



Culinary Institute
of America

Culinary Intensive Workshop Day 5





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Day 5

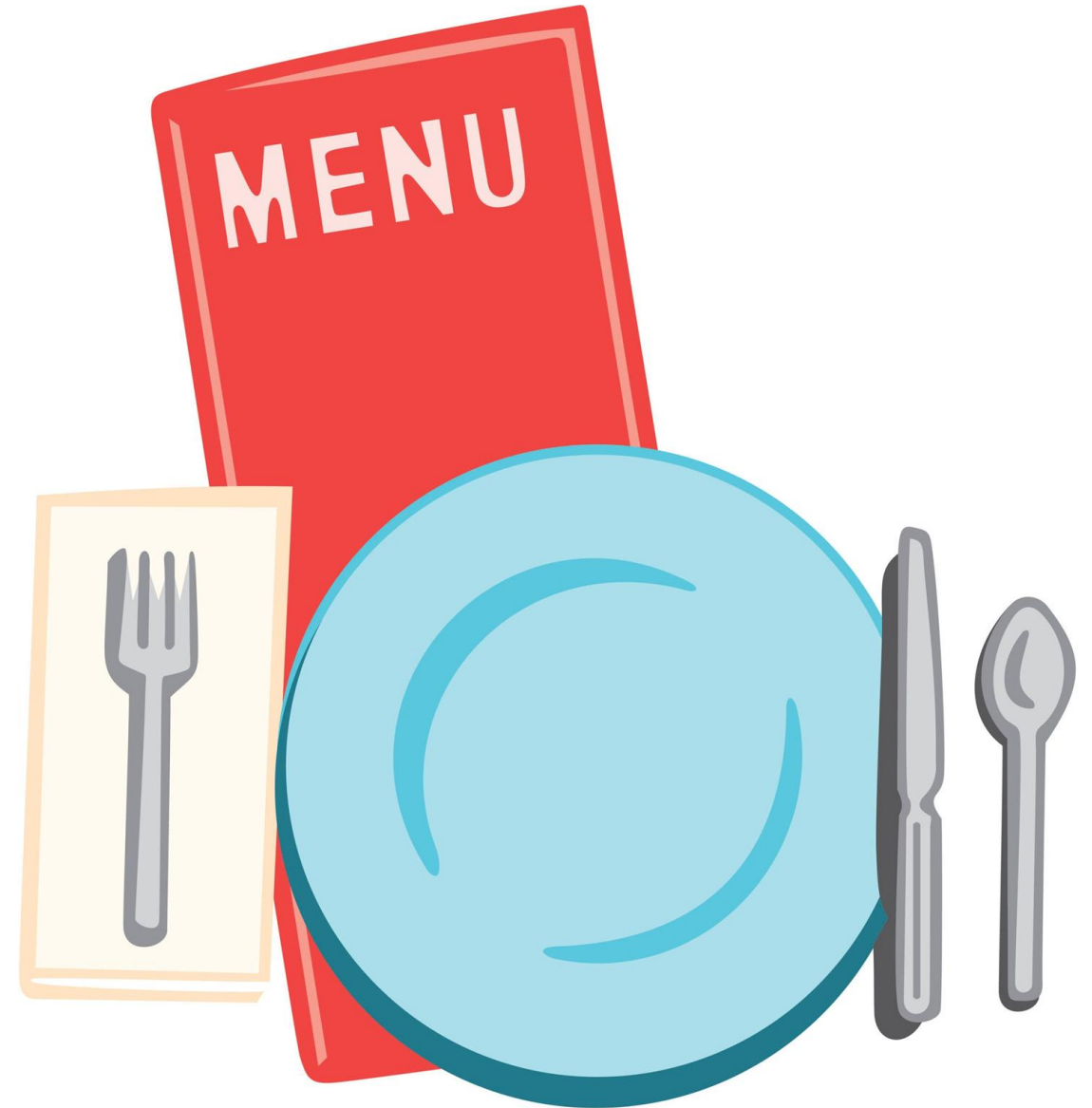
Reimagining Favorite Foods

Promoting Dietary Behavioral Changes Mindfulness



Day Overview

9-10	Lecture in PDR
10:15-11	Demo
11-1:30	Production
1:30	Lunch From Production
2-2:15	Re-set kitchen
2:15-2:30	Wrap up



Learning Objectives

- Compare plant based and plant forward diets.
- Select ingredients for that implement the Protein Flip.
- Modify traditional recipes for plant-based versions.
- Discuss how to easily swap plant-based proteins for animal protein.
- Identify ways to swap out saturated fats with healthier plant-based fats to maximize flavor and texture.
- Use plant-based milks for animal milk in a variety of preparations.
- Describe the health benefits of eating less animal protein.
- Find ways to incorporate healthier protein into everyday recipes.
- Describe alternatives to ultra processed food.
- Evaluate how coffee and tea support metabolic and cardiovascular health.
- Discuss how GLP-1 medications influence dietary needs, and identify food-based strategies to support individuals using them.
- Describe the impact of ultra-processed and refined foods on metabolic health.
- Apply behavior change and motivational interviewing strategies to help individuals sustain healthier eating patterns.
- Understand how to Integrate a patient's food story and food access/choices into a diet plan.
- Create a balanced grain bowl for any meal using previously prepared and staple pantry ingredients.
- Find ways to become more mindful in the choosing, preparation, and eating of food.



Lecture Overview

- Beverages: sugar sweetened beverages, water/tea/coffee, alcohol
 - Dairy / Plant Based Dairy - Calcium
 - Coffee/tea/caffiene
- Desserts and Treats
 - Sugar/Sweeteners
- What Now Behavioral Changes
 - How to analyze to nutrition in the press/ controversial topics/ scientific articles
 - o Promoting Dietary Behavioral Changes (cooking in batches, cook and eat together with family)
 - § Now What- how to make behavoir change - what's your goal, how to make small changes, get your family involved



Water & Other Beverages

- Human body is 60% water
 - Hydration ensures proper body functioning
- Water is most essential beverage
- Coffee and tea, when consumed without added sugar, can offer some health benefits
- Alcohol, may provide some cardiovascular benefits in moderation, carries significant risks and is not recommended for all
- Sugary and heavily sweetened beverages should be avoided
- Encouraging healthier beverage choices helps promote long-term wellness, reducing the burden of chronic disease, and supporting sustainable, health-conscious dietary habits



Milk & Dairy

Dairy is not an essential food

- All nutrients can be found in other food sources
- Calcium, protein, riboflavin (vitamin B2), vitamin B12, potassium, phosphorus, vitamins A and D (added during processing)

Contains saturated fats

- Some dairy products remove fats

Dairy and health: Controversial findings

- What else a person is in persons diet?
- What type of dairy? what are the other ingredients? Serving size?
 - Ex. ice cream, cottage cheese, unsweetened non-fat greek yogurt, etc.



Plant-Based Dairy Alternatives

- What's in them?
 - Contain stabilizers (gums) for creaminess
 - May have added sweeteners
 - look for “unsweetened”
 - Store-bought items are fortified with similar nutrient profile as cow milk
- 65-70% global population is lactose intolerant
 - Strong link to ancestral dairy farming traditions and genetics
 - Prevalence highest East Asia, Africa, and South America
 - Lowest in Northern Europe

	Protein (g)	Calcium (mg)	Vitamin D (IU)	Vitamin A (IU)	Fiber (g)	Sugars (g) (Plain)	Sugars (g) (Chocolate)	Calories (Plain)	Calories (Chocolate)
Milk, whole, with added vitamin D	8	276	124*	395	0	12**	24	149	208
Milk, nonfat, with added vitamins A and D	8	299	115*	500*	0	12**	21	83	168
Soy milk, fortified	7	301*	119*	503*	1	1	19	80	153
Hemp milk, fortified,	3	499*	101*	499*	1	N/A	23	N/A	199
Almond milk, fortified,	1	451*	101*	499*	1	2	15	39	91
Coconut milk, fortified	<1	451*	101*	499*	0	6	N/A	74	N/A
Rice milk, fortified	<1	283*	101*	151*	<1	13	N/A	113	N/A

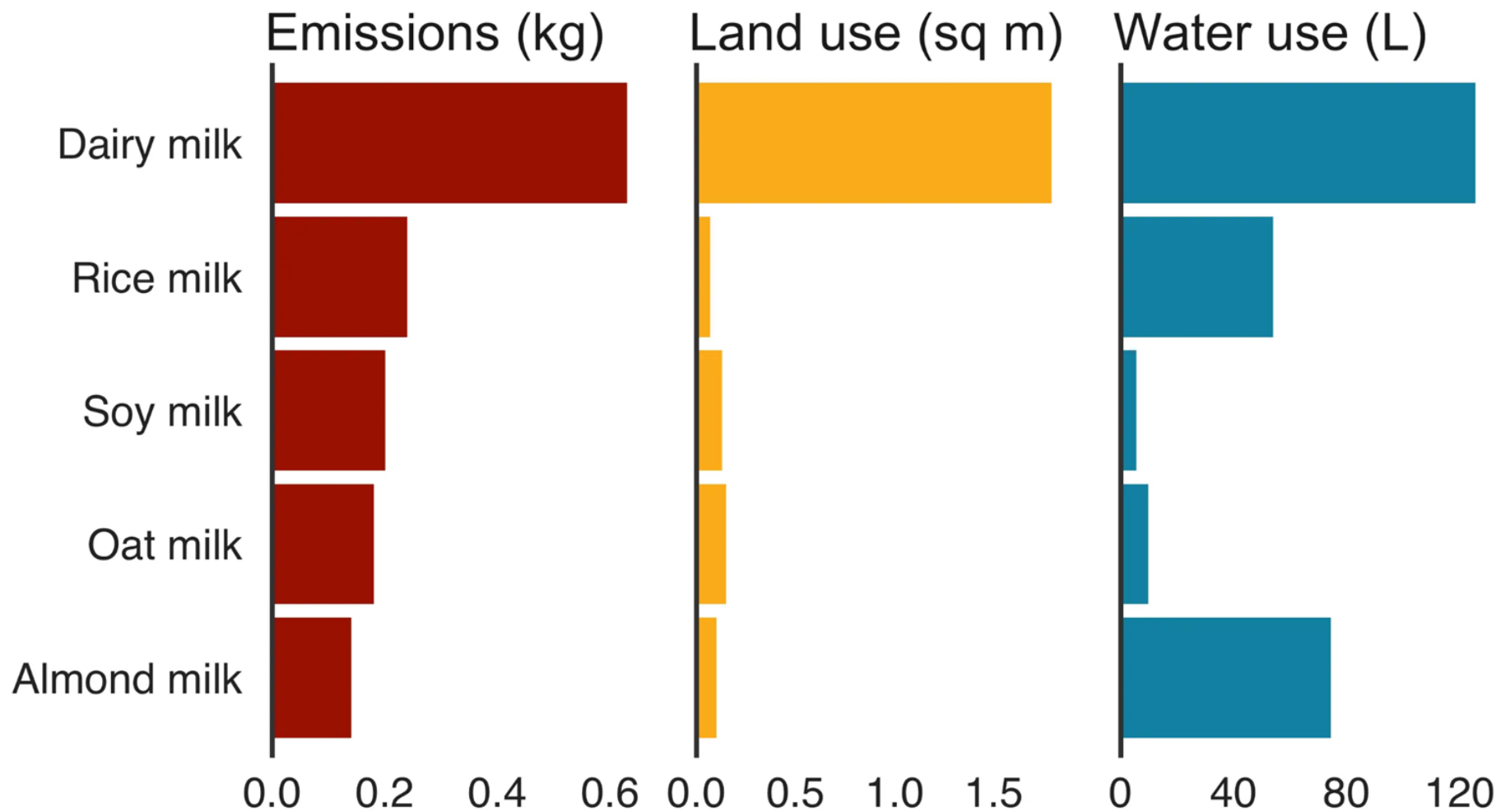
Data from USDA Nutrient Database, standard reference
 *added during processing **natural milk sugars, not added during processing
 g = grams; mg = milligrams; IU = International Units; N/A = standard reference data not available

Tufts.edu



Envir Which milk should I choose?

Environmental impact of one glass (200ml) of different milks

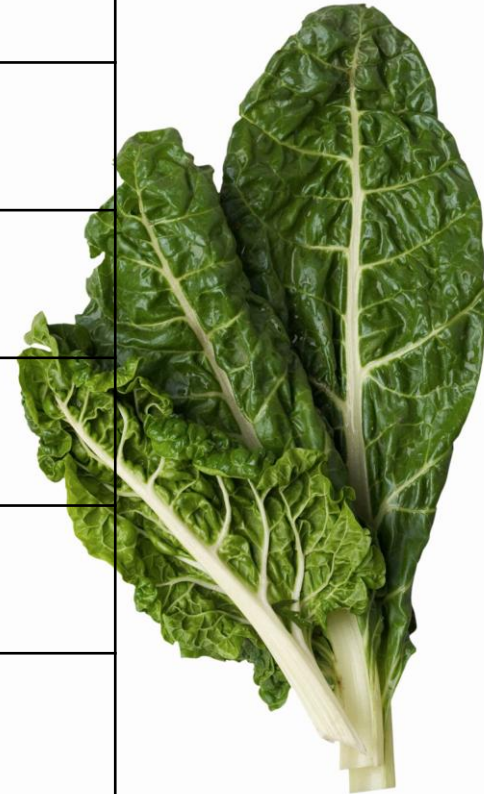


Source: Poore & Nemecek (2018), Science. Additional calculations, J. Poore



Non-dairy Calcium Rich Foods

Plant milks, calcium fortified	8 ounces (1 cup)	100–450mg
Tofu, processed with calcium	4 ounces	200–434mg
Collard greens, cooked	1 cup	268mg
Kale, cooked	1 cup	177mg
Soybeans, cooked	1 cup	175mg
Mustard greens, cooked	1 cup	165mg
Bok choy	1 cup	158mg
Broccoli, cooked	1 cup	62mg



Alcohol

Potential cardiovascular and metabolic benefits when consumed moderately

- Lower risk coronary heart disease, ischemic stroke, sudden cardiac death by 25–40%
- Improves HDL cholesterol, insulin sensitivity, and blood clotting regulation
- Some evidence suggests reduced risk of type 2 diabetes and gallstones

Possible social and psychological benefits

- Stress reduction, enhanced social bonding

Contributes to serious health risks when misused

- Liver disease, cardiomyopathy hypertension, cancers
- Mental health issues, violence, poor sleep

1 standard drink = 12 to 14 grams alcohol (12 oz beer, 5 oz wine, or 1.5 oz distilled spirits)

Moderate drinking = 1 drink per day for women / 2 for men

- Women who consume 2–5 drinks per day: up to 41% higher risk of breast cancer compared to abstainers



Coffee

Coffee can be considered a healthful part of the diet for most adults - Moderation remains key

Contains compounds: caffeine, polyphenols, and diterpenes

Epidemiological studies indicate moderate coffee consumption associated with:

- Reduced risks of type 2 diabetes, cardiovascular disease, depression, and neurodegenerative disorders
 - Parkinson's and Alzheimer's disease
- May improve insulin sensitivity and glucose metabolism
- Antioxidant and anti-inflammatory effects may protect against cellular damage

Caffeine:

- Temporarily increase heart rate and blood pressure
 - Long-term studies show no elevated risk of heart disease or stroke among moderate drinkers
- 2-5 cups daily correlates with lower risk of cardiovascular mortality
- May stimulate thermogenesis and fat metabolism
- Potential beneficial effect on respiratory function
- Protective against fibrosis and cirrhosis



Tea

Tea is the world's most popular beverage after water

Traditional teas contribute caffeine and array of phytonutrients

- Polyphenols, theaflavins, catechins

Decaffeinated teas generally retain polyphenols

- Certain solvent-based decaffeination methods may reduce their concentrations
- Adding milk may decrease measurable antioxidant capacity
 - Lower-fat milks can exert greater effect than high-fat milks

Primary practical cautions:

- Avoid very hot serving temperatures
- Be mindful of caffeine sensitivity
- Minimize added sugars



Desserts

Often rich in added sugars, refined grains, and unhealthy fats

Traditional desserts like cakes, pies, and cookies are the norm

Alternatives that provide satisfaction

“Three Pleasures”:

- Fruit: fresh, frozen or dried
- Nuts: raw or roasted
 - Consider amount of sodium if salted
- Dark chocolate

THE THREE PLEASURES

I'd like to request a healthier dessert, featuring only
fruit, nuts, and dark chocolate.



Be creative and join other chefs in the dessert by
design challenge! Details at hsph.me/3fordessert

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#3ForDessert



Dark Chocolate

Provides minerals such as iron, magnesium, zinc, copper, and phosphorus



Flavanols—naturally occurring in cacao

- Cardiovascular and metabolic benefits
 - Promote the production of nitric oxide in the endothelium, the inner lining of blood vessels, which helps relax blood vessels, improve circulation, and lower blood pressure
- Dark chocolate contains 2-3x more flavanols than milk chocolate
- Some research suggests enhanced insulin sensitivity

Calorie-dense, 150-170 calories per ounce

- Moderate levels of saturated fat



Sugar

- Sugar comes primarily from sugarcane or sugar beets
- Extract sweet juice, clarify to remove impurities, boil down to thick syrup, then crystallizing the sucrose
- Excessive intake is linked to obesity, diabetes, heart disease, and other chronic conditions
- Recommended daily sugar intake is less than 10% of total calories
- 12 teaspoons for a 2,000-calorie diet
- American Heart Association suggests lower limits for added sugars:
 - under 25g (6 tsp) for women
 - 36g (9 tsp) for men
 - no added sugar for kids under 2



Focus on limiting added sugars, not naturally occurring sugars from whole foods



Non-chemical Alternatives to Cane Sugar

Maple syrup

Honey

Molasses

Agave

Dates

Beets

Stevia

Monk Fruit



Sugar Substitutes

- Zero calorie lab created sweeteners:
 - Aspartame, sucralose, saccharine
- Sugar alcohols (reduced carb):
 - erythritol, xylitol, sorbitol, and maltitol
- Health effects remain inconclusive, research shows mixed findings
- Current evidence does not support causal relationship with cancer
- Current evidence suggests low-calorie sweeteners can play limited transitional role in reducing sugar consumption for SSB consumers
 - Not a long-term solution for weight management or metabolic health
 - Consider what else is in the food product
- When choosing beverages, water is best



Ultra Processed Foods - Science of Perfecting Taste

- Ultra processed foods are designed in labs to create customers - not to provide nourishment
- \$50 million laboratory and team of neuroscientists hired to override your brain
- Food companies employ more than 5,000 chemists and "flavorists" to engineer addictive flavors
 - Study saliva production and brain scans to perfect "crave factor"
 - Ultra-processed foods light up same regions of brain as hard drugs
- Doritos alone required 2 yrs and \$10 million in development to perfect addiction
- "Bliss point formula" that affects your brain
 - 35% sugar: trigger dopamine like cocaine
 - 25% fat: activates opioid receptors like heroin
 - 40% salt: creates cellular dehydration divine more consumption
 - "vanishing caloric dentist"- metals quickly, tricks satiety signals
 - "dynamic contrast": crunchy creamy combos that overwhelm senses
- 200% stronger than any food in nature



Ultra Processed Foods: Breaking the Addiction



Day 1-3: expect withdrawal (headaches, irritability, cravings)

Day 4-7: blood sugar stabilizers, cravings reduce by 50%

Day 14: taste buds reset, real food tastes better

Day 21: neural pathways rewire, addiction breaks

Replace manufactured foods with single ingredient whole foods

- Apples, carrots, nuts = no bliss point



GLP1 Medications + Food

- Prioritize nutrient-dense foods in smaller, satisfying portions
- Maintain adequate protein to preserve lean body mass
- Build food confidence and literacy to support independence from medication
- Understand hunger and satiety cues that may shift with medication use
- Explore simple, flexible meal frameworks like grain bowls, soups, and smoothies

GLP-1s may change conversation about appetite and food BUT

- Do not replace the need for a positive relationship with food
- Or foundational skills required to cook and eat with purpose and joy



Translating Science to Practice

Nutrition is complex

- Influenced by biology, economics, culture, industry, and media

Consider:

- If a study is well-designed and published in a reliable source
- If findings align with broader body of evidence
- If funding sources or conflicts of interest may have influenced the results
- Does a dietary claim hold up when considering substitutions, context, and real-world applicability?

Goal = translate scientific information into **practical, equitable, and sustainable food choices**

- Resist misinformation
- Promote clarity

Help guide both individual behaviors and institutional policies toward improved health outcomes



How to Discern the Evidence: Red Flags

- **Poorly Constructed Studies:** Often small, retrospective, and biased.
- **Outlier Studies:** Contradicting established evidence, usually with weak designs.
- **Low-Quality Meta-Analyses:** Especially when conducted by non-specialists.
- **Economic Influence:** Industry funding can bias study design and reporting.
- **Political Interference:** Lobbying can affect public health guidelines.
- **Status Quo Bias:** Resistance to change even when new evidence emerges.
- **Media "Experts":** Influencers and diet book authors with little scientific background.
- **Lack of Context "Compared to What?":** Evaluating foods without considering replacements can distort interpretation.
- **Half-Truths:** Replacing refined carbs with red meat is not a health win.
- **Sensationalism:** "Miracle" headlines often mask modest, mixed, or unconfirmed findings.
- **Environment Disconnect:** Many Americans face barriers to healthy food access, skewing public health messaging.
- **Personal Bias:** Our cultural food beliefs can block objective assessment.

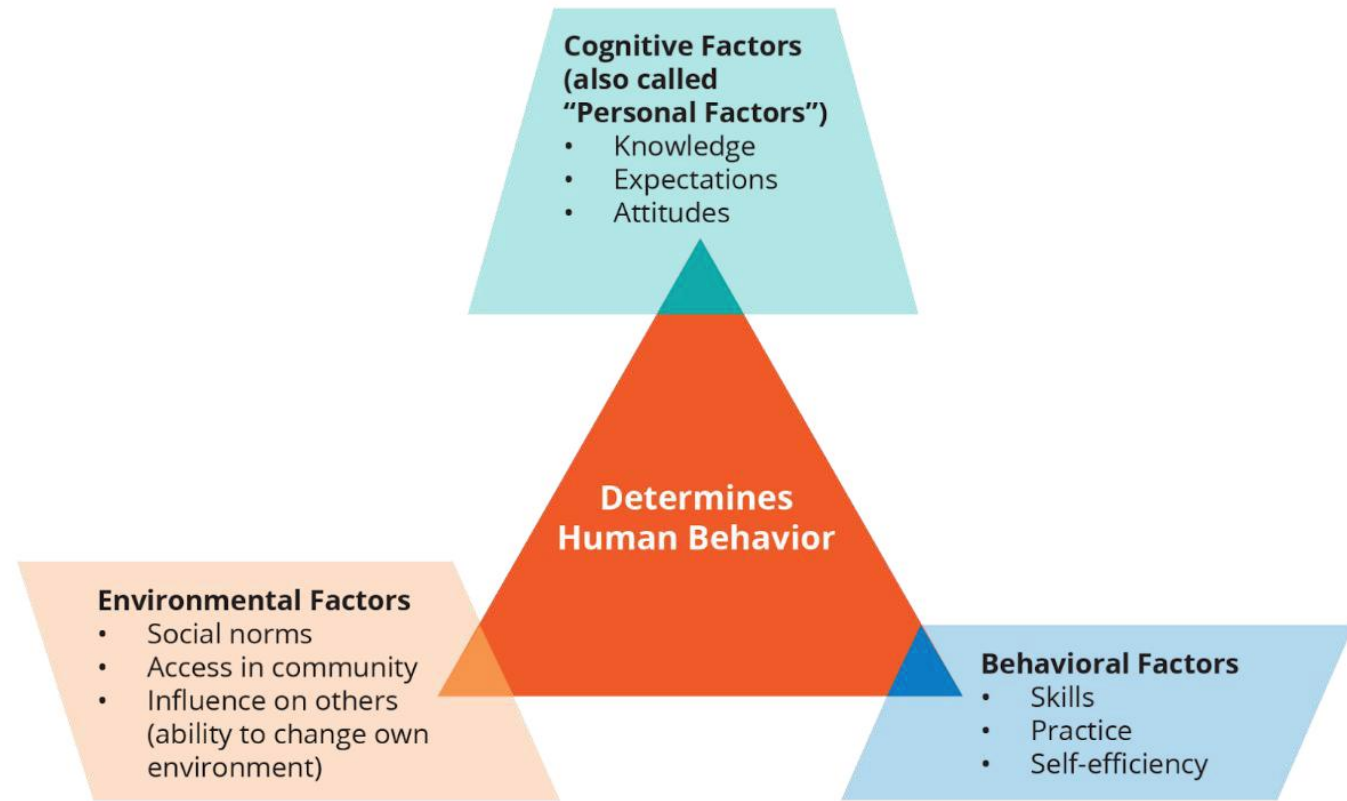


Driving Behavior change

- Making and identifying goals
- S M A R T
- Create realistic expectations
- Be clear on the end goal
- Understand how much time it will take
- Identify progress

Celebrate the small wins

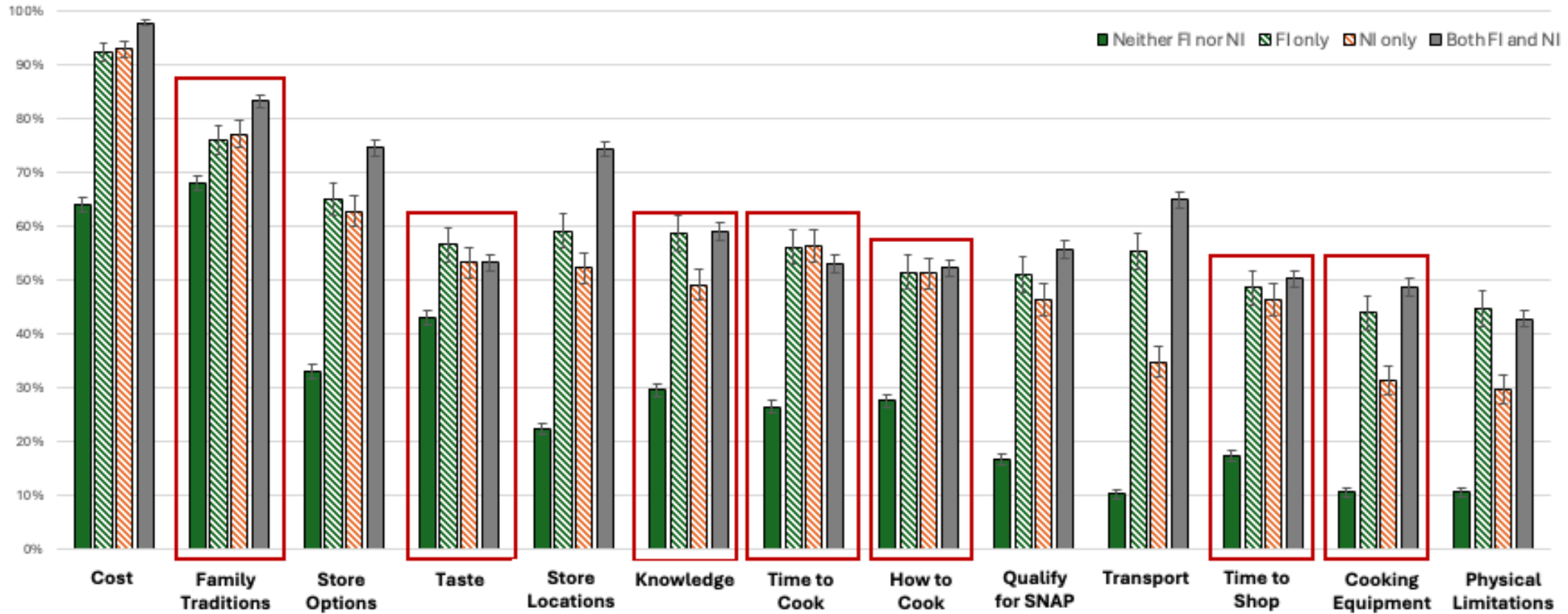
Small steps help create lasting change



Social Cognitive Theory



Barriers to Healthy Eating: National Survey



“I don’t have time to cook”

“I don’t know how to cook healthy foods”



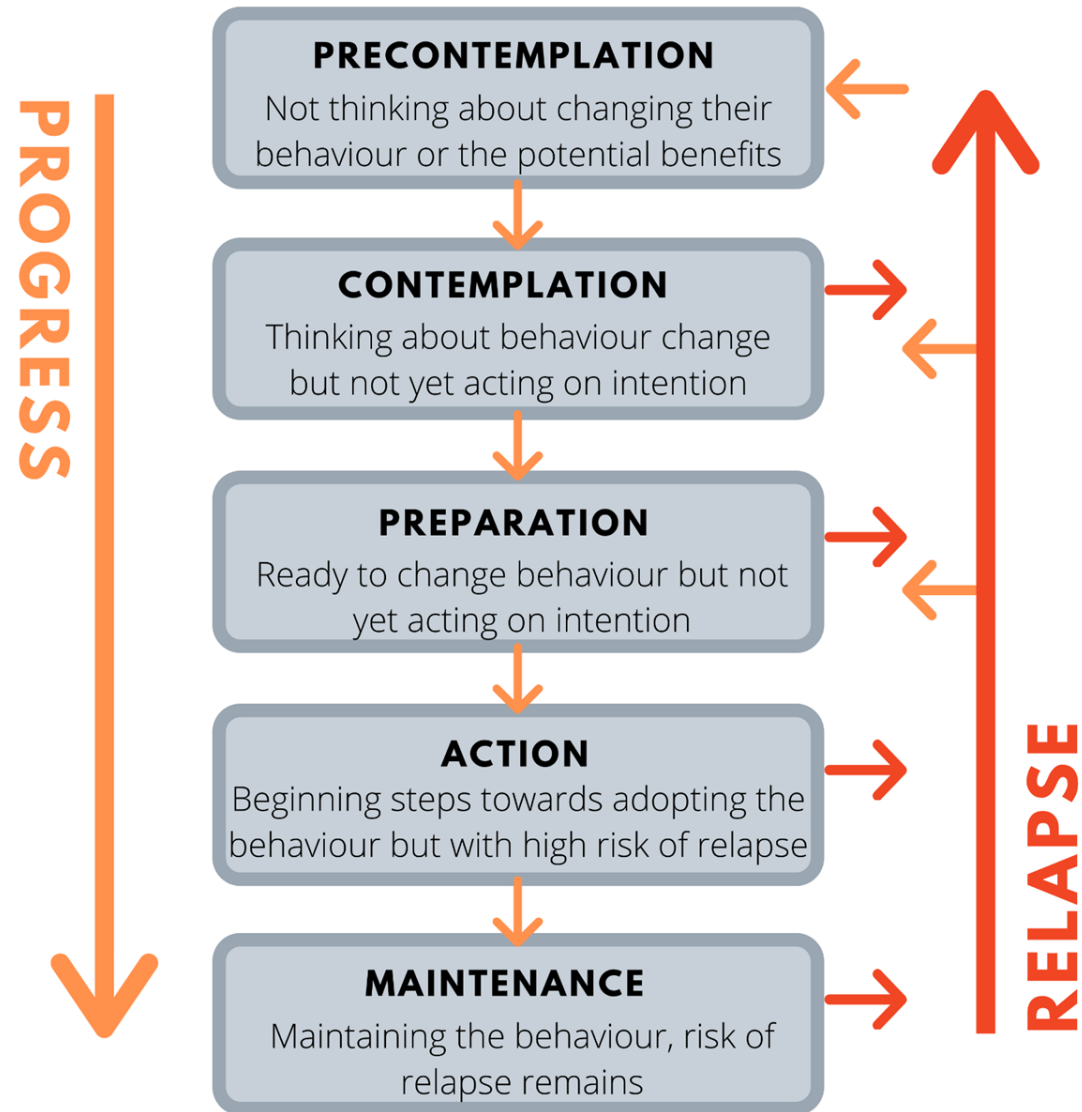
Barriers to Behavior change

- Environmental, psychological, social, and biological factors
- Limited access to affordable, nutritious foods, time constraints, and the convenience of ultra-processed options
- Emotional eating, stress, and ingrained habits can undermine motivation,
- Misinformation and confusion about nutrition create uncertainty about what “healthy eating” means
- Social pressures, cultural norms, and family traditions may reinforce less healthful patterns
- Biological factors such as taste preferences or metabolic differences can play a role

Overcoming these challenges requires practical, individualized strategies that consider personal circumstances, cultural context, and the broader food environment to support sustainable dietary change

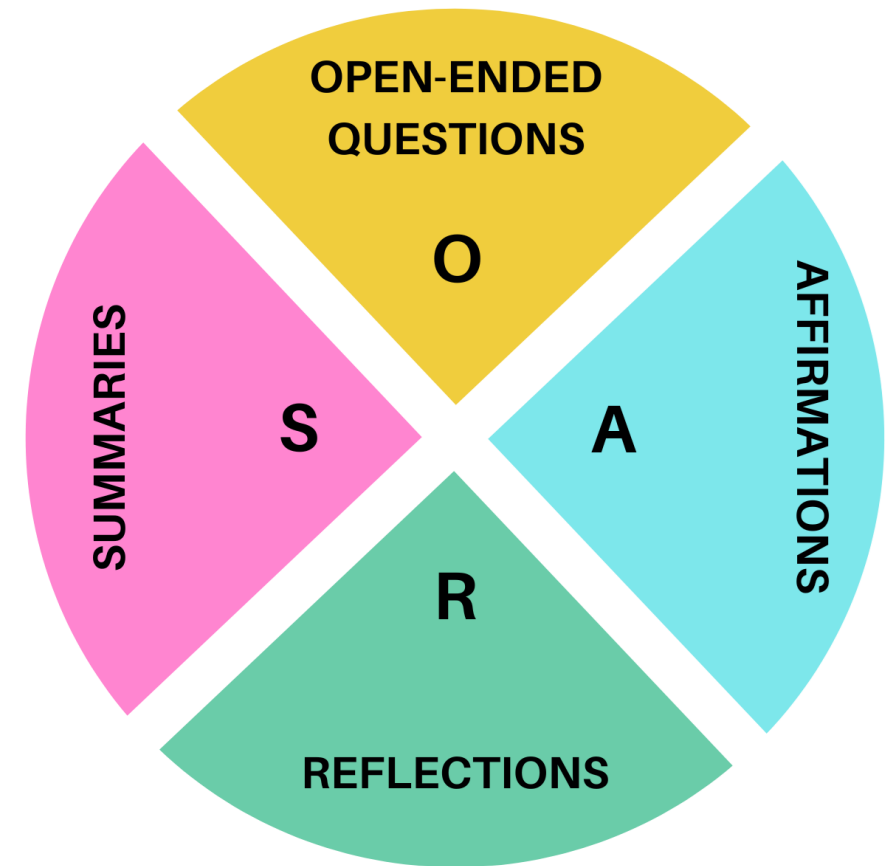


Transtheoretical Model of Behavior Change Theory



Motivational Interviewing

- Collaborative, person-centered communication style
- Helps people find their own motivation to change
- Explore and resolve their own ambivalence
- Practitioners guide conversations, build rapport, and foster client's intrinsic motivation
- Uses empathy, acceptance, and non-judgmental support to build commitment to goals



Role Play: Motivational Interview Style

In pairs (1 group of 3); 10 minutes then switch roles

Person 1: Clinician

Person 2: Patient at annual physical (42y/o, BMI 33, pre-diabetic (A1C 5.6), HTN, full-time administrative assistant, has 2 kids ages 9 & 12) Patient identifies that they would like to be/feel healthier.

Ask open ended questions, “can you tell me more about..”
Remember to summarize, “what I hear you saying is..”

Let person 2 be the driver of their own plan
Person 1 is the guide to help them discover





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Any Questions?