

# REGENERATIVE COOKING AS PREVENTION

## Cooking and Food as Medicine

**Jenny Breen, Chef, MPH, MEd**

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University of Minnesota

[TRANSFORMINGTHETABLE.COM](http://TRANSFORMINGTHETABLE.COM)

### MN Health Plans Collaborative



# Today's Presenter

**Jenny Breen, MPH, M Ed.**

Jenny Breen is a Chef, Public Health Nutritionist, culinary educator (faculty in culinary nutrition at the Bakken Center for Spirituality and Healing at the University of Minnesota), and Teaching Kitchen Manager at Hennepin Healthcare's Redleaf Center for Family Healing. She is committed to the belief that food is a human right—not a privilege—and works toward building an equitable, accessible, and sustainable food system for all.

# The Redleaf Center for Family Healing

- **Multi-Generational Mental Health and Parenting Support for Families**
- **A range of outpatient mental health and parenting support for individuals during pregnancy and parenting of children ages 0–5 years**

**Services include:**

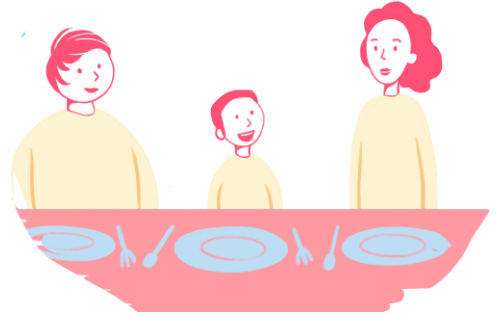
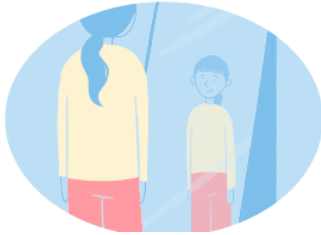
- **Mother-baby Day Hospital**
- **Perinatal Outpatient Program (POP)**
- **Outpatient Clinic**



**Redleaf Center**  
For Family Healing

# EVERYONE HAS A FOOD STORY-WHAT'S YOURS?

A food story is a memory, a reflection, a recipe, a person, or experience with cooking or eating.



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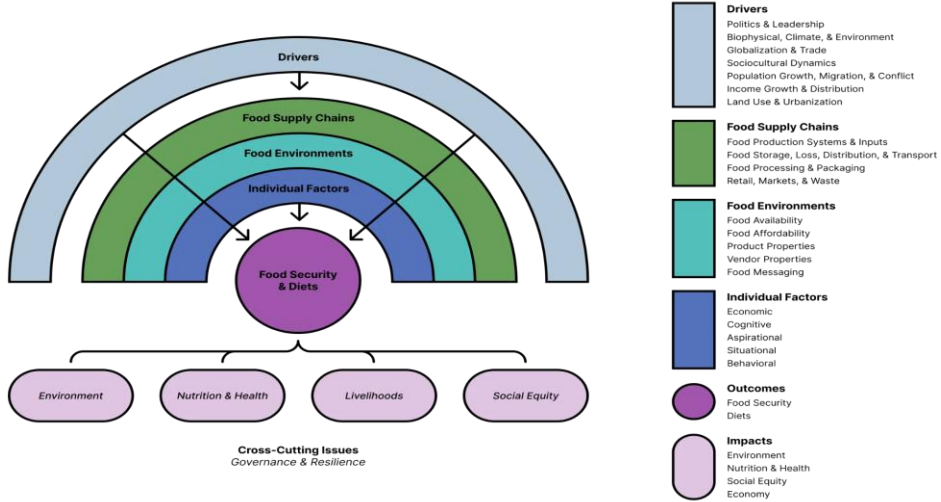
# SOCIAL DETERMINANTS OF HEALTH



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)

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# THE FOOD SYSTEM



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# STANDARD AMERICAN DIET (S.A.D.)

## U.S. FOOD CONSUMPTION AS A % OF CALORIES

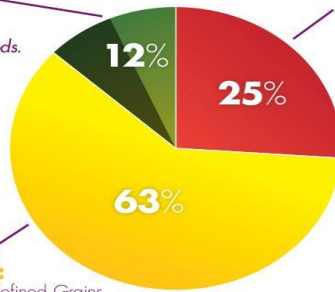
**PLANT FOOD:**

Vegetables, Fruits, Legumes, Nuts & Seeds, Whole Grains  
**Fiber is only found in plant foods.**

**NOTE:** Up to half of this category may be processed, for example almonds in candy bars, apples in apple pies or spinach in frozen spinach souflie, and of course these would not be healthy choices. The focus should be on whole unprocessed vegetables, fruits, legumes, nuts and seeds and whole grains.

**PROCESSED FOOD:**

Added Fats & Oils, Sugars, Refined Grains



**ANIMAL FOOD:**

Meat, Dairy, Eggs, Fish, Seafood  
**Cholesterol is only found in animal foods. Animal foods are the PRIMARY source of saturated fat.**

**GUIDE TO HEALTHY EATING:**

Much easier to understand than the USDA Food Pyramid, with no food industry influence.

Eat **LESS** from the animal and processed food groups and **MORE** whole foods from the plant food group.

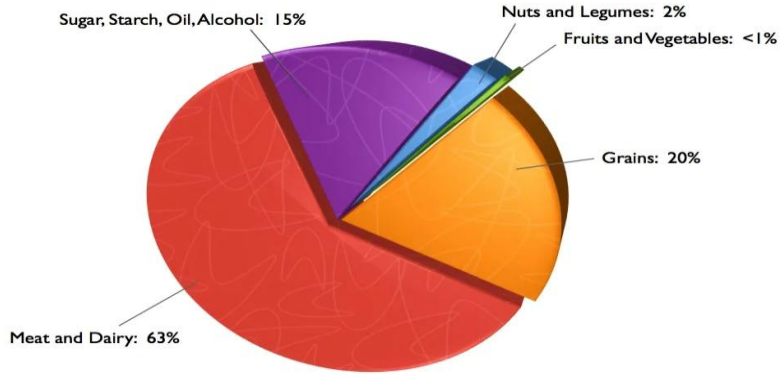
In general, food from the animal and processed food group contribute to disease, while **WHOLE** foods from the plant group contribute to good health.

Source: USDA Economic Research Service, 2009; [www.ers.usda.gov/publications/EIB33](http://www.ers.usda.gov/publications/EIB33); [www.ers.usda.gov/Data/FoodConsumption/FoodGuideIndex.htm#calories](http://www.ers.usda.gov/Data/FoodConsumption/FoodGuideIndex.htm#calories)  
 New York Coalition for Healthy School Food \* [www.healthychoolfood.org](http://www.healthychoolfood.org)  
 Special thanks to Joel Fuhrman, MD, author of *Disease Proof Your Child: Feeding Kids Right* \* Graphics by MichelleBanda.com  
 © 2009, New York Coalition for Healthy School Food

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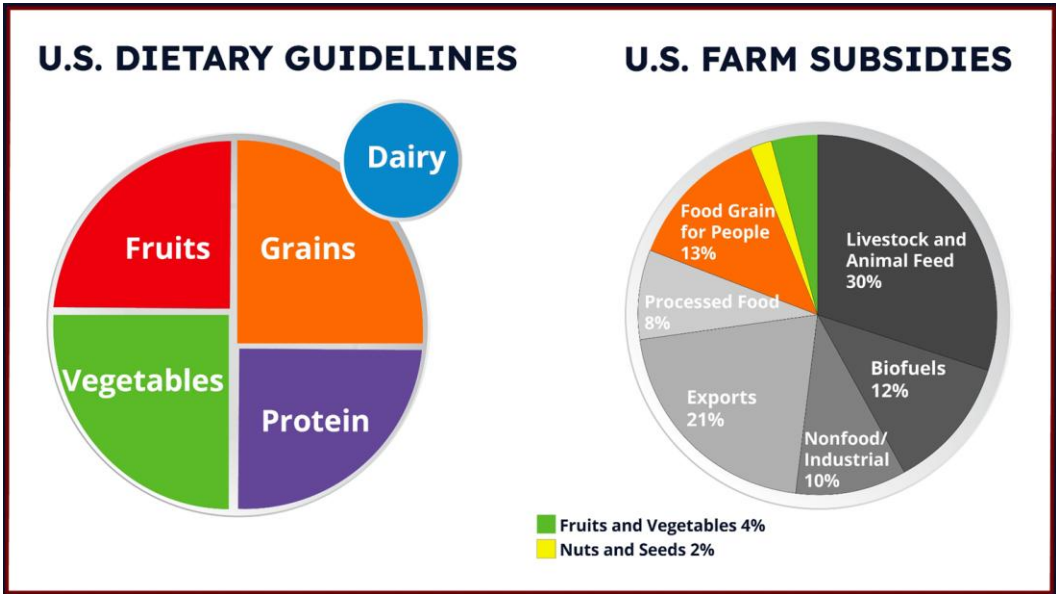
# THE US FOOD SYSTEM AND GOVERNMENT SUBSIDIES

## Where the Money Goes: The Foods That Subsidies Support



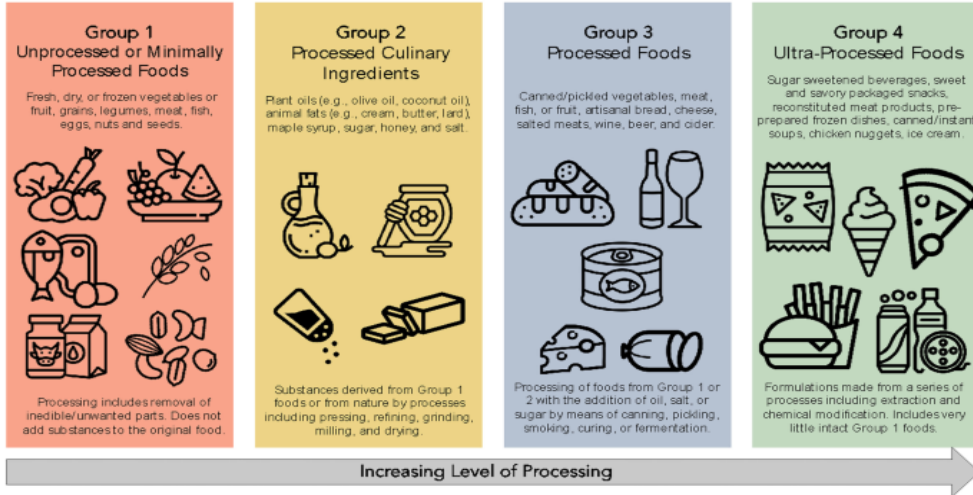
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# MISMATCH BETWEEN US SUBSIDIES AND DGAS



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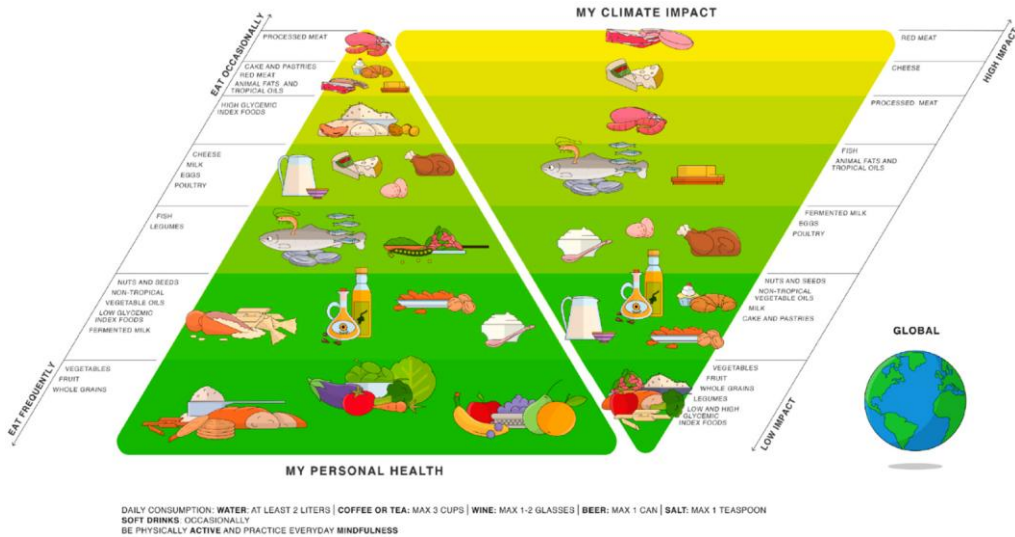
## THE NOVA CLASSIFICATIONS



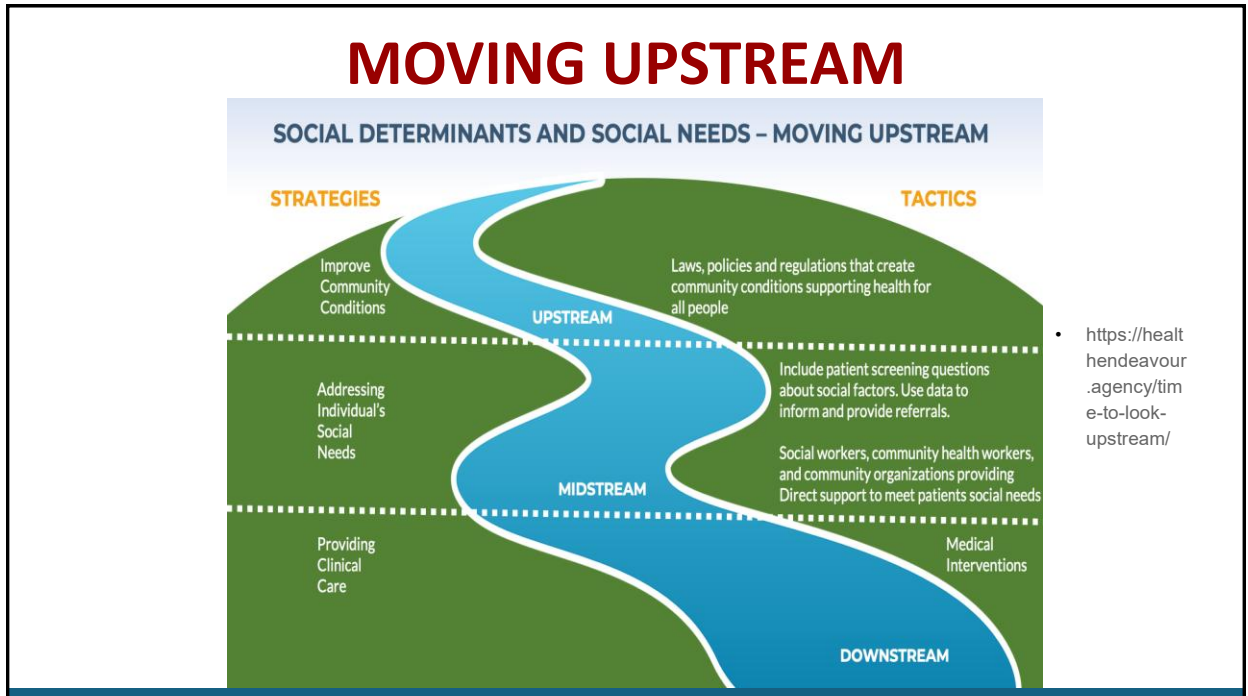
Definition of Ultraprocessed Foods (UPF) from NOVA classification:  
"formulations of ingredients, mostly of exclusive industrial use, typically created by series of industrial techniques and processes (hence 'ultra-processed')."  
From FAO of United Nations report 2019: <https://www.fao.org/3/ca5644en/ca5644en.pdf>

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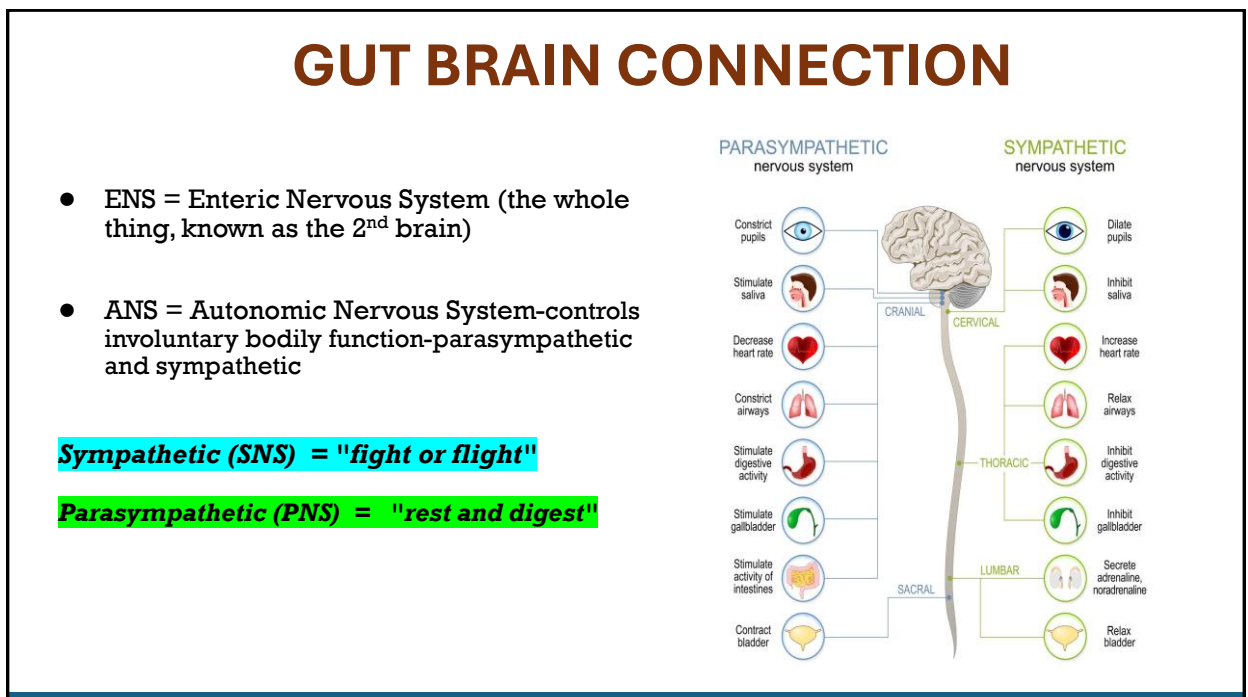
## THE DOUBLE PYRAMID PERSONAL HEALTH/CLIMATE IMPACT



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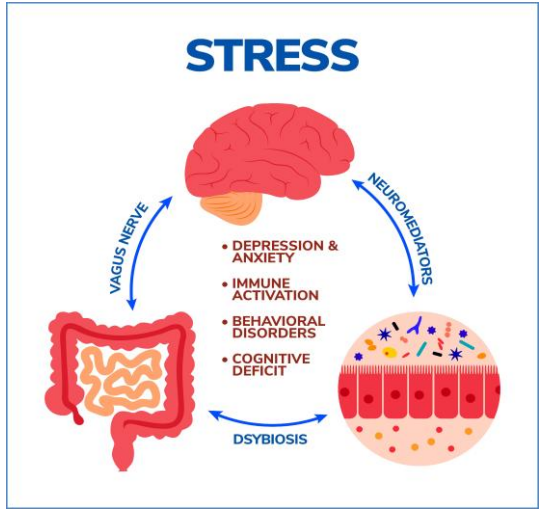


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# STRESS AND THE GUT



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## A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease



Adapted: Seligman HK, Schilling D. N Engl J Med. 2010;363:6-9.

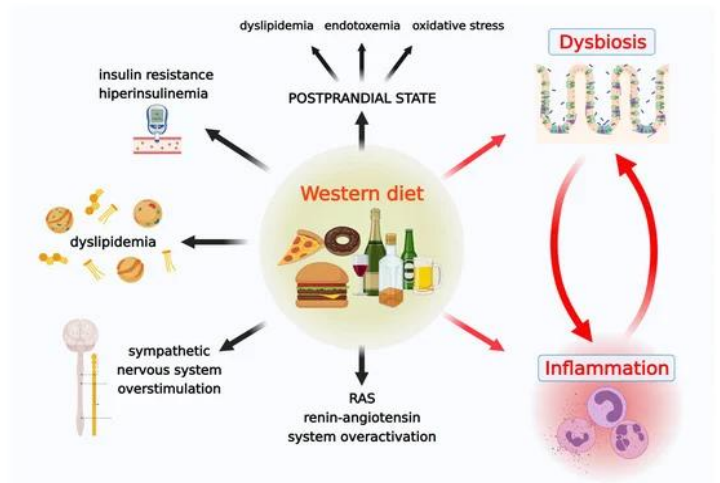
Food security and mental health share a profound relationship influenced by multifaceted factors like socioeconomic conditions, access to nutritious food, and societal inequalities. -Recommendations for integrating food security into mental health strategies based on the insights and conclusions drawn

(Ejohuo et al, 2024)

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## DIET AND THE GUT BRAIN CONNECTION

- Composition, structure and function of the brain are dependent on the availability of appropriate nutrients:
  - - Lipids
  - - Amino acids
  - - Vitamins and minerals
 ([Castro et al., 2018](#); [Delpech et al., 2015](#)).
- Food intake and food quality impact brain function → diet can be a **modifiable variable** to target mental health, mood and cognitive performance
- ([de la Torre et al., 2016](#); [Dinan et al., 2018](#)).



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## WHY GUT HEALTH MATTERS



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# THE LANGUAGE WE USE



Rachel Hartley Nutrition

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# TRADITIONAL DIETARY PATTERNS

Risk of depression is 25% to 35% lower in those who eat a traditional diet.

Traditional diets tend to be high in vegetables, fruits, unprocessed grains, and fish and seafood, and to contain only modest amounts of lean meats and dairy and void of processed and refined foods and sugars

In addition, many of these unprocessed foods are fermented, and therefore act as natural probiotics



(harvard.edu)

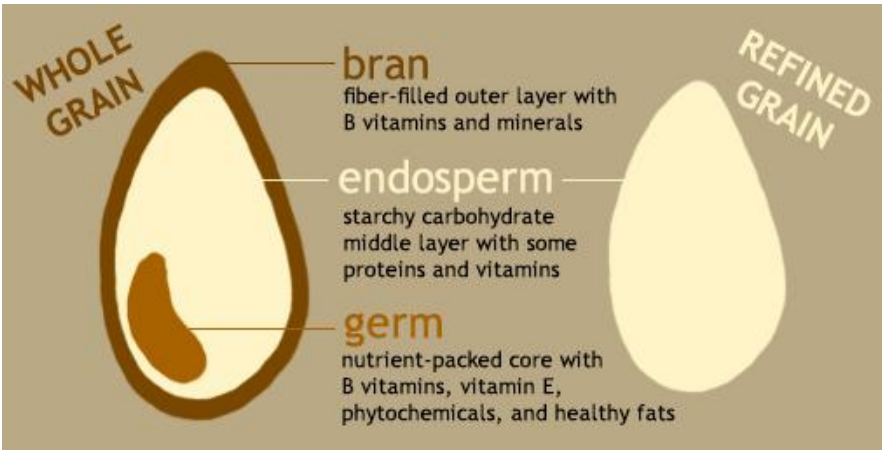
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# THE 3 MACRONUTRIENTS: CARBOHYDRATES



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## CARBOHYDRATE QUALITY=FIBER



**Example study:**  
 2019 large meta-analysis (Lancet) demonstrates fiber intake 25-29 g/day associated w/ significantly less cardiovascular diseases, type 2 diabetes, and colorectal and breast cancer

Reynolds 2019

<https://www.hsph.harvard.edu/nutritionsource/whole-grains/>

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# CARBOHYDRATE QUALITY

[https://oldwayspt.org/system/files/atoms/files/Diabetes\\_CarbCommonSense.pdf](https://oldwayspt.org/system/files/atoms/files/Diabetes_CarbCommonSense.pdf)

**Fruits/vegetables/legumes -highest quality nutrients, fibers, protein (legumes, veg)**

**Whole intact grains**

**Lightly processed grains**

**Whole grain foods**

**Refined grains**

**Treats and desserts**

**- least quality, minimal nutrients, mostly absent fiber, minimal protein**

**NOTE: Dairy (part), all sweeteners (except stevia) also CHO's**

**WHOLE GRAINS COUNCIL**

## CARBOHYDRATE QUALITY COMMON SENSE

Carbohydrates have been the mainstay of diets around the world for thousands of years, but recently they've been under attack on the web and in some best-selling diet books, leaving the average person thoroughly confused.

It may help you to think of carbohydrate choices on a continuum, starting with the healthiest, top-quality choices and progressing to less healthy choices. Make more of your carb choices from the beginning of this list than from the end, and you'll be eating well.

**FRUITS, VEGETABLES AND LEGUMES**  
You can't go wrong with fruits, vegetables, and legumes (beans), all-stars that deliver lots of vitamins, minerals and fiber for relatively few calories. As Dr. David Katz says, "You find me one person who can legitimately blame their obesity or diabetes on apples or carrots, and I will give up my day job and become a hula dancer!"

**INTACT WHOLE GRAINS**  
Running neck-in-neck with fruits and vegetables are intact whole grains. Like fruits and veggies, intact whole grains are powerhouses of nutrition. But keep portions moderate: they have less water, so they're a more concentrated carb. Best choice of all! Eat your intact whole grains with lots of vegetables, as in the quinoa bowl shown here.

**LIGHTLY PROCESSED GRAINS**  
Sometimes intact whole grains are very lightly processed, as when oats are steamed and rolled to make rolled oats, or grains are crushed, mixed with water and extruded to make whole grain pasta. These are also good choices. Little-known fact: Flour and water made into pasta digests much more slowly than if the same flour and water were made into bread. That makes pasta a healthier choice for controlling blood sugar swings.

**WHOLE GRAIN FOODS**  
Grains count as "whole" whenever all of their original bran, germ, and endosperm are still present—even if the grains have been made into breads, crackers and cereals. Look for whole grain foods made without extra ingredients—just good whole grains, without added sugar.

**REFINED GRAINS**  
When whole grains aren't available and white bread or other refined grains are the only choice, pay special attention to what you're eating with your grains, making sure to add lots of vegetables, beans, fish and other healthy "partners." Tip: true sourdough breads are less likely to spike blood sugar than yeast breads.

**TREATS AND DESSERTS**  
Grain foods high in sugar and extra fats are meant to be eaten rarely—at most a few times a week, not every day. While most whole grain versions are marginally healthier than their refined counterparts, a whole grain cookie is still a cookie, so save these treats for special occasions.

[WWW.WHOLEGRAINSCOUNCIL.ORG](http://WWW.WHOLEGRAINSCOUNCIL.ORG) • [WWW.OLDWAYSPT.ORG](http://WWW.OLDWAYSPT.ORG)

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# THE 3 MACRONUTRIENTS: PROTEINS



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# PROTEINS









Definition of complete protein - all 9 essential amino acids (AAs) are contained in the food

Incomplete protein - some of the essential amino acids, not all. Ex. nuts, seeds, vegetables.

Complete Protein Examples:

- Animal proteins (eggs, meat, fish, dairy)
- Soy
- Quinoa, buckwheat
- Avocado
- Combinations of vegetables, grains, legumes, nuts - the body can put together the needed AAs

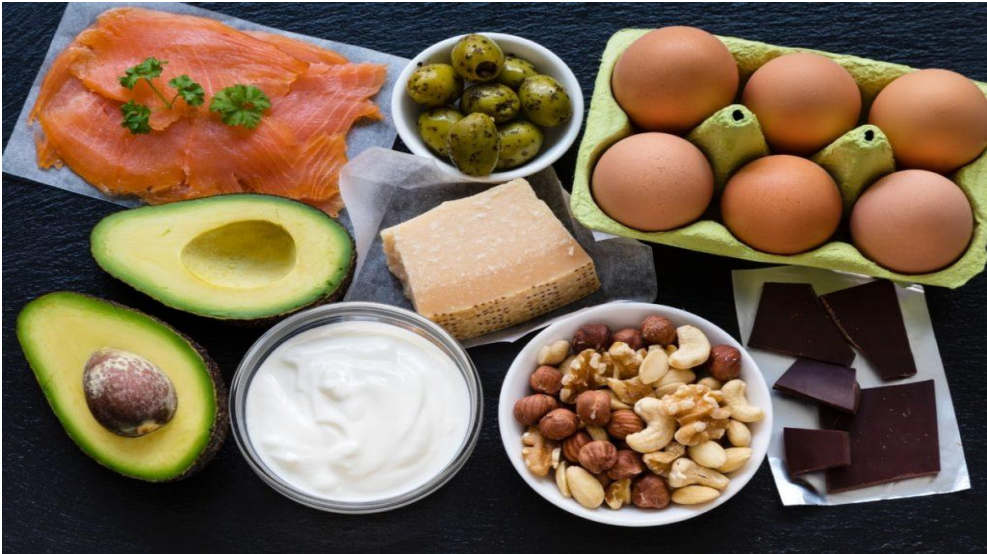
### What do amino acids do?

<p><b>Break down food.</b></p> 	<p><b>Grow and repair body tissue.</b></p> 	<p><b>Make hormones and brain chemicals.</b></p> 	<p><b>Provide an energy source.</b></p> 
<p><b>Maintain healthy skin, hair and nails.</b></p> 	<p><b>Build muscle.</b></p> 	<p><b>Boost your immune system.</b></p> 	<p><b>Sustain a normal digestive system.</b></p> 

Cleveland Clinic

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# THE 3 MACRONUTRIENTS: FATS



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# NATURALLY OCCURRING/QUALITY FATS

## Plant

Nuts

Seeds

Olives

Avocado

Nut & seed oils - *cold or expeller pressed*

Pesto, hummus

Dark chocolate (>80%)

Coconut



## Animal\*

- Dairy (grass-fed, full-fat, plain organic yogurt, ghee, butter, cheese)

- Pastured eggs (high in O3 FAs)

- Pastured (Grass fed) beef (high in O3 FAs) [55]

- Pastured/free-range poultry

- Game meats, pork, other meats

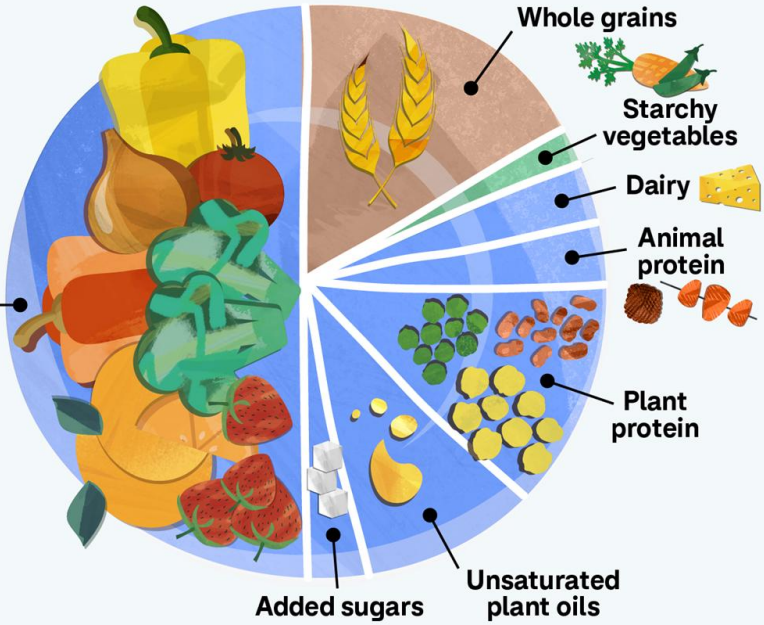
- Fish, seafood varieties

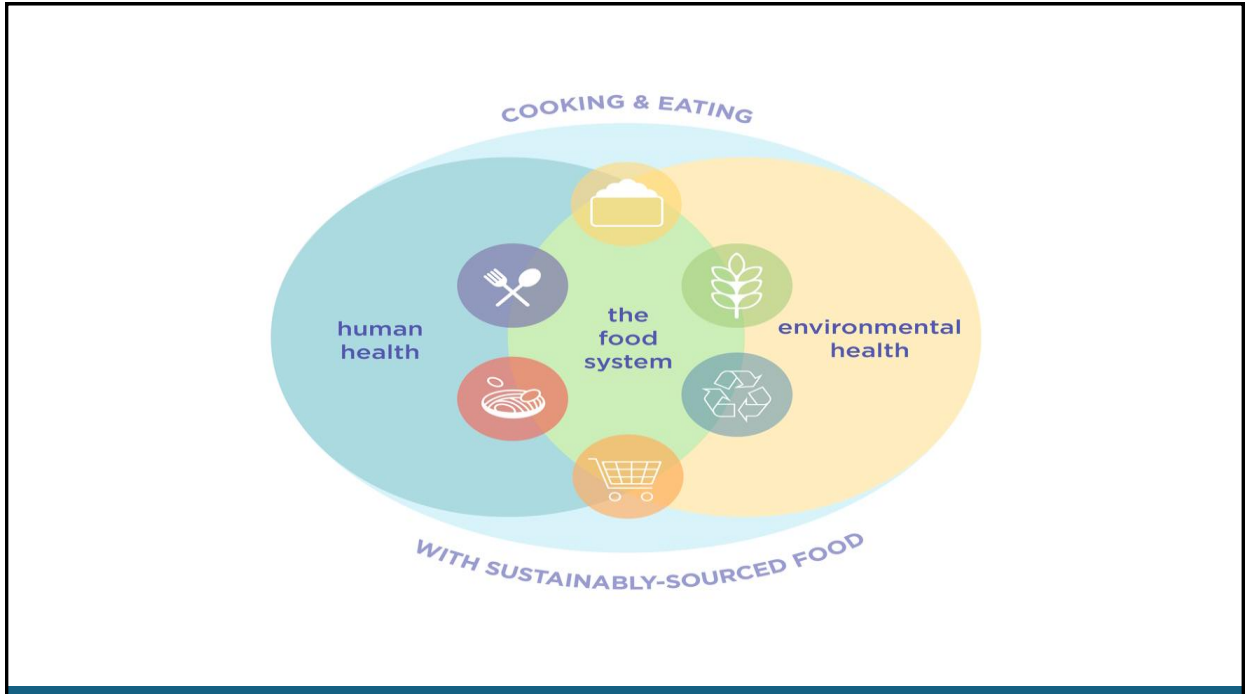
\*type of fat in animal products depends on diet of animal and conditions in which they are raised.

[55] Daley 2010

# The Planetary Health Plate

Fruits and vegetables  
*Non-starchy vegetables*





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## INTEROCEPTIVE AWARENESS

### *the food mood journal*

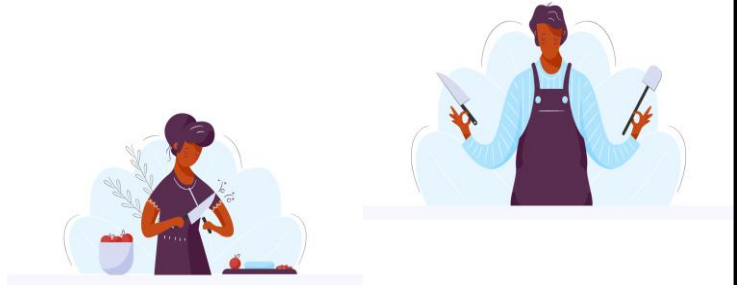
- a. Keep a record of everything you eat (*no need to measure*)
- b. Measure your hunger on a scale of 1-10 (How hungry were you before you started)
- c. Describe the environment
- d. Describe your mood- here are examples, but any word is acceptable:  
angry, bored, sad, frustrated tired, scared, happy, nervous/anxious, lonely, uncertain, excited
- e. Describe your physical satisfaction-on a scale of 1-5 - are you still hungry? just right? full? uncomfortable?
- f. Describe your emotional satisfaction-on a scale of 1-5 - are you relaxed? did you get what you wanted?
- g. Do you have any questions, thoughts, 'aha' s or takeaways?



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## COOKING AS SELF CARE

1. INCREASED SENSE OF CALM
2. MIMICS MEDITATION
3. MAKES YOU SMILE MORE
4. PROVIDES A LOW-STRESS ENVIRONMENT
5. SHARPENS NEW SKILLS
6. BOLSTERS CONFIDENCE
7. DEVELOPS FOCUS
8. STRENGTHENS YOUR SENSES



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### Drop in mom baby cooking/feeding classes for any current or past patient

- Food, and cooking play an important role in overall health and wellbeing.
- Specifically for moms and babies, a healthy relationship with food is fundamental for developing/maintaining a healthy body
- A backdrop for a healthy relationship between mom and baby
- We're teaching Food Skills! -- upstream prevention and downstream intervention to improve health/outcomes and costs.



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## Medicaid managed care in-lieu-of service classes-a pilot with Hennepin Health

- Medicaid section 1115 demonstration waiver: “new approach to healthcare”
- Builds skills for long-term prevention; education on food system & sustainable food access (ie: SNAP at farmers markets, ©NourishedRX)
- Supports chronic disease management, combats isolation
- Prevents/decreases hospitalization costs (estimated \$10,000/patient)



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## Cooking up Culture Classes in partnership with Employee Wellness and Health Equity



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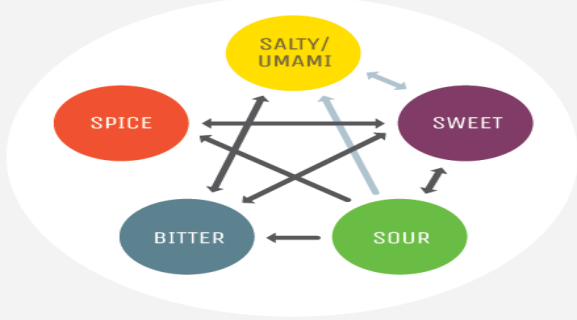
# FLAVOR

## THE FLAVOR STAR

**ENHANCES**  
*Brings out the other flavor*

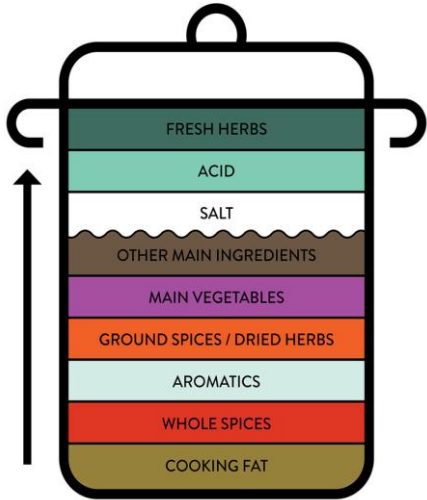
**BALANCES**  
*Counteracts the other flavor. If your dish is experiencing too much of one flavor, use a balancing flavor to level it out.*

**COOKSMARTS**



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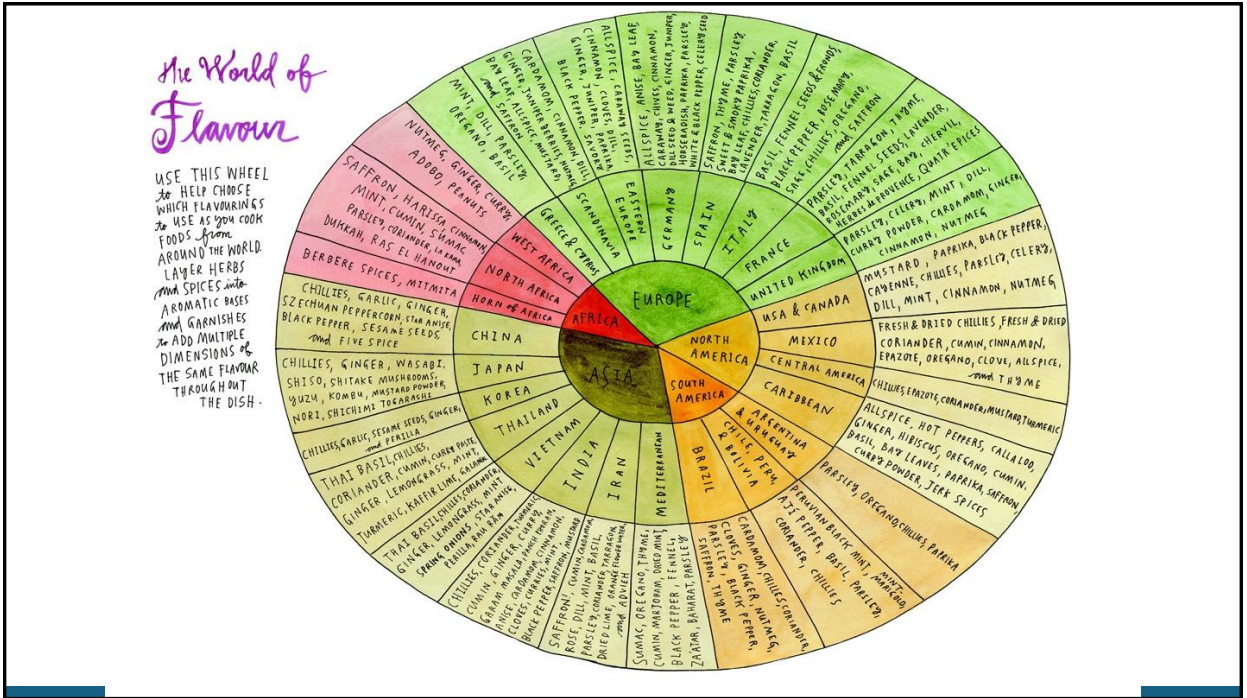
## BUILDING FLAVOR FROM TOP TO BOTTOM



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HEALTHY CHIEF

aliadalal.com

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## BUILD A DELICIOUS AND NOURISHING BOWL

### Build Your Own Nourish Bowl

- Whole Grains
- Veggies
- Proteins
- Sauce/Fat
- Extras

**Protein Source**

**Healthy Fats**

**Starchy and non-starchy veggies**

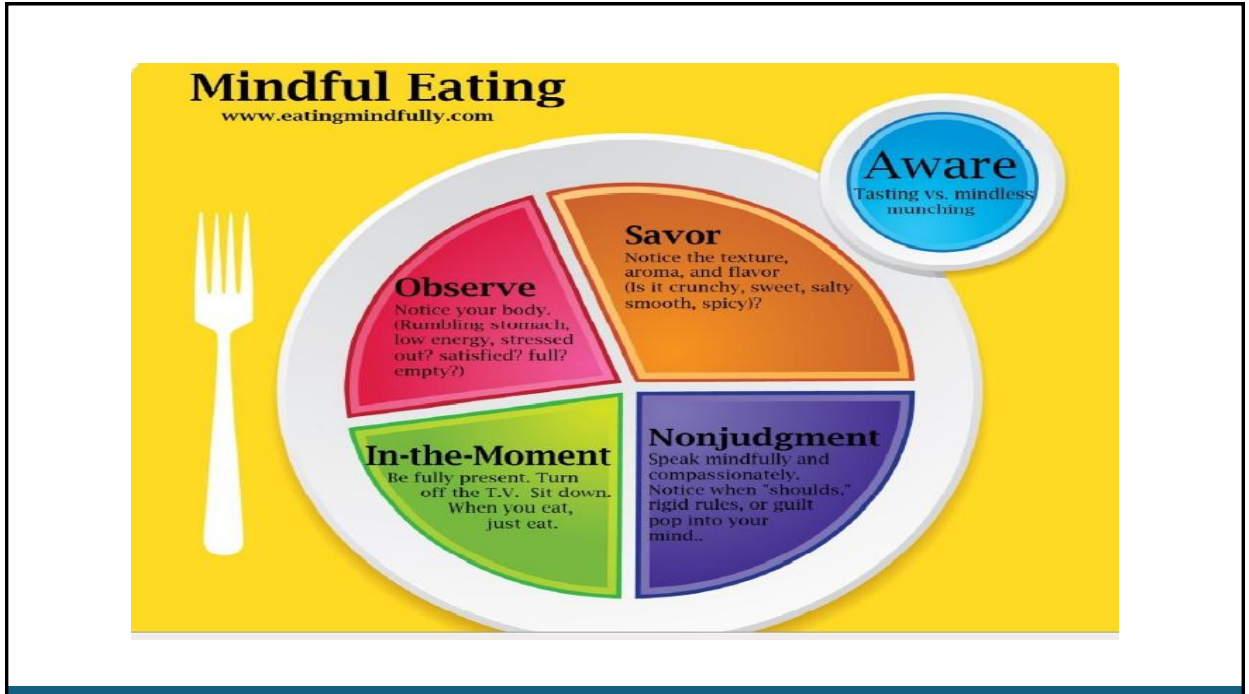
**Leafy Greens**

**Whole Grains**

**Toppings**

@plantfulvibes  
@eatwithamy

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## Questions and Open Discussion

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**Classes at the Bakken Center for Spirituality and Healing, University of Minnesota**

CSpH 5905 Food Matters (w/DR Kate Shafto)  
CSpH 3301 Food Choices, Healing the Earth, Healing Ourselves (Jenny) online every semester  
**CME course: Food Matters for Health Professionals** (w/DR Kate Shafto)  
Nourishment to Lighten the Season-public webinar series (see info in the scanner)  
breen026@umn.edu

**The Redleaf Center for Family Healing, Hennepin Healthcare**  
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# Thank You!

