

# Healthy Eating and Migraine Disease

Lindsay Keach Bronstein, MS, RD, LDN, HC

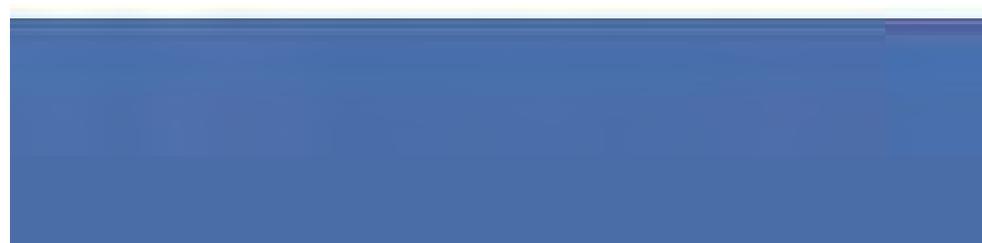
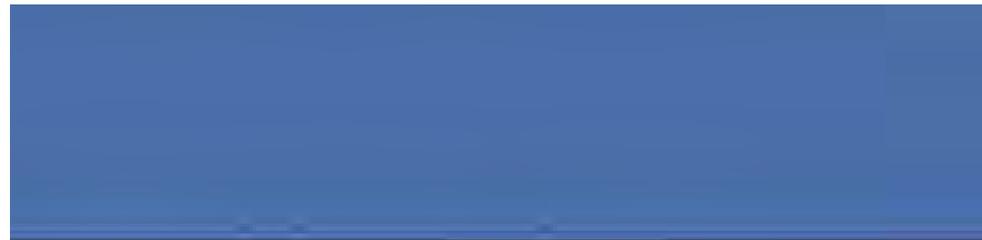
[Lindsay@feedhealth.com](mailto:Lindsay@feedhealth.com)

Saturday, April 13 2021

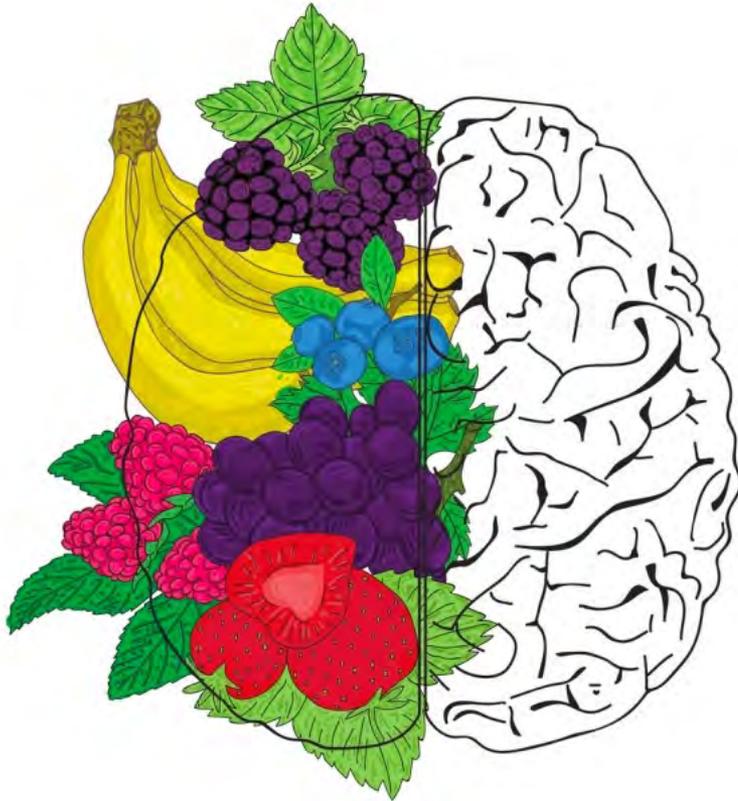
**How many of you feel that what  
(or how) you eat impacts your  
headaches?**

**How many of you find that your migraine attacks impact your food choices (either before, during or after)?**

# Eating:



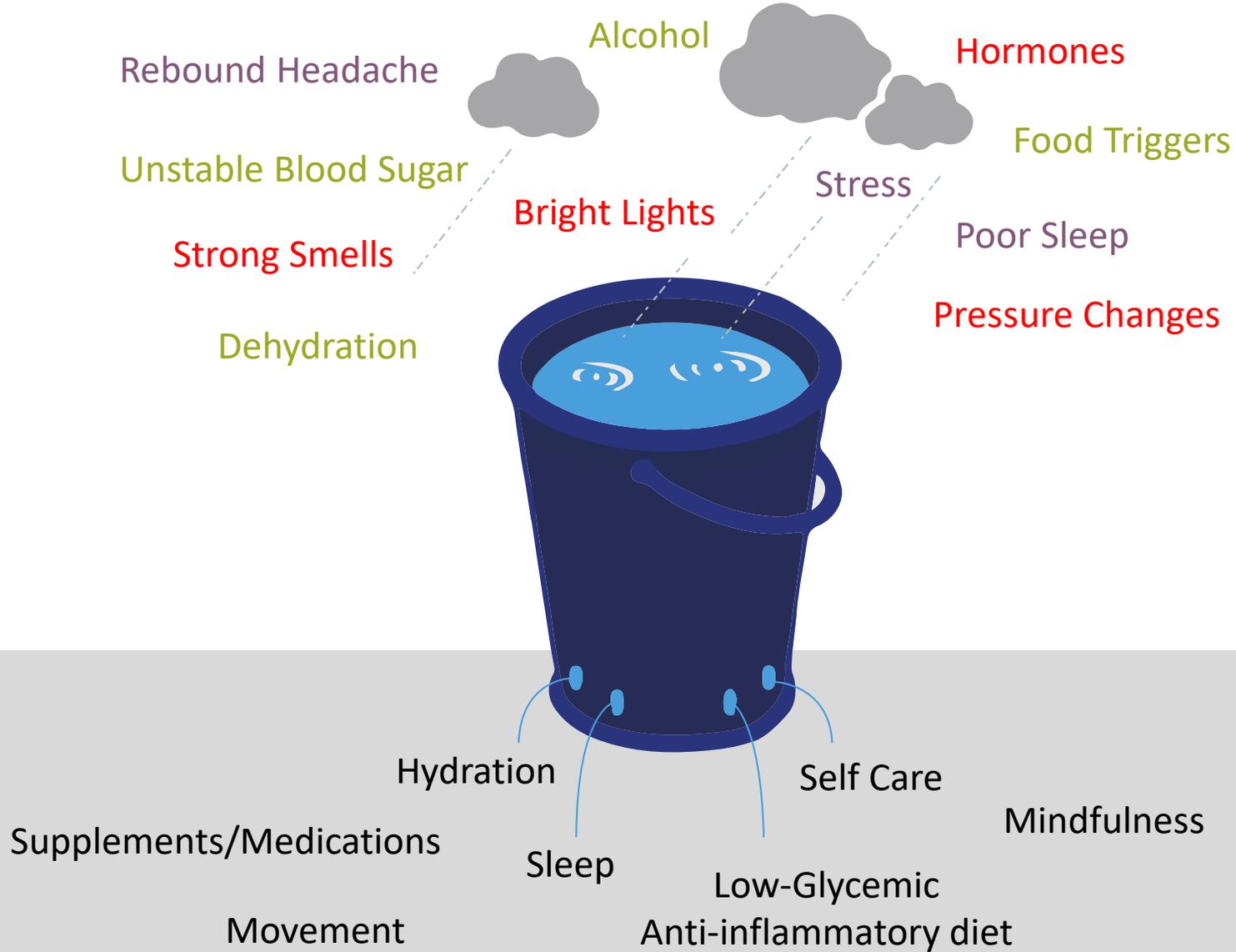
# Migraine Disease and Nutrition



- There is little doubt that what and how we eat impacts our physical and mental health, and can impact severity, frequency and duration of headaches

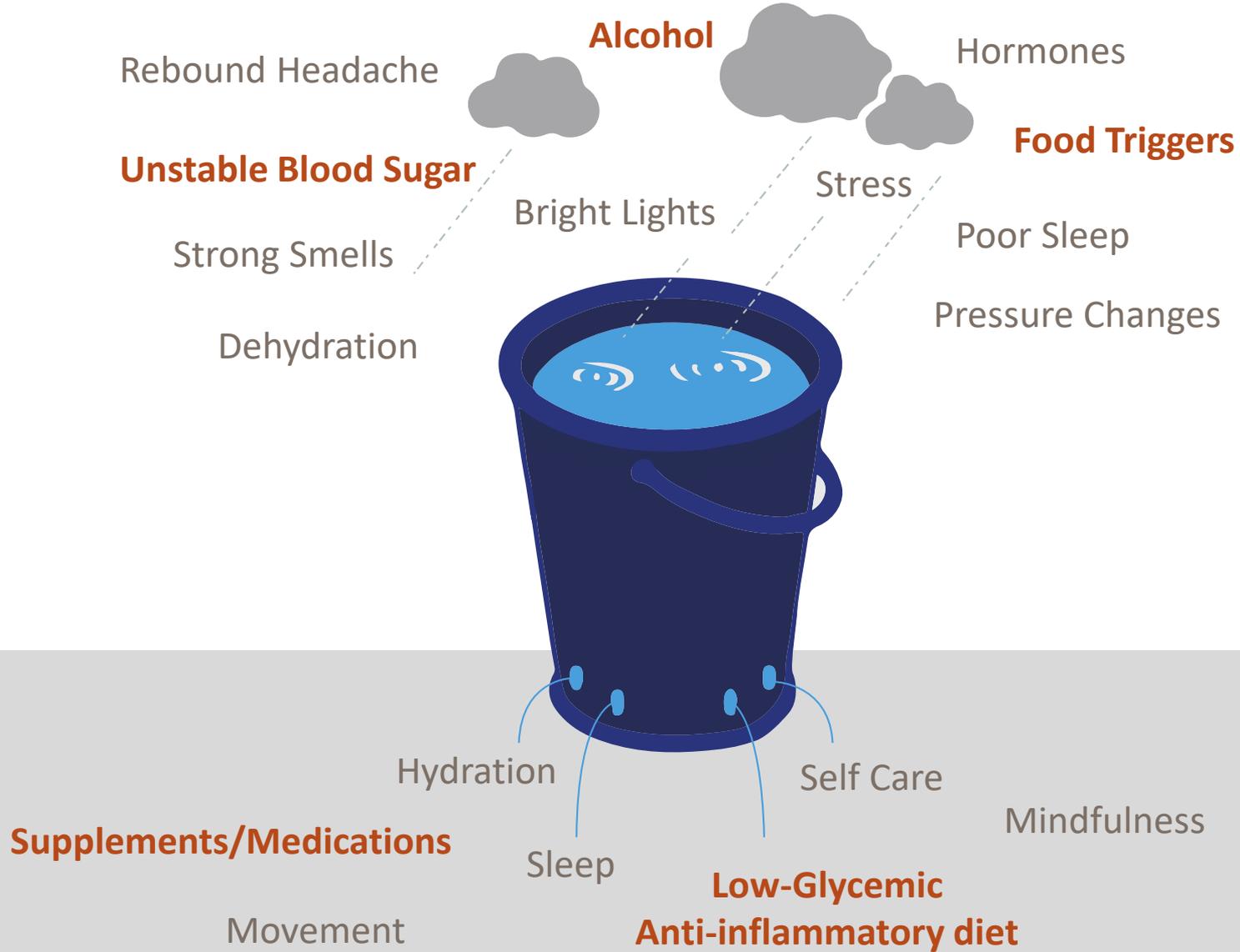
**AND**

- Food is rarely the *only* factor influencing migraines, which are a complex and multivariant condition



## 2 Main Strategies

1. **Increase headache threshold** by focusing on keeping the body in homeostasis -- regularly attending to self-care and nourishment practices that help to keep your body, brain and blood sugar levels balanced
2. **Decrease triggers** from sources that you can control (limit what goes into the bucket) – this may involve exploring possible food triggers



# Diet Strategies

- Not everyone will experience food triggers as a significant “filler of the their bucket”
- But **everyone can benefit from healthy diet changes**

# Diet Strategies

- Baseline advice is to follow an anti-inflammatory, low-glycemic, whole food-based diet
  - People may also have unique food sensitivities that increase inflammation
  - The goal here is to create more space in the bucket
  - This is where I recommending starting for most people
- Elimination diet targeted at reducing common food triggers for migraine
  - The goal of this diet is to identify and reduce triggers, thereby filling the bucket less quickly
  - For those who have significant dietary triggers, this can be game-changing
  - BUT not everyone has significant food triggers, and the diet itself may cause increased stress (also a trigger!)



# Balanced Blood Sugar



# Low-Glycemic Diet and Migraine

- Randomized control trial of 350 migraineurs without aura
- High-fiber, low-glycemic index diet vs medication (propranolol, flunarazine, amitriptyline or topiramate)
- After one month, frequency of attacks was significantly reduced in both the diet and the pharmacological group
- Severity of attacks was reduced at both 30- and 90-day in the drug group but only at 90-day in the diet group
- **Conclusion:** The results of the study revealed that low glycemic index diet intake can be an effective and reliable method to reduce migraine attacks



**ALL**  
**Carbohydrates**  
(except fiber)

**Glucose**  
(Sugar)

**FUEL** for BRAIN,  
muscles & energy  
production in body.

(excess)

Stored as  
Glycogen for “easy  
access”

(excess)

Stored as Fat

**“Slow Carbohydrates”**: unprocessed or minimally processed whole grains, vegetables, fruits and beans

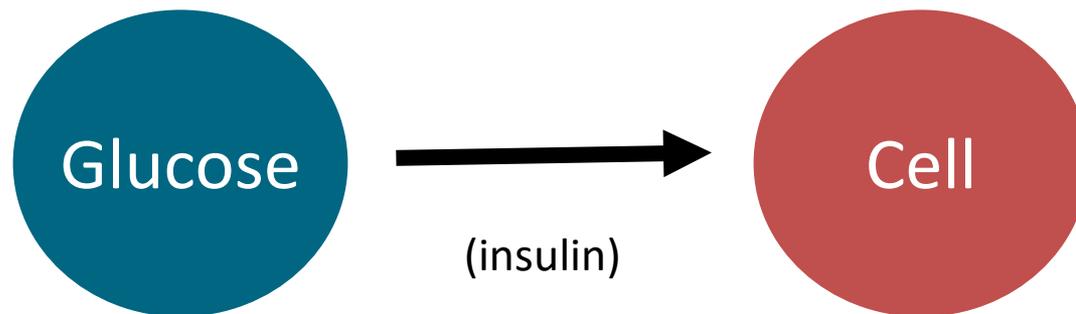
- Slower breakdown and conversion to sugar
- More fiber, vitamins, minerals, phytonutrients

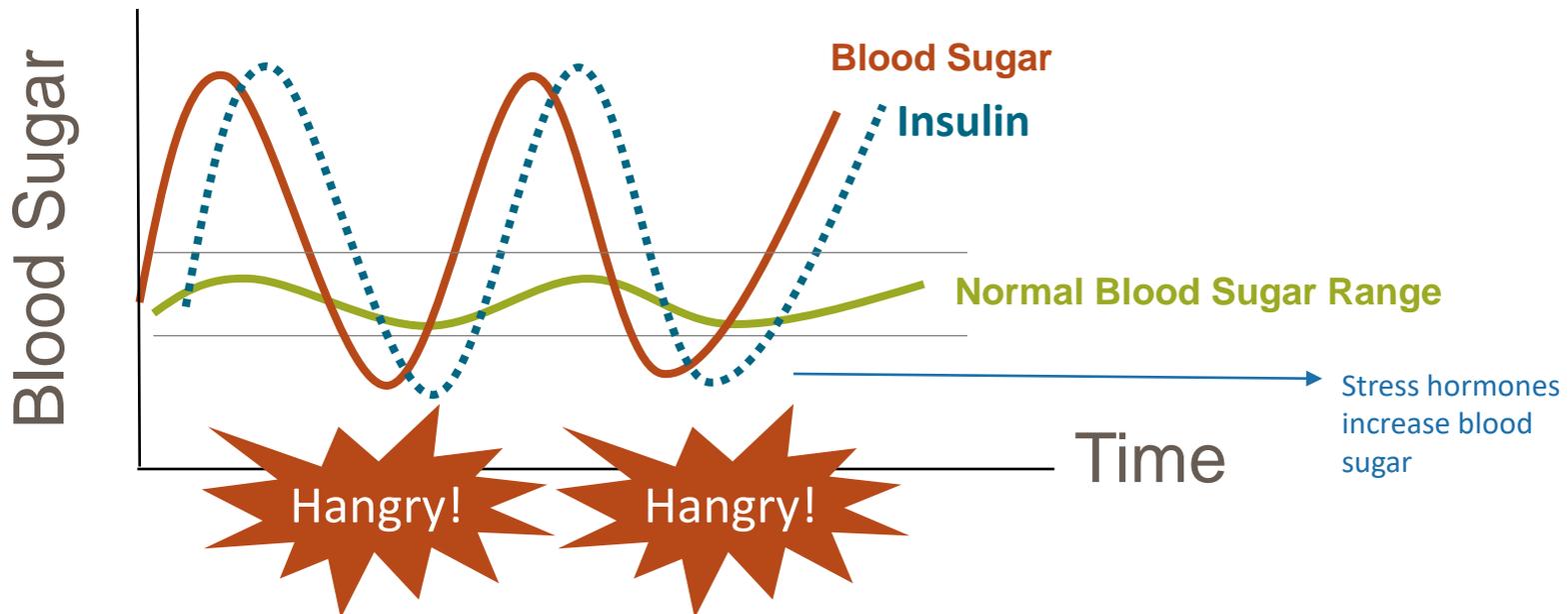
**“Fast Carbohydrates”**: white bread, pastries, sodas, desserts, added sugars, and other highly processed or refined foods

- Faster conversion to sugar (*but context is important*)
- Less / No fiber, vitamins, minerals, phytonutrients

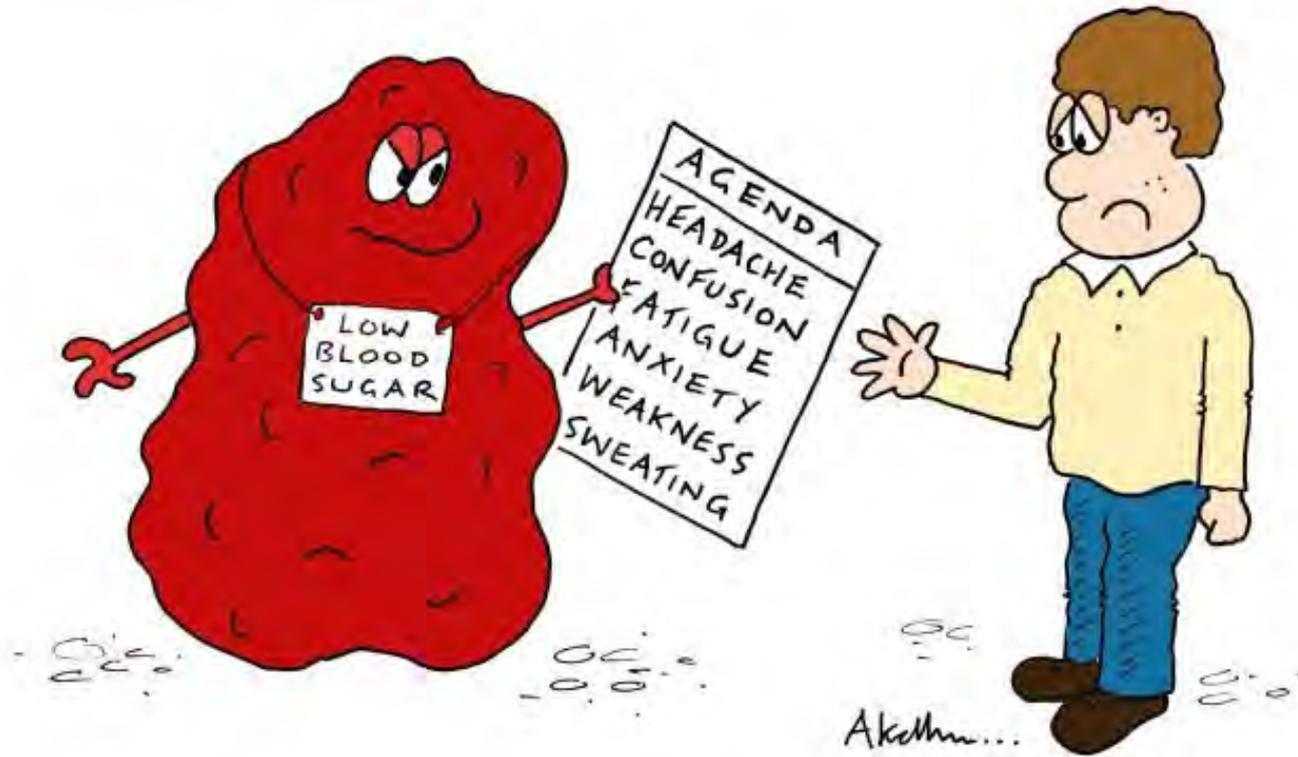
# Glucose is your body's fuel

- Glucose is carried by your blood throughout your body to be transformed into energy by your cells.
- That's why it's called "blood sugar"
- All of your cells, **particularly those in your brain**, require a steady supply of glucose at all times
- Large fluctuations in blood sugar affect the brain more than any other organ - can lead to headaches





1. You eat a **fast-carb-packed meal**
2. Your **blood sugar** (glucose) rises
3. Your **pancreas** releases the hormone **insulin**. Insulin brings your blood sugar down by letting glucose into your cells where it can be used for energy
4. Your blood sugar dips **too low**...you run out of energy, your mood dips, you crave sweets and starches...



**"Low Blood Sugar hands you your agenda for the day."**

**So, how do  
we get balanced  
blood sugar?**

**1**

**Swap fast carbs  
for slower ones.**

# Fast Carbs

- White rice, bread, pasta, potatoes, crackers
- Sweets
- Fruit juices
- Puffed rice cereals, corn flakes
- Some “energy” bars
- Baked goods

# Slow Carbs

- Beans and Legumes
- Whole fruits and vegetables
- Minimally processed whole grains like brown rice, quinoa, steel cut oats, barley, farro

**2**

**Combine carbs with  
protein and fat**

# Better Together:

- **Carbohydrates** are the body's preferred source of energy
  - in whole food form, they are also packed with **fiber** which helps you feel fuller faster...along with other benefits
  - Digested first and most quickly
- **Protein** gives you staying power
  - Helps the body make energy more efficiently
  - Digested more slowly
  - Helps to keep blood sugar levels steady
- **Healthy fats** provide satisfaction and help you feel full
  - Digested most slowly – keep you feeling satisfied & fueled longer
  - Delay gastric emptying, helping to prevent quick blood sugar rise



**Eat regularly,  
Snack strategically**

# Strategic Snacking

- **Energy Audit:** For a week, make note of when you have energy slumps / hunger / mood crashes / headaches during the day.
  - Plan a snack for 10-20 minutes before your energy drop usually hits
  - Try different snack combinations and note which work best
- **Snacks** should be “mini-meals” – a combination of protein, healthy/complex carbohydrates, and some healthy fat
  - Protein and fat often come “packaged” together in snacks (like nut or seed butters, hummus, cheese, hard-boiled egg)
  - Healthy Carbs can come from fruit, starchy vegetables, whole grains or beans
  - You can ALWAYS add vegetables!

# Snack Combos

Healthy Carbs/Fiber	+	Protein/Healthy Fat
<ul style="list-style-type: none"><li>• Veggies</li><li>• Fruit</li><li>• Applesauce</li><li>• High-fiber / Whole Grain cracker</li><li>• Cooked whole grains (quinoa / brown rice / oats / farro)</li><li>• 100% whole grain bread</li><li>• Low-sugar granola</li><li>• Brown rice cake</li><li>• Sweet Potato / Winter Squash</li><li>• Popcorn</li></ul>	+	<ul style="list-style-type: none"><li>• Nut, seed or soy butter</li><li>• Hummus, bean or lentil dip</li><li>• Raw seeds or nuts</li><li>• Chickpeas, lentils or other legumes</li><li>• Canned tuna / wild salmon / sardines</li><li>• Hard boiled egg</li><li>• Greek yogurt or skyr</li><li>• Baked organic tofu or tempeh</li><li>• Chicken / Turkey / etc.</li><li>• Protein powder (rice / hemp / pea)</li></ul>

## Great “Combo” Foods

- Beans, lentils, edamame
- Bars – okay in a pinch. Aim for <10g sugar, 10g protein, 4g Fiber

# Strategies to Balance Blood Sugar

- Choose “**slower carbs**” – vegetables and fruit, beans, nuts, seeds, whole grains vs. “fast carbs” – refined, processed, sugary
- **Combine** carbohydrates with protein and fat to lower glycemic load & blood sugar response
- Look at **eating pattern** – it may help to add a mid-morning or mid-afternoon snack; in general, don’t go more than 3-4 hours without eating
- Increase **FIBER** in diet
- Try starting your day with **protein**

# Anti-Inflammatory Diet

## Science Compared Every Diet, and the Winner Is **Real Food**

- Researchers asked if one diet could be crowned best in terms of health outcomes. If diet is a set of rigid principles, the answer is a decisive no. In terms of broader guidelines, it's a decisive yes.
- [James Hamblin](#) Mar 24 2014, 1:14 PM ET

*the Atlantic*



**Real food wins.**

# Eat a Rainbow



# Anti-Inflammatory Diet

- Rich in colorful fruits and vegetables (high in phytonutrients and antioxidants)
- High fiber beans and legumes, whole grains
- Healthy fats – omega-3's from fish, flax, chia, hemp, walnuts, dark leafy greens and monounsaturated fats from avocado, olive oil, nuts/seeds
- High-quality plant and animal proteins
- Anti-inflammatory herbs and spices

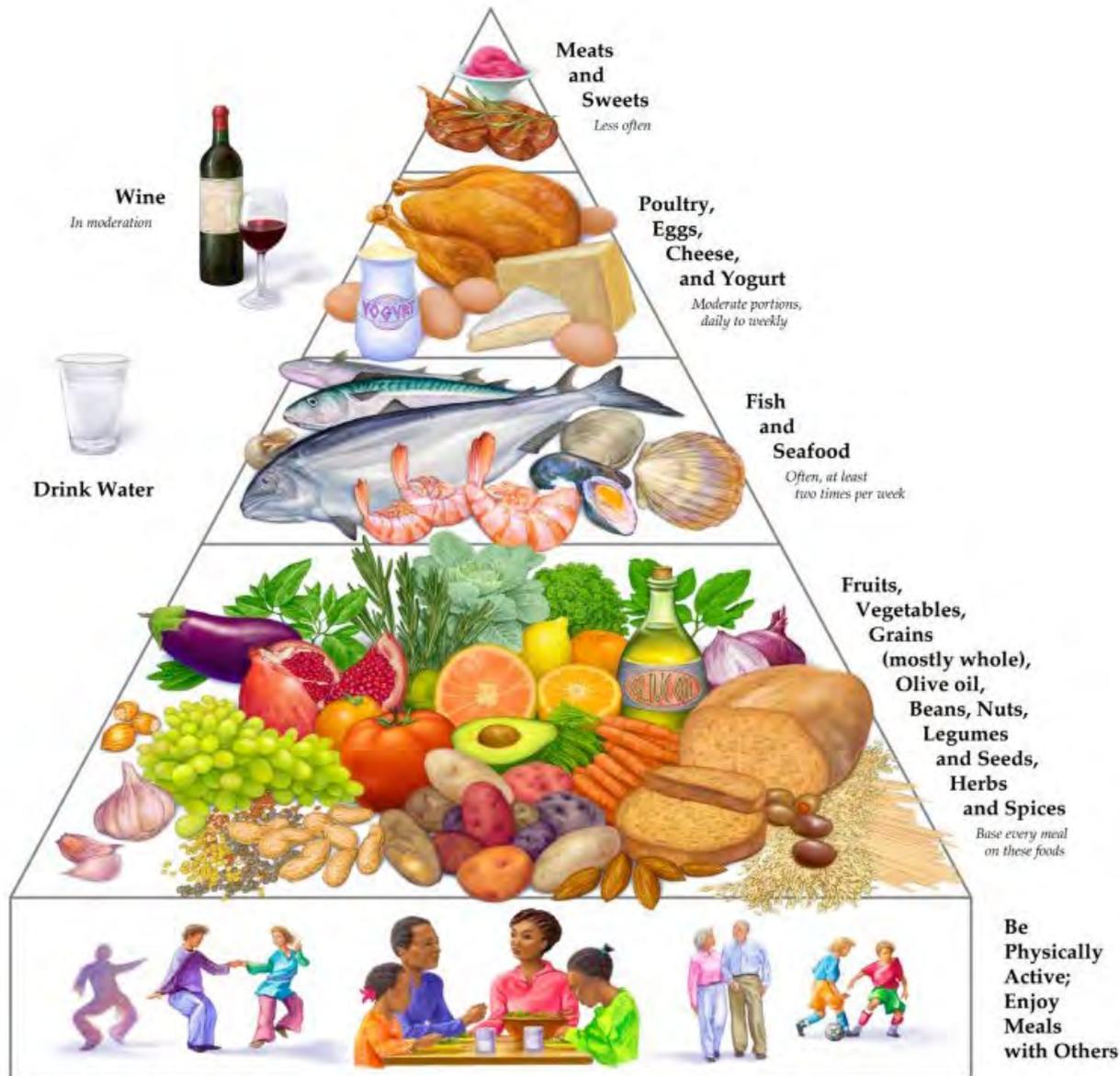
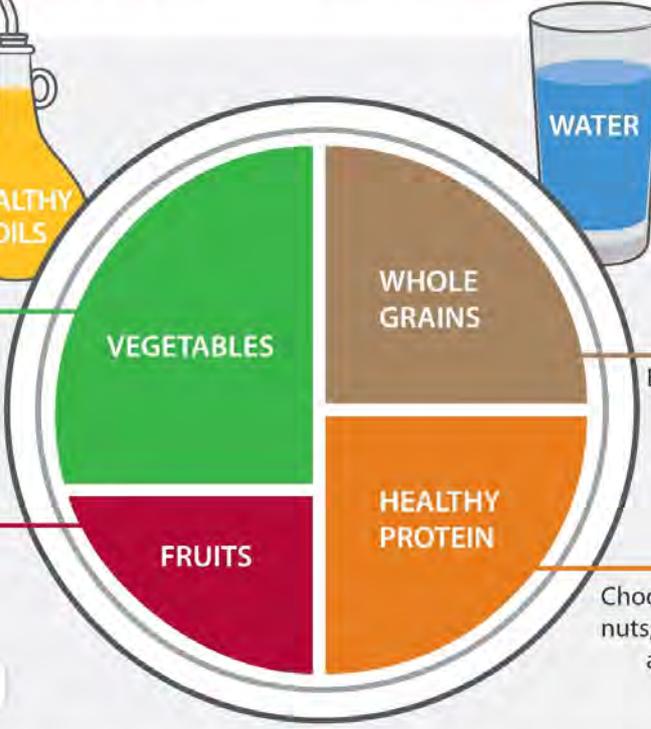


Illustration by George Middleton

# Harvard Healthy Eating Plate

**HEALTHY EATING PLATE**



**HEALTHY OILS**

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.

**WATER**

Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

**VEGETABLES**

The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.

**WHOLE GRAINS**

Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

**FRUITS**

Eat plenty of fruits of all colors.

**HEALTHY PROTEIN**

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.

**STAY ACTIVE!**

© Harvard University

Harvard School of Public Health  
The Nutrition Source  
[www.hsph.harvard.edu/nutritionsource](http://www.hsph.harvard.edu/nutritionsource)

Harvard Medical School  
Harvard Health Publications  
[www.health.harvard.edu](http://www.health.harvard.edu)

# Increase Colorful Plant Foods

- Intake of colorful fruits and vegetables is correlated with decreased risk of cardiovascular disease (heart attack and stroke), certain cancers, macular degeneration, age-related decline in cognitive function, and mortality
- Vegetables, fruits, beans and nuts are **high in fiber** and **phytonutrients**
- When you fill your plate with fruits and vegetables you naturally “**crowd out**” less healthful foods

(1) Harvard School Of Public Health: Nutrition Source. Vegetable and Fruits – Get Plenty Every Day. Website. Accessed 12/9/14. Available at: <http://www.hsph.harvard.edu/nutritionsource/vegetables-full-story/#2> (2) He FJ, Nowson CA, Lucas M, MacGregor GA. Increased consumption of fruit and vegetables is related to a reduced risk of coronary heart disease: meta-analysis of cohort studies. *J Hum Hypertens*. 2007; 21:717–28. (3) Nguyen, B, et al. **Fruit and vegetable consumption and psychological distress: cross-sectional and longitudinal analyses based on a large Australian sample.** *BMJ Open*. 2017 Mar 15;7(3):e014201.

**Where can I add color to my diet?**

**Could I add 1 piece of fruit to what I'm currently eating?**

**What vegetables do I love?**

# Supplements

- **Magnesium:** Magnesium helps maintain the tone of blood vessels and prevents nerve cells from becoming overly excited, which can trigger headaches. May be helpful for migraines related to menstruation and for headaches in children. **Dose: 600mg/d**
- **CoQ10:** Supports cellular energy production. Can reduce headache frequency and severity – may take 4-12 weeks to notice effect. **Dose: 150mg/day**
- **Riboflavin (B2):** Vitamin B2 balances energy production in the cells. Studies have found that it can decrease how often someone gets a migraine in ~3 months. **Dose: 400mg / day**

# Supplements

- **Ginger:** May be a safe/effective abortive to decrease severity of migraine. **Dose:** 400mg at first signs of headache
- **Butterbur:** May reduce frequency of headaches when taken x 4 months – has inflammation lowering and antihistamine effects. **Dose:** 50-100 mg twice/day
- **Feverfew:** **Dose:** 25mg twice per day – do not take with blood thinners or ragweed allergy
- **Combination product:** like MigreLief that contains B2, Magnesium and feverfew can be taken at recommended dose

# Migraine Food Triggers

Can vary dramatically from person to person

Often are:

1) Byproducts of food aging (fermented products like red wine, aged cheeses, yeast in fresh bread and yogurt)

2) foods with chemicals similar to the neurotransmitters that our brains use (coffee, chocolate, MSG, and the nitrates used as preservatives in many prepackaged foods)

- These types of dietary triggers are generally not the result of allergies, but are direct sensitivities to chemicals in foods and beverages

# Migraine Elimination Diets

- Commonly reported migraine triggers: alcohol, including red wine and beer, artificial sweeteners, caffeine withdrawal, chocolate, processed meats, foods containing MSG, histamine, and tyramine
- Heal Your Headache (Buccholz) / Hopkins Diet
- Low Tyramine Diet
- Low Histamine Diet
- Ketogenic Diet
- Modified Elimination Diet (removing gluten and dairy)
- Comprehensive Elimination diet (removing many major common allergy foods)

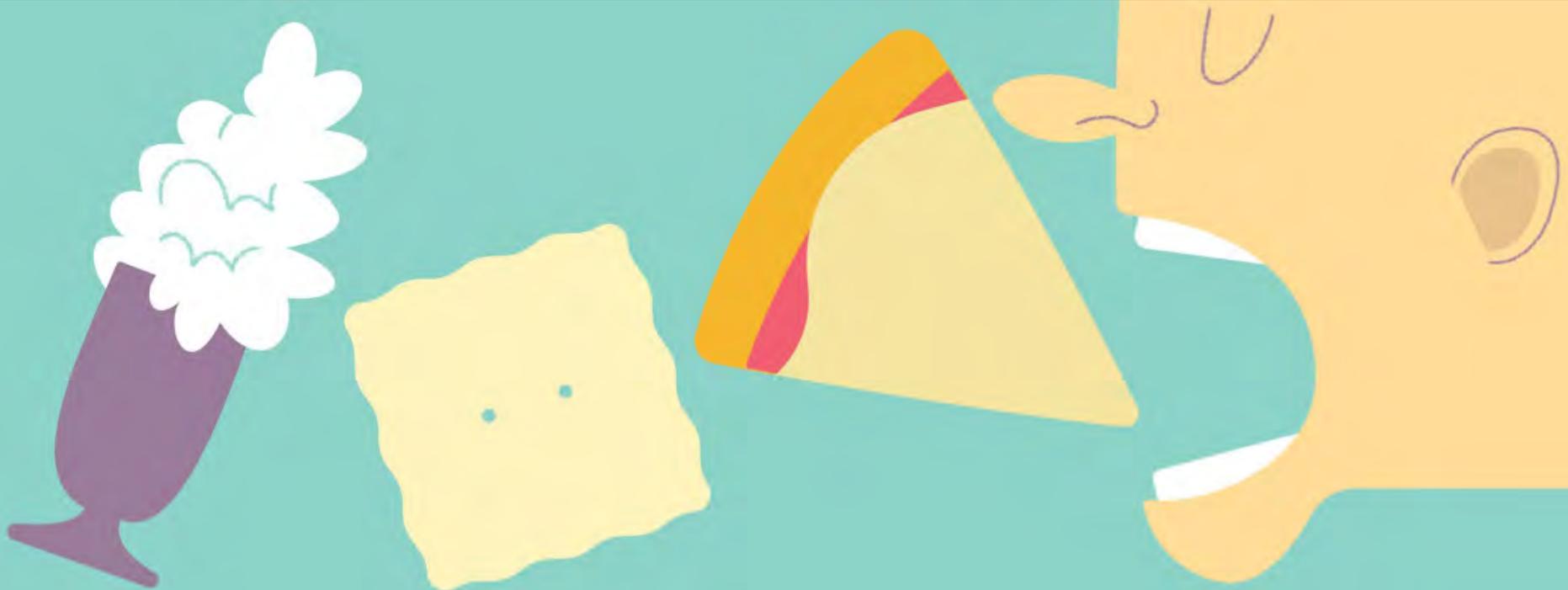
# In defense of Chocolate...

- In a study of chocolate as a trigger, eating even large amounts of chocolate didn't trigger headaches *when patients couldn't tell if they were eating chocolate*—even for individuals who believed chocolate was a headache trigger for them
- Chocolate craving often occurs with menstrual periods, another common headache trigger
- Chocolate craving may be part of a pre-headache warning or prodrome (the first stage of the attack, before an aura or headache)

# ...but maybe not caffeine

- Acute treatment of headaches with caffeine is sometimes effective but should be limited to not more than two days per week
- For people who experience migraine, caffeine taken three or more days per week, for whatever reason, may lead to dependency and increased migraine frequency
- Even small amounts (<20mg) may cause dependency and rebound headaches
- For those who have frequent headaches, avoidance of all caffeine is ideal, and at least until improvement in headache frequency is seen

# What about how migraine attacks impact eating?



# Cravings

- Frequently occur in prodrome phase
- Can help to signal/identify onset of migraine attack
- May get confused as migraine triggers (chocolate)
- Many also report post-migraine hunger and cravings

# Cravings

## Strategies:

- Get to know your cravings – keeping a food/craving/headache log can help to make connections between certain cravings and onset of migraine attack – may help with earlier intervention
- Honor the **spirit of the craving** (“sweet” / “salty” / “creamy” / “chocolate”) with less processed and more nutrient-dense options
- Self-compassion – sometimes it’s ok to find comfort in comfort foods!

# Cravings Strategies

- Check in to see what triggered the craving: “see” food? Boredom? Stress? Hunger? Prodrome?
- **Try:** Have a small healthy snack FIRST – this will give your body the fuel it needs and help to moderate blood sugar response
  - If you still want “a little something” 30-40 minutes later, it will be easier to have a small treat
- **Try:** Combining your treat with a healthy snack (eg. Almonds, piece of fruit, piece of dark chocolate) or meal to lower the glycemic load and ensure proper fueling
- **Try:** Upgrading the quality of your treat – use high-quality ingredients and limit processed foods with long ingredient lists...

# Self-Compassion

"Unlike self-criticism, which asks if you're good enough, self-compassion asks **what's good for you?**"

- Kristin Neff

becomingwhoyouare.net

- **Self-compassion: having a neutral but understanding consideration of yourself and your actions**
- How would you treat a friend?
- Associated with well-being, increased feelings of happiness, and greater personal initiative to make needed changes in life
- Kristin Neff – [self-compassion.org](http://self-compassion.org)

**What is my body *really* asking for right now?**

**What is the most loving thing I can do for myself in this moment?**

# Get Curious



**All life is an experiment.  
The more experiments you  
make the better.**

– Ralph Waldo Emerson

# Where do I start?

- Start Small. Experiment.
- Take notes! Food/craving/mood/headache log
- "Crowd out" less healthy things by increasing healthy ones
- Anti-inflammatory, mostly whole foods diet – 80/20 approach
- Balanced blood sugar = balanced energy and mood = fewer headaches
- Avoid skipping meals, especially breakfast
- Snack throughout the day to avoid hunger headaches and low blood sugar
- Limit processed foods and prepare foods at home when possible
- Get curious about your triggers and avoid them when possible
- Consider trying supplements like Magnesium, Vitamin B2, and CoQ10
- Take it one day, one snack at a time.
- Get Support!

# Questions?

Lindsay Keach Bronstein, MS, RD, LDN, HC

[Lindsay@feedhealth.com](mailto:Lindsay@feedhealth.com)

617-453-8180