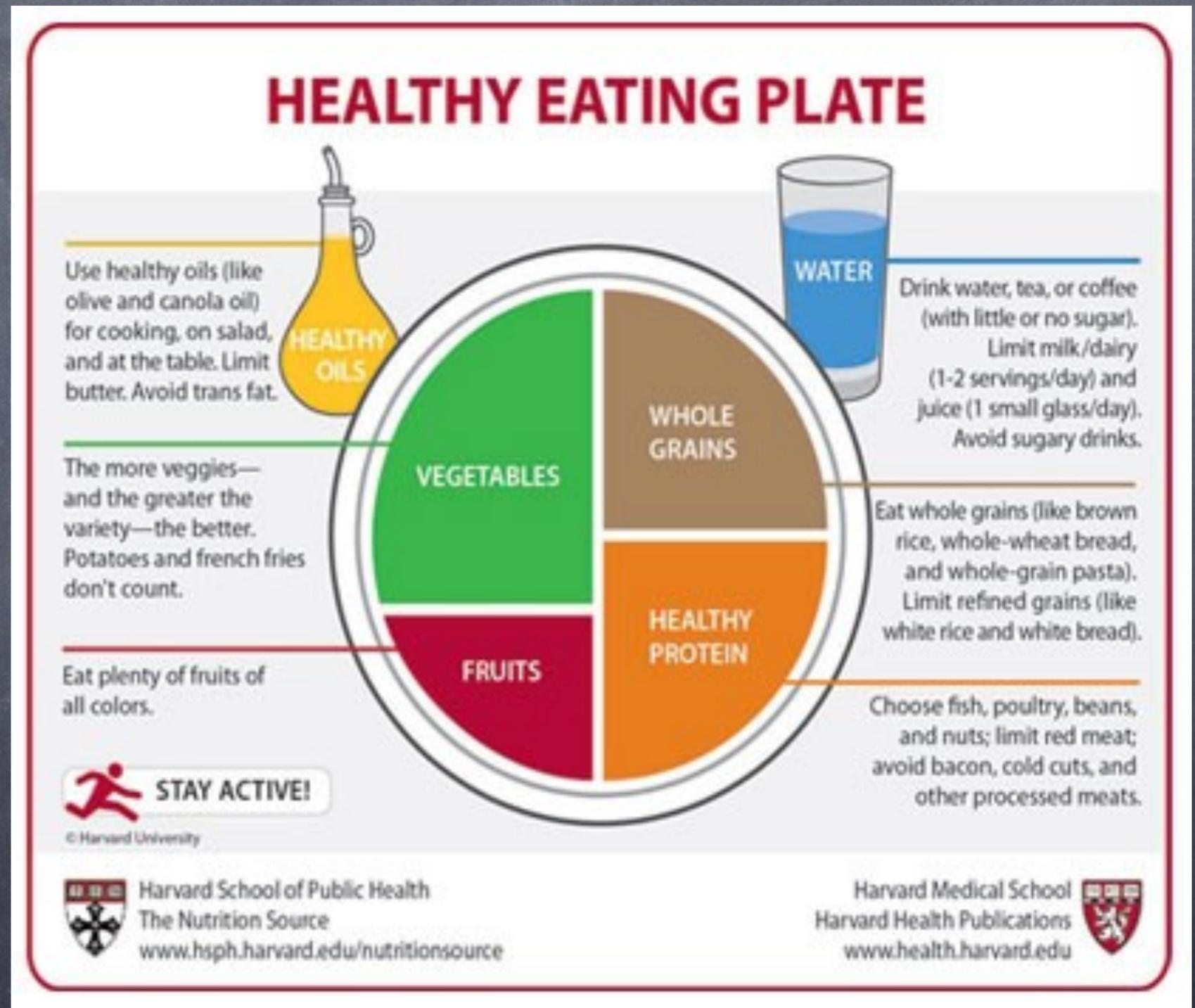
Whole grains,
legumes & nuts are
sufficient

If eat meat, then
fish or chicken

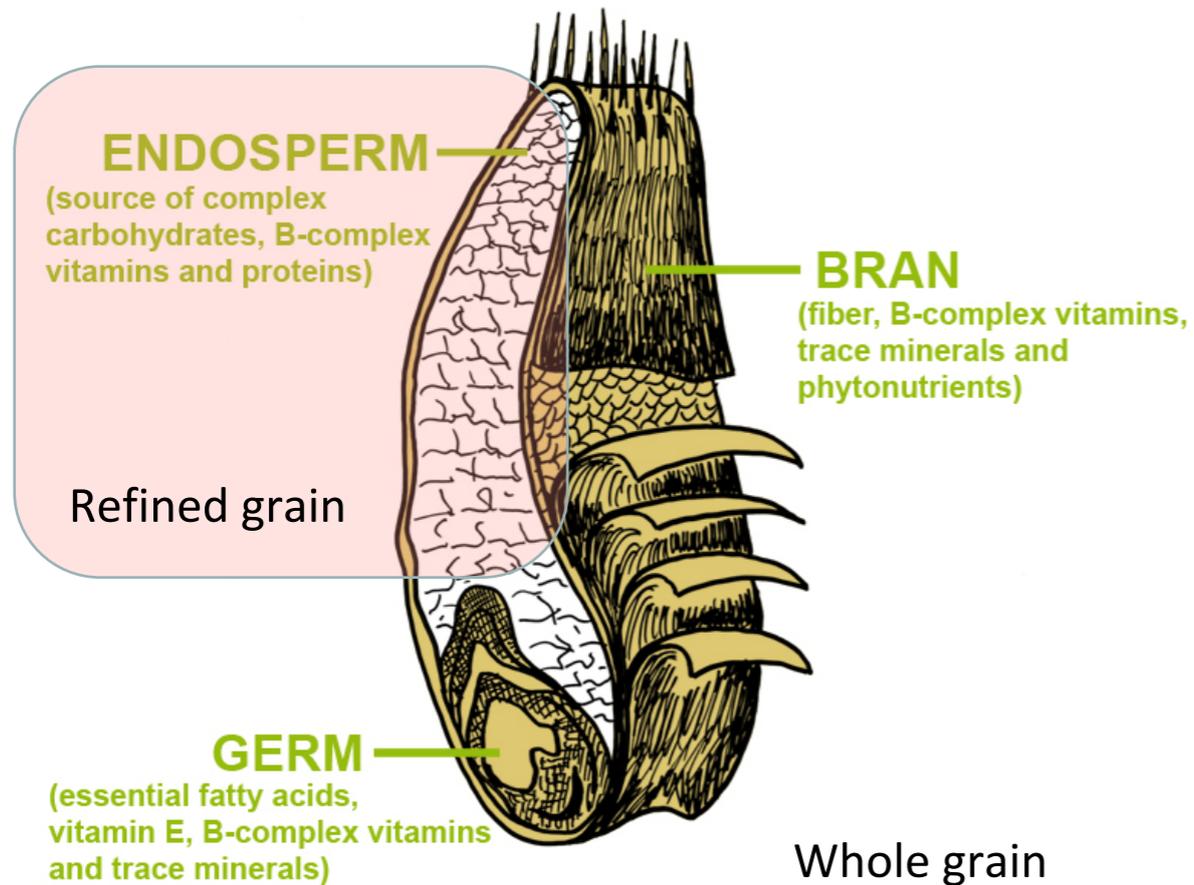
Limit or avoid: red
meat, processed
meat

Drink water, not juice
or soda

Whole foods, not
processed, Moderate



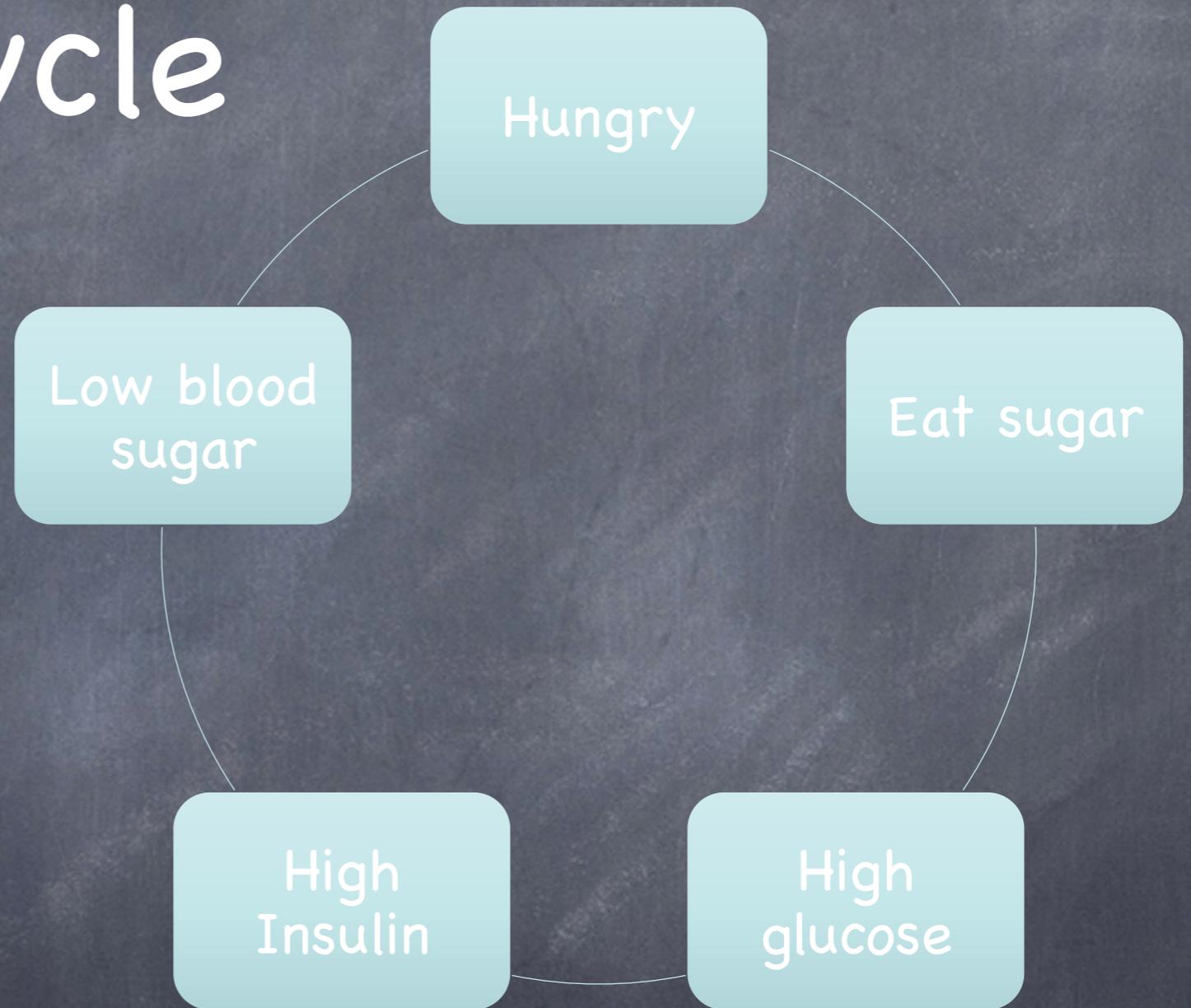
The Whole Grain Kernel



Carbohydrates

- Simple carbohydrates (refined, highly processed)
 - Sugar, white bread and pasta, candy, cookies, cakes, jelly, packaged goodies
- Complex carbohydrates (whole grain)
 - Whole grains, quinoa, amaranth, bulgur, brown rice, wheat germ, oat bran, and oatmeal

Sugar Cycle



Simple carbs (i.e. sugar, white bread) cause unpleasant, unhealthy ups & downs

Glycemic Index

- The glycemic index, or GI, measures how a carbohydrate-containing food raises blood glucose.

	Low (<55)	Medium (56-69)	High (>70)
Bread	100% stone ground whole wheat or pumpernickel	Whole wheat, rye and pita	White or bagel
Cereal	Oatmeal (rolled or steel-cut), oat bran, muesli	Quick Oats	Corn flakes, puffed rice, bran flakes, instant oatmeal
Other Grains	Pasta, converted rice, barley, bulgar	Brown, wild or basmati rice, couscous	Shortgrain white rice, rice pasta, macaroni and cheese from mix
Starch vegetables, legumes	Sweet potato, corn, yam, lima/butter beans, peas, legumes and lentils		Russet potato, pumpkin Pretzels, rice cakes, popcorn, saltine crackers
Fruits & vegetables	Most fruits, non-starchy vegetables and carrots		melons and pineapple

Morning

Wake up same time every morning
Eat Breakfast with protein, fats, and carbs

Don't drink >2 cups of coffee. If you drink be consistent
Drink 2 glasses of water every morning

?Supplements



The infographic is set against a light beige background. At the top left, there is an illustration of a breakfast meal including a bowl of cereal with a spoon, a glass of orange juice, a plate with a whole orange, a sliced hard-boiled egg, a slice of Swiss cheese, and some fresh fruit like a strawberry and a banana. To the right of this is a white coffee cup on a saucer with a spoon. Below the breakfast illustration, the text '7 am' is written in a large, bold, dark red font. To the right of '7 am' is the heading 'Supplements that may prevent attacks' with a superscripted '8'. Below this heading is a list of supplements: Magnesium 400 mg, Riboflavin (vitamin B2) 400 mg, and Coenzyme Q10 300 mg. To the right of the list is an illustration of a red and white capsule with 'B2' and 'Mg' written on it. At the bottom left, there is a glass of water with a splash. To the right of the glass is the heading 'Drink water!' followed by two bullet points. The entire infographic is partially overlaid by a large, stylized orange and white circular graphic on the left side.

Caffeine: Morning pick-up or daily grind?

- Having caffeine more than three times per week can^{12,13}:
 - o Lead to dependence
 - o Cause withdrawal symptoms
 - o Increase the number of attacks
- Medications with caffeine should never be taken more than twice per week¹²

7 am

Supplements that may prevent attacks⁸

Magnesium 400 mg
Riboflavin (vitamin B₂) 400 mg
Coenzyme Q10 300 mg

Drink water!

- Dehydration is known to cause head pain
- About one third of migraine patients say thirst can trigger attacks²

Magnesium, Riboflavin, CoQ10

Magnesium Rich Foods



Almonds



Spinach



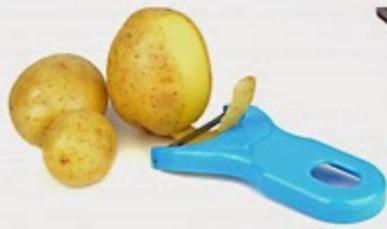
Soybeans



Cashews



Avocados



Potatoes



Brown Rice

Vitamin B₂

Food sources of Riboflavin (vitamin B₂):

Cereal, nuts, milk, eggs, green leafy vegetables and lean meat



ADAM.

Food Sources of CoQ10



Mid-Morning – mid afternoon

Snacking OK (foods low on glycemic index)

Don't skip lunch (eat around same time every day)

Remember healthy plate

Try not to have caffeine after noon.

Remember to keep drinking water



Evening

Remember healthy plate

Don't eat a large meal right before bed (finish dinner 3 hours prior to bedtime)

Snack with protein before bed is good

Watch out for sodium (heavy in processed foods/restaurants)

Watch alcohol

Food for thought

- A high-sodium diet can make migraine attacks worse¹
- Processed foods tend to be high in sodium
- Cut back on sodium with fresh or mildly processed foods



The Migraine Diet

- Strict diets don't work for everyone
- Consider them only after better alternatives have been unsuccessful¹⁴⁻¹⁶

7 pm

Potential migraine triggers

- | | |
|----------------------------|-------------------|
| Fasting | Alcohol |
| Cured meats | Aged cheese |
| Citrus | Chocolate |
| Caffeine | Wine [*] |
| Monosodium glutamate (MSG) | |

^{*}Contains several potential triggers: tyramine, sulfites, histamine, and thephenolic flavonoids⁸

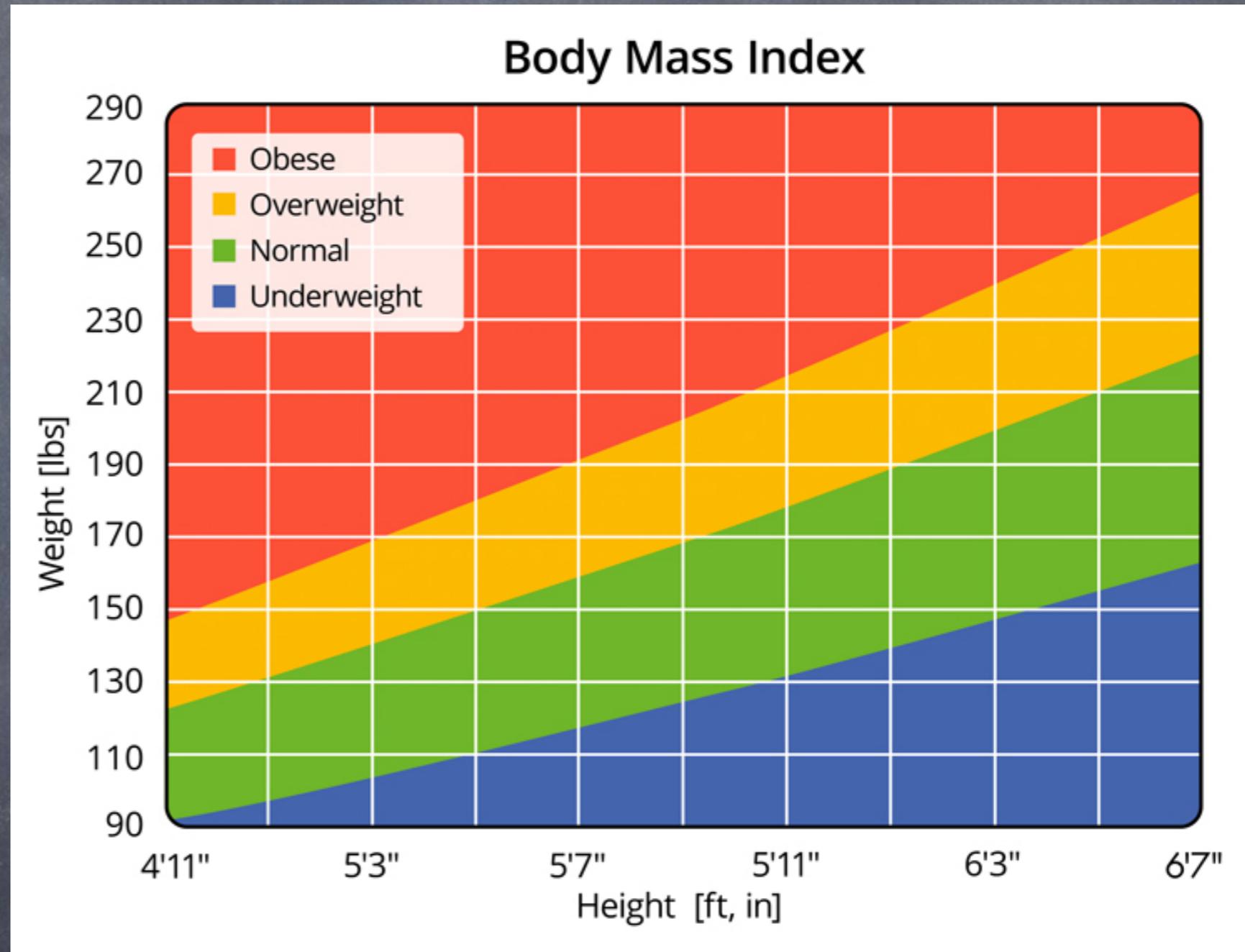


Extra weight

Obesity (BMI over 30) can make migraine symptoms worse

Modest weight loss (7-10% of total body weight) can improve migraine symptoms

Eat 5-6 small meals and snacks per day to: avoid fasting headaches
Manage hunger while losing weight



12 Foods

To Help Prevent Migraines

If you are prone to migraines, it is very important to include a variety of nutrient-dense foods into your diet, especially foods that are rich in omega-3 fatty acids, magnesium and vitamin B2. You should also be drinking plenty of water. Here are some beneficial food options for you:



Ginger



Olive Oil



Coconut Oil



Chia Seeds



Sesame Seeds



Brussels Sprouts



Swiss Chard



Pumpkin Seeds



Sweet Potatoes



Black Beans



Flax seeds



Spinach