



Nutrition Updates

August 6, 2019

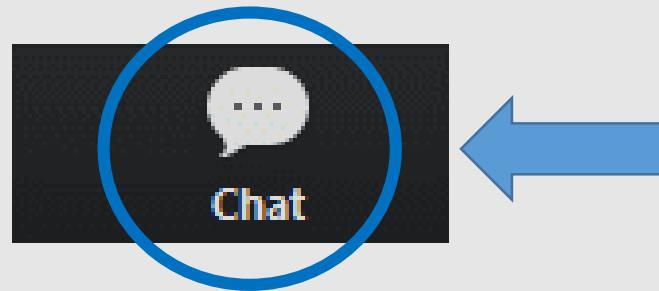
Welcome!

Zoom Information

Webinar participants are muted

Chat feature:

- Hover over Zoom screen to view task bar at bottom
- Click on the Chat bubble



Polls – appear as a pop-up screen

Today's Expert Presenter

Rachel Scherr, PhD
Assistant Research Scientist,
UC Davis Department of Nutrition

Director, Center for Nutrition in Schools



Poll Question

Which of these topics (if any) have participants brought up or asked about?
(may choose more than one)

- Leaky Gut
- GAPS Diet
- Whole 30 Diet
- Carnivore Diet

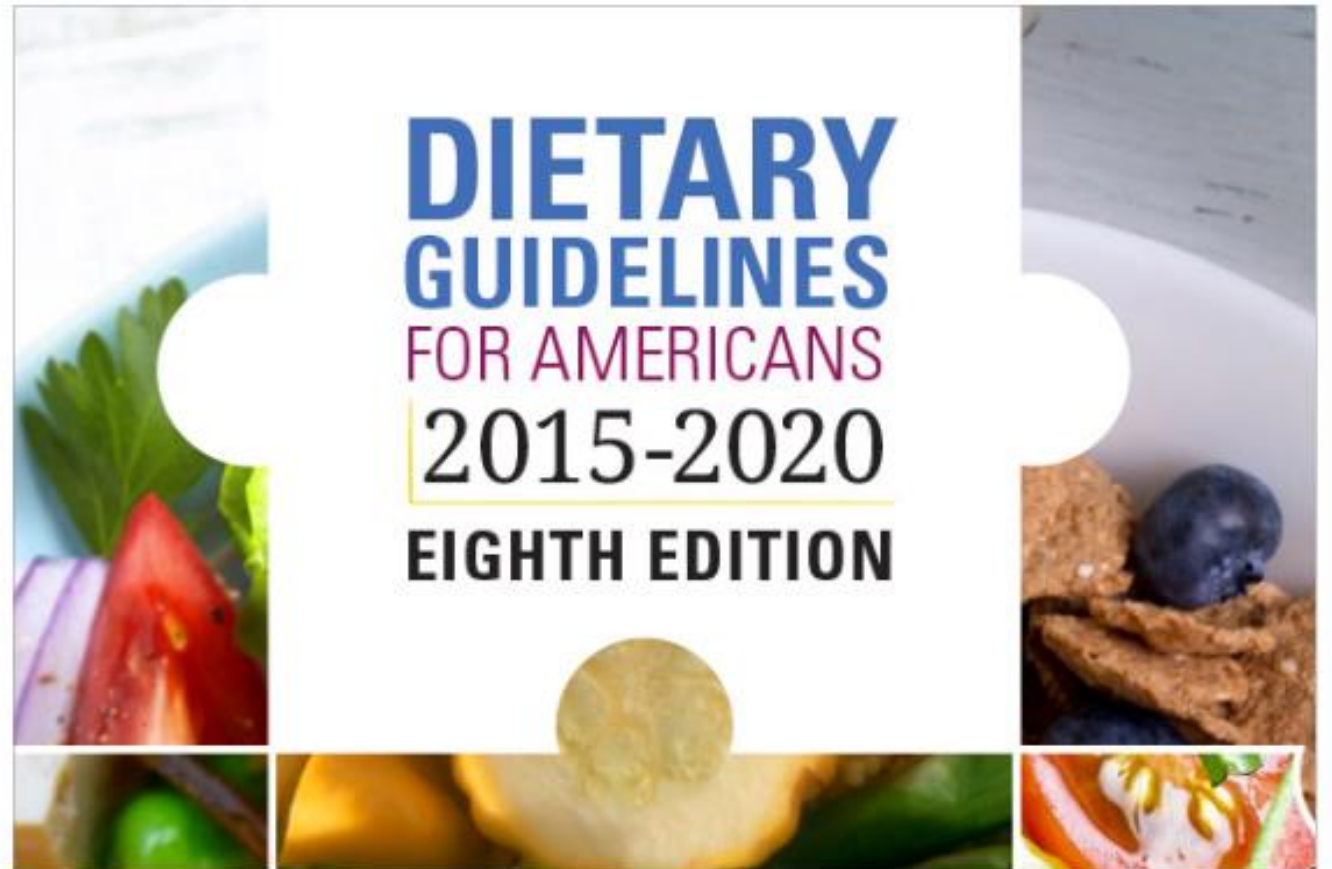
Today's Webinar

- Basis for Dietary Recommendations
- Health and Variability
- Leaky Gut
- Elimination Diets
 - GAPS Diet
 - Whole 30
 - Carnivore Diet
- Conclusions



What is the basis for
dietary recommendations?

Current Recommendations



Beyond the Hype

Nutrition is an inter-disciplinary science

- **“Evidence-based”** recommendations
- Understanding these recommendations can help you identify the hype from those with good scientific evidence



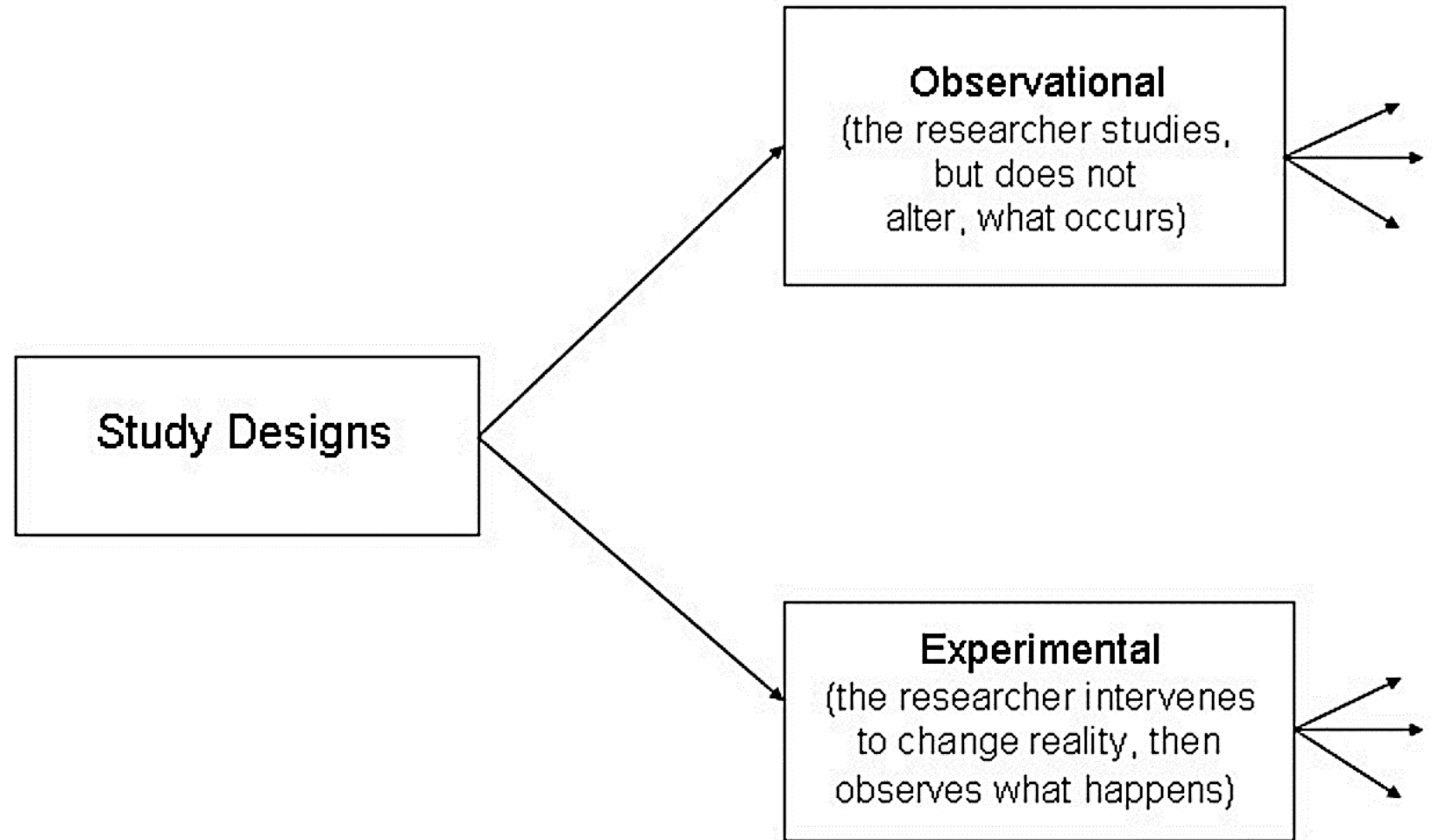
National Institutes
of Health



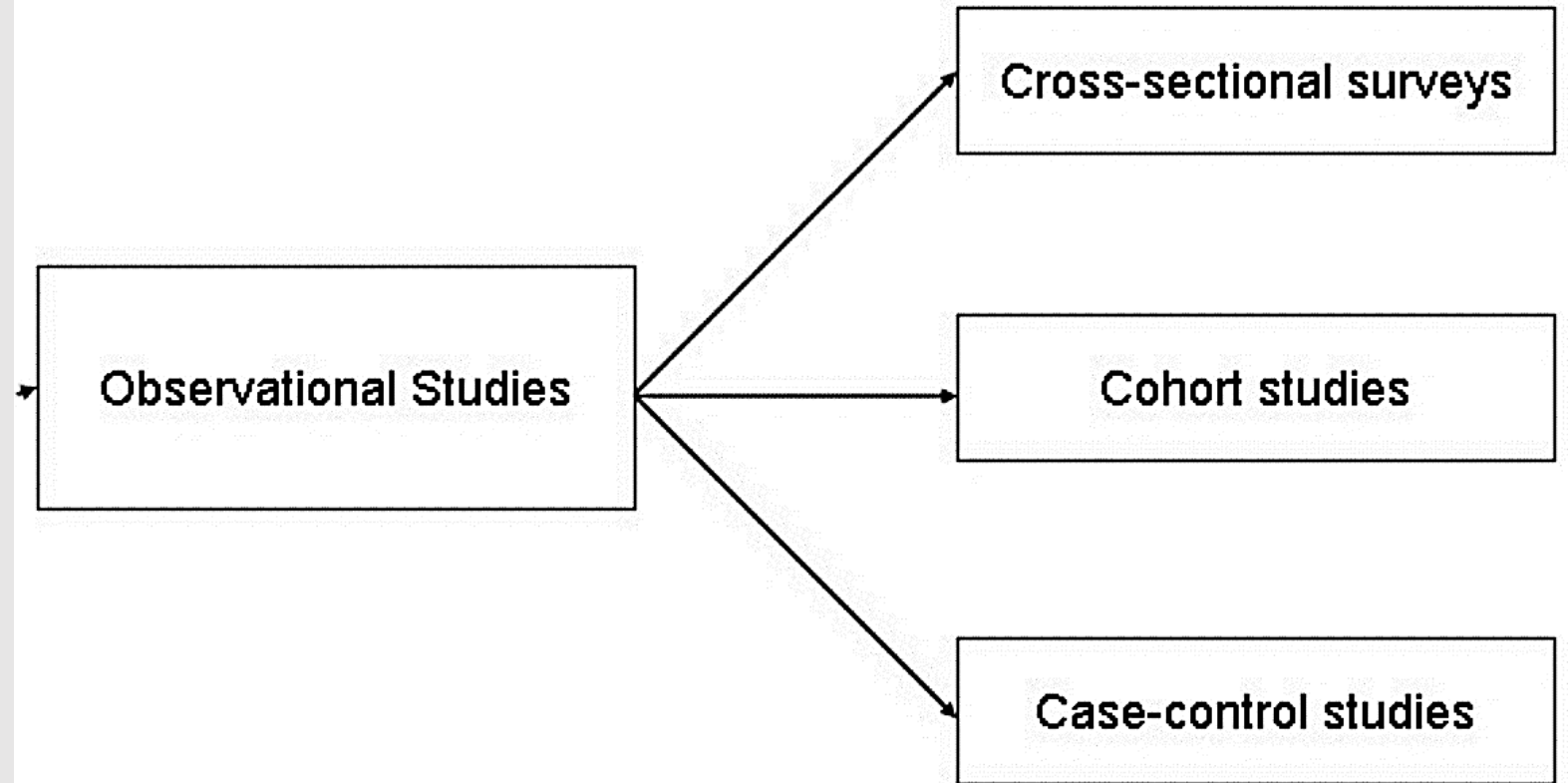
What are evidence-based recommendations?

- Evidence is collected via research, using a variety of study designs
- Different study designs provide information of different quality
 - Strengths and limitations
- 1) Describing prevalence of health problems
- 2) Identifying causes of health problems (etiological research)
- 3) Evaluating therapy, including treatment and prevention

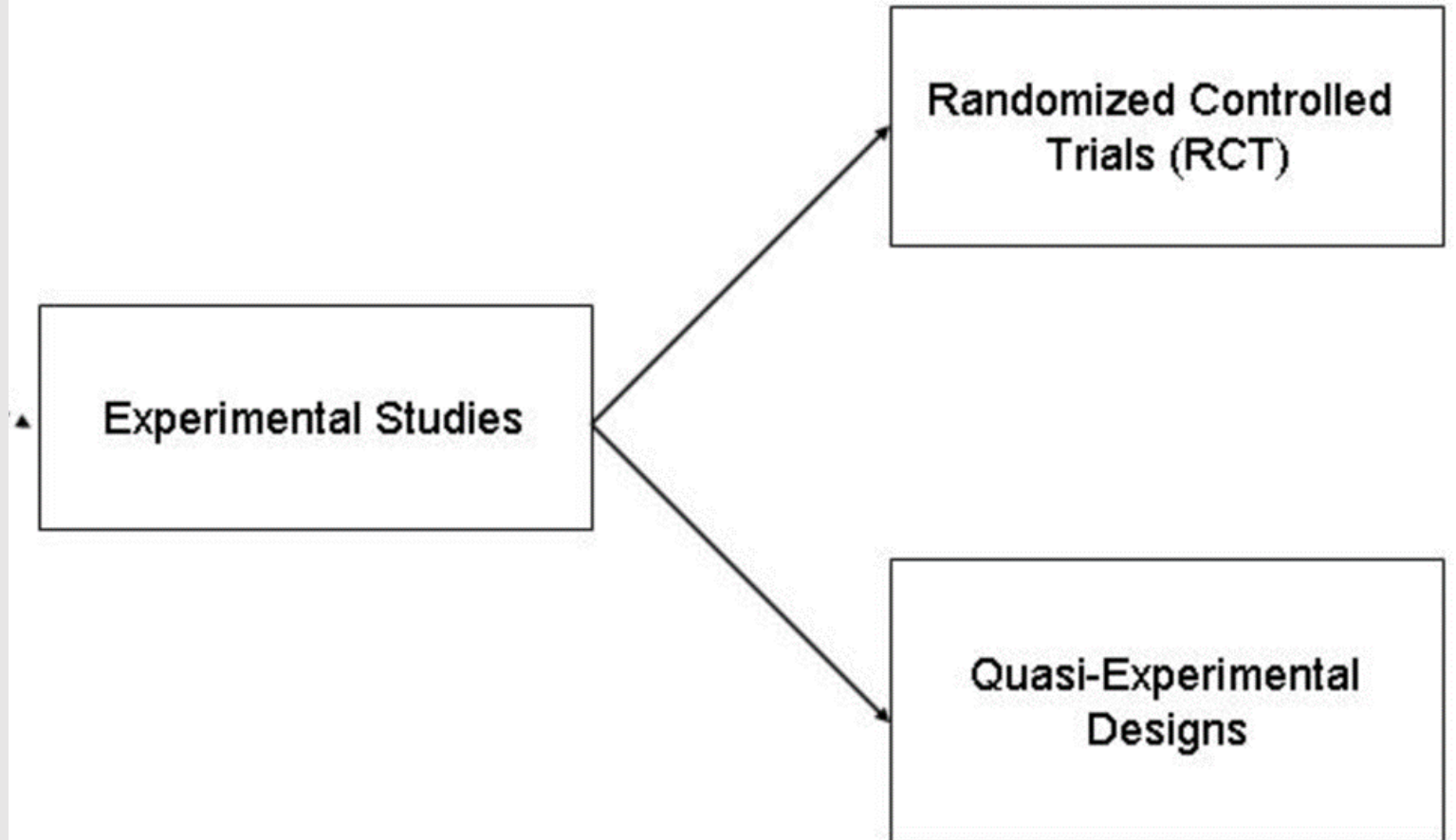
Observational vs. Experimental Designs



Types of Observational Designs



Experimental Designs

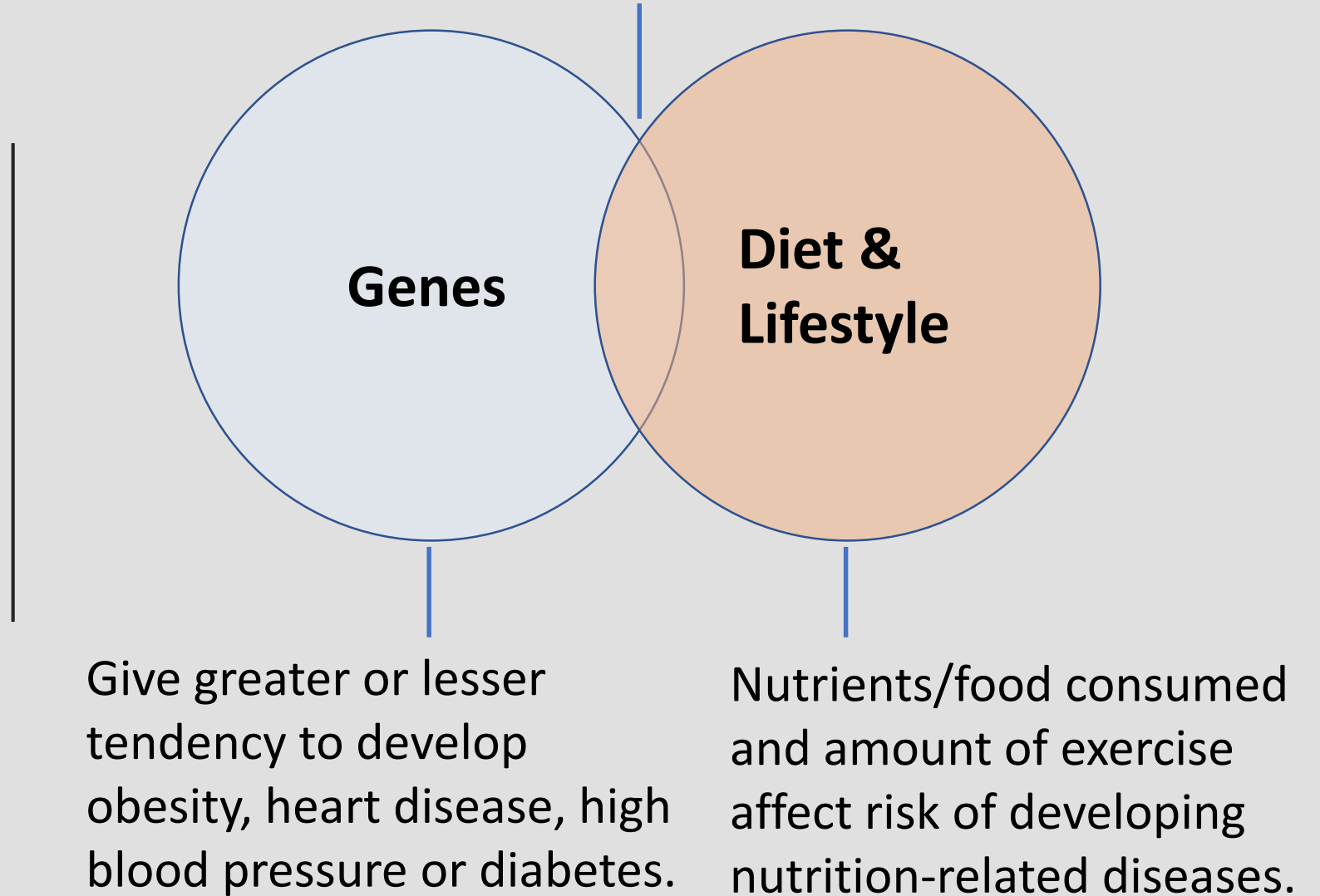




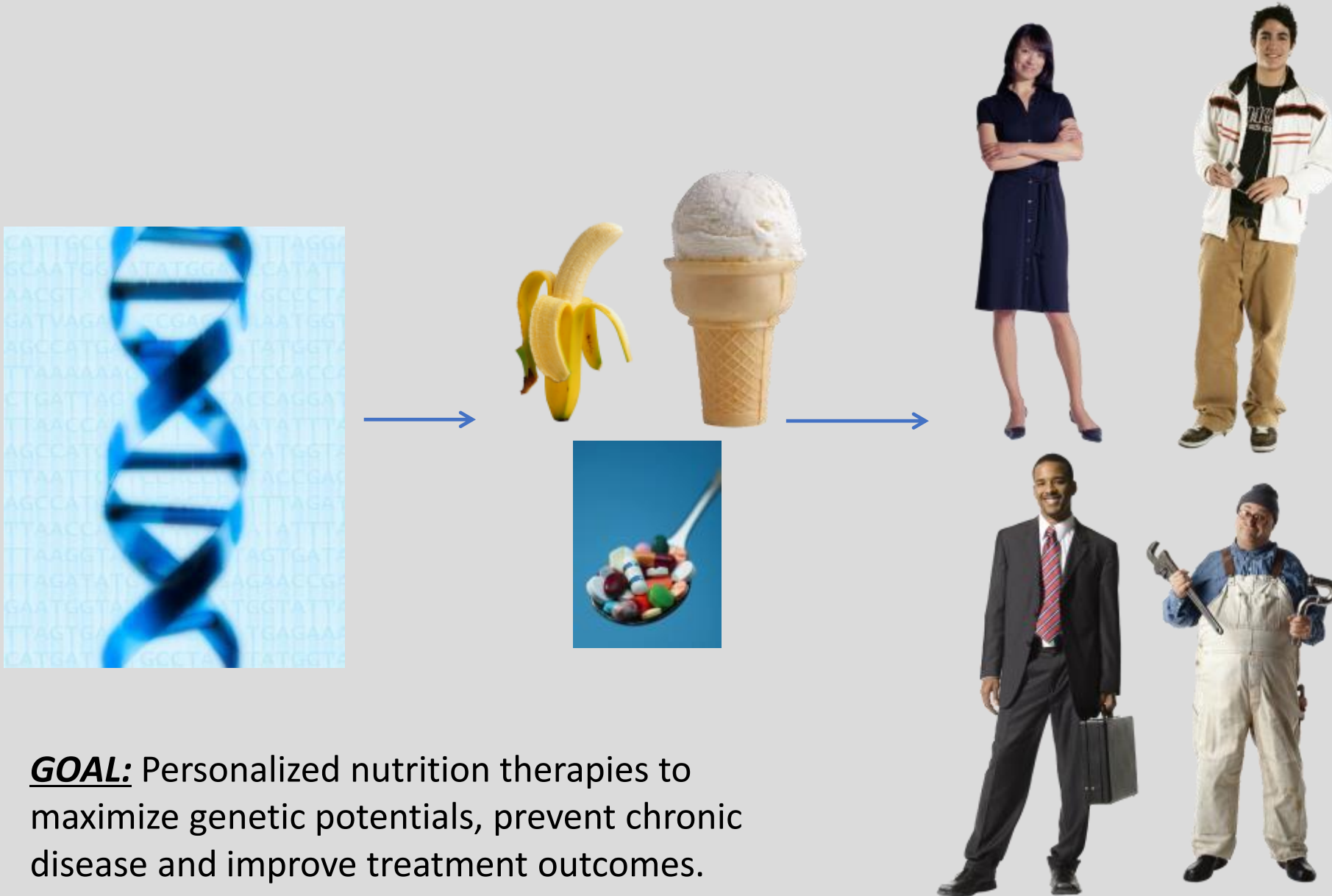
Why is there so much variability with respect to individuals' responses to diet?

Health: Genetics and Lifestyle

Risk of disease results from interplay between genes inherited and diet and lifestyle choices



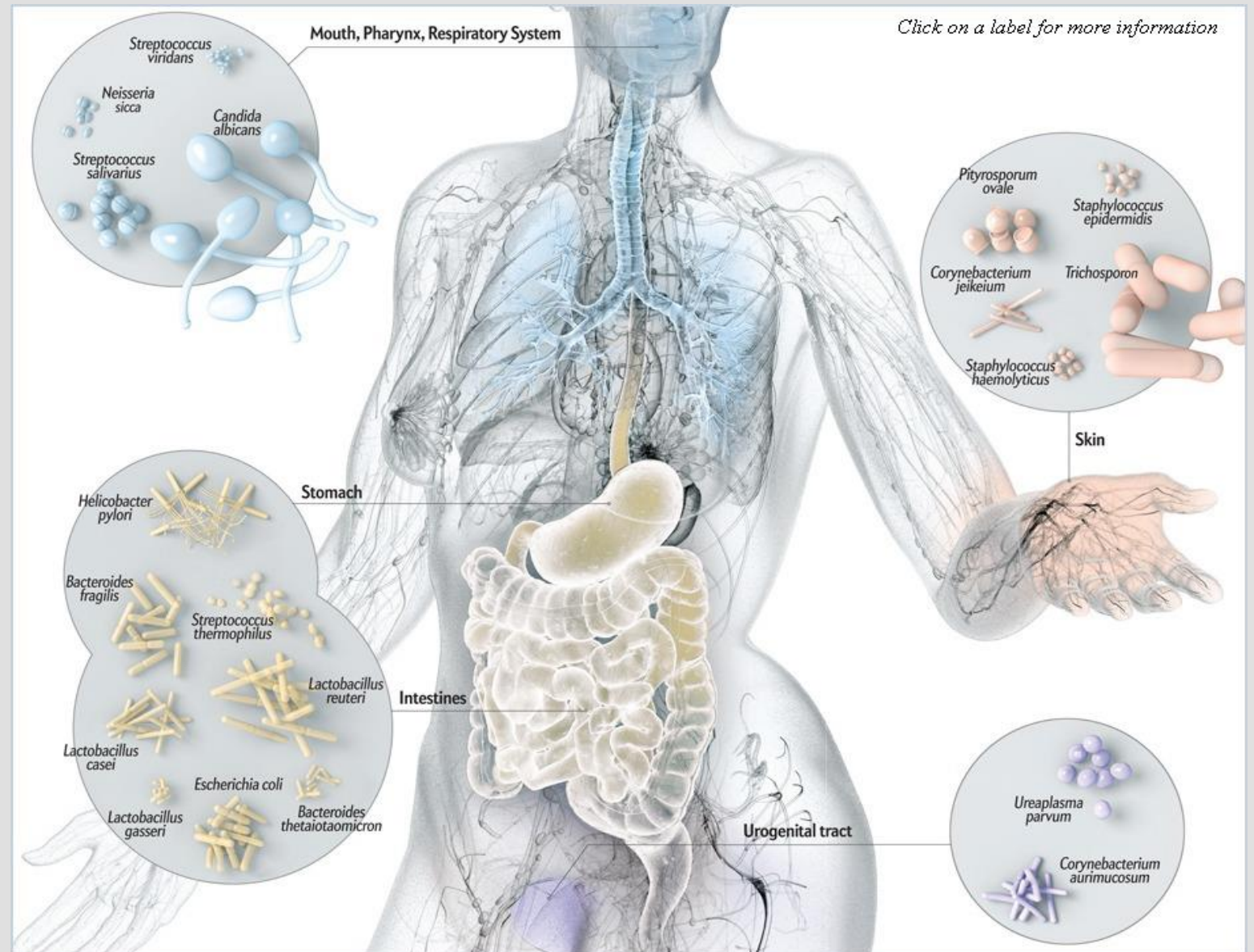
Why So Much Variation?



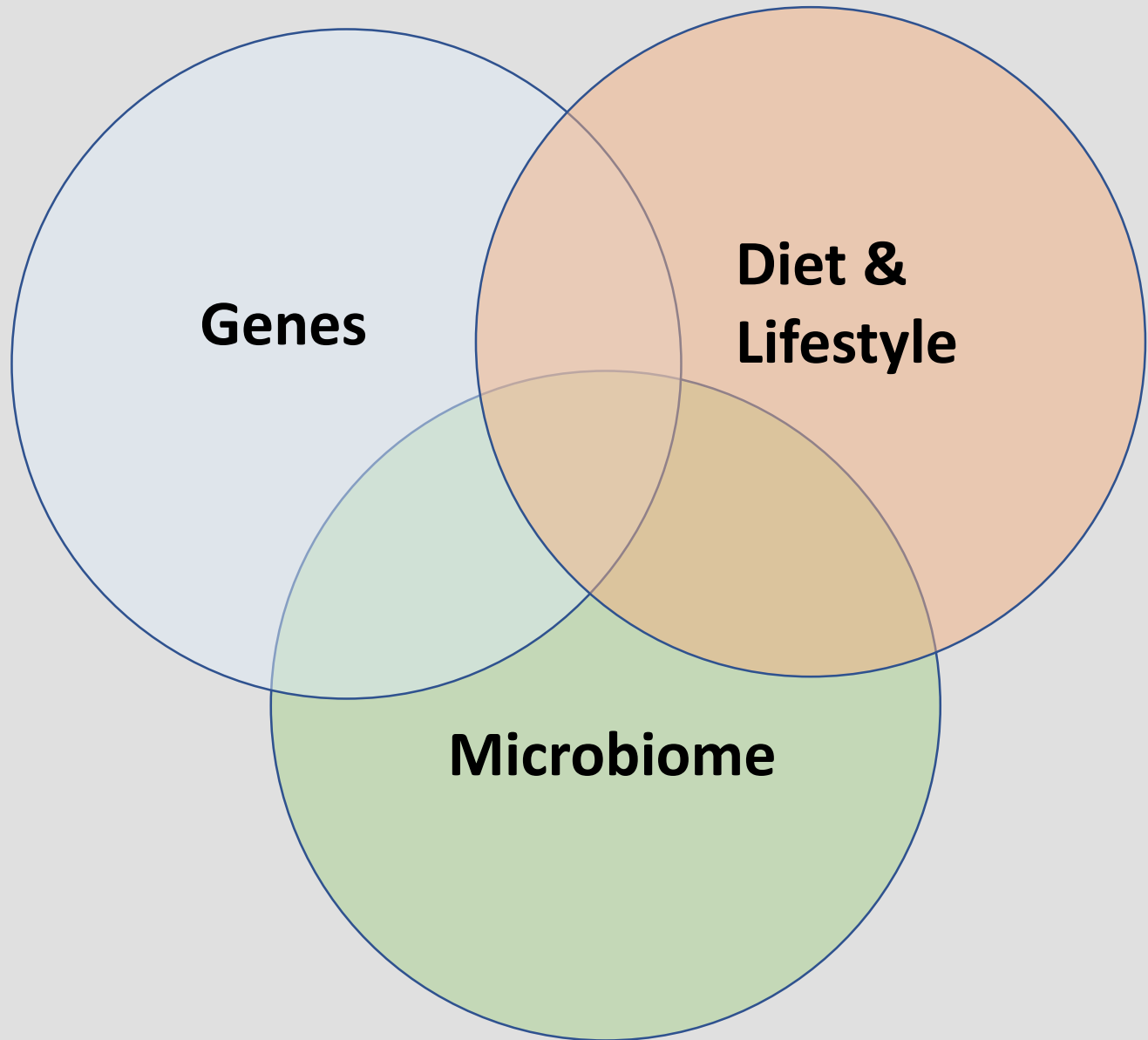
GOAL: Personalized nutrition therapies to maximize genetic potentials, prevent chronic disease and improve treatment outcomes.

What is the Microbiome?

The microbiome consists of more than just the microbes living on and inside of us.



Health:
Genetics,
Lifestyle, *and*
Microbiome

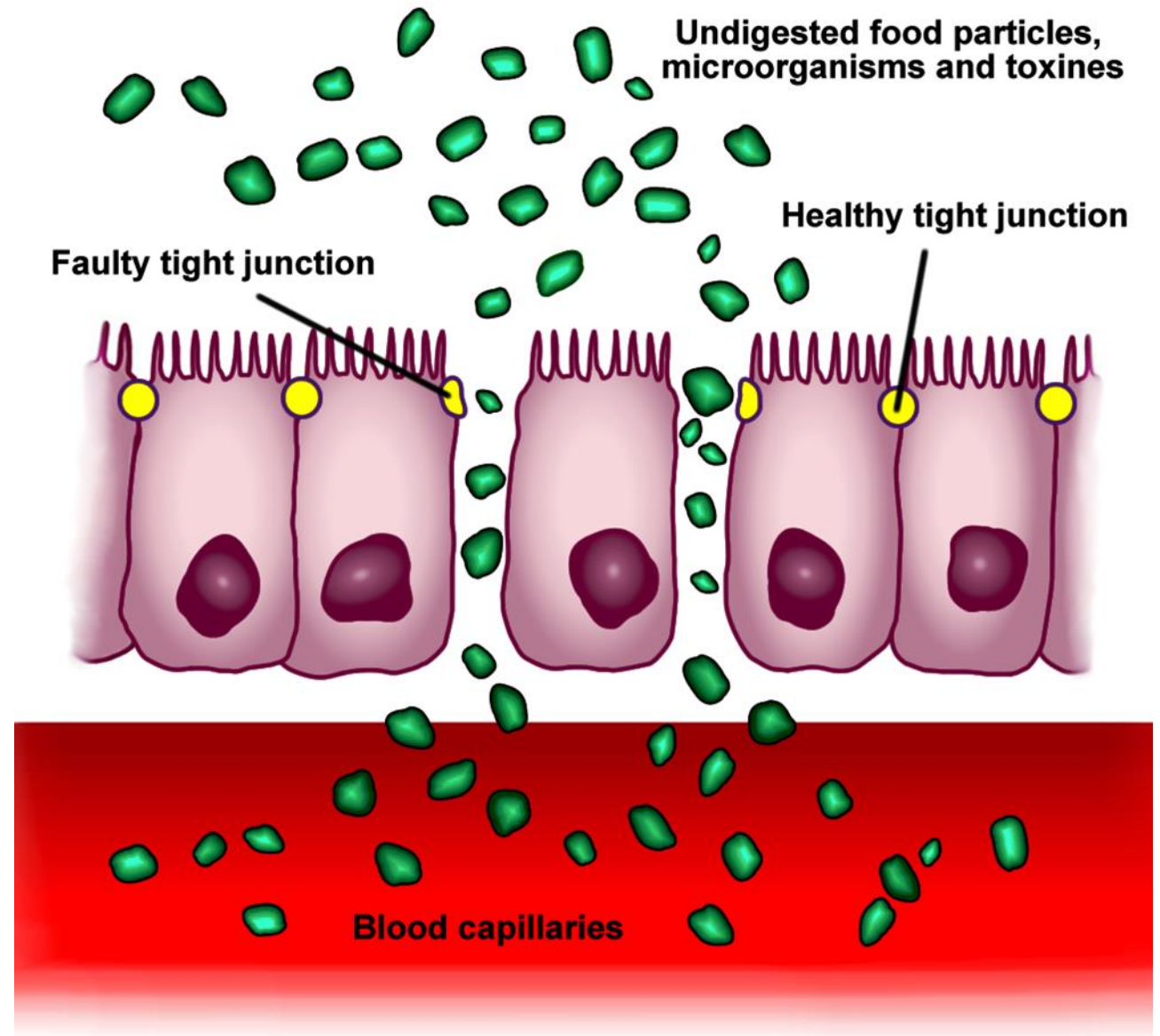


Poll Question

What does the term
'leaky gut' refer to?

- Abdominal fat deposits
- Increased intestinal permeability
- Loose stools
- Indigestion

Leaky Gut



**INFLAMMATORY, IMMUNOLOGICAL,
AUTOIMMUNE AND NEOPLASTIC REACTIONS**

Leaky Gut

- Molecules that cross through the compromised tight junctions are seen as harmful irritants, and trigger inflammatory cascades.
- These types of antigens have been associated with autoimmune disease and psychiatric disorders, including depression, bipolar disorder, schizophrenia and autism.

Elimination Diets and Leaky Gut



In conditions associated with Leaky Gut, like Irritable Bowel Syndrome, **elimination diets** are a starting point to find what food sensitivities an individual may have.



Dietary changes can impact the host directly, as well as the microbiome. The host-microbiome relationship can be modulated and have visible health effects.



Elimination Diets

- Restricts foods which are suspected to have negative health consequences for an individual, such as intolerance or allergy.
- Frequently used to determine foods that are associated with Irritable Bowel Syndrome (IBS) symptoms.

Elimination Diets

Completed in stages

- **Elimination:** Remove suspected foods from the diet for 2-4 weeks.
- A few selected foods
- Entire food groups
- Or limit diet to only a few foods in total.



Elimination Diets

- **Reintroduction:** Introduce foods back into the diet
 - one at a time
 - for a few days at a time
 - monitor for any uncomfortable symptoms

Elimination Diets

- Gluten-free diet
- Lactose-free diets
- FODMaPS diet
- Specific Carbohydrate Diet
- Fasting diets, and more.

Elimination Diets

- Increased in popularity in recent years:
 - GAPS Diet
 - Whole 30
 - Carnivore Diet

Poll Question

Which food group (or groups) would most likely be targeted by elimination diets?
(may choose more than one)

- Fruits
- Grains
- Proteins
- Dairy



GAPS - Gut and Psychology Syndrome Diet



From GAPSdiet.com

- “The GAPS Diet was derived from the Specific Carbohydrate Diet ... to naturally treat chronic inflammatory conditions in the digestive tract as a result of damaged gut lining.”

GAPS Diet

- 3 main components:
 - Diet
 - Supplementation
 - Detoxification

GAPS Diet

- Diet –
“The Nutritional protocol restricts all grains, commercial dairy, starchy vegetables and all processed/refined carbohydrates while focusing on easily digestible and nutrient dense foods.”



GAPS Diet

- Supplementation – “generally includes a commercial probiotic to provide beneficial bacteria along the GI tract, essential fatty acids, cod liver oil, and targeted digestive support.”
- Detoxification** – “...cleanse the liver and colon through juicing, GAPS Milkshakes, and enemas”

**A note on “Detoxing” ...

- The human body has built-in machinery for detoxification – **the liver and kidneys**.
- Liver - 500+ functions in the body, including producing bile, manufacturing blood proteins, storing some vitamins and minerals, and removing harmful toxins and waste products.
- Kidneys - filter approximately 200 quarts of blood every day – about 2 quarts are excreted in the form of urine, which will contain the waste products from the liver.

The Liver



Liver cleanses are often marketed as a safe, healthy way to detoxify the liver.

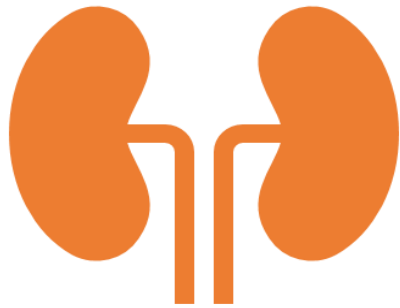


Many products featuring these claims are not FDA regulated.



Insufficient evidence exists to support the use of many products marketed for liver detoxification.

The Kidneys



The kidneys act to clear waste from the bloodstream.



Supplements that claim to improve kidney health may not be regulated by the FDA.



Many ingredients in supplements (including herbal supplements) should be avoided by some individuals, especially those with Chronic Kidney Disease.



GAPS Diet

- Eliminates many foods long term, including beans, grains, sweet potatoes, soy, milk, and others.
- Restricts many food additives, including carrageenan, corn syrup, baker's yeast, and more.

GAPS Diet



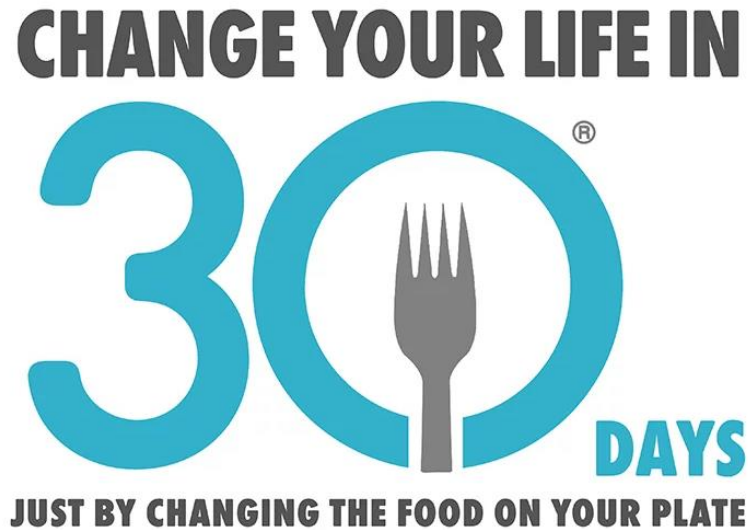
GAPS Diet

- Sample Daily Menu:
 - Breakfast – Blueberry, banana, and Greek yogurt smoothie
 - Lunch – Mixed green salad with sliced hard-boiled eggs
 - Dinner – Beef and broccoli stir-fry with zucchini noodles and sauerkraut

GAPS Diet

- Risks – may become nutritionally deficient, could also contribute to lead contamination due to high amounts of bone broth ingested.
- Claims – Founder claims that intestinal permeability is related to psychological disorders like autism, and that the GAPS Diet can address these disorders.
- GAPS has not been reviewed in any RCTs, and so effectiveness cannot be determined.

Whole 30[®]



Find out more at [whole30.com](https://www.whole30.com)

From Whole30.com...

“Certain food groups (like sugar, grains, dairy and legumes) could be having a negative impact on your health and fitness without you even realizing it.

...This will change your life.”

Whole 30®

- Developed by Melissa Hartwig Urban, Certified Sports Nutritionist, *for personal use*
- Her blog gained a following, and now the Whole 30 plan is used by over 2 million individuals worldwide.

Whole 30®

- Eliminates foods and food groups from the diet for **30 days**
 - Added sugars, alcohol, grains, legumes, dairy, and others.
- Eliminates food additives like carrageenan, monosodium glutamate (MSG), and sulfites.
- Includes strictly “Real Food” choices, like meat, seafood, fruits and vegetables, natural fats, herbs, and spices.

Whole 30[®]



**NO
LEGUMES**

Your healthy eating pantry (and fridge) are not complete without these staple items, easily found in most health food stores. Read your labels here too! On the Whole30, no added sugar, soy, carrageenan, MSG, sulfites, or other off-plan ingredients.

pantry item

helpful hints

Almond flour	Use almond flour/meal to thicken a sauce or to coat meat or fish before baking.
Applesauce	Unsweetened brands, like Santa Cruz Organics .
Beef or chicken broth	Some Imagine broths are Whole30-friendly, but it's best to make your own .
Butter (clarified) or ghee	Pastured and organic - like Whole30 Approved Pure Indian Foods or OMGhee .
Canned meats (salmon, tuna, chicken)	Read your labels—no soy, sugar or other less healthy ingredients.
Canned vegetables (sweet potato, squash, pumpkin)	The only ingredient should be the vegetable itself (and maybe water).
Cocoa (or 100% cacao)	100% cocoa or cacao adds flavor to meals and sauces. Treat it like a spice.
Coconut aminos	From Coconut Secret : Whole30-friendly, found in the soy sauce aisle.
Coconut butter	Also called "creamed coconut" or "coconut manna." Try Artisana brand.
Coconut (flaked or shredded)	Great for snacking or in recipes . Buy organic to avoid added sulfites.
Coconut milk	Get the full fat version, no sulfites. Try Thai Kitchen or Whole Foods 365 .
Coconut oil	Look for the unrefined kind—organic isn't important here.
Curry paste	Red, green, or yellow will spice up any curry. Try Thai Kitchen brand.
Fish sauce	Watch for added sugar here! We like Whole30 Approved Red Boat Fish Sauce .
Hot sauce	Try Whole30 Approved Tessemæ's or Horsetooth Hot Sauce .
Jerky	Remember, no added sugar! Try Primal Pacs , Chomps , and Gourmet Grassfed .
Mustard	Read your labels—no added sugar, corn starch, maltodextrin, etc.

Whole30
 Approved®

Over 100 brand
 associations and
 affiliations on their
 website

<https://whole30.com/pdf-downloads/>



Whole30 Approved®

Over 100 brand
associations and
affiliations on their
website

Whole 30®

- Sample Daily Menu:
 - Breakfast – Sweet potato hash with apples, sausage, and eggs
 - Lunch – Chicken salad, baby spinach and pomegranate seeds in an acorn squash bowl
 - Dinner – Garlic shrimp in Romanesco sauce over zucchini noodles

Whole 30®

- Claims:
 - Restore healthy metabolism
 - Heal digestive tract
 - Balance immune system/reduce inflammation
 - Weight loss
 - Improved mental clarity and mood
- Other 'testimonials' of improvement in chronic conditions
- This diet has not been tested in any RCT for effectiveness, and so effectiveness cannot be determined.

Whole 30®

- Risks – avoiding food groups like grains and dairy may make meeting all nutrient recommendations difficult.
- Benefits – promotes consumption of fruits and vegetables

The Carnivore Diet

From Meat.Health ...

“I discovered plant-based foods are the root cause of so many of our modern illnesses.”



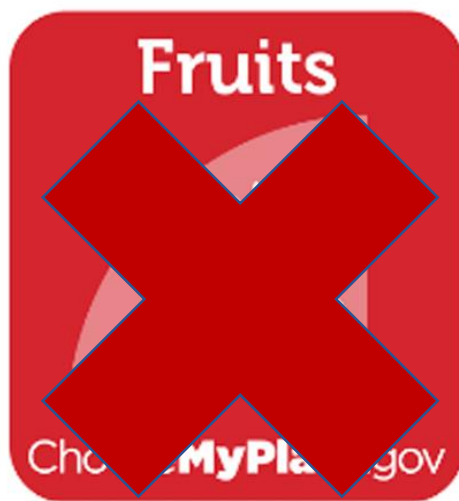
Carnivore Diet

The protocol has 3 levels:

1. Meat or Fish, Coffee/Tea, Eggs, High-fat dairy products, Himalayan Salt, Electrolytes, and some other Supplements
2. Meat and Water, No Supplements or exceptions
3. Beef and Water



Carnivore Diet



**ANIMAL
ONLY**

Carnivore Diet

- Sample Daily Menu:
 - Breakfast – Eggs, bacon, sardines
 - Lunch – Turkey burger patty, salmon jerky, beef tips
 - Dinner – Filet mignon, crab, chicken liver
 - Snacks – small amount of Parmesan cheese, jerky

Carnivore Diet

- Risks – may become nutritionally deficient in many micronutrients found in plant foods.
- Increased risk of some cancers.
- Some populations may not be compatible with this type of eating pattern (Chronic Kidney Disease patients and individuals sensitive to cholesterol in foods).

Carnivore Diet

- Claims – Founder claims that users can expect fat loss, muscle gain, digestive health, and mental health.
- Carnivore has not been reviewed in any RCTs, and so these claims and its effectiveness cannot be determined.

Elimination Diets and Overall Health



Microbiome composition is largely shaped by environment.

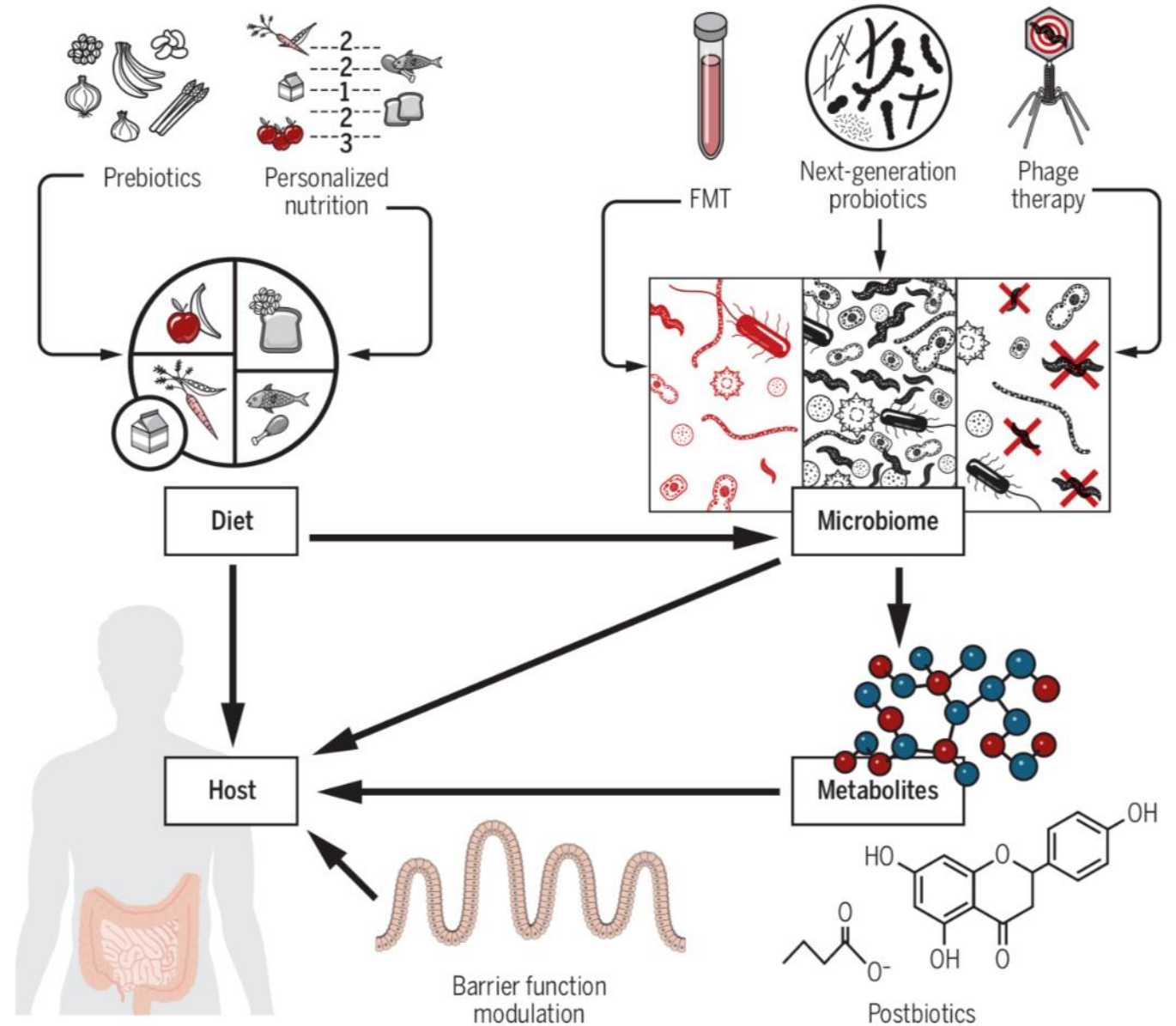


Microbiome influences human phenotype, including factors like HDL cholesterol levels, waist and hip circumference and ratio, BMI, and others.

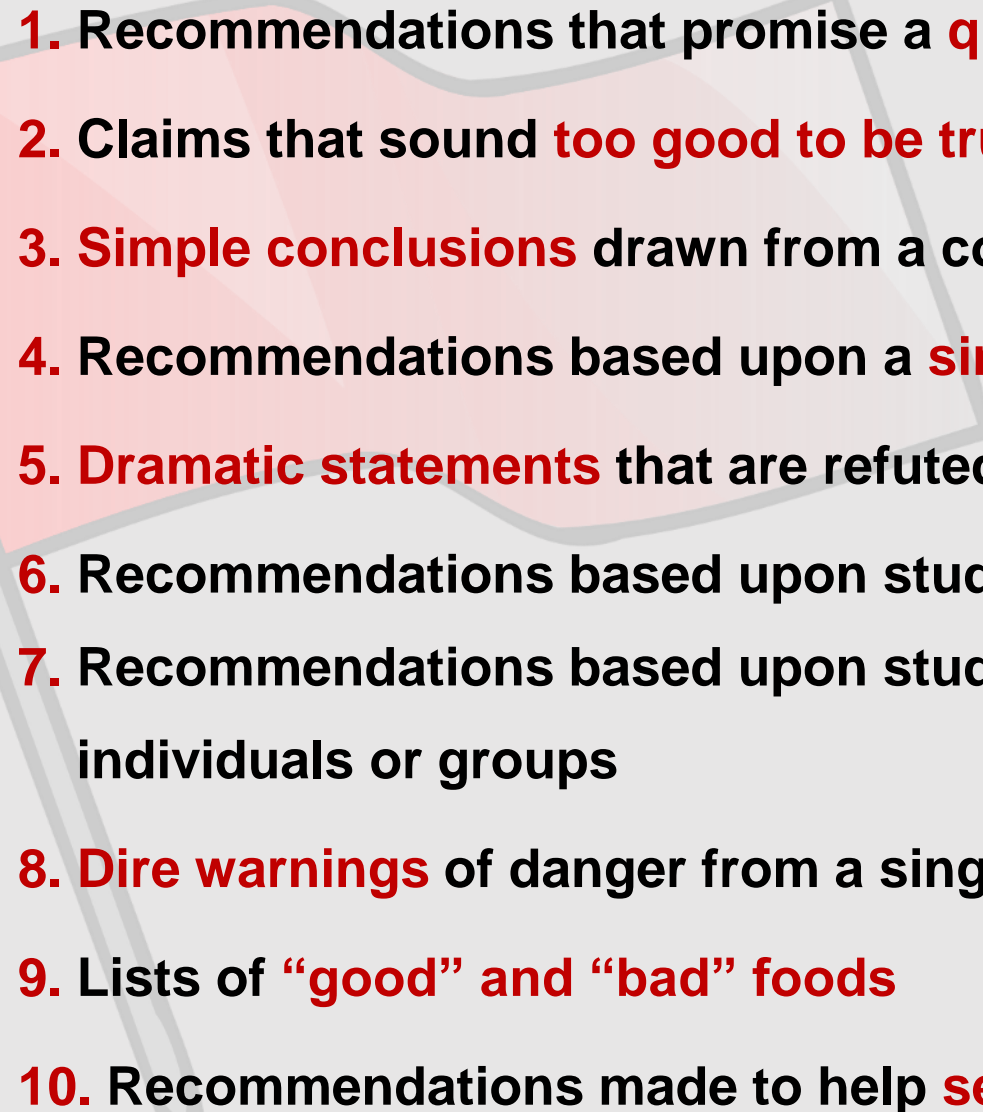
Elimination Diets and Overall Health

“In the next decade, microbiome-based dietary and prebiotic interventions may emerge as essential tools for health care and dietary planning, enabling precision therapies, for example, as a complementary preventive treatment of uncontrolled inflammation in inflammatory bowel disease (IBD).”

Elimination Diets and Overall Health



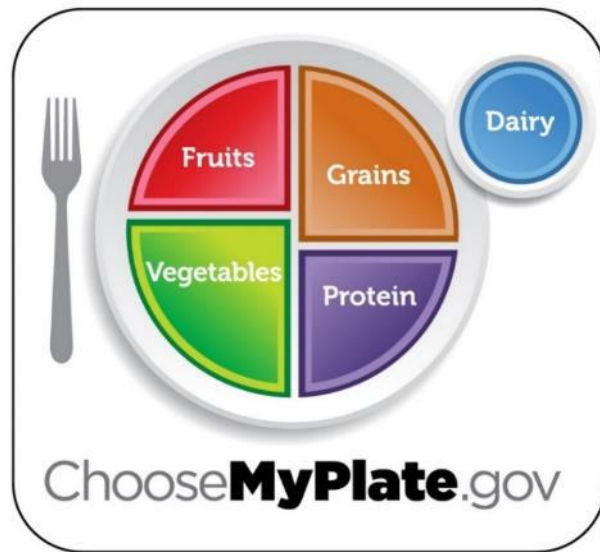
Red Flags of Junk Science

- 
1. Recommendations that promise a **quick fix**
 2. Claims that sound **too good to be true**
 3. **Simple conclusions** drawn from a complex study
 4. Recommendations based upon a **single study**
 5. **Dramatic statements** that are refuted by a reputable scientific organization
 6. Recommendations based upon studies **without peer review**
 7. Recommendations based upon studies that **ignore differences** among individuals or groups
 8. **Dire warnings** of danger from a single product
 9. Lists of “**good**” and “**bad**” foods
 10. Recommendations made to help **sell a product** or by the manufacturer itself

Chat

Which of the ten 'red flags of junk science' did you observe in the information presented about GAPs, Whole30, or Carnivore diets?

Dietary Guidelines for Americans 2015 - 2020



- The MyPlate tool can be used to accommodate many styles of eating, as it emphasizes an overall healthy eating pattern, rather than removing foods or food groups from the diet in order to be considered “healthy”.
- MyPlate emphasizes the consumption of fruits and vegetables, lean protein, whole grains, and decreasing the consumption of sodium, saturated fat, and added sugars.

Responding to Misinformation

A TV show told about how eating grains and dairy products can cause a lot of health problems.

Affirm/Reflect

That subject is getting a lot of attention in the media.
You are naturally concerned about your family's health.

Offer correct information

Let's talk about what the science says...

Thank/Move On

Thank you for your comments and for
the chance to provide the group more information.
Now let's go to the next activity...

Websites with Reliable Nutrition and Health Information

Academy of Nutrition and Dietetics <http://www.eatright.org>

National Institutes of Health <http://www.nih.gov>

American Council on Science and Health <http://www.acsh.org>

Food and Drug Administration <http://www.fda.gov>

Centers for Disease Control & Prevention <http://www.cdc.gov>

US Department of Agriculture <https://www.choosemyplate.gov/>

Nutrition Information

UCDAVIS

DEPARTMENT of NUTRITION

<http://nutrition.ucdavis.edu>



CENTER for NUTRITION in SCHOOLS

CONNECTING FOOD, HEALTH, AND LEARNING

<http://cns.ucdavis.edu>

Thank You for Participating!

Please Complete the Evaluation

https://ucanr.co1.qualtrics.com/jfe/form/SV_e8J7dKjYOimPEG1

