



# Eat To Treat

Talking about nutrition with your patients



# Eat to Treat

## Talking talking about nutrition with patients

### AGENDA

#### CLASS 1: CULINARY NUTRITION IN THE TREATMENT OF METABOLIC DISEASES

- Introduction
- Teaching Kitchens
- Culinary Nutrition and Metabolic Diseases
- Starting the Conversation
- Cooking Demonstration

#### CLASS 2: NUTRITION SERVICES IN THE TREATMENT OF METABOLIC DISEASES

- Medically Tailored Food and Meals
- Medical Nutrition Therapy & Therapeutic Diets
- Translating Recommendations into Real Food Solutions
- Cooking Demonstration

#### CLASS 3: POTENTIAL FOR THE CLINICAL PRACTICE OF CULINARY NUTRITION

- Cultural and Socioeconomic Considerations in Nutrition
- Shared Medical Appointments and Nutrition Education in Underserved Communities
- What Drives Behavior Change
- Cooking Demonstration

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### COURSE PURPOSE:

This course aims to provide clinicians with tools to effectively communicate and administer nutrition interventions in the prevention and treatment of metabolic diseases among underserved populations.

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### EDUCATION OBJECTIVES

1. Define culinary nutrition and its function in the prevention and treatment of metabolic diseases.
  2. List at least two resources providers can use during short clinical visits to help start conversations about nutrition with their patients.
  3. Identify key nutrition resources including referrals to a dietitians, medically tailored food/meals, and teaching kitchens.
  4. Identify ways to introduce culinary nutrition into practice, either through counseling, referrals, or shared medical appointments.
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### TARGET AUDIENCE

Physicians, nurses, physician assistants, dietitians, and other clinicians working with patients who require nutrition and lifestyle changes to manage and prevent weight-related chronic diseases.

# Introduction

## Background

Chronic diseases, such as obesity, diabetes, and cardiovascular disease, account for seven of the ten leading causes of death in the United States (US).<sup>1</sup> Given that suboptimal diet is a major risk factor for these non-communicable diseases, nutrition interventions are widely recommended as prevention and treatment modalities.<sup>2</sup> Despite this evidence, only one in five patients with at least one diet-related chronic disease receives nutrition counseling.<sup>3</sup> Several factors may be driving this lack of nutrition counseling, including clinicians' ability and comfort providing nutrition counseling, lack of time during patient visits, and failure to recognize how social issues impact a patient's ability to adhere to recommendations.<sup>4</sup> To mitigate this problem, The Academy of Nutrition and Dietetics published a position paper that emphasized the benefits of referring patients to a registered dietitian (RD) for individualized Medical Nutrition Therapy (MNT) as part of their treatment regimen.<sup>5</sup> However, few patients with diet-related chronic diseases are referred to nutrition professionals and clinicians report a lack of knowledge regarding who to refer patients to for counseling.<sup>4</sup>

In addition to inadequate nutrition counseling and lack of referrals to nutrition professionals, social and environmental factors may prevent patients from making dietary changes. Low socioeconomic status is associated with food insecurity and reliance on non-nutrient dense and highly processed foods, resulting in increased risk of diet-related disease.<sup>6</sup> Additionally, a lack of self-efficacy around home food preparation may be a barrier to dietary changes. Research suggests that culinary nutrition interventions



focused on improved culinary skills, meal planning, and food acquisition strategies in both community- and hospital-based settings have improved health and weight outcomes<sup>7</sup> compared to nutrition education alone.<sup>8</sup> This course aims to address the need for increased nutrition counseling and to optimize available nutrition services. Although other culinary medicine courses<sup>9,10</sup> exist, this course is specifically designed to be clinically applied to meet the needs of populations disproportionately at risk for diet-related diseases. Our goal is to provide the tools to support effective conversations surrounding nutrition in short patient visits, encourage referrals to nutrition services, and inspire champions to think innovatively in order to enhance the practical understanding of nutritional interventions in a hospital setting.

# Introduction

## Nutrition philosophy

While certain foods may increase the risk of disease, others can provide medicinal and protective benefits in some individuals. Despite this established relationship, there is still uncertainty in identifying an optimal diet for the treatment of metabolic diseases. This lack of consensus can be attributed to four primary considerations: 1) obesity is a complex multifactorial condition, and the origin of the disease remains uncertain; 2) food has been changed, processed, and packaged, leading to unknown health outcomes; 3) nutrition research is inconclusive because of the dependency on self-reported data, limited longitudinal studies, and the large number of variables that require consideration; and (4) dietary needs vary based on epigenetics, metabolism, and other biological factors and may need to be individually tailored. This said, this course is not intended to debate nutrition findings or commend one approach over another. Instead, this course will focus on recommendations that are widely accepted and explore ways to make these recommendations feasible to promote improved diet patterns. To help navigate the nutrition science, we have distilled five key nutrition principles to help guide conversation.

This course applies these nutrition recommendations to culinary skills while considering time, money, cultural preferences, and other factors influencing diet patterns. In



### KEY NUTRITION PRINCIPLES

1. **Avoid processed and ultra-processed foods<sup>11</sup>**
2. **Increase the consumption of natural, plant-based foods<sup>12,13</sup>**
3. **Include natural and essential fats such as polyunsaturated and monounsaturated fatty acids<sup>14</sup>**
4. **Manage satiety with fewer total calories<sup>15</sup>**
5. **Avoid diet language and emphasize sustainable eating patterns<sup>16</sup>**

addition to these general recommendations, this course will explore three therapeutic nutrition interventions and their clinical functions. However, rather than focusing on specific diets such as the Mediterranean diet or Dash diet, this course distills the major principles of each into three diet categories (1) Cardiac Diet Considerations (2) Intake Tracking & (3) Carbohydrate Management. The purpose of these categories is to eliminate diet stigma and negative associations with diet trends while promoting a diet pattern that supports specific nutritional recommendations. These diet interventions are designed to take into consideration the specific need(s) and preferences of individual patients and should be administered with specific outcome measures in mind.

# Introduction

## Why cooking?

The average American does not cook. In fact, one survey found that 72 % of participants considered combining processed foods such as a jar of tomato sauce to be cooking.<sup>17</sup> These same individuals reported disliking cooking and significant problems reading and using recipes compared to those cooking from scratch.<sup>17</sup> So why is this a problem? As stated in our nutrition philosophy, processed foods have been linked to chronic diseases. Research has found that eating outside of the home has been associated with increased body weight, obesity, and poor diet quality.<sup>18,19,20</sup> In contrast, cooking at home has been positively associated with meeting the recommendations for fat, calcium, whole grain, fruit, and vegetable intake, reduced BMI, and improved health.<sup>21,22</sup> One study found that cooking interventions may be more effective than nutrition education alone.<sup>8</sup>

Thus, our goal is not to train master chefs, but rather to encourage incorporating more scratch cooking into weekly meal routines, particularly for patients at risk of or with chronic nutrition-related diseases. It is our hope that by teaching cooking skills alongside nutritional science, clinicians will better understand the impact and burden that diet recommendations can have on a patient. They will be better equipped to have positive conversations around real food recommendations and to help patients overcome barriers to healthy nutrition. In addition, this experience is intended to bring light to Teaching Kitchens as a nutrition resource and to promote patient referrals.



- Eating out of the home has been positively associated with body weight obesity, and poor diet quality<sup>20</sup>
- Cooking at home has been positively associated with meeting the recommendations for fat, calcium, whole grains, fruit, and vegetables intake, reduced BMI, and improved health<sup>21</sup>
- Cooking interventions may be more effective than nutrition education alone<sup>8</sup>

# Introduction

## Glossary

### **CULINARY MEDICINE, CULINARY NUTRITION, AND LIFESTYLE MEDICINE**

**Culinary medicine (CM)** is an evidence-based field in medicine that blends the art of food and cooking with the science of medicine and is typically performed by a medical doctor.<sup>23</sup>

**Culinary nutrition** is the practical application of nutrition interventions through culinary education and is typically performed by a nutrition expert (registered dietitian, certified chef, and certified life coach).

**Lifestyle medicine** widens the scope to include diet as well as exercise, sleep, stress management, substance use, and social connections.<sup>24</sup>

### **DIETARY INTERVENTIONS<sup>25</sup>**

**Glycemic Index** refers to the speed in which dietary sugar impacts an insulin response in the body. A lower glycemic load stimulates a lower insulin demand and therefore less overall stress on the pancreatic beta cell. This often extends to the exclusion of certain vegetables and many if not all fruits.

**Low Fat** diet refers to a diet that limits total fat and uses carbohydrates as the primary energy source. Total fat is below some threshold, reasonably set at the lower limit of the recommended range established by the Institute of Medicine, or 20% of daily calories.

**Low Carbohydrate and Ketogenic** diets refer to a diet that limits carbohydrates to stimulate fat burning (lipolysis). In the absence of carbohydrates, fat is used as an energy and cannot be transported and stored in adiposities (fat cells). Using fat as the primary source of energy is called ketosis (the origin of the name Ketogenic). Total carbohydrate intake is below some threshold, reasonably set at the lower limit of the recommended range established by the Institute of Medicine, or 45% of daily calories.

**Mediterranean** diet refers to eating pattern traditionally followed by countries in the Mediterranean and includes a high intake of olive oil, fruit, nuts, and vegetables; a moderate intake of fish and poultry; a low intake of dairy products, red meat, processed meats, and sweets; and wine in moderation.

**DASH** diet stands for the Dietary Approach to Stop Hypertension. The DASH diet is rich in fruits, vegetables, whole grains, and low-fat dairy foods.

**Paleolithic** diet is based on the dietary pattern of our Stone Age ancestors. The diet focuses on avoiding processed foods and the preferential intake of vegetables, fruits, nuts and seeds, and lean meats. Dairy and grains are often avoided entirely.

**Vegan** diets exclude all animal products, including dairy and eggs. In principle at least, all animal products are excluded entirely.

# Introduction

## Glossary

### FOOD SECURITY AND FOOD INSECURITY <sup>26</sup>

**High food security:** no reported indications of food-access problems or limitations.

**Marginal food security:** one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.

**Low food security:** reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.

**Very low food security:** reports of multiple indications of disrupted eating patterns and reduced food intake.

### Group Visits and Shared Medical Appointments <sup>27</sup>

Group visits and shared medical appointments (SMA) are both billable services that include group education and elements of an individual patient visit (vital signs, history taking, and physical exam). Patients are often seen by one or more health care providers in a concurrent session conducted by an interdisciplinary team.

### METABOLIC DISEASES AND SYNDROME <sup>28</sup>

**Metabolic disease** refers to dysfunction in the body's ability to process food into energy. This may be due to genetic predisposition and/or unfavorable lifestyle behavior affecting the chemical breakdown process of nutrients and/or the utilization of nutrients by the cell.

**Metabolic syndrome** is a cluster of conditions that occur together and increase the risk of heart disease, stroke, and type 2 diabetes. These conditions include increased blood pressure, elevated blood sugar, excess body fat around the waist, and abnormal cholesterol or triglyceride levels. In order to have metabolic syndrome, a patient must have 3+ of these 5 conditions.

### NUTRITION PROFESSIONALS/SERVICE

**Registered dietitians** are clinicians who have met current minimum academic requirements with successful completion of both specified didactic education and supervised practice experiences through programs accredited by The Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics and successfully completed the Registration Examination for Dietitians.<sup>29</sup>

**Nutritionist** can be used to describe an accredited professional as well as a self-proclaimed expert. Regulation of this term varies state by state.

**Nutrition chef educator** is a chef who has gone to culinary school and has been trained in nutrition.

**Life coach** can be any clinician or non-clinician who has additional training in the science of health behavior change. Health coaches add coaching skills to their health care expertise.

# Introduction

## Glossary

### **PROCESSED FOODS DEFINED BY NOVA<sup>30</sup>**

**Unprocessed or Natural** foods are obtained directly from plants or animals and do not undergo any alteration following their removal from nature.

**Minimally Processed** foods are natural foods that have been submitted to cleaning, removal of inedible or unwanted parts, fractioning, grinding, drying, fermentation, pasteurization, cooling, freezing, or other processes that may subtract part of the food, but which do not add oils, fats, sugar, salt or other substances to the original food.

**Processed Culinary Ingredients** are products extracted from natural foods or from nature by processes such as pressing, grinding, crushing, pulverizing, and refining. They are used in homes and restaurants to season and cook food and thus create varied and delicious dishes and meals of all types, including broths and soups, salads, pies, bread, cakes, sweets, and preserves.

**Processed** foods are products manufactured by industry with the use of salt, sugar, oil, or other substances added to natural or minimally processed foods to preserve or to make them more palatable. They are derived directly from foods and are recognized as versions of the original foods.

**Ultra-Processed** foods are industrial formulations made entirely or mostly from substances extracted from foods (oils, fats, sugar, starch, and proteins), derived from food constituents (hydrogenated fats and modified starch), or synthesized in laboratories from food substrates or other organic sources (flavor enhancers, colors, and several food additives used to make the product hyper-palatable). Manufacturing techniques include extrusion, molding, and preprocessing by frying.

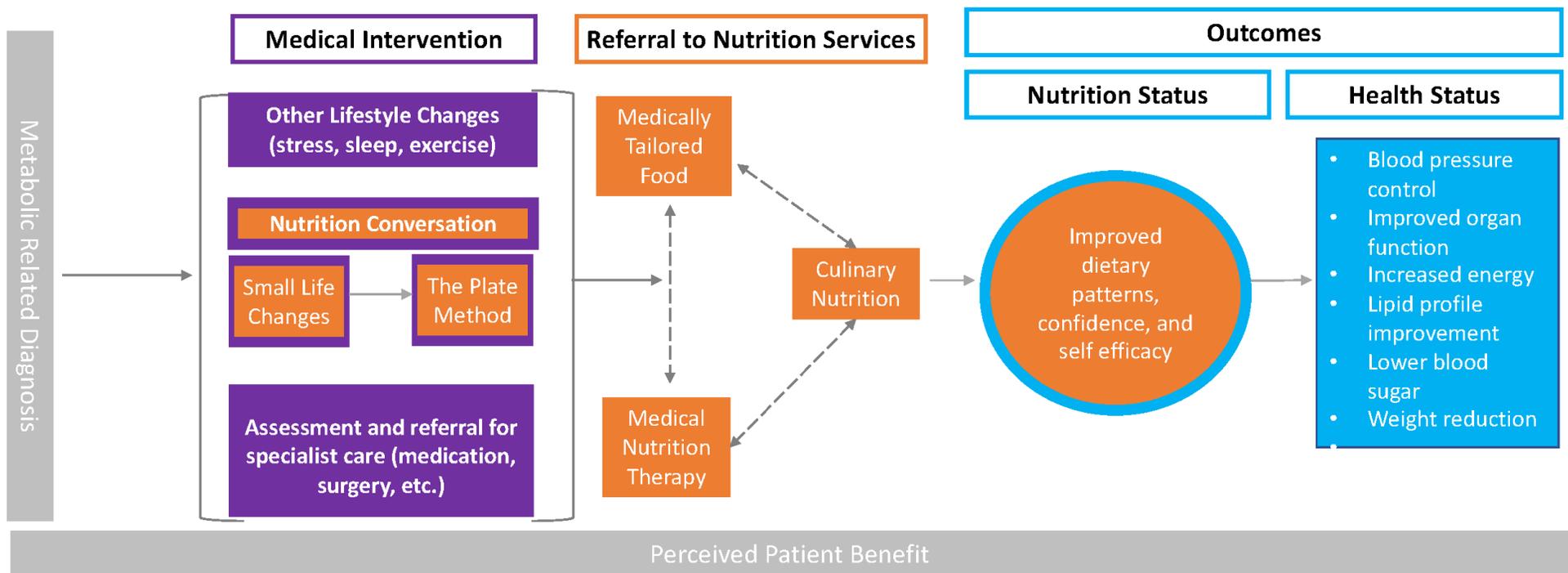
### **TEACHING KITCHENS<sup>31</sup>**

**Teaching kitchens** offer education in basic cooking techniques and other self-care topics like enhanced nutrition, mindfulness, physical activity, and behavioral health coaching. While the kitchen itself is an essential component, it is only the location, while the entire teaching kitchen curriculum is what creates positive change.

# Nutrition Intervention

## Nutrition intervention for metabolic diseases

### A Clinical Care Model for Nutrition Interventions in Metabolic Diseases



#### Key

- **Purple** – Medical interventions disseminated by the practitioner.
- **Orange** – Related to nutrition.
- **Blue** – Outcomes associated with interventions and services.

# Nutrition Intervention

## Nutrition intervention for metabolic diseases

### **NUTRITION INTERVENTION FOR METABOLIC DISEASES**

Metabolic diseases refers to dysfunction in the body's ability to process food into energy. This dysfunction may be due to genetic predisposition and/or negative lifestyle behavior affecting the chemical breakdown process of nutrients and/or the cell's utilization of nutrients. A common consequence of metabolic disease is severe weight gain. Increased body mass further perpetuates metabolic dysfunction and can contribute to numerous abnormalities, including high blood pressure, high blood sugar, excess body fat around the waist and in other organs, and abnormal cholesterol or triglyceride levels. These conditions can increase risk of heart disease, stroke, type 2 diabetes, and can cause polycystic ovary syndrome, fatty liver, and renal disease.

Although there is no one specific diet proven to manage metabolic diseases, nutrition interventions have been found to promote improved health outcomes. An interdisciplinary approach to healthcare is considered the most effective method to promote behavior change.

The model on the previous page is designed to improve the modality of nutrition education in a clinical setting. The goal is to provide standardized treatment plans among providers to optimize clinical time and produce the consistency and support required for patients to make effective and lasting health improvements.

### **MULTIDISCIPLINARY APPROACH**

The model depicts a flow of care. The purple represents medical care provided by a practitioner such as a doctor, physician's assistant, nurse practitioner or registered nurse. This intervention includes a combination of medicine and lifestyle changes. For this course, the model separates out nutrition interventions from lifestyle interventions. These nutrition interventions are highlighted in orange on the model.

In this model, the practitioner starts the conversation, which includes acknowledging the concern, discussing small life changes and introducing The Plate Method. The goal at this step is for the patient to achieve small changes that can improve self-efficacy and have positive health outcomes long term. The Plate Method is an ideal starting point because it offers a visual representation of mealtime, taking into consideration current eating patterns. The Plate Method should be used by all clinicians to start the diet change conversation and should be introduced before therapeutic diets are discussed. This conversation should help motivate patients to consider more home cooking. Although many disciplines may be knowledgeable in nutrition, short medical visits may not allow for enough time to administer interventions effectively.

# Nutrition Intervention

## Nutrition intervention for metabolic diseases

The referral to nutrition services should be initiated at the inception of food-related conversations. We propose referrals to three key resources including medically tailored foods/meals, medical nutrition therapy, and culinary nutrition. Medically tailored food (MTF) and medically tailored meals (MTM) can help improve access to healthful foods. This is essential as food acquisition is often a major barrier to adherence to diet recommendations. In a retrospective cohort study, MTM were associated with significantly fewer inpatient admissions and fewer skilled nursing facility admissions, translating into a cost savings.<sup>29</sup> However, MTM are costly, requiring large food manufacturing, distribution and often not feeding the entire family. This said, MTM should be limited to those patients who are both ill and highly vulnerable, such as those with debilitating chronic diseases and aging adults.

The next recommended referral is to a dietitian. Dietitians are the most qualified practitioners to counsel patients on nutrition and are best suited to partner with practitioners to provide health improvement programs. Dietitians are trained to administer Medical Nutrition Therapy (MNT), which is an evidence-based nutrition intervention model of care aimed to help treat medical conditions through an individually tailored nutrition plan.<sup>31</sup> Working with patients on their food quality, variety, and quantity has been shown to be important in delaying the development of metabolic diseases. Dietitians are trained and given the time to work with patients to create healthier eating patterns within their cultural norms. Eating patterns suggested to patients are used to manage specific conditions and require specificity around macronutrient distribution and food and beverage quality.

The last nutrition resource recommended is to culinary nutrition programs. Culinary nutrition can help patients utilize medically tailored foods and apply nutrition interventions to real food and meals. In addition, these classes are intended to help overcome barriers to cooking and behavior change. This service may be offered in your area. Please use [findhelp.org](http://findhelp.org) or <https://teachingkitchens.org/map-fim/> to find programs near you. If one does not exist, we encourage you to be a champion and find ways to incorporate culinary nutrition into your practice. Strategies to do this will be discussed in the lectures.

### **INDIVIDUALIZED AND OUTCOME CENTERED**

The model intends to be individualized and patient focused. Patients move along the schematic based on perceived benefit and outcomes. The patient will determine which intervention will work best for their specific need. Movement along the model should be coordinated with specific measures including health outcomes (e.g weight, hemoglobin A1c, lipid profile), metabolites in urine such as ketones, and/or qualitative and quantitative data related to quality of life and acceptability. Compliance may be assessed through typical intake questions, a diet recall, food logging, and/or daily photographs of their plate, when possible. Creating an outcome driven intervention is crucial in offering meaningful nutrition recommendations without adding inconsequential burden.

# Starting the Conversation

## Small life changes

Primary care practitioners and physicians are trusted sources of health information. As such, what they deem as important has value with their patients. For this reason, it is critically important that providers be the ones to start the conversation around dietary and lifestyle changes as primary treatment modalities for metabolic related health conditions. Small life changes have been associated with initial and continued weight loss. This tactic encourages patient-chosen behavioral goals that are attainable in the short term and that offer accumulated benefit over time. Using small life changes to guide the nutrition conversation is a good strategy to use during short patient visits. A validated “Starting the Conversation Tool” has been developed by Paxton et al. and can be used to help navigate the conversation.<sup>32</sup> These questions have been built to assess diet quality and pinpoint areas of improvement. This tool can be used during patient visits or prior to seeing the patient as part of vital sign assessment and prescreening. Once diet quality has been assessed, the “Starting the Conversation on Dietary Changes Table” can be used to determine specific individualized goals.<sup>32</sup> For example, for a patient drinking soda daily, a goal may be to reduce soda consumption to 1 can per day.<sup>33</sup>

Please see the consideration below to help promote an effective nutrition conversation:

- 1. Do no harm.** When discussing weight, remember that stigma exists. Talk about weight in a sensitive way, being conscientious of the wording you choose. Avoid blaming the patient and explain concerns in a medical context.
- 2. Choose a patient-centered, small-change approach.** As the provider, you know what dietary and lifestyle changes will have the biggest impact on the patient’s condition. However, your patients know themselves and the intricacies of their lives best. Meeting patients where they are at and guiding them towards impactful, self-set goals will help increase the likelihood that they succeed. Patients may have an idea of where they want to start in terms of changes, or they may need some guidance. Listen to them before goal setting.
- 3. Low hanging fruit.** Success breeds success. When discussing goals with your patient, try to guide them towards small changes that will make a big impact. These will vary based on the patient and their condition. Sugar sweetened beverages, small amounts of physical activity, and fast-food consumption are great places to start. When a patient is successful in completing a goal, and even more so, when they see a measurable result (be it weight loss, lab values, clothing size, stamina), they are more likely to maintain the change(s) and continue to build on them.
- 4. Use simple concepts.** As practitioners, you have a background in science and the research behind dietary and lifestyle changes. It is your job to translate that knowledge into clear, simple, action-based concepts for your patients. Use simple visual tools like the Healthy Plate to get across complex dietary recommendations (the Healthy Plate conveys portions, proportions, variety).
- 5. Use resources.** Become aware of services offered in the community that can help support patients in achieving their goals. In addition, utilize referrals to other clinicians and to food resources.

# Starting the Conversation

## Clinical tool

### Starting The Conversation: Diet

(Scale developed by: the Center for Health Promotion and Disease Prevention, University of North Carolina at Chapel Hill, and North Carolina Prevention Partners)

Over the past few months:

- |    |   |  |                                       |  |
|----|---|--|---------------------------------------|--|
| 1. | How many times a week did you eat fast food meals or snacks?  | Less than 1 time<br><input type="checkbox"/> | 1-3 times<br><input type="checkbox"/> | 4 or more times<br><input type="checkbox"/>  |
| 2. | How many servings of fruit did you eat each day?  | 5 or more<br><input type="checkbox"/>        | 3-4<br><input type="checkbox"/>       | 2 or less<br><input type="checkbox"/>        |
| 3. | How many servings of vegetables did you eat each day?   | 5 or more<br><input type="checkbox"/>        | 3-4<br><input type="checkbox"/>       | 2 or less<br><input type="checkbox"/>        |
| 4. | How many regular sodas or glasses of sweet tea did you drink each day?                                      | Less than 1<br><input type="checkbox"/>      | 1-2<br><input type="checkbox"/>       | 3 or more<br><input type="checkbox"/>        |
| 5. | How many times a week did you eat beans (like pinto or black beans), chicken, or fish?                      | 3 or more times<br><input type="checkbox"/>  | 1-2 times<br><input type="checkbox"/> | Less than 1 time<br><input type="checkbox"/> |
| 6. | How many times a week did you eat regular snack chips or crackers (not low-fat)?                            | 1 time or less<br><input type="checkbox"/>   | 2-3 times<br><input type="checkbox"/> | 4 or more times<br><input type="checkbox"/>  |
| 7. | How many times a week did you eat desserts and other sweets (not the low-fat kind)?                         | 1 time or less<br><input type="checkbox"/>   | 2-3 times<br><input type="checkbox"/> | 4 or more times<br><input type="checkbox"/>  |
| 8. | How much margarine, butter, or meat fat do you use to season vegetables or put on potatoes, bread, or corn? | Very little<br><input type="checkbox"/>      | Some<br><input type="checkbox"/>      | A lot<br><input type="checkbox"/>            |

SUMMARY SCORE (sum of all items): \_\_\_\_\_

# Starting the Conversation

## Clinical tool

Table. Starting the Conversation on Dietary Changes

Assessing Dietary Patterns <sup>a</sup>	Reasonable Target Change <sup>b</sup>	Example of Realistic Small Substitutions
Ask patients about the frequency of these dietary intakes occurring over the previous few months		
Fast food meals or snacks per month	Decrease by 1 fast food meal per week	Replace 1 fast food meal per week with a prepared food from supermarket or a sandwich from home
Servings of fruit per day	Increase by 1 serving per day	Add fresh, frozen, or canned fruit to yogurt
Servings of vegetables per day	Increase by 1 serving per day	Add fresh, frozen, or canned vegetables to yogurt smoothie
Regular sodas, juices, or other sugary beverages per day	Decrease by 1 sugary beverage per day	Replace a sugared soda with water or flavored water, lightly sweetened tea, or coffee
Servings of beans, nuts, chicken, or fish per week	Increase fish/seafood by around 1 serving per week	Replace a fast food entrée or processed meat (eg, ham) sandwich with tuna fish sandwich
Regular snack chips or crackers per week	Decrease by 1 serving per week	Replace 1 serving of snack chips or crackers with a handful of nuts
Desserts and other sweets per week	Decrease by 1 serving per week	Replace 1 sugary sweet or dessert with a fruit or a handful of nuts
Use of butter or meat fat	Decrease trans and saturated fats as seasoning	Replace butter with light drizzle of olive oil and/or spices

<sup>a</sup> An example of a brief nutrition behavior assessment tool, modified from Paxton et al.<sup>8</sup>

<sup>b</sup> Reasonable target changes in consumption, adapted from Mozaffarian and Capewell.<sup>9</sup>

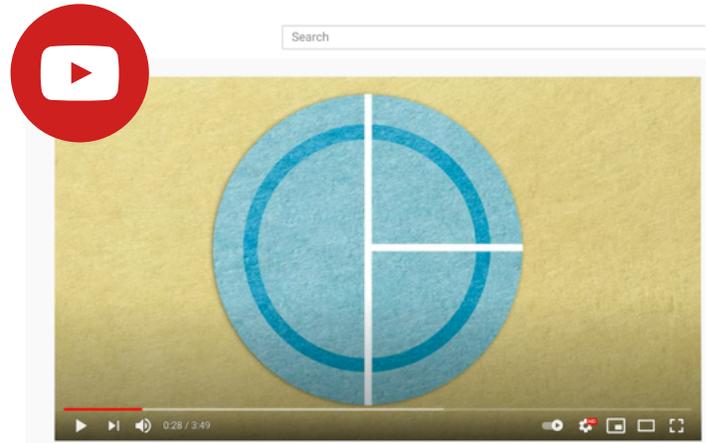
Image by Paxton et al. retrieved from: <https://pubmed.ncbi.nlm.nih.gov/21146770/> on July 22nd 2021.

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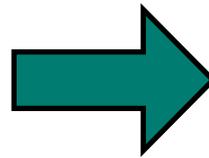
# Starting the Conversation

## The plate method

The primary goal of the Plate Method is to empower patients to cook more at home and to include more vegetables with meals. The Plate Method is a simple, visual way to demonstrate portion sizes.<sup>35</sup> Half of the plate should be filled with non-starchy vegetables, one quarter should be filled with lean protein, and one quarter should be filled with a whole grain or starchy vegetable. This diagram is a place to start with a patient and will help lay the nutrition foundation upon which the dietitian can build. This is the first nutrition related conversation you should have with your patient. Do not include further nutrition recommendations with your patient until they have met with their dietitian, a dietary assessment has been completed and goals have been identified. Additional information may cause more harm than good by causing massifications and/or unattainable goals. Please refer to the next page for a Plate Method handout you can review with your patients.



Watch the video above by clicking the photo!



Check out the website [oldwayspt.org](http://oldwayspt.org) to see culturally sensitive plates.

## Typical Intake Questions

### Typical intake: a quick way to find out an overview of a patients diet

- Start with "what is the first thing you typically eat in the morning"?
- Ask "what did you eat next"? and avoid naming meals (breakfast, lunch, dinner, snack)
- Use follow up questions such as, "how was that cooked"? or "did you have anything with that"? or "how do you take your coffee"?
- Ask "how often" questions such as, "how often do you drink soda"? "how often do you add vegetables to your meal"?

# The Plate Method

## Overview

### Balance Your Plate

Eating a balanced diet is not just about calorie control, but also making sure you are getting in enough of the nutrients we all need to be healthy. It is best to eat foods in their whole form as often as possible to get in enough fiber, protein, vitamins, minerals, and antioxidants needed for a healthy body. Below is a guide on how to set up your meals and what foods to include most of the time, to support a healthy weight for your body, good heart health, and healthy blood sugars.

#### Grains and Starchy Vegetables ( $\frac{1}{4}$ plate)

##### Choose whole grains:

Brown rice, quinoa, barley, bulgur (blé), farro, maize (corn tortillas), oats, and whole grain bread and pasta

##### Starchy Vegetables:

Sweet potatoes, potatoes, yams, yucca, plantains, beans, peas, and corn



#### Lean Protein ( $\frac{1}{4}$ plate)

**Vegetables:** lentils, beans, tofu

**Meat:** chicken, turkey, pork, lamb, ground meat, eggs

**Fish:** tuna, salmon, halibut, cod, shrimp, scallops

**Dairy:** yogurt, milk, cheese

#### Fats (choose plant sources)

Oils: 1 tablespoon olive for salad or peanut, avocado, canola oil for high temperature cooking

Olives: 20 whole olives

Avocado:  $\frac{1}{2}$  whole avocado

Nuts: (walnuts, almonds, peanuts, cashews)  $\frac{1}{4}$  cup unshelled whole, 2 tablespoons nut butter

Seeds: 2 tablespoons unsalted sunflower seeds, pumpkin seeds, ground flax, chia seeds, hemp seeds

#### Fruit (1 small or half large)

Fruit can be added to meals but is not required.

#### Non-starchy Vegetables ( $\frac{1}{2}$ plate)

Asparagus, broccoli, Brussel sprouts, cabbage, carrots, chayote, cucumber, eggplant, green beans, greens/salad (arugula, collard greens, kale, romaine, lettuce spinach, swiss chard), mushrooms, onions, pepper, summer squash, tomatoes (tomato sauce & salsas), zucchini



#### Plate Method Off the Plate!

Add veggies and lean protein to pasta, pizza, stir-fry, tacos, omelets

# Addressing Eating Pattern

## Overview

### EATING PATTERN

Many times, with metabolic dysfunction, a patient may face obesity but not the other comorbidities mentioned. Managing weight can help prevent future complications and improve quality of life. Behavior tactics around eating awareness have been found to help patients make long lasting change. Rather than focusing on specific macro- and micronutrients, this approach builds self-efficacy and accountability around changing diet patterns. Intake tracking applications such as Loselt, MyFitness PAI, or point based programs such as Weight Watchers should not be used to meticulously manage calories. Instead, they can be used as tools to better understand individual eating patterns and to gain a better understanding of nutrient density. Please see below for a list of resources that patients can use to help promote healthy food intake patterns.

In contrast, mindfulness is a mindset rather than an outcome-driven behavior.<sup>37</sup> It is based on an individual's experience of food and eating. Based on this awareness, the person eating chooses what and how much to consume.<sup>37</sup>

### Mindfulness Activity<sup>37</sup>

1. Get a raisin and set it down in front of you. STOP; do not throw a handful of raisins into your mouth. (OK, so there is a rule, but there is a good reason, which you will understand soon.)
2. Imagine you have just been dropped off on this planet, and you know nothing about where you are. You have never experienced anything from Earth. With no experience, there are no judgments, fears, or expectations. It is all new to you. Take a few deep breaths and relax.
3. Look at the raisin and pick it up.
4. Feel its weight.
5. Examine its surface—the various ridges, shiny parts, dull parts; really look for the first time at this strange object.
6. Smell this object and notice how you react.
7. Roll the raisin between your fingers and listen to hear what sound it makes. Notice its stickiness.
8. Notice what you are feeling about this object.
9. Place the raisin between your lips and just hold it there for a few moments. What do you notice happens inside you?
10. Let it roll back into your mouth, but do not chew yet, just roll it around. Is there a taste? Do you salivate? What do you want to do?
11. OK, bite down, just once. What do you notice?
12. Slowly begin to chew, noticing what each bite brings.
13. Chew the raisin until it is completely liquefied before you swallow.
14. After swallowing, close your eyes for a few moments to notice the consequence of what you just experienced.

# Carbohydrate Management

## Overview

### CARBOHYDRATE MANAGEMENT

A common side effect of metabolic dysfunction is hyperinsulinism due to the body's inability to efficiently use glucose for energy. This can lead to the development of type 2 diabetes. The primary goal of this diet is to help regulate insulin by managing the amount and quality of carbohydrates consumed. Managing carbohydrates can help reduce the stress on failing pancreatic beta-cells and, therefore, preserve beta-cell capacity by diminishing demand. It is important for patients to be aware of the sources of carbohydrates and the appropriate serving sizes. A great place to start this conversation will be to discuss the plate method and how to use your hand to measure carbohydrate servings. More detailed information will be provided by the dietitian and will take into account individualized medication, preferred diet pattern, and specific goals. Please use the handout on the following page to support conversations around carbohydrate management.

#### SMART GOALS

Setting SMART goals is a counseling strategy to build a patient's self-efficacy by creating simple, measurable, achievable goals. This is a great way to help patients make life changes such as incorporating carbohydrate counting. The dietitian will most likely use this type of goal setting with patients. It will be the clinicians role to check in, evaluate, and celebrate success.

#### GROUP MEDICAL APPOINTMENTS

Another way to aid your patients is to offer shared medical appointments (SMAs) where patients can share and work together to reach individual goals. Many shared medical appointments can include both a practitioner and a dietitian and are billable. More information on the implementation of group or shared medical appointments will be provided in the 3 sections of the course.

### Resources

**S** – Specific (Ex: I will lose 10 pounds)

**M** – Measurable (Ex: 2 cups of vegetables a day)

**A** – Achievable/actionable (Break larger goals into small, actionable steps)

**R** – Relevant (Low effort, high value goals)

**T** – Time bound (I will lose 10lbs in 10 weeks)

Make sure to write it down!

Students will then participate in a case study

# Cardiac Considerations

## Overview

### CARDIAC HEALTH

Metabolic dysfunction can result in the accumulation of visceral fat, increasing the risk of cardiometabolic diseases. This correlation may be a result of numerous factors including abnormalities in lipid metabolism, insulin resistance, inflammation, endothelial dysfunction, adipokine imbalance, and inflammation activation. The heart healthy eating pattern discussed in this course is intended to highlight specific dietary recommendations that have been found to address these mechanisms. The real food application and practical strategies of this diet pattern will be provided during the lectures and cooking demonstrations. Please reference the patient handout on the following page as a tool for talking with your patients about heart-healthy food.

## Key Nutrients

### SUGAR AND HEART DISEASE?

Most adults consume more added sugar than is recommended for a healthy diet. Research has found that there may be a relationship between added sugar consumption and increased risk for cardiovascular disease (CVD) mortality.<sup>36</sup> When it comes to heart health, discussing carbohydrate intake including both the amount and quality consumed is important.

### HYPERTENSION

Hypertension or high blood pressure is considered the silent killer as often it progresses without a patient experiencing physical symptoms. It is important to help patients understand the severity of this disease while also motivating them to make lifestyle changes. A great first step is to encourage patients to limit processed foods (or foods found in packaging) in order to reduce sodium intake

### ATHEROSCLEROSIS

Atherosclerosis is linked to elevated levels of cholesterol in the blood. Depending on the patient, replacing saturated fat with unsaturated may be the best diet intervention. Have patients consider having one meal per day that includes fatty fish or a plant-based option such as avocado on whole grain toast for breakfast or fish tacos for dinner.



# Shakshuka

**Yields:** 3 servings | **Prep Time:** 10 minutes | **Total Time:** 20 minutes

## DIRECTIONS

1. Thinly slice the bell peppers and onion.
2. Heat oil in a large frying pan over medium-low heat. Add the bell peppers and onion and cook for 10 minutes or until soft.
3. Mince the garlic. Add the garlic, cumin, paprika, red chili flakes and salt and cook for 1 minute.
4. Pour in tomatoes and cook for another 10 min or until mixture begins to thicken.
5. Gently crack eggs into the skillet (2 per person) over the tomato mixture, cover the pan, and cook for 5-8 minutes or until the eggs are poached but the yolks are still runny. If you do not have a cover for your frying pan, transfer the skillet (if oven safe) to 350°F oven and bake for 7-10 minutes.
6. While the eggs are cooking, roughly chop the parsley.
7. Top the finished dish with parsley and feta cheese.

*Serve with whole grain pita, bread, corn tortillas, or over rice.*

\* Vegan Option: Substitute 1 can of chickpeas for the eggs and serve as a spicy chickpea stew.

## INGREDIENTS

- Bell peppers - 2 (any color)
- Onion - 1 large
- Avocado oil - 1 Tablespoon
- Garlic - 3 cloves
- Ground cumin - 1 teaspoon
- Sweet paprika - 1 teaspoon
- Red chili flakes - ¼ teaspoon (optional)
- Salt - ½ teaspoon
- Crushed tomatoes, no salt added - 1 (28 ounce) can
- Eggs - 6 large
- Parsley - ⅓ bunch
- Feta cheese, - ½ cup (optional)

### Optional

- Rice
- Whole grain pita, tortilla or bread

**Calories:** 355

**Fat:** 247g

**Saturated Fat:** 5g

**Carbohydrates:** 18g

**Dietary Fiber:** 4g

**Protein:** 17g

**Sodium:** 370mg



# Zucchini Noodles With Peanut Sauce

**Yields:** 3 Servings | **Prep Time:** 10 minutes | **Total Time:** 20 minutes

## DIRECTIONS

1. Make the Peanut Sauce: Juice the lime into a jar and remove the seeds. Mince the garlic and add to the jar. Add the peanut butter, soy sauce, water, ground ginger and red pepper flakes. Put on the lid and shake to mix.
2. Chop the bell pepper and prepare protein by defrosting the shrimp (if frozen) or chopping, tofu or other protein into small pieces.
3. Heat the sesame oil in a large frying pan over medium-high heat. Add the protein and bell pepper and cook for 5 minutes. Add the zucchini noodles and the Peanut Sauce. Cook until the protein is cooked through and vegetables are soft.
4. Sprinkle peanuts on top. Serve warm or cold.

*Zucchini noodles may be a big change from traditional noodles. Mixing zucchini noodles with rice noodles is a great place to start.*

## INGREDIENTS

### The Thai Peanut Sauce

- Lime - 1 medium
- Garlic - 1 clove
- Unsalted peanut butter - 3 Tablespoons
- Low-sodium soy sauce - 2 Tablespoons
- Water - 2 Tablespoons
- Ground ginger - 1 teaspoon
- Red pepper flakes - ½ teaspoon

### The Protein and Vegetables

- Bell pepper - 1 large (any color)
- Protein - 1 lbs. of Chicken, Tofu, or large raw shrimp, deveined, peeled, tail-off
- Sesame oil - 1 Tablespoon
- Fresh zucchini noodles - 1 package (12-16oz)
- Peanuts - ¼ cup

**Calories:** 329    **Fat:** 17g    **Saturated Fat:** 3g    **Carbohydrates:** 15 g  
**Dietary Fiber:** 5g    **Protein:** 32g    **Sodium:** 933 mg



# Spicy Tacos

**Yields:** 3 Servings | **Prep Time:** 20 minutes | **Total Time:** 30 minutes

## DIRECTIONS

1. Pat the fish dry with a paper towel and cut into slices about 1x3".
2. Add the chili powder, cumin and salt onto a plate and mix until combined.
3. Coat the fish on all sides with a very thin layer of the spice mixture.
4. Add the oil to a large frying pan and turn the heat to medium-high. Once the oil is hot, add the fish and cook 2 to 3 minutes per side, or until golden brown and cooked through. When finished, transfer the fish to a paper-towel-lined plate.
5. If using, remove the avocado flesh from the skin and slice.
6. Warm the tortillas up in a frying pan over medium heat.
7. Assemble the tacos by topping each tortilla with fish, coleslaw mix, avocado, and salsa.

*For a vegan option, drain 1 container of firm tofu. Add the oil to a large frying pan and turn heat to medium-high. Crumble tofu into the pan. Add the seasoning per above recipe, and cook until browned. Serve per above recipe.*

## INGREDIENTS

### Chili Crusted Fish Tacos

Cod - 1 lbs (can substitute shrimp, tilapia, chicken or tofu)  
Chili powder - 1 Tablespoon  
Cumin - 1 teaspoon  
Salt /salt substitute - ¼ teaspoon  
Avocado oil - 1 Tablespoon (can substitute olive oil, canola oil etc.)

### Tortilla and Toppings

Corn tortillas - 6 taco-sized  
Coleslaw mix - 1 (10oz) bag  
Avocado - 1 (optional)  
Salsa - ½ cup

**Calories:** 370   **Fat:** 11g   **Saturated Fat:** 2g   **Carbohydrates:** 35g  
**Dietary Fiber:** 8g   **Protein:** 37g   **Sodium:** 147 mg

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