



Topic  
Better Living

Subtopic  
Health, Nutrition  
& Fitness

# The Mayo Clinic Diet

## The Healthy Approach to Weight Loss

### Course Guidebook

Donald D. Hensrud, M.D., M.P.H.  
Mayo Clinic



MAYO  
CLINIC

**PUBLISHED BY:**

**THE GREAT COURSES  
Corporate Headquarters  
4840 Westfields Boulevard, Suite 500  
Chantilly, Virginia 20151-2299  
Phone: 1-800-832-2412  
Fax: 703-378-3819  
[www.thegreatcourses.com](http://www.thegreatcourses.com)**

**Copyright © The Teaching Company, 2018**

**Contains content licensed to The Teaching Company  
from ©2018 Mayo Foundation for Medical Education  
and Research (MFMER). All rights reserved.**

Printed in the United States of America

This book is in copyright. All rights reserved.

Without limiting the rights under copyright reserved above,  
no part of this publication may be reproduced, stored in  
or introduced into a retrieval system, or transmitted,  
in any form, or by any means  
(electronic, mechanical, photocopying, recording, or otherwise),  
without the prior written permission of  
The Teaching Company.

## Donald D. Hensrud, M.D., M.P.H.

Associate Professor of Nutrition  
and Preventive Medicine  
Mayo Clinic



Donald D. Hensrud, M.D., M.P.H., holds the academic rank of Associate Professor of Nutrition and Preventive Medicine at Mayo Clinic in Minnesota. He is a consultant in the Division of Preventive, Occupational, and Aerospace Medicine in the Department of Internal Medicine at Mayo Clinic, with joint appointments in the Division of Endocrinology and the Division of General Internal Medicine. Dr. Hensrud also serves as director of the Mayo Clinic Healthy Living Program. He previously served as chair of the Division of Preventive Medicine and as director of the Mayo Clinic Executive Health Program.

Dr. Hensrud received his B.S. from the University of North Dakota and his M.D. from the University of Hawai'i. He completed residency training in internal medicine and fellowship training in preventive medicine at Mayo Clinic. Dr. Hensrud subsequently earned his M.P.H. (master of public health) from the University of Minnesota and his M.S. in Nutrition Sciences from The University of Alabama at Birmingham, where he also completed a clinical nutrition fellowship. He joined the staff of Mayo Clinic in 1992.

Dr. Hensrud is certified by the American Board of Internal Medicine, the American Board of Nutrition, and the American Board of Preventive Medicine. He is a past president of the American Board of Physician Nutrition Specialists and served as a consultant to the National Board of Medical Examiners. Dr. Hensrud is a fellow of the American College of Physicians and The Obesity Society. He serves on the board of Wellness Council of America, a nonprofit organization that is one of the nation's premier resources for workplace wellness.

Dr. Hensrud is the author of many scientific articles and book chapters and has contributed to lay education as editor of the books *Mayo Clinic Healthy Weight for EveryBody*; *The New Mayo Clinic Cookbook*, which won a 2005 James Beard Foundation Award; *The Mayo Clinic Plan: 10 Essential Steps to a Better Body and Healthier Life*; and the number 1 *New York Times* best seller *The Mayo Clinic Diet*. He was coeditor of the medical text *Clinical Preventive Medicine*, a premier reference in the field of preventive medicine, and he wrote a monthly health column for *Fortune* magazine for more than three years.

In recognition of his achievements, Dr. Hensrud has received many awards, including the Charles E. Kupchella Preventive Medicine and Wellness Award, conferred by the University of North Dakota, and the Distinguished Alumni Award, conferred by The University of Alabama at Birmingham (UAB) on the 40<sup>th</sup> anniversary of the UAB School of Health Professions. He consistently appears on the Best Doctors in America List. ■

# ABOUT MAYO CLINIC

**M**ayo Clinic is a nonprofit organization committed to providing expert, whole-person care to everyone who needs healing. The Mayo Clinic mission is to inspire hope and contribute to health and well-being by providing the best care to every patient through integrated clinical practice, education, and research. For more information, visit [www.mayoclinic.org/about-mayo-clinic](http://www.mayoclinic.org/about-mayo-clinic) or <http://newsnetwork.mayoclinic.org/>.

At the turn of the 20<sup>th</sup> century, Dr. Charlie and Dr. Will Mayo organized medical professionals in a new way to better care for patients. They created a system that allowed doctors to take the time to thoroughly investigate patient problems and to quickly and easily get help from other specialists.

The system was built on the idea that two heads are better than one. It also encouraged a continual search for better ways of diagnosis and treatment.

Through growth and change, Mayo Clinic remains committed to its heritage: thorough diagnosis, accurate answers, and effective treatment through the application of collective wisdom to the problems of each patient. ■

# TABLE OF CONTENTS

## INTRODUCTION

About Mayo Clinic .....	iii
Disclaimer .....	vi
Course Scope .....	1

## LESSON GUIDES

### LECTURE 1

The Science of Weight and Weight Loss .....	4
---	---

### LECTURE 2

Getting Ready for the Mayo Clinic Diet.....	14
---	----

### LECTURE 3

Starting Your Diet: The <i>Lose It!</i> Phase .....	25
---	----

### LECTURE 4

Assessing Your Weight-Loss Progress .....	35
---	----

### LECTURE 5

Maintaining Your Program: The <i>Live It!</i> Phase .....	44
---	----

LECTURE 6	
Tracking Your Weight-Loss Progress .....	55
LECTURE 7	
Adapting the Mayo Clinic Diet .....	66
LECTURE 8	
Exercise, Activity, and Health .....	78
LECTURE 9	
Behavioral Strategies for Weight Loss .....	88
LECTURE 10	
Cooking the Mayo Clinic Diet Way .....	97
LECTURE 11	
Overcoming Obstacles to Weight Loss .....	108
LECTURE 12	
Handling Lapses and Keeping Weight Off .....	120
 <b>SUPPLEMENTAL MATERIAL</b>	
Bibliography .....	129
Image Credits .....	136

# DISCLAIMER

This series of lectures is intended to increase your understanding of how doctors diagnose and treat diseases and how you can improve your own health by being an active and informed patient. However, these lectures are not designed for use as medical references to diagnose, treat, or prevent medical conditions, illnesses, or trauma, and neither The Teaching Company nor the lecturer is responsible for your use of this educational material or its consequences. Furthermore, participating in this course does not create a doctor-patient relationship. The information contained in these lectures is not intended to dictate what constitutes reasonable, appropriate, or best care for any given health issue, nor does it take into account the unique circumstances that define the health issues of the viewer. If you have questions about the diagnosis, treatment, or prevention of a medical condition or illness, you should consult your personal physician. Please consult your physician or other health-care professional before beginning or changing any fitness or nutrition program to make sure that it is appropriate for your needs. The individuals pictured in this material are models, and the photos are used for illustrative purposes only. There is no correlation between the individuals portrayed and the condition or subject discussed. The opinions and positions provided in these lectures reflect the opinions and positions of the relevant lecturer and do not necessarily reflect the opinions or positions of The Teaching Company or its affiliates.

The Teaching Company expressly DISCLAIMS LIABILITY for any DIRECT, INDIRECT, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOST PROFITS that result directly or indirectly from the use of these lectures. In states that do not allow some or all of the above limitations of liability, liability shall be limited to the greatest extent allowed by law. ■



# THE MAYO CLINIC DIET: THE HEALTHY APPROACH TO WEIGHT LOSS

People often go on a diet to lose weight and improve their health. Almost as often, they go off the diet, only to regain the weight. Why does this happen? Mainly, it is because of the dieter's mentality, the belief that a diet should be rigid, austere, and temporary.

The Mayo Clinic Diet is different. It isn't a temporary weight-loss program but a permanent lifestyle change. It isn't one size fits all but is tailored to each individual's needs and tastes. By following an eating plan that's low in calories yet satisfying, and through incorporating more physical activity, you will be able to lose weight, keep it off, and improve your health in countless ways.

In this course, Dr. Donald Hensrud, director of the Mayo Clinic Healthy Living Program in Rochester, Minnesota, will take you step by step through the Mayo Clinic Diet and show you how it can be customized just for you. You'll begin with a review of the science of overweight and obesity, learning the wide-ranging effects that

excess weight has on your physical health. Next, you will review the important steps in preparing for your new, healthier lifestyle. Then, you will quickly jump into the two-week *Lose It!* phase of the program, where you will learn to break some negative habits and adopt some healthy habits that will help you on your weight-loss journey.

After learning about *Lose It!*, you will get ready for the second phase of the diet by learning how to track your eating and exercise behavior and why this is important for weight-loss success. You will also learn how to analyze this data to enhance your success and overcome setbacks. Then, you will learn about the *Live It!* phase of the program, where you adopt the strategies and behaviors that will help keep the weight off for the long term. You will set appropriate goals and targets using the SMART paradigm, and you will learn to make adjustments to your program to suit your particular dietary needs.

Throughout this part of the course, you will also visit the Mayo Clinic Healthy Living Program Kitchen, where Executive Wellness Chef Jen Welper will teach you how to organize your kitchen for success and demonstrate some of the basic skills you'll need for cooking healthy meals.

In the second half of the course, you'll meet Dr. Warren Thompson, an exercise expert with the Healthy Living Program. Together, Dr. Hensrud and Dr. Thompson will discuss why activity is so important to health and weight loss, and they will show you the most effective ways to increase your physical activity. You will also meet Dr. Matthew Clark, a behavioral health specialist at the Healthy Living Program, who will discuss the psychological aspects of adopting healthy behaviors.

Next, you will spend a very special lecture in the kitchen with Chef Jen, who will demonstrate how to quickly prepare a week's worth of healthy meals. These meals incorporate healthy ingredients,

healthy techniques, and terrific variety, yet use just a few simple ingredients that can be mixed and matched to please both your palate and your waistline.

In the final lectures of the course, Dr. Hensrud and Dr. Clark will discuss what to do when you are struggling with your diet plan. Everyone encounters obstacles now and then in their quest for better health. What matters is how you deal with them. So, these final lectures will help you learn strategies for staying on course, overcoming obstacles, and getting support when you need it.

Through learning this practical, flexible, enjoyable way of eating, you will be able to lose weight, improve your health, reduce your risk of chronic disease, improve your energy, and enjoy your life more. ■



## LECTURE 1

# THE SCIENCE OF WEIGHT AND WEIGHT LOSS

Effectively managing weight sounds so easy—eat less and exercise more—but the factors that go into it are tremendously complex, as evidenced by how many people have been gaining weight over the past 40 years in the United States and around the world. The Mayo Clinic Diet involves making beneficial lifestyle changes in diet and physical activity—eating better and becoming more active. This lecture will help you on your journey to better health by teaching you about obesity, its risks, and trends in obesity over time as well as the importance of reaching and maintaining a healthy weight.

## OBESITY

- ◆ Obesity is defined as an increase in percent body fat, and that can lead to health consequences. Because many people don't have easy access to a machine that can measure their body fat, the National Institutes of Health (NIH) offers a threefold approach to assess health risks due to increased weight:
  1. Calculate your body mass index (BMI).
  2. Measure your waist circumference.
  3. Know your medical history.
- ◆ For most people, weight correlates with percent body fat. Body mass index works well in predicting percent body fat and health consequences of obesity, but it's not perfect. People who are very muscular, such as body builders, may have high weights and therefore high BMIs, but they are not at increased health risk because their percent body fat is low and their percent muscle—their lean tissue—is higher.
- ◆ You can determine your BMI in a chart, or you can calculate it yourself. Multiply your weight in pounds by 703 and divide that number by your height in inches. Then divide your answer one more time by your height in inches.
- ◆ We use BMI to classify obesity and its risks. As BMI increases, so do health risks.
  - You're underweight if you have a BMI of less than 18.5.
  - Your BMI is normal if it's between 18.5 to 24.9.
  - You're classified as overweight if your BMI is between 25 and 29.9.
  - Obesity is broken down into two classes: 30 to 34.9 for class 1 obesity and 35 to 39.9 for class 2 obesity.

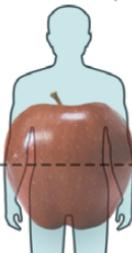
BMI	Normal			Overweight				Obese				
	19	24	25	26	27	28	29	30	35	40	45	50
Height	Weight in pounds											
4'10"	91	115	119	124	129	134	138	143	167	191	215	239
4'11"	94	119	124	128	133	138	143	148	173	198	222	247
5'0"	97	123	128	133	138	143	148	153	179	204	230	255
5'1"	100	127	132	137	143	148	153	158	185	211	238	264
5'2"	104	131	136	142	147	153	158	164	191	218	246	273
5'3"	107	135	141	146	152	158	163	169	197	225	254	282
5'4"	110	140	145	151	157	163	169	174	204	232	262	291
5'5"	114	144	150	156	162	168	174	180	210	240	270	300
5'6"	118	148	155	161	167	173	179	186	216	247	278	309
5'7"	121	153	159	166	172	178	185	191	223	255	287	319
5'8"	125	158	164	171	177	184	190	197	230	262	295	328
5'9"	128	162	169	176	182	189	196	203	236	270	304	338
5'10"	132	167	174	181	188	195	202	209	243	278	313	348
5'11"	136	172	179	186	193	200	208	215	250	286	322	358
6'0"	140	177	184	191	199	206	213	221	258	294	331	368
6'1"	144	182	189	197	204	212	219	227	265	302	340	378
6'2"	148	186	194	202	210	218	225	233	272	311	350	389
6'3"	152	192	200	208	216	224	232	240	279	319	359	399
6'4"	156	197	205	213	221	230	238	246	287	328	369	410

- ◆ A BMI that's greater than 40 is what is classified as class 3, or extreme obesity. There are various terms for a BMI greater than 40, such as extreme obesity, medically complicated obesity, and severe obesity. When BMI is greater than 40, health risks really start to increase.
- ◆ The second part of the NIH threefold approach is the waist measurement, which is an indicator of how body fat is distributed. The term "apples" describes people who tend to carry their weight around the middle of their body, and the term "pears" describes people who carry their weight around the hips, thighs, and buttocks in a lower-body distribution. In general, men tend to be apples and women tend to be pears.
- ◆ In general, people who are apple-shaped have higher health risks than those who are pear-shaped. If you carry your weight around the middle, you're at greater risk of diabetes, high blood pressure, and abnormal blood lipids, as well as heart disease.

- ◆ The reason why people who are apple-shaped have higher health risks is that they not only have fat just beneath the skin, called subcutaneous fat, but they also carry fat in and around their abdominal organs, called visceral fat.

#### Apple shape

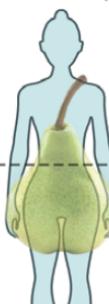
- More visceral fat
- Higher risk of weight-related health problems



Above the waist  
Below the waist

#### Pear shape

- Less visceral fat
- Lower risk of weight-related health problems



#### DID YOU KNOW?

Evidence suggests that how you carry your weight—whether you're an apple or a pear—may be even more important than your BMI in predicting health risks.

- ◆ We're not exactly sure why visceral fat is so bad, but the prevailing hypothesis is that visceral fat is close to the liver. When visceral fat is broken down into free fatty acids and transported in the blood

for the body to use for energy, the liver is exposed to a high concentration of these free fatty acids, which appear to be an important factor in causing insulin resistance. This can lead to high glucose values, high blood pressure, and abnormal blood fats—the metabolic syndrome.

- ◆ Subcutaneous fat is not totally harmless. It appears to increase health risks, too, which is why we measure the total waist measurement when determining obesity.
- ◆ The waist is measured horizontally at the top of the pelvic bones. While this may not be your natural waist, it is measured this way to standardize results among people. The waist measurement is an indicator of whether you are an apple or a pear. Your waist measurement is considered high if you're a man and your waist measurement is greater than 40 inches, or if you're a woman and your waist measurement is greater than 35 inches.



- ◆ The waist measurement represents a continuous risk, meaning that the higher the waist measurement, the greater the health risks. Within the overweight and obese categories, a high waist measurement increases health risks more than it does in the normal BMI category, where risks are low, and the extreme obese category, where risks are high regardless of the waist measurement.
- ◆ So, health risks related to weight are both related to increasing BMI and to increasing waist measurement independent of BMI. In fact, research shows that the highest health risks are associated with a relatively low BMI yet a high waist measurement.
- ◆ The third aspect of weight-related health risks is medical history. Regarding your medical history, ask yourself the following:

- Do you have a family history of obesity, cardiovascular disease, diabetes, high blood pressure, or sleep apnea? This can mean an increased risk for you.
- Have you gained considerable weight since high school? No matter your age or your BMI, gaining more than 10 pounds throughout your adult life puts you at greater risk for weight-related conditions.
- Do you already have a health condition that would improve if you lost weight? This includes conditions such as high blood pressure and type 2 diabetes.
- Do you smoke cigarettes? Are you sedentary? Both of these compound your risk of health problems due to excess weight.

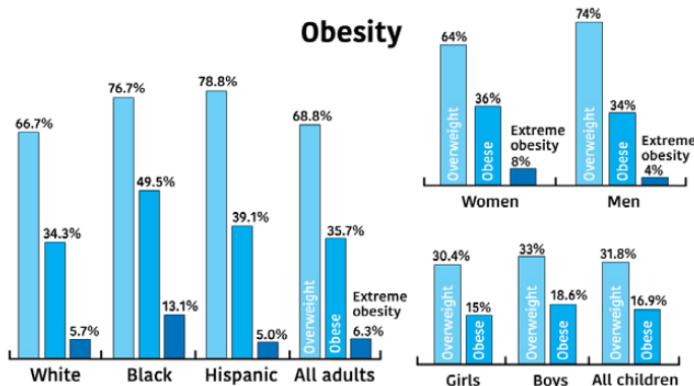
◆ While BMI and waist size are a picture of where you are now, your health history gives us a picture of your other health risks and conditions and some hints as to what might happen in the future. For people with other health risks, weight loss is even more important.

◆ If your BMI is in the normal range, your waist circumference is under the described limits, and you were able to honestly answer “no” to all of the health history questions, you may not have anything to gain by losing weight, but that doesn’t mean that some of the nutrition and exercise principles taught in the Mayo Clinic Diet can’t improve your health. Whether or not you need to lose weight, following the principles of the Mayo Clinic Diet will help improve your health.

◆ If your BMI is between 25 and 30—in the overweight range—if your waist measurement is above the recommended guidelines, and if you answered “yes” to one or more of the medical history questions, then you will most likely benefit from small to moderate weight loss. If your BMI is over 30, putting you in the obese category, some weight loss will almost certainly be beneficial.

## TRENDS IN OBESITY

- ◆ Since about the 1970s in the United States, the prevalence of obesity has gradually increased in both sexes, in all ages, and in all races. The latest figures show that among all adults, almost 69 percent, or more than two-thirds, are either overweight or obese.



- ◆ Men tend to be more overweight, and women tend to have a higher prevalence within the obese category and the extreme obese categories. Among children, 17 percent are obese.
- ◆ Caucasian men have the highest prevalence of being overweight, Hispanic men have the highest prevalence of class 1 and class 2 obesity, and black men have the highest prevalence of extreme obesity. Hispanic women have the greatest prevalence of being overweight, and black women have by far the greatest prevalence of being obese and extremely obese.
- ◆ There are many health complications of obesity. The higher the BMI, the greater the risk of type 2 diabetes mellitus, high blood pressure, and dyslipidemia—all of which are risk factors

for heart disease. The risk of these three conditions and heart disease is greater among people who are apple-shaped.

- ◆ The risk of stroke increases with increasing obesity, and overall mortality increases with obesity. This is particularly true in extreme obesity, where there's a marked increase in the risk of dying. Most cancers are related to increased weight, and the risk of lung disease also increases with increasing weight.
- ◆ One of the most underdiagnosed conditions related to obesity is obstructive sleep apnea. This type of apnea occurs when your throat muscles intermittently relax and block your airway during sleep, particularly when people sleep on their back. There are many cases of obstructive sleep apnea out there; many people have it and don't know it.
- ◆ Other health conditions that increase with increasing weight are degenerative arthritis, gallbladder disease, and gastroesophageal reflux disease (heartburn). There's also a liver condition called nonalcoholic fatty liver disease that's related to obesity. A small percentage of people who have nonalcoholic fatty liver disease can go on to develop fibrosis, cirrhosis, and even liver failure.
- ◆ With increasing weight, women can experience gynecologic abnormalities, such as infertility and polycystic ovarian syndrome. Both men and women who are obese also have an increased risk of varicose veins and skin problems, such as intertrigo and cellulitis. There's also an increased risk of complications during surgery or pregnancy with increasing weight.
- ◆ Obesity can impact quality of life in many ways, aside from increasing your risk of specific diseases and conditions.

- ◆ Just as obesity has been increasing over time, some health complications from obesity have also increased, such as diabetes. This increase is largely due to the increase in weight over the years, because there's such a strong relationship between increased weight and diabetes.

## WEIGHT LOSS

- ◆ Losing and maintaining weight will help treat and even prevent the conditions associated with increased weight. Weight loss is one of the most effective ways to lower blood pressure. In addition, joint symptoms improve, people can move around more easily—the list goes on and on. Improving habits in diet and physical activity can lead to modest weight loss and decrease your long-term risk of disease.
- ◆ Like many things, weight is determined by a combination of genetics and environment. In addition, there are probably many different genes that influence our weight. About 30 to 50 percent of weight is related to genetics; the rest is environment. Then, there are individual factors, such as diet and physical activity habits, that are separate from the environment.
- ◆ The set-point theory states that it's difficult to lose and maintain weight loss because the body wants to stay at a certain weight. This may explain why it's more difficult for some people than others to lose weight, and it may be influenced by genetics. However, it's difficult to determine how strong this effect may be.



### DID YOU KNOW?

When compared to someone with a normal BMI, people who are overweight are three times more likely to have diabetes, and people who are obese are seven times more likely to have diabetes.

- ◆ While changes in both diet and activity factors are related to the increasing prevalence of obesity, there is more evidence that the major factor responsible is a decrease in daily physical activity, separate from exercise.

- ◆ The energy balance equation states that the calories we eat minus the calories that we burn will determine our weight. There are things you can do that influence the equation. For example, if you get too little or too much sleep, you tend to burn fewer calories and weigh more.



### DID YOU KNOW?

One study reported that Americans burned 130 calories per day less at work in 2010 than they did in 1960.

## Suggested Reading

Dagan, et al, "Waist Circumference vs Body Mass Index in Association with Cardiorespiratory Fitness."

Ebbert, et al, "Fat Depots, Free Fatty Acids, and Dyslipidemia."

Farias, et al, "Set-Point Theory and Obesity."

Hensrud, "Diet and Obesity."

—, *The Mayo Clinic Diet*.

Hensrud, et al, "Extreme Obesity."

Jensen, et al, "2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults."

Lee, et al, "Upper Body Subcutaneous Fat Is Associated with Cardiometabolic Risk Factors."

Pontzer, "Hunter-Gatherer Energetics and Human Obesity."

Rosenquist, et al, "Visceral and Subcutaneous Fat Quality Is Associated with Cardiometabolic Risk."



## LECTURE 2

# GETTING READY FOR THE MAYO CLINIC DIET

The Mayo Clinic Diet consists of two phases: *Lose It!*, a two-week jump-start phase in which you can lose weight relatively quickly by changing a number of habits, and *Live It!*, in which you take the habits that you changed in *Lose It!* and turn them into long-term lifestyle changes that will help you continue to lose weight and manage your weight loss over time. The Mayo Clinic Diet is a practical and enjoyable program that will help you not only lose weight, but also improve your health and feel better. The following three lectures will walk you through the phases of the Mayo Clinic Diet in detail.

## PREPARING FOR THE MAYO CLINIC DIET

- ◆ In preparation for starting the Mayo Clinic Diet, motivation to lose weight is important to consider, both now and in the future. What is your inner burning desire that will help you keep weight off in the long term? There may be several reasons, such as having better health, having more energy, and looking better and feeling better. All of these reasons are valid, but what matters is what is important to you.
- ◆ Spend a few minutes thinking about what motivates you to lose weight and write down all of your motivators. Post them where you will see them often; this will help you when you're having a temporary challenge or need a pick-me-up. Add new ones to your list as you go through your weight-loss program.
- ◆ After you have written down what motivates you to lose weight and you have read through the first five chapters of *The Mayo Clinic Diet* book (available separately from this course), pick a start date. It can be helpful and motivating to know exactly when you'll be off and running. Choosing a start date is also helpful because you'll need to do a little preparation before then. You'll want to be as ready and prepared as possible so that you don't have to take time later to make adjustments while you're focusing on your plan.
- ◆ Next, get your kitchen ready, including your cupboard, pantry, and fridge. The idea is to get rid of high-calorie, processed foods and stock up on lower-calorie, unprocessed foods, especially frozen or shelf-stable basics that you can keep on hand. That way, when you need a meal in a hurry, you'll be ready to go and you won't be tempted to grab a less healthy option.
- ◆ The next step in preparing for the Mayo Clinic Diet is exercise. Line up the gear you'll need for physical activity. Make sure that you have a good pair of walking shoes, comfortable clothes,

and whatever else you need to be physically active. In addition, you may need some specific items, such as a yoga mat or a bicycle, depending on the types of exercise you choose.

- ◆ If you're just starting to exercise, talk to your doctor first about your plans and any concerns you should address. From there, talk to your friends who exercise or the staff at a fitness facility about their ideas on exercise. They can provide helpful tips that can help get you started.

## Are You Ready to Start a Weight-Loss Program?

Managing weight takes time and planning, so how do you know if you're ready? You don't want to put off your start date any longer than necessary, but you also don't want to set yourself up for failure by trying to lose weight at a time when you're facing a lot of obstacles. Take this quiz to determine if now is a good time to make big changes to your daily routine.

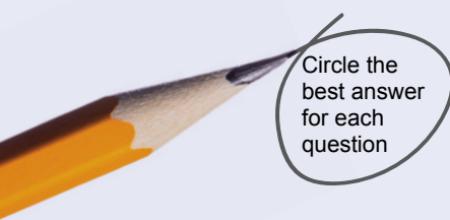
- 1 How motivated are you to lose weight?**
  - Highly motivated
  - Moderately motivated
  - Somewhat motivated
  - Slightly motivated or not at all motivated
- 2 Considering the amount of stress affecting your life right now, to what extent can you focus on weight loss and on making lifestyle changes?**
  - Easily
  - Relatively well
  - Uncertain
  - Somewhat or not at all

- 3 Initially, people often lose weight quickly with the Mayo Clinic Diet. But in the long run, it's best to lose weight at a rate of one to two pounds a week. How realistic are your expectations about how much weight you'd like to lose and how quickly you want to lose it?**

- Very realistic
- Moderately realistic
- Somewhat realistic
- Somewhat or very unrealistic

- 4 Aside from special celebrations, do you ever eat a lot of food rapidly while feeling that your eating is out of control?**

- No
- Yes



Circle the best answer for each question

- ◆ You'll also want to set up a tracking system so that you can track your progress. In the beginning, during the *Lose It!* phase, it is recommended that you use a habit tracker. If you have a copy of *The Mayo Clinic Diet Journal* (available separately from this course), you can use the habit tracker there, or you can easily develop your own using paper, an app, a whiteboard, or whatever works for you.

**5 If you answered “yes” to the previous question, how often have you eaten like this during the last year?**

- a. About once a month or less
- b. A few times a month
- c. About once a week
- d. About three times a week or more

**6 Do you eat for emotional reasons—for example, when you feel anxious, depressed, angry, or lonely?**

- a. Never or rarely
- b. Occasionally
- c. Frequently
- d. Always

**7 How confident are you that you can make changes in your eating habits and maintain them?**

- a. Completely confident
- b. Moderately confident
- c. Somewhat confident
- d. Slightly or not at all confident

**8 How confident are you that you can exercise several times a week?**

- a. Completely confident
- b. Moderately confident
- c. Somewhat confident
- d. Slightly or not at all confident

If most of your responses are a, then you're probably ready to start a weight-loss program. If they're mostly b and c, consider if you're ready or if you should wait and take action to prepare yourself. If they're mostly d, you may want to hold off on your start date.

If there is a lot of stress in your life now, investigate ways to better manage the stress. If it's overwhelming, consider talking to a licensed mental health professional. If you're too busy and won't be able to devote the necessary time to the program, perhaps wait until things settle down and you're less busy. Take the time you need to address any issues that may prevent your full participation in the program.

You may want to talk to your health-care team about what you can do to increase your readiness. Then, when you're ready to revisit your readiness, ask yourself these questions again.

## Habit tracker

✓ Check if done



	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	TOTALS
<b>ADD 5 HABITS</b>								
1. Eat a healthy breakfast	✓	✓		✓		✓	✓	5
2. Eat vegetables and fruits	✓	✓	✓		✓		✓	5
3. Eat whole grains	✓	✓	✓	✓		✓	✓	6
4. Eat healthy fats	✓	✓	✓	✓	✓		✓	6
5. Move!	✓		✓		✓	✓	✓	5
<b>BREAK 5 HABITS</b>								
1. No TV while eating			✓		✓		✓	3
2. No sugar	✓	✓	✓		✓	✓	✓	6
3. No snacks	✓	✓	✓	✓		✓	✓	6
4. Moderate meat and dairy	✓	✓	✓	✓	✓		✓	6
5. No eating at restaurants	✓	✓	✓	✓	✓	✓		6
<b>5 BONUS HABITS</b>								
1. Keep diet records	✓	✓	✓	✓	✓	✓	✓	7
2. Record exercise/activity	✓	✓	✓	✓	✓	✓	✓	7
3. Move more!	✓						✓	2
4. Eat “real!” food	✓	✓		✓			✓	4
5. Write your daily goals	✓	✓	✓	✓	✓	✓	✓	7
<b>TOTALS:</b>	<b>14</b>	<b>12</b>	<b>12</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>14</b>	

- ◆ Later, during the *Live It!* phase, you'll need a way to log your daily and weekly goals. Just as with the habit tracker, you can use *The Mayo Clinic Diet Journal* to log your goals, track servings from the different food groups, and track your activity, or you can use your own activity monitor, app, or tracking system.

## THE MAYO CLINIC DIET

- ◆ The Mayo Clinic Diet is much more than a diet—it's a lifestyle change program. It is broken down into two different phases: *Lose It!* and *Live It!*.
- ◆ In the two-week *Lose It!* phase, you can lose weight quickly by suddenly changing a number of habits. All of these habits are safe and healthy. You are asked to add five habits, break five

habits, and adopt five bonus habits. For example, one of the five habits you can add is to eat breakfast. Studies have shown that people who eat breakfast have a better time managing weight than people who don't. Another habit to add is to eat more vegetables and fruits, which are low-energy-density foods that can help you lose weight.

- ◆ In the Mayo Clinic Diet pilot program, people lost on average about 6 to 10 pounds in the two weeks of the *Lose It!* phase. When people started changing their habits, they reported that it seemed challenging at first, but once they got into it, it wasn't that bad. And they felt empowered; they reported that they did much better than they thought they could.
- ◆ *Live It!* is an indefinitely long lifestyle-change phase where you take the habits that you learned in *Lose It!* and build on them. And you know that you can do it because of the results you achieved in the *Lose It!* phase. You've lost some weight, and the goal is to continue to lose weight at a rate of about one to two pounds a week until you reach your goal weight.
- ◆ There are various tools that can help people in the *Live It!* phase. One of these is the Mayo Clinic Healthy Weight Pyramid, which is a guide on how to eat not only to lose weight but also to improve health.
- ◆ Food pyramids have been around since the U.S. government released its first one in 1992. Unfortunately, that first pyramid



### DID YOU KNOW?

According to the National Weight Control Registry, 78 percent of registrants who have lost weight and kept it off share the habit of eating breakfast every day.

was heavily influenced by industry and therefore didn't give the best advice.

The second pyramid that was issued was color-coded without images of food, and this was confusing to many people.

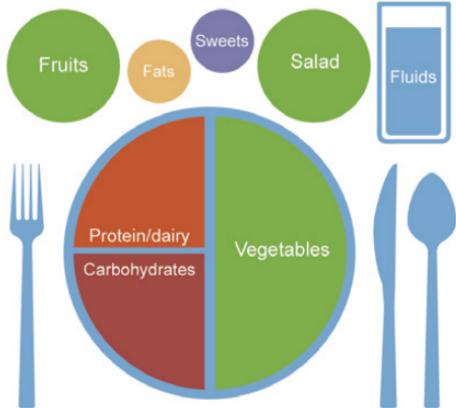


- ◆ The Mayo Clinic Healthy Weight Pyramid has been around for more than 15 years and has been a helpful tool from the beginning.

It's divided into different food groups. At the bottom of the pyramid are fruits and vegetables. Above that are whole-grain carbohydrates. Above that are lean proteins and dairy, followed by healthy fats and, at the top of the pyramid, a small amount of sweets. At the center of the pyramid is daily physical activity—both because of its effect on weight loss and on improving health.

- ◆ The idea behind the Mayo Clinic Healthy Weight Pyramid is to eat more foods from the food groups at the base of the pyramid and less food from those at the top—and start moving more. In each of the food groups, healthy choices are recommended.
- ◆ Today, the U.S. government uses a plate to help guide healthy-eating choices. Because people eat from more than just a plate, Mayo Clinic created the Mayo Clinic Healthy Dining Table, which illustrates on a very practical basis how to apply the Mayo Clinic Healthy Weight Pyramid. On the Healthy Dining Table, you'll see not only a main plate, but also a salad plate; a fruit bowl; a small bowl for healthy fats, such as nuts; a small plate for a sweet, such as dark chocolate; and a glass for fluids, such as water.
- ◆ In a Mayo Clinic Diet meal, vegetables and fruits should make up the largest portion of your meal. Vegetables should make

up half of your plate, and fruits have their own bowl—you can eat them with the meal, as a snack, or both. An easy way to include more vegetables in your diet is to have a green salad with your meal, which is why there is a separate salad plate.



- ◆ Other foods should be eaten in moderation. Limit carbohydrates to a quarter of your plate. The same goes for protein and dairy. Fats and sweets should be eaten sparingly, and they may not be a part of every meal. For your fluids, include beverages that are low in calories or calorie-free. Water is best.
- ◆ To help estimate how much food from each food group you should eat, there are icons, or an object, to help you estimate serving sizes easily. There is no calorie-counting and there are no complicated formulas to use with the Mayo Clinic Diet. You become an expert in estimating serving sizes and how much you're eating of certain foods.

### Pyramid Servings at a Glance

<b>V</b>	Vegetables	<b>C</b>	Carbohydrates	<b>Ft</b>	Fats
<b>F</b>	Fruits	<b>PD</b>	Protein/Dairy	<b>S</b>	Sweets

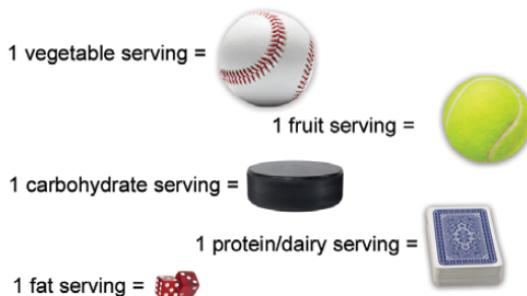
Item	Amount	Food group servings
Oatmeal, instant, plain (made with water)	1 packet	1.5
Chicken, grilled	1 sandwich	1 2 1
Spinach salad with fruit	1 salad	2 1 1

Item	Amount	Food group servings
Vegetable or vegetable beef, canned (broth-based)	1 cup	1
Spaghetti with marinara sauce	1 cup	2 2 1
Hummus, home-prepared	4 tablespoons	1
Bread, banana	1 slice	0.5 1 1 1
Yogurt, frozen, fat-free	½ cup	0.5 1
Orange, grapefruit or pineapple, unsweetened	4 fluid ounces	1

Please refer to *The Mayo Clinic Diet* book for more complete lists of foods and icons used for estimating serving sizes.

- ◆ For example, a serving of vegetables is about the size of a baseball. A serving of fruit is about the size of a tennis ball. A carbohydrate serving is about the size of a hockey puck. A protein or dairy serving is the size of a deck of cards or smaller. A fat serving is the size of one or two dice.
- ◆ It is recommended that you track your diet and activity patterns during the *Live It!* phase because people who track their habits are more successful at weight loss than people who don't. And as time goes on, it becomes second nature. You'll make new habits in how you eat, and hopefully the new way you're eating will be practical and enjoyable, which is critical to making it sustainable as a lifestyle habit.
- ◆ If you think about what determines how much

#### Visual Guide to Serving Sizes



you eat, it's not calories; it's the volume or weight of food that you consume that determines satiety, or feeling full. Some foods have a lot of calories in a small volume and, therefore, are very energy dense, such as butter or sugar. Other foods are bulkier and contain more volume and weight, but not many calories. These foods are low in energy density. These are foods that contain water, fiber, or even air.

- ◆ Vegetables and fruits have a lot of water and a lot of fiber, which adds bulk and volume but not calories. You can eat more of these foods, and the weight and volume will fill you up, but you won't consume a lot of calories. If you're eating more fruits and vegetables, you're actually eating more food but getting in fewer calories—and that's a good thing.

### DID YOU KNOW?

There are the same number of calories in one and a third sticks of butter as there are in about 20 heads of lettuce or 35 cups of green beans.



1 1/3 sticks of butter

20 heads of lettuce

35 cups of green beans

- ◆ Water contained in food has a greater effect on increasing satiety than consuming water separately, probably because the water is absorbed more quickly if it's consumed separately. So, choosing foods that are high in water content will lower the energy density of a meal and increase your satiety.

### DID YOU KNOW?



Research has shown that someone will become more satisfied by eating soup than by eating the same amount of dry ingredients and water separately.

- ◆ A common attitude among people who are trying to lose weight is that they have to deprive themselves. An important benefit of the Mayo Clinic Diet is that you don't have to live in deprivation. You can eat virtually all the fresh and frozen fruits and vegetables that you want because there will a practical limit—you're not going to overdose on green beans or broccoli. Psychologically, you won't have to feel deprived, which can be liberating and help you stay on the program.
- ◆ If you're eating more fruits and vegetables, you're not eating something else that is higher in calories. You'll consume fewer calories so that you can lose weight but still achieve satiety. Often, the sauces and other things that you add to vegetables contain more calories than the vegetables, so you will need to be careful about what you put on them.

### Suggested Reading

Hensrud, *The Mayo Clinic Diet*.

Rolls, "The Relationship between Dietary Energy Density and Energy Intake."

USDA Center for Nutrition Policy and Promotion, "A Brief History of USDA Food Guides."



## LECTURE 3

# STARTING YOUR DIET: THE *LOSE IT!* PHASE

In the two-week *Lose It!* phase of the Mayo Clinic Diet, you make changes to your everyday habits. These habits are all lifestyle changes that have some evidence related to weight loss—decreasing calories eaten or increasing calories burned through physical activity. Within this phase, you add five habits, break five habits, and adopt five bonus habits. The habit tracker will help you chart your progress. The habits outlined in this lecture will be what you'll list in the left column of your table if you're creating one on your own.

## ADD FIVE HABITS

1. Eat a healthy breakfast—but not too much.
  - Evidence shows that people who consume breakfast tend to have an easier time controlling their calorie intake and managing their weight. One of the theories behind this is that if people eat breakfast, they may be less hungry later on. Conversely, if people don't eat breakfast, they may be much hungrier later on and snack more or eat more at subsequent meals.
  - There are a number of things you can do to eat a healthy breakfast, all based on personal preference. These include grabbing some fruit, a whole-grain bagel, a yogurt, or a breakfast wrap as you walk out the door in the morning. To save time, you can prepare breakfast the night before. For example, put the cereal in a bowl on the counter. If you have more time, you can make a smoothie.
2. Eat vegetables and fruits.
  - Try to shoot for four or more servings a day of vegetables and three or more servings a day of fruits. There's no limit on the amount of fresh or frozen vegetables and fruits, in their natural form, that people can eat.
  - There are different things you can do to increase your intake of fruits and vegetables. Make smoothies with fruit. Add fruit to a dish, such as cereal, or even to a salad. Vegetables are good by themselves, or you can prepare them in different ways, such as making soups or adding them to casseroles.
  - In general, the key is to eat fresh and frozen fruits and vegetables without high-calorie sauces or dips. Frozen fruits and vegetables can be just as healthy, and in some cases healthier, than fresh ones because some vitamins, such as vitamin C, degrade with time. If vegetables sit on a shelf for a long time, the vitamin C content and other nutrients may slightly decrease. Most frozen vegetables are frozen very soon after picking, which can help preserve the nutrients.



### DID YOU KNOW?

- Don't indulge in dried fruits and fruit juice too much. Those are more concentrated sources of calories.
- 3. Eat whole-grain carbohydrates, such as brown rice, oatmeal, whole-wheat bread, or whole-grain pasta.
  - This habit is both for health and for weight reasons. From a weight standpoint, whole grains contain fiber; therefore, they're bulkier. This can contribute to satiety, or the feeling of fullness. Whole grains are lower in energy density than refined grains.
  - You can do many things to increase your intake of whole grains, such as swapping whole-wheat bread or pasta for the regular versions.

Studies have shown that people who eat more vegetables and fruits tend to weigh less and gain less weight over time.

## DID YOU KNOW?



Studies have shown that people who eat a diet that's higher in fiber tend to weigh a little bit less over time.

4. Eat healthy fats, such as olive oil, vegetable oils, and nuts.
  - Fat intake doesn't correlate with weight as much as people think, as long as you're burning calories through physical activity. The key is to eat healthy fats, such as nuts. Nuts are particularly filling; they cause us to feel satisfied if we listen to our bodies. People are able to have a small amount of nuts, become satisfied, and then eat fewer calories from other foods.
  - It's true that you can eat too much fat. However, if you're reducing your intake of less healthy fats, such as high-fat dairy products or high-fat meats, then there's room to include some healthy fats in your diet. You can do this in many different ways. You can use nuts as a snack, or you can use them on salads and in other dishes. You can sauté foods in oil, such as canola



oil, if you don't want a strong flavor. If you want the olive oil flavor, olive oil is great for marinades and to use as a dressing.

## 5. Move.

- Try to walk or do some other type of physical activity or exercise for 30 minutes or more each day. If you're not very active, you may want to build up to this. Start slowly and gradually work up to 30 minutes, and certainly don't overdo it. Talk to your health-care team before starting a physical activity program.
- Don't do something that is painful or not enjoyable. Instead, try to work regular physical activity into your everyday life. Throughout the day, take the stairs, for example. You can even chunk up the time by walking the stairs for 10 minutes at a time. Or schedule your exercise session if it helps you to do that.
- It's human nature to want to decrease physical activity and take the shortcut. But our environment has markedly changed since the days when those who ate the most and did the least survived. These days, we have to outsmart our inner brain and look for opportunities to get activity.
- There are simple ways to do this. Park farther away from your destination. Look for excuses to get more physical activity. Try games and apps that promote physical activity if they interest you.
- If you're going to exercise, choose something you enjoy, make it a priority in your schedule, and focus on continuing it in the long term. Don't do something that you can't keep up in the long term or take on too much too fast.



- Often in life, something comes along and knocks your exercise off schedule. If this happens, one option is to change the time around: Sometimes exercise in the morning, sometimes at noon, and sometimes in the evening.

## BREAK FIVE HABITS

1. No eating while watching TV—and you can only watch as much TV as the time you spend exercising.
  - Watching TV is a sedentary activity, so break this habit and get moving. Also, some people tend to mindlessly eat, especially at night in front of the TV or another type of screen. This habit is not only associated with burning fewer calories, but it also can be associated with increasing your calorie intake from eating.
  - There are various ways to break this habit. For example, put a note on the TV: “No TV while eating” or “TV time equals exercise time.” If you have an exercise area in your house, you can walk on the treadmill or ride a stationary bicycle while you catch up on the news or watch your favorite program.
  - Another option is to look for alternatives. Many people find that if they turn the TV off, especially while with their family, the conversations around the dinner table are much more enjoyable and can contribute to good family dynamics.
2. No sugar, except what's found naturally in fruits.
  - Sugar contributes calories that are very easy to ingest—it's high in energy density—which can contribute to weight gain. In addition, we need other nutrients to metabolize carbohydrates, such as sugar. Also, there are some direct negative effects of sugar, such as dental cavities. Furthermore, if you're consuming drinks such as soda that contain

sugar, you may not be consuming other healthier drinks, such as milk.

- Alcohol counts as a sugar, so avoid it to decrease calorie intake, at least in the *Lose It!* phase. Also stay away from artificial sweeteners during this phase because they may increase your cravings for sweets.
- You can reduce your intake of added sugar and artificial sweeteners in many different ways. For example, drink unflavored, carbonated water. In baking, try substituting a fruit puree, applesauce, or something similar for sugar.

### 3. No snacks, except for vegetables and fruits.

- The snacks that people often eat are not that healthy, high in calories, and difficult to stop eating. That means the calorie intake from snack foods can be very high. Vegetables and fruits should be the main snacks to consume, but a small amount of nuts could be a good choice if you crave a more traditional snack.

### 4. Moderate meat intake and use low-fat dairy.

- Meat is associated with increased calorie intake, weight gain, and poorer overall health. From a health standpoint, less is better when it comes to red meat, and especially processed meat.
- Low-fat dairy contains the same nutrients as full-fat dairy except for the fat content, and the saturated fat in full-fat dairy just adds extra calories and contributes to increased cholesterol levels.



#### DID YOU KNOW?

In the United States, a large amount of sugar has been added to the food supply. Sugar has been shown to contribute to increased calorie intake and increased weight.

- Try to eat just one serving—about the size of a deck of cards—of meat daily. Eating less meat increases the opportunities to eat a wide variety of other foods, such as whole grains, pasta, fish, vegetables, or tofu.
- 5. No eating at restaurants unless the meal fits the program.
  - When people eat out, they're not in control of what they're eating. Many of the dishes served in restaurants may taste good, but they may also be very high in calories. It can be hard to know since you're not in charge of portion size or cooking techniques.
  - If you can find things on a restaurant menu that fit the overall program, that's okay, but be careful when eating at restaurants during the *Lose It!* phase. Research shows that eating out is one of the factors associated with increased calorie intake and increased weight.
  - When you do eat out, keep in mind that restaurants are often willing to change recipes or modify them to your needs. Don't be afraid to ask restaurants to change the way a food is prepared or the amount that's served.



#### DID YOU KNOW?

Studies have shown that both red meat and processed meat are associated with an increased risk of type 2 diabetes and heart disease as well as an earlier death.

## ADOPT FIVE BONUS HABITS

1. Keep food records.
  - In the *Lose It!* phase, you're using the habit tracker you created as a way to record roughly what you're doing. At the end of each day, just put a check mark next to all the habits you did. The more check marks you have, the better.
  - You can do the same thing in more detail with food records, where you write down everything you eat. This can help you to reflect, see your patterns of where your calories are coming from, and adjust as necessary.
2. Keep activity records.
  - If you keep records with your habit tracker, you know exactly what you're doing. You can reflect on that, make adjustments, and make sure that you're getting at least 30 minutes a day of physical activity.
3. Move more.
  - If you're able to move for 60 minutes a day—twice as much as the minimum 30 minutes—you can burn more calories and get more health benefits. You don't want to overdo it, but the more physical activity you're able to get, the more successful you'll be in reaching your weight-loss goals.
4. Eat real food.
  - “Real food” means unprocessed food. When food is processed, often nutrients are removed, and sugar, salt, or other less healthy ingredients are added. So, if you're eating real food, you're getting more health benefits and probably consuming fewer calories.
  - It may take time to prepare real food, but as you get better at preparation, you become more efficient. And although it may take a little more time, preparing good food for your body is more than worth it, even on a busy schedule.

5. Write down your daily goals.

- We all have certain things that drive us—not only in terms of weight goals, but in terms of achieving other things in life, such as feeling better and improving the quality of your life. Writing down your goals can help you reflect, embrace change, and keep you motivated to improve your health, as well as your weight.

## Suggested Reading

Biswas, et al, “Sedentary Time and Its Association with Risk for Disease Incidence, Mortality, and Hospitalization in Adults.”

Cho, et al, “Consumption of Cereal Fiber, Mixtures of Whole Grains and Bran, and Whole Grains.”

Flores-Mateo, et al, “Nut Intake and Adiposity.”

Hensrud, “Diet and Obesity.”

—, *The Mayo Clinic Diet*.

Kerns, et al, “Thiamin Deficiency in People with Obesity.”

Lee, et al, “Physical Activity and Weight Gain Prevention.”

Mozaffarian, et al, “Changes in Diet and Lifestyle and Long-Term Weight Gain.”

Villalobos, et al, “Nonexercise Activity Thermogenesis in Obesity Management.”

Williams, “The Benefits of Breakfast Cereal Consumption.”

Ye, et al, “Greater Whole-Grain Intake.”



## LECTURE 4

# ASSESSING YOUR WEIGHT-LOSS PROGRESS

Once you've completed the *Lose It!* phase, take time to reflect. How did the first two weeks go? Were they harder or easier than you anticipated? The habits in *Lose It!* are stretch goals; they're designed to bump you out of your comfort zone in a rather dramatic way and head you in a different direction. So, give yourself a pat on the back for making it through. Equally important, what did you learn from *Lose It!*? This is key because what you learned about yourself can help you be successful in the next phase of the diet, which is more long-term.

## REFLECTING ON THE *LOSE IT!* PHASE

- ◆ Once they've gone through the *Lose It!* phase, it's pretty common for people to realize certain things. First, it's important to realize that no one is perfect. No one does all 15 habits for the full two weeks. Give yourself a break from the start; you can't expect perfection.
- ◆ You may have realized that the *Lose It!* phase wasn't as bad as you anticipated going in. Think about the habits that you changed. Some of the habits are more difficult than others. Typically, the hardest one is no eating while watching TV, and the second hardest habit to break is decreasing sugar intake. But even with these habits, it usually wasn't as bad as people thought it would be.
- ◆ You might have realized that watching TV isn't an essential part of your schedule, and you're doing fine without it. Or it might take some time to change this behavior. Perhaps for now, you can focus more on the tasty and healthy meal you're eating and the people you're with rather than the TV.
- ◆ As you reflect on the *Lose It!* phase, what's realistic for you moving forward? What modifications do you want to make, and what habits become sustainable in the long term?
- ◆ The other thing that people often learn is that going through the *Lose It!* experience empowered them. You've been through it. Hopefully, you've experienced some weight loss in the process. Almost all people do, and usually the more habits people follow, the more weight loss they experience.
- ◆ Before you started *Lose It!*, you didn't know what to expect or if you would be able to change these habits. Now that you've completed it, hopefully you feel empowered and have more confidence in your ability to continue to do well in the future

in *Live It!* as you turn this into a lifestyle of healthy habits and sustained weight loss.

- ◆ After the two weeks on the *Lose It!* program, take a look at the numbers. Look at your weight record, whether you kept it in *The Mayo Clinic Diet Journal* or in a notebook or on your phone. Check to see how much weight you have lost. You can also re-measure your waist and see if your waist size has decreased.
- ◆ If you've seen improvement, great! If not, keep moving forward. However, don't get too caught up in the numbers. This is going to turn into a lifestyle program for a long time to come, and you'll have more opportunities to continue to change and lose weight.
- ◆ Even if you didn't lose a single pound, you were successful if you adopted even some of the habits. You ate better, you were more active, and therefore, your health improved. Your health will improve through better habits in diet and physical activity even separate from weight loss.
- ◆ One of the things you can do to help yourself moving forward is to look back and analyze your habit tracker. You can see patterns in your habits, both looking across and down the habit tracker.
- ◆ Looking across the habit tracker, which of the habits were more challenging for you? You can total them up on the right



side for each week or for the two weeks. Continue to work on the more challenging habits in the future.

- ◆ You can also look down the columns on the habit tracker. Were there certain days that were more challenging than others? You can use this information as you move forward to try to modify your habits on certain days of the week.
- ◆ Try to look at what worked for you in *Lose It!*, what didn't work overall, and why. Maybe there are some things that you can change. Maybe there are other things that are very challenging—things that you can accept for now and move on.
- ◆ As you transition to *Live It!*, think about these habits and try to maintain them as you move forward. But as you maintain them, they should be continued within your own lifestyle in a way that's not drudgery. They should be practical, hopefully somewhat enjoyable, and fit within your lifestyle so you don't have to make a heroic effort to keep them going. If you can't continue one of them perfectly, do what you can in that area—it's better than doing nothing.
- ◆ The whole purpose of *Lose It!* was for you to jump in and change a number of habits that hopefully led to real weight loss. There weren't many details in *Lose It!*, such as how many calories you should eat each day, and that was intentional. By changing key habits related to eating and exercise, you were hopefully able to lose weight without getting lost in the details.
- ◆ Transitioning from *Lose It!* to *Live It!* is about staying on track and building on the changes you've made. Over time, small, consistent changes can add up to big results.
- ◆ One of the key goals of *Lose It!* was to create a mental reset so that you're no longer tied to your old ways of thinking about eating and moving. Your job now is to start thinking in terms of

a lifelong approach. Because this new way of eating and moving is based on a number of general principles, there are endless ways of staying with it without getting bored or overwhelmed.

## REVIEWING YOUR NEW HABITS

- ◆ Some of the habits you've worked on so far may have been more challenging than others. While you may not be able to maintain all of the habits perfectly as time goes on, try to maintain as many of them as you can and build on them as you go.
- ◆ The first five habits are lifestyle strategies you want to keep for life. Maintain these habits as much as possible. Each day, eat a healthy breakfast, plenty of fruits and vegetables, whole grains, and healthy fats. It's also very important that you continue to make time for physical activity. If you can work toward increasing your physical activity even more than you



## Bending the Rules on Breaking Five Habits

The rules for the five habits that you break in the *Lose It!* phase still need to be followed after you complete the phase, but it's okay to bend the rules. For example:

**Sugar.** Will you ever have a piece of dessert or a glass of wine again? Yes, you will. But the distinguishing factor is habitual versus occasional. Can you have cake on your birthday? Yes. Should you have cake or dessert every day? No. Keep sugar special and limit it.

**Restaurants.** It's not that you can never eat at restaurants again. But try to eat at home more often because you'll tend to eat healthier when you make your own meals. And when you do eat at restaurants, continue to try to stick with your plan.

**Snacks.** If you can keep processed snacks out of your house and stock your kitchen with fruits and vegetables, eventually you won't think twice about grabbing a peach or a small handful of nuts to satisfy a craving. What about the big party at your friend's house? Go and have some (but not all) of the food, but keep the occasion special and return to your regular routine the next day.

**Screen time.** The habit of eating while in front of a screen is best broken for good. This doesn't mean that you can't have some unbuttered popcorn at the movies, but TV dinners should largely remain a thing of the past.

already have, go for it! Do this safely, making gradual increases as your fitness increases.

- ◆ The second set of habits are intended to limit behaviors that add unnecessary calories. People often wonder whether these rules still need to be followed after the *Lose It!* phase—and they do, as much as possible. But on occasion, it's okay to bend the rules a bit.
- ◆ The last batch of habits in *Lose It!* are bonus habits. With some of these habits, it's best to try to maintain them for life, such as eating "real" (not processed) food and exercising more. When

it comes to keeping records, continue the activity until you feel like you have a handle on the big picture—you've learned your weaknesses and the triggers behind them.

- ◆ Think of this as a journey in which you continue to make changes as time goes on. Soon, you may find yourself eating foods that you never thought you'd eat because you didn't

## Setting Up Your Kitchen for Success

To get ready for the *Live It!* phase of the Mayo Clinic Diet, set up your kitchen for success with the proper cookware and utensils. The following items will help you cook healthy and achieve restaurant-quality results:

- ◆ a hard-anodized sautée pan for scrambling eggs, searing chicken breasts, or a piece of salmon and a deeper sauté pan for sautéing large amounts of vegetables or for making a rice pilaf
- ◆ good-quality utensils that have a silicon bottom or are made with high-heat rubber
- ◆ good-quality measuring cups and teaspoons (perhaps made of stainless steel) as well as a liquid measuring cup (made of glass or plastic)
- ◆ a pair of tongs with a nonmetal tip
- ◆ storage containers in various shapes and sizes for portion control (with a good seal)
- ◆ a wire or plastic strainer (which you can rest on top of a pot of boiling pasta to simultaneously steam vegetables)
- ◆ a good-quality peeler
- ◆ an ice cream scoop for use as a portion scoop
- ◆ an instant-read thermometer for making sure that you are not over- or undercooking chicken or fish
- ◆ a honing steel for sharpening knives

like them—or thought you didn't. With the right attitude, you can learn to like new foods, and many wonderful foods exist. If you remain open and curious, the journey will only get better as you move forward.

## TIPS FOR MOVING FORWARD

- ◆ Change can be challenging, but don't underestimate yourself. Consider what you accomplished in *Lose It!*. Even if you only take very small steps in the beginning, as long as you keep moving down the path of healthy weight loss, the journey will become more enjoyable.
- ◆ Is it really this easy? No, or everyone would be doing it. Is it possible? Absolutely, and you're on your way. Don't be surprised if you encounter some roadblocks ahead—everyone does. Although you receive a lot of guidance in this course, keep in mind that this is your journey and your plan. This is you forging your own path toward a healthier lifestyle.
- ◆ Make the plan yours. Design it and tailor it in a way that fits you. Having a plan that's individualized to your tastes and lifestyle will make it easier to keep up over time. This individualized approach is much better than continuing to search for the elusive silver (weight-loss) bullet. This doesn't mean, however, that you can't or shouldn't reach out to others for support, including family, friends, and professionals.
- ◆ As you learn the basic concepts of healthy eating and becoming more active, make sure that the execution fits you, your schedule, priorities, and overall philosophies. Weight loss is a complex process. There are hundreds of factors that affect weight and activity; your job is to determine what you need to do to make your plan work for you. And don't feel as

though you can't make changes along the way. If something isn't working, try another approach.

- ◆ Also, keep it simple. Try not to get hung up on details, such as the precise number of food group servings in your meal or exactly how many calories you burned swimming laps. Sometimes, paying too much attention to the details can make it even more difficult to reach your goals.
- ◆ Feel free to revisit the two-week *Lose It!* phase any time you need a refresher course or feel yourself slipping back into old habits. Consider *Lose It!* your personal reset button that you can use at any time you feel you need to get back on track.
- ◆ Eventually, as you become comfortable managing your diet and daily activities, you may no longer need to revisit this course. The goal is to get you to a point where you're fully in control and you have the skills needed to maintain a healthy lifestyle on your own. As your new eating and activity routines—your new habits—become second nature, you'll make decisions that will automatically default to the healthy option.

## Suggested Reading

Elliot and DeWan, *The Complete Book of Knife Skills*.

Hensrud, *The Mayo Clinic Diet*.



## LECTURE 5

# MAINTAINING YOUR PROGRAM: THE *LIVE IT!* PHASE

It's time to transition to the second phase of the Mayo Clinic Diet, the *Live It!* phase. In this phase, you're focusing on a lifestyle change. You'll be taking the habits from *Lose It!*, learning some new skills, and developing long-term lifestyle changes in diet, physical activity, and behaviors that will help you not only lose weight until you reach your weight goal, but also help you feel better and improve your overall health. The more you can tailor this plan for yourself, the more success you'll have.

## GOALS

- ◆ Everybody has different goals. Some people want to lose a lot of weight; some people want to lose a little weight. Other people want to focus more on their health or want to be able to move more and be more active with their family. A great goal for everyone is just feeling better and increasing their quality of life. There are many different types of goals, and they should be personalized.
- ◆ A common goal is to lose weight. With regard to weight-loss goals, medical studies show that in general, people may not be totally realistic. They may want to have a goal weight that they haven't weighed since high school. It's important to have a realistic goal from the beginning.
- ◆ The danger in setting unrealistic weight-loss goals is that people focus too much on the numbers on the scale without focusing on how to reach that goal. And when they don't see the numbers on the scale change as quickly or as much as they want, people get frustrated. They throw in the towel, ignore the weight they've already lost, and end up gaining the weight back.
- ◆ One way to make goals more realistic is to break them up into short- and long-term goals. For example, maybe your short-term goal is to lose five pounds or five percent of your weight. Once you've reached that goal, then you can make another goal. That makes your long-term goals more achievable. Weight goals are outcome goals.
- ◆ Activity and dietary goals are often performance goals, which are based on a process or an action. It's something you do that helps you achieve your outcome goal. A performance goal with activity might be to start walking 15 minutes a day, four days a week. You're gradually going to build that up

over time, so your goals can continue to change. A common feature of a performance goal is that it should be SMART: **s**pecific, **m**easureable, **a**ttainable, **r**elevant, and **t**ime-limited (or **t**rackable).



- ◆ Think about your performance goals. What can you do in physical activity and in diet to help you achieve your goals for weight loss, feeling better, and other outcome goals? Apply the SMART concepts to your performance goals and ultimately change your lifestyle and reach your outcome goal.

## TARGETS

- ◆ The *Live It!* phase offers a more specific plan for how many calories you should consume each day to lose weight and what foods you should eat to help you stay within that calorie limit. This is done by setting pyramid serving targets. The food choices in these targets are based on the Mayo Clinic Healthy Weight Pyramid, which is basically your playbook for healthy eating.
- ◆ The pyramid serving targets serve two purposes: They can help you lose weight so that you reach the goal for

weight loss that you established, and they will help you maintain your weight loss by establishing a healthy-eating program that you can enjoy for a lifetime. The serving targets teach you how to eat healthy, and after doing it long enough, it becomes habit.

### DID YOU KNOW?

What you think of as a serving may actually be a portion. A serving is an exact amount of food, based on common measurements such as cups, ounces, and tablespoons. A portion is the amount of food you put on your plate. A portion of food may contain several servings.

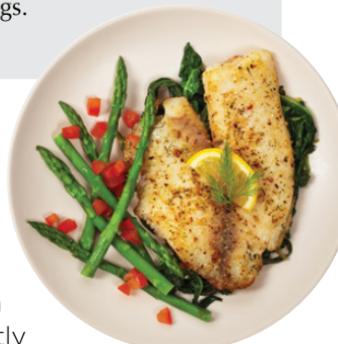
- ◆ To create your individualized plan based on serving targets, you'll need to perform three steps:

#### 1. Determine your daily calorie target.

- To lose weight, you need to take in fewer calories than what you're currently consuming. To do this, it helps to set a target.

In the *Live It!* phase, your goal is to lose about one to two pounds a week. That means consuming at least 500 to 1,000 calories a day less than you normally do. If you eat 500 fewer calories than you usually do each day and keep your activity level about the same, you should lose about one pound in a week, because 3,500 calories equals about a pound of body fat.

- You can adjust your calorie target based on your own goals and how quickly you want to lose weight. If you feel exceptionally hungry or lose weight too quickly, consider moving up to the next calorie level. If the weight isn't coming off quickly enough, you can move down a calorie level. But if you do this, don't drop below the lowest level listed because you may not get enough nutrients.



## Your daily calorie target for healthy weight loss

Weight in pounds	Starting calorie target			
Women	1,200	1,400	1,600	1,800
250 or less	✓			
251 to 300		✓		
301 or more			✓	
Men	1,200	1,400	1,600	1,800
250 or less		✓		
251 to 300			✓	
301 or more				✓

2. Determine your daily serving targets for the different food groups in the Healthy Weight Pyramid.

- This program focuses on servings from food groups in the Mayo Clinic Healthy Weight Pyramid rather than on calories. Tracking servings is much easier than counting calories, and it gives a close-enough measurement of calorie intake. It also provides a guide to what kind of foods to eat, ensuring that you get a balanced diet.

## Serving recommendations for daily calorie targets

Food group	Daily calorie targets				
	1,200	1,400	1,600	1,800	2,000
V Vegetables	4 or more	4 or more	5 or more	5 or more	5 or more
F Fruits	3 or more	4 or more	5 or more	5 or more	5 or more
C Carbohydrates	4	5	6	7	8
PD Protein/Dairy	3	4	5	6	7
Ft Fats	3	3	3	4	5

- The food groups on the pyramid are vegetables, fruits, carbohydrates, protein and dairy, and fats. The servings for carbohydrates, protein/dairy, and fats groups are upper limits. Try not to exceed them. The closer you stick to the targets for these food groups, the more likely you are to be successful in losing weight. Alternatively, the servings targets for vegetables and fruits are lower limits. You should eat at least the number of servings listed, and you can eat more if you want to. In general, for better weight management, limit the number of servings you eat of most foods, but increase the number of servings of fruits and vegetables.



#### DID YOU KNOW?

Studies show that eating more vegetables and fruits is a key factor in weight management. Vegetables and fruits are low-energy-dense foods that will fill you up but not provide a lot of calories.

3. Learn to quickly estimate serving size for each of the different food groups.
  - To lose weight and keep it off, it's important to learn how to estimate servings so that you can control your portions. The bottom line is to be able to look at different foods and quickly estimate how much equals one serving.

## Quick guide to serving sizes

Vegetables	Calories	Visual cue
1 cup broccoli	25	1 baseball
2 cups raw, leafy greens	25	2 baseballs
Fruits	Calories	Visual cue
½ cup sliced fruit	60	Tennis ball
1 small apple or medium orange	60	Tennis ball
Carbohydrates	Calories	Visual cue
½ cup pasta or dried cereal	70	Hockey puck
½ bagel	70	Hockey puck
1 slice whole-grain bread	70	Hockey puck
½ medium baked potato	70	Hockey puck
Protein/Dairy	Calories	Visual cue
3 ounces of fish	110	Deck of cards
2–2½ ounces of meat	110	½ deck of cards
1½–2 ounces of hard cheese	110	½ deck of cards
Fats	Calories	Visual cue
1½ teaspoons peanut butter	45	2 dice
1 teaspoon butter or margarine	45	1 die

## THE MAYO CLINIC HEALTHY WEIGHT PYRAMID

- ◆ What's important in the Mayo Clinic Healthy Weight Pyramid is not only the number of servings, but the types of food that you're eating. The goal is to promote weight loss, but also improve your health. For example, if you ate 600 calories from jelly beans in a day, you'd lose weight, but this isn't

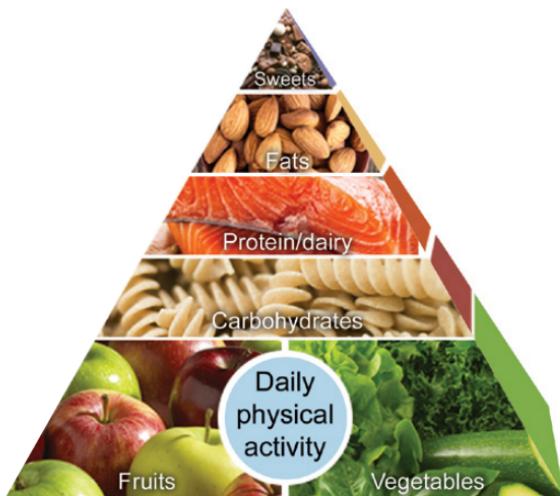
## Estimating Your Servings

Estimating your servings at meals is a great way to control the calories you consume. Unfortunately, the eye can be deceiving. Most people habitually, and unintentionally, underestimate the number of servings they eat and consume more calories than they realize. Here's an exercise to help you get a better sense of servings:

- 1 Pour dry cereal into a bowl until you have what you think is about half of a cup, which is a serving size for many cereals. Don't use a measuring device; just depend on your own estimation.
- 2 Now pour the cereal out of the bowl and into a measuring cup. How close did you come to half of a cup? Most people imagine it as being a greater amount than it actually is.
- 3 You can also pour in the bowl the usual amount of cereal you take. Then, pour it out into the measuring cup and see how many servings were in your bowl. Often, people eat two or three servings of cereal during breakfast.
- 4 Try this exercise with favorite foods that you frequently eat. The more you practice, the more you'll be able to identify at a glance what a serving is, and the more control you'll have over your portion sizes.

the healthiest way to do it. Within each of the food groups, healthier choices are recommended.

- ◆ At the bottom of the Mayo Clinic Healthy Weight Pyramid are fruits and vegetables, and the most servings from fruits and vegetables is recommended. You can eat virtually unlimited amounts of fresh or frozen fruits and vegetables. This can help not only to manage your weight, but it can also help lower cholesterol, lower your blood pressure, reduce risk of many types of cancers, decrease the risk of heart disease, and increase longevity.



- ◆ In the carbohydrates group, whole grains are recommended. They're healthier than refined grains, such as sugar and refined flour. Whole grains are associated with decreased risk of heart disease and cancer and increased longevity compared to refined grains.
- ◆ In the protein and dairy group, low-fat dairy products and lean sources of protein are recommended. Fish and beans are healthy sources of protein. Some people worry about not getting enough protein when they are eating a plant-based diet like the Mayo Clinic Diet. But on a plant-based diet, the bottom line is if you get



#### DID YOU KNOW?

There are the same number of calories in one regular-sized typical candy bar as there are in a small apple, orange, pear, and banana combined.

enough calories and eat a variety of foods, you'll get enough protein. Studies have shown that eating plant protein is associated with greater longevity than animal protein.

#### DID YOU KNOW?

Approximately 85 percent of men and two-thirds of women eat more protein than they need.

- ◆ In the fats food group, healthy fats—such as olive oil, canola oil, soybean oil, and nuts—are recommended. Some types of fat have health benefits. Olive oil, for example, is associated with increased longevity. Unsaturated vegetable oils, such as soybean and canola, which are liquid at room temperature, are healthier than saturated fats, such as lard, which is solid at room temperature.
- ◆ At the top of the pyramid is sweets. You are allowed—if you want—up to 75 calories of sweets each day. This isn't going to increase your overall calorie intake that much, but it makes the whole program more of a lifestyle approach rather than a strict diet. It helps free you from the dieter's mentality that a diet is negative and really hard to do. If you want to keep it healthy, go for dark chocolate, which has antioxidant compounds and appears to lower blood pressure.



#### DID YOU KNOW?

Studies have reported that eating just one ounce of nuts—a small handful—at least four times weekly will decrease the risk of dying from cancer and cardiovascular disease as well as help you live longer.

## Suggested Reading

American Dietetic Association, "Position of the American Dietetic Association."

Anderson, et al, "Health Benefits of Dietary Fiber."

De Vet, et al, "Ain't No Mountain High Enough?"

Foster, et al, "What Is a Reasonable Weight Loss?"

Hensrud, *The Mayo Clinic Diet*.

Hu, "Resolved."

Lent, et al, "Initial Weight Loss Goals."

Mozaffarian, et al, "Changes in Diet and Lifestyle and Long-Term Weight Gain."

Ros, "Health Benefits of Nut Consumption."



## LECTURE 6

# TRACKING YOUR WEIGHT-LOSS PROGRESS

**R**esearch has shown that people who track their efforts are more successful in reaching their health goals than those who don't track. In this lecture, you will learn about tracking your progress. To help you track more effectively, you will learn background information on calories, servings, and influences on how much we eat.

## CALORIE TARGETS

- ◆ If you eat more calories than you burn, you'll gain weight. If you eat fewer calories than you burn through activity in the day, you'll lose weight. People sometimes say that they'll come up with a plan to lose weight that doesn't involve paying attention to calories—that calories don't count. But ultimately, they do.
- ◆ There are things that modify the equation of calories in-calories out. For example, it's been shown that the amount of sleep that you get each day can influence your weight. People who sleep too little or too much tend to weigh more than people who get the recommended seven to nine hours of sleep a night. Sleeping more or less than this may affect hormones, appetite, and metabolism in subtle ways.
- ◆ Nonetheless, calories do count—although you won't be counting calories in the Mayo Clinic Diet. This diet uses servings rather than calories. Within each food group, each serving—whether it's a piece of fruit or a piece of fish—has about the same number of calories. So, you're doing the same math, but in bigger units.
- ◆ You may have wondered why someone who has more weight to lose gets to eat more calories than someone who only needs to lose a few pounds. You might be thinking that a person who falls into the obese category of the BMI chart should eat even less than the person who falls into the overweight category. But here's why it doesn't work that way.
- ◆ The more someone weighs, the more calories he or she burns at rest. People sometimes think that they must weigh more because they have a low metabolic rate, but that's not true. The more people weigh, the more lean tissue, or muscle, they have. About 20 to 35 percent of extra weight

is lean tissue to support that extra weight. So, as weight increases, fat tissue increases quite a bit, but muscle tissue also increases.

- ◆ So, with increased weight there is increased muscle mass, and because muscle tissue burns calories even at rest, increased weight is associated with increased muscle, which is associated with an increased resting metabolic rate. This is why calorie goals increase with increasing weight.
- ◆ While resting metabolic rate, or resting energy expenditure, increases with increasing weight, total energy expenditure may not increase with increasing weight. This is because total energy expenditure includes physical activity energy expenditure, so if someone who weighs more is less physically active, his or her resting energy expenditure may be greater than someone who weighs less, but his or her total energy expenditure—which is important for managing weight—may be less because of decreased physical activity.
- ◆ Research studies have shown that in general, we underestimate the calories that we eat. It varies widely, but this occurs in everyone, even people who aren't trying to lose weight. And it may be more prominent in people who are trying to lose weight. In general, we underestimate our calorie intake by about 20 percent.
- ◆ This isn't anything intentional or devious; we're just not good judges of how many calories we eat. One of the reasons why is because the amount of food you see on your plate doesn't always correlate with calories.



#### DID YOU KNOW?

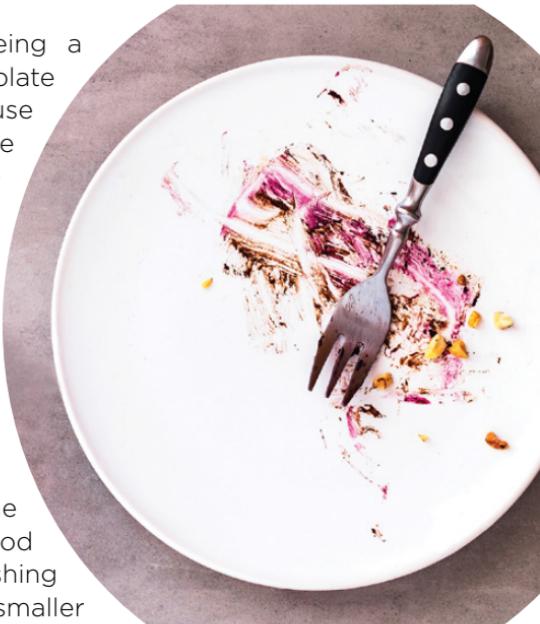
Everyone eats about 20 percent more calories than they think they are eating.

- ◆ If you start out at 1,200 calories as a goal for the day, you may perhaps eat 20 percent more than that. That's okay—and expected—and a buffer has been built into the Mayo Clinic Diet for that, so you should be able to lose weight even though you may be taking in a few more calories than you think.
- ◆ The other reason you start out at a fairly low calorie target in the Mayo Clinic Diet is you're allowed to eat all of the fresh or frozen fruits and vegetables you want. You might consume a few more calories overall, but this is already factored into your plan. You'll still be eating fewer calories than you were before and should still be able to lose weight.

## SERVING TARGETS

- ◆ Sometimes, determining the number and type of servings in your meal is challenging. When you're eating out or preparing more complex meals, one of the skills to develop is deconstructing the recipe or food into its various food groups so that you know the number of servings you're eating.
- ◆ There will be times when you may have the calorie information of a food readily available, but it's difficult to deconstruct the item to determine the individual food group servings. When that happens, you can convert the calories to servings of the food group that the item is closest to.
- ◆ As you're recording your food intake, keep track of your overall serving targets as you go through the day. At the end of the day, you want to achieve those serving targets through your various meals and snacks. This is the way that you control calories and the amount of food that you eat to achieve your weight-loss goal, and it's easier than trying to count calories in all of the different foods that you eat.

- ◆ Keep in mind the difference between a serving and a portion. A serving of food is a specific amount of food equal to a certain number of calories, but a portion is the amount of food that you put on your plate. That may be one serving, two servings, or three servings.
- ◆ Most people eat more than one serving in a typical portion. By paying attention to servings, you can pay attention to the portion on your plate, and you should reach your serving and, therefore, your calorie target for the day.
- ◆ There are various ways of trying to keep portion control in check while you're meeting your serving targets. Try to rely on hunger rather than habit. You can eat all the servings of vegetables and fruits that you want, so if you want to beat the system, you can have generous amounts of vegetables and fruits at your meals or as snacks.
- ◆ You may be used to being a member of the "clean plate club." This is, in part, because people don't want to waste food. However, once you've taken food, you don't have to eat all of the food on your plate. The habit of cleaning your plate may not be benefiting you because it just increases the number of unneeded calories you consume.
- ◆ The time to make the decision of how much food to take is when you are dishing up the food. If you take a smaller



amount initially and reach your serving goals, you can still achieve satiety and fullness and not overeat.

- ◆ Realize when you're full and satisfied. You can better appreciate this by incorporating mindfulness when you're eating. Eat slowly, pay attention to the taste and texture of your food, and enjoy it. When you do feel a sense of satiety or that you've had enough, then it may be time



### DID YOU KNOW?

It takes about 15 to 20 minutes for the sensation of fullness in the stomach to reach the brain.

## Beneficial Eating Habits

To set yourself up for success, here are five steps to take every time you eat:

- 1 Eat smaller portions and serve smaller amounts. Take slightly less than what you think you'll eat. Using a smaller plate or bowl makes less food seem like more.
- 2 Focus on your food. Watching television, reading, or working while you eat distracts you. Before you know it, you've eaten more than you want to. Practice being mindful and focus on what you're eating.
- 3 Because it's important to be aware of serving sizes versus portion sizes, make sure that you can see what you eat. Don't eat directly from a container. Seeing food on a plate or in a bowl gives you a better sense of portion size and, therefore, number of servings.
- 4 Because we know there's a delay between being full and feeling full, be sure to eat slowly. When you eat too quickly, your brain doesn't get the signal that you're full until it's too late and you've already overeaten. This is also part of being mindful when eating.
- 5 Don't feel obligated to clean your plate. Stop eating as soon as you feel satisfied. Those extra bites of food that you're trying not to waste add unneeded calories. Eventually, you'll learn to take smaller portions to begin with so you don't waste food.

to stop. Practice this and soon it will become easier and more automatic.

## TRACKING FOOD AND ACTIVITY

- ◆ Keeping track of your eating and activity routines is important for a number of reasons. Tracking can help you identify a starting point in your health and fitness journey. Once you know this starting point, you can begin to establish a realistic road map to get to where you want to be in the future.
- ◆ Sometimes people see tracking as a demonstration of the things that they didn't accomplish. But tracking is actually a much more positive exercise. Think of tracking as an opportunity to highlight everything you did achieve.
- ◆ It doesn't matter what tool you use to keep records. Tracking can take any shape you desire, and it will help you be mindful of what you're doing to improve your diet and physical activity habits.



- ◆ It really is necessary to write down everything you're eating and doing, at least for a while. This is because people tend to significantly underestimate how many calories they consume and overestimate the amount of physical activity they do. Especially in the early stages of your weight-loss plan, it's easy to misjudge how much you're eating and how active you are.
- ◆ As long as you enter information correctly, tracking provides objective feedback on your diet and physical activity efforts so that you can see how well you're sticking with your plan. It also makes you more mindful. It helps you pay attention to what you're putting in your mouth and how much (or how little) you're moving your body. Seeing your eating and activity behaviors written down also keeps you honest and holds you accountable to yourself.
- ◆ Another advantage to tracking is that it reveals eating and activity patterns you might not be aware of. Recognizing that unwanted patterns exist is your first step toward overcoming them.
- ◆ Tracking also helps with realistic goal setting. Having an objective record of where you are now compared to where you want to be sets you up for success. It allows you to develop small, achievable goals and build on them gradually over time.
- ◆ Finally, tracking gives you motivation. When you see that you're meeting your daily and weekly goals and targets, you'll feel inspired to build on those successes.
- ◆ Write down everything you eat and all the physical activity you do. Choose a method that works for you, such as a notebook that's customized to your needs; printouts you find online; *The Mayo Clinic Diet Journal*, a workbook designed specifically for use with the Mayo Clinic Diet to track both food and activity; a

smartphone app; free or fee-based logs found on the internet, such as the Mayo Clinic Diet online program; and spreadsheets or word-processing documents. A wearable fitness tracker can measure your activity, such as steps, distance traveled, or calories burned.

- ◆ Most people benefit from a tracking system that's easy to use, not one that's so complicated it becomes an obstacle. It should also be something you can keep handy when you need it. Don't be afraid to experiment. If one tracking system ends up being too cumbersome or not detailed enough, try another until you find one that's right for you.
- ◆ In the first weeks of *Live It!*, you might find it most useful to log everything you eat and all of your physical activity each

## Rules for Successful Tracking

Whatever tracking system you choose, successful tracking comes down to a few basic rules:

- 1 Write everything down. This includes the snacks and quick nibbles throughout the day. It all adds up and contributes calories.
- 2 Don't view your records as do-or-die objectives. Instead, think of them as experiments. You're testing out what works and what doesn't.
- 3 Don't fret over your records. If one day you forget to jot down what you ate or your activities, that's okay. Estimate as best you can and get back on track.
- 4 If you have trouble remembering to write things down, set up a regular reminder, such as an email or chime on your phone or computer that occurs at certain times of the day.
- 5 Keep it simple. Your tracking system doesn't have to be elaborate. All that matters is that you record key information that will help you determine if you're meeting your goals and targets, and if not, why not.
- 6 Do it right away. You'll be more likely to keep accurate records if you log the information right after you eat and exercise.

day. As time goes by, you may only need to track habits that relate to the targets and goals you're focusing on for the week. When tracking, remember to be honest. The more accurate your records are, the more useful they'll be.

- ◆ As a baseline, the following is what you should track. Then, as you progress, you can customize this list to your needs.
  - Write down the amount of food you ate. In some cases, you may need to estimate. Then, convert the food in your meal into Healthy Weight Pyramid food group servings. Also



#### DID YOU KNOW?

Research shows that people who track their physical activity struggle less with staying physically active, exercise more often, and lose significantly more weight.

record the time of day and which meal it is, or if it's a snack. For some people, additional details such as hunger level and mood are beneficial.

- Track your daily physical activity. Along with structured activities, such as walks and aerobic workouts, record other activities that get your body moving, including recreational activities and everyday chores. Record how long you do each activity. You can also record the distance you walked, biked, or jogged. Pay attention to intensity. In general, the higher your heart rate, the higher the level of intensity.
- Record your weight. Some people prefer to weigh themselves daily. Many people prefer to weigh in every few days or once a week. Don't get caught up in the small ups and downs on the scale; focus on trends over time.
- Measure and record your waist circumference every few weeks. Your waist size can also tell you whether you're making progress on your weight-loss goals.

◆ When you meet a goal, take a moment to celebrate. Then, build on that success by modestly increasing your goal. If you don't meet a goal, instead of getting discouraged, focus on problem solving. What kept you from reaching the goal? Is it something you can change?

## Suggested Reading

Brown, et al, "Calorie Estimation in Adults."

Colditz, "Healthy Diet in Adults."

Hensrud, *The Mayo Clinic Diet*.

Lichtman, et al, "Discrepancy between Self-Reported and Actual Caloric Intake and Exercise in Obese Subjects."

Schoeller, et al, "Inaccuracies in Self-Reported Intake."



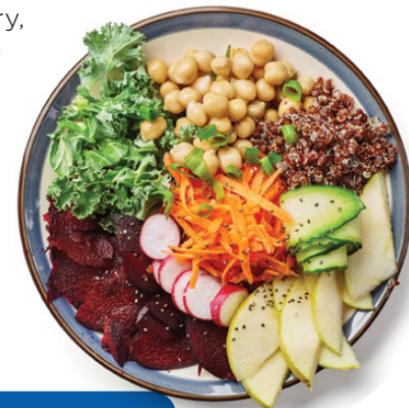
## LECTURE 7

# ADAPTING THE MAYO CLINIC DIET

Now that you have your goals, your targets, and an idea of how the Mayo Clinic Diet helps you track your food intake to reach those goals, you're going to learn about customizing the diet for your own needs. Many people have special dietary needs, whether they have a medical condition or an ethical or religious restriction. The Mayo Clinic Diet is consistent with all of these eating patterns. In this lecture, you'll learn how the Mayo Clinic Diet can be customized to fit your specific dietary needs.

## VEGETARIAN AND VEGAN DIETS

- ◆ If you're following a vegetarian diet, customizing the Mayo Clinic Diet comes down to modifying the foods in the protein and dairy group and not consuming meat or other animal products, depending on the type of vegetarian diet you follow. Some vegetarians eat eggs while others don't, and some consume dairy products while others don't. Some people avoid all animal products, including eggs, dairy, and even honey; these people are considered vegans. All of these needs can be addressed so that people who follow a vegetarian or even a vegan diet can still follow the Mayo Clinic Diet with some modifications.
- ◆ Over the years, people have had various concerns with regard to a vegetarian diet. One concern is that on a vegetarian or vegan diet you're not getting enough protein, because you're not eating meat and other animal products. The fact is that most people eat more protein than they need.
- ◆ Even if you're not getting the recommended dietary allowance, it's set high enough to meet 98 percent of the needs of the population. So, meeting the recommended dietary allowance for protein virtually ensures that you're getting enough.



### DID YOU KNOW?

The majority of people eat more than the recommended dietary allowance for protein, which is 0.8 grams per kilogram of body weight per day. For somebody who weighs 70 kilograms, or 154 pounds, that would be about 56 grams of protein per day.

- ◆ For vegetarians and vegans, there are many other sources of protein aside from animal products. Beans are an excellent source of protein, for example. And most foods, including carbohydrates and even vegetables, contain small amounts of protein. The bottom line is that if you eat a variety of foods and you get enough calories, you'll get the right types and amount of protein.
- ◆ Another concern on a vegetarian or vegan diet is that there may be other nutrients that people aren't getting enough of. One of them is vitamin B-12, which is only found in animal products. The amount of B-12 that we need is only two to three micrograms a day and dairy products and eggs contain vitamin B-12. Vegetarians who consume those foods are not at risk for a B-12 deficiency, but those who follow a vegan diet should take a B-12 supplement.
- ◆ Another nutrient that has been mentioned to be of concern on a vegetarian diet is iron. The iron that is in meat is absorbed better than iron from plant products. For this reason, the amount of iron that is stored in the body is lower on a vegetarian diet. However, having iron stores that are too high may not be beneficial for health. In addition, there is no higher incidence of iron-deficiency anemia in vegetarians compared to non-vegetarians.

## THE MEDITERRANEAN DIET

- ◆ The Mediterranean diet emphasizes eating primarily plant-based foods, such as fruits and vegetables, whole grains, legumes, and nuts. It replaces butter with healthier olive oil and emphasizes using herbs and spices instead of salt to flavor foods. It also limits red meat to no more than a few times a month, while including fish or possibly poultry in the diet at least twice a week. It also offers the option of drinking a small amount of red wine in moderation.



- ◆ This style of eating has wide-ranging benefits, and the general recommendations track pretty closely with what is recommended on the Mayo Clinic Diet. People who want to follow a Mediterranean diet can pretty easily modify the Mayo Clinic Diet so that the two diets are consistent with each other. In a Mediterranean diet, the fats group that contains olive oil might be increased a little, so you may want to decrease foods in other groups to keep the overall calorie intake consistent with your goal.

### DID YOU KNOW?

Research has shown that a Mediterranean diet reduces the risk of heart disease. It's associated with a lower level of low-density, or LDL, cholesterol—the "bad" type of cholesterol that's more likely to build up deposits in your arteries. The Mediterranean diet is also associated with a reduced incidence of cancer as well as Parkinson's and Alzheimer's diseases. Women who follow a Mediterranean diet supplemented with extra-virgin olive oil and mixed nuts may have a reduced risk of breast cancer.

## THE DASH DIET

- ◆ On the DASH (Dietary Approaches to Stop Hypertension) diet, you're encouraged to eat 8 to 10 servings of fruits and vegetables a day. With an emphasis on fruits and vegetables, the Mediterranean diet is very consistent with the Mayo Clinic Diet.
- ◆ The DASH diet also includes whole grains and low-fat dairy products. It includes some fish, poultry, and legumes and encourages a small amount of nuts and seeds a few times a week. You can eat red meat, sweets, and fats in small amounts. The DASH diet is low in saturated fat, cholesterol, and total fat. It focuses on reducing sodium intake: staying below 2,300 milligrams a day for moderate reduction and below 1,500 milligrams a day for significant reduction. All of these aspects of the DASH diet are consistent with the Mayo Clinic Diet.

### DID YOU KNOW?

The 2015 Dietary Guidelines for Americans from the U.S. government includes recommendations for healthy eating patterns that meet the dietary guidelines. These include a vegetarian diet, the Mediterranean diet, and the DASH diet.



## THE PALEO DIET AND THE RAW FOODS DIET

- ◆ A few other dietary trends are the Paleo diet and the raw foods diet. There is less evidence supporting the health benefits of following these diets than the dietary patterns that have already been discussed.
- ◆ The Paleo diet includes more protein and fewer carbohydrates. While eating fewer refined carbohydrates has health benefits, it is still desirable for health reasons to include some whole-grain carbohydrates. And consuming more animal protein from red meat—another key part of the Paleo diet—may increase the risk of diabetes, heart disease, and overall mortality.
- ◆ There are risks in eating a raw foods diet, as cooking can destroy harmful bacteria. In addition, eating only raw foods can be very restrictive.

## GLUTEN-FREE DIETS

- ◆ Another trend is the gluten-free diet. Within the carbohydrates food group, the Mayo Clinic Diet recommends whole grains that do contain gluten.
- ◆ Whole grains have been associated with many different health benefits. Whole grains, such as whole-wheat products that contain gluten, are associated with a lower risk of heart disease, a lower risk of dying from heart disease, increased longevity, and other health benefits.
- ◆ People with celiac disease or a gluten sensitivity should avoid gluten. But for most people, if you can tolerate whole grains, including them in your diet will help you improve your health and manage your weight.

## What's the Deal with Gluten?

Up to one percent of the population has celiac disease, an immune condition where the body reacts against gluten. These people can develop serious health complications if they eat gluten over a period of time. People with celiac disease should avoid foods that contain gluten, and this includes grains such as wheat, rye, and barley.



Another small group of people—a few percent—have gluten sensitivity. They don't feel as good when they eat foods that contain gluten. They may get bloating and have diarrhea, and sometimes they describe a brain fog. These people won't develop the serious health complications that people with celiac disease can develop, but they will improve the way they feel if they avoid gluten. So, they should probably avoid gluten, too.

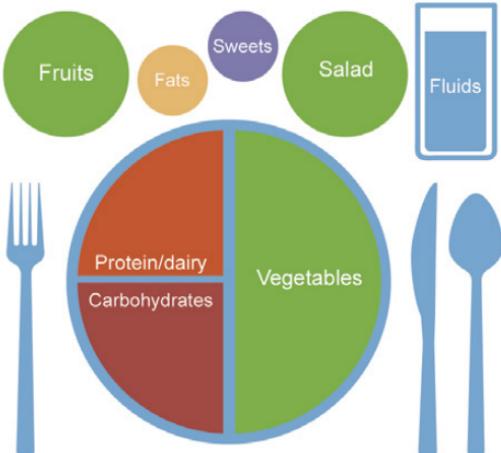
However, approximately 30 percent of the population is following a gluten-free diet because they believe it will improve their health. These people are misinformed. For most people, including whole grains in their diet will help improve their health and manage their weight.

## CREATING A PRACTICAL EATING PLAN

- ◆ The Mayo Clinic Healthy Weight Pyramid outlines the principles of eating a certain number of servings and eating the right foods in the right amounts to both better manage your weight and improve your health. But we don't eat according to the pyramid, per se. We don't put food on a pyramid; we put food on a table.
- ◆ The U.S. government has a tool, MyPlate, that illustrates how foods should go on our plates. Instead of a plate, Mayo Clinic

uses the Healthy Dining Table, which was developed because we don't just put food on one plate—we may have a few different plates.

- ◆ On Mayo Clinic's plate, which is similar to the MyPlate tool, half the plate should be vegetables, about a fourth should be from the carbohydrates group, and about a fourth should be from the protein and dairy group. That's the basis of what most of us eat. However, at many meals, we also have other foods. We have a salad plate on the side, and that encourages more vegetables. We may have fruits and fats, either with the meal or as a snack. There are also sweets, perhaps eaten for dessert. This is an entire dining plan, an entire dining table of the way we eat.



- ◆ Another important aspect of this is fluids, which people sometimes don't get enough of. Although water is the best choice for fluid, there are other good sources, too. Coffee has been shown to decrease the risk of certain health conditions, such as diabetes, liver disease and liver cancer, and Parkinson's disease. It can also improve cognitive speed, improve mood, and decrease the risk of depression. Tea is also a good fluid for most people. Green tea has been shown to have health

benefits, including possibly protecting against prostate cancer.

- ◆ Alcohol is another fluid that people consume. For people who drink alcohol, moderate consumption is associated with a reduced risk of heart disease and overall mortality. Moderate consumption is defined as, on average, no more than one drink a day for women and men older than age 65 and no more than two drinks a day for men younger than age 65.



### DID YOU KNOW?

## MEAL PLANNING

- ◆ Some people like to be told what to eat, to make choices easy. Other people like to be more flexible, and that's why Mayo Clinic teaches people about serving sizes—so they can design their own menus and choose their own foods.
- ◆ It's important to be practical with this; most people don't have hours and hours to spend in the kitchen. And the real challenge is modifying your habits in what you eat. So, you may need to modify the foods that you currently eat to fit the Mayo Clinic Diet and try new foods that fit this plan.

Some people think that if they drink more fluid and have to go to the bathroom more, their kidneys have to work harder, but it's just the opposite: If you're drinking more fluid and staying hydrated, it's good for the body and good for the kidneys. The kidneys don't have to concentrate the urine, so they don't have to work as hard.

## Healthy Food Preparation

Part of what determines the nutritional value of food is the way it's cooked. Five basic healthy cooking techniques that will help you get the most out of your meals are searing, sautéing, roasting, baking, and grilling. Here are a few tips for using these methods:

- ◆  The most important thing about searing and sautéing is making sure you have a hot pan. If you're not sure if it's hot, put a little water on your fingertips and flick them at the pan, listening for a sizzle. If you cannot hear a sizzle, it is not hot enough yet.
- ◆  When roasting vegetables, spread them out on a baking sheet. If the vegetables are overcrowded, they're just going to steam.
- ◆  You can finish cooking seared salmon by placing it on a sheet pan and putting it in the oven.
- ◆  When grilling chicken or salmon, it's time to flip it when you can see the white starting to cook around the corners.
- ◆  Use a small amount of olive oil or canola oil when using any of these methods.

- ◆ In changing what you eat to fit the Mayo Clinic Diet, don't be afraid to try new foods and modify old foods that you currently eat. To make this as easy as possible, these changes should fit certain criteria:
  - They need to be practical.
  - The foods should taste good.
  - The foods you eat should fill you up.
  - They should be low in calories.
  - They should fit the Mayo Clinic Diet plan.
  - They should be health-supporting. And if they fit the Mayo Clinic Healthy Weight Pyramid, they will be.

- ◆ It takes some adjustment to make new foods and new meals. But you will establish a routine, and it will become part of a new habit. Here are some steps you can take to get to this point:

- Planning can make a big difference. Stock up on groceries on the weekend and make a plan for using those foods during the week.
- Pay attention to practicality, enjoyment, and taste. If your plan fits those criteria, it's much easier to keep up over the long term.
- Convenience is important. There may be times when you're strapped for time, so keeping certain foods around so that you can make a healthy meal relatively quickly is a big help.
- Be flexible. It's important to plan and have a routine, but life is going to get in the way. When you're traveling, for example, you may need to be flexible. But there are things you can plan for even when life gets in the way. For example, fast-food chains have some items on the menu that are relatively healthy.



## Suggested Reading

Cho, et al, “Consumption of Cereal Fiber, Mixtures of Whole Grains and Bran, and Whole Grains.”

Frassetto, et al, “Metabolic and Physiologic Improvements from Consuming a Paleolithic, Hunter-Gatherer Type Diet.”

Hensrud, *The Mayo Clinic Diet*.

Lappe, *Diet for a Small Planet*.

Mitrou, “Mediterranean Dietary Pattern and Prediction of All-Cause Mortality.”

Pan, et al, “Red Meat Consumption and Mortality.”

Sinha, et al, “Meat Intake and Mortality.”

Sofi, et al, “Adherence to Mediterranean Diet and Health Status.”

U.S. Department of Health and Human Services, “Dietary Guidelines for Americans, 2015–2020.”

Woolf, et al, “Protein.”



## LECTURE 8

# EXERCISE, ACTIVITY, AND HEALTH

**B**urning calories is a part of maintaining a healthy weight, and exercise and physical activity have huge health benefits beyond helping you lose weight and keep it off. Exercise is one of the most important lifestyle factors when it comes to preserving cognitive function and decreasing the risk of dementia. Exercise also reduces the risk of the most important health outcome: overall mortality, or the risk of dying. Exercise helps prevent weight gain, helps you lose weight, and helps prevent weight regain after you lose weight.

## BENEFITS OF EXERCISE

- ◆ Research indicates that exercise lowers the risk of the major causes of death in the United States: heart disease, cancer, respiratory diseases, accidents, Alzheimer's disease, and diabetes. Exercise also reduces the risk of total mortality; it reduces the risk of premature mortality by between 30 and 40 percent.
- ◆ Exercise helps brain function and even improves brain structure. Better brain function translates into lower risk for developing Alzheimer's disease.
- ◆ Exercise also reduces the risk of gaining weight over time. People who are active are consistently less likely to gain weight than people who are inactive.
- ◆ One type of exercise is cardiovascular exercise, which is any exercise where you increase your heart rate. The *Lose It!* phase of the Mayo Clinic Diet asks people to get 30 minutes of exercise per day, and a bonus habit in the *Lose It!* phase is 60 minutes of exercise per day. You do not have to run to get the benefits of exercise; walking 30 minutes five days a week has benefits. For people who are trying to lose weight and keep it off, 60 minutes of walking five to seven days a week is recommended.
- ◆ The advantage of vigorous exercise is for people who do not have time to walk for an hour five days a week. They can do vigorous exercise and burn as many calories in a shorter amount of time. There is some small advantage to people who do vigorous exercise over moderate exercise in terms of heart disease, but the main benefits of exercise actually come from walking.
- ◆ Light exercise includes such activities as walking at a pace of one or two miles an hour and doing some light gardening.

Moderate exercise would be walking at a pace of three or four miles an hour. Vigorous exercise would be running, so six miles an hour and up.

- ◆ Someone who is completely sedentary should start out walking 15 minutes a day and, after a few weeks, work up to 20 minutes and eventually up to 30 minutes at least five days a week.
- ◆ Interval training is the best way to improve fitness. Consult with your doctor before starting interval training because it is vigorous activity, which carries some risk, particularly for people who have been sedentary. Interval training consists of a warm-up period, then exercise at a very fast heart rate for a short period of time, and then exercise at a slower heart rate for a period of time. You continue to do a fast interval followed by a slow interval in a series. Interval training helps to build fitness more than exercising at a steady heart rate.
- ◆ Resistance training lowers the risk of diabetes and heart disease. It's particularly helpful for people who want to reduce their waist circumference. A combination of cardiovascular exercise and resistance training is recommended, as opposed to one or the other.



#### DID YOU KNOW?

The standard recommendation for exercise is 30 minutes of moderate exercise five times a week. If you'd rather spend fewer days exercising, you can do vigorous exercise three days a week for 25 minutes.

- ◆ Exercises like yoga promote balance and flexibility. Balance training is recommended for people who are 60 years old and over. Balance is important because falls are a very big problem, and balance training has been shown to reduce the risk of falls.
- ◆ Exercise can also improve your mood. Getting active not only helps you blow off steam when you're stressed out, but it also affects your brain chemistry in a way that improves your mood. It helps increase the production of your brain's feel-good neurotransmitters, called endorphins. Regular exercise can also increase self-confidence, relax you, and lower the symptoms associated with mild depression and anxiety. It can even improve your sleep, which is often disrupted by stress, depression, and anxiety.
- ◆ All of these exercise benefits can ease your stress levels and give you a sense of command over your body and your life. And if you feel physically better—whether in terms of your energy and endurance or feeling good about how you look in the mirror—that will improve your mood, too.
- ◆ Exercise helps boost your everyday energy levels. Regular exercise makes your cardiovascular system more efficient, which means that oxygen and other nutrients get where they need to go to nourish your brain and body. Having more energy is good for you, and it's good for your relationships.
- ◆ One way that exercise can enhance your relationships is if you work out with a buddy—whether it's your spouse, your kids, or a friend. You can even use exercise as a way to make new friends, by taking a class or joining a club or league.
- ◆ Exercise also helps you sleep better, as long as you do it at the right time of day. Because exercise affects your body's energy efficiency, your body will use its downtime more efficiently,

too, and you'll get deeper, more refreshing sleep. The only exception is that if you exercise too vigorously late at night, it may keep you from falling asleep.

## CARDIOVASCULAR EXERCISE

- ◆ When it comes to your cardiovascular exercise program, start slowly and build up gradually. Increase what you do by setting SMART performance goals.
- ◆ By incorporating exercise into your lifestyle, you can markedly improve your health and burn more calories. When you start exercising, you should choose activities that you enjoy, make it a priority in your schedule, and focus on continuing it over the long term.
- ◆ Walking is a great form of exercise. It's easy to do just about anywhere and doesn't require a lot of equipment other than good shoes. If you don't enjoy walking or want to keep variety in your exercise, there are many alternatives to walking, such as swimming, biking either outside or on a stationary bicycle, yoga, Pilates, and dancing.
- ◆ Some people like to exercise in the afternoon. If you're a morning person, that may be the best time for you to exercise. Every day isn't the same, so it's important to be flexible yet

## Expanding Your Physical Activity Plan

It's important to understand the difference between physical activity and exercise. Physical activity is all the different movements we do throughout the day. Exercise is physical activity that is planned, structured, and repetitive and is performed to improve conditioning and health.

As you plan your physical activity, keep these three main strategies in mind:

- 1 Reduce the amount of time that you sit.
- 2 Get more fit with exercise.
- 3 Keep at it by establishing goals, including performance goals using SMART criteria.

still try and get exercise in your schedule somehow.

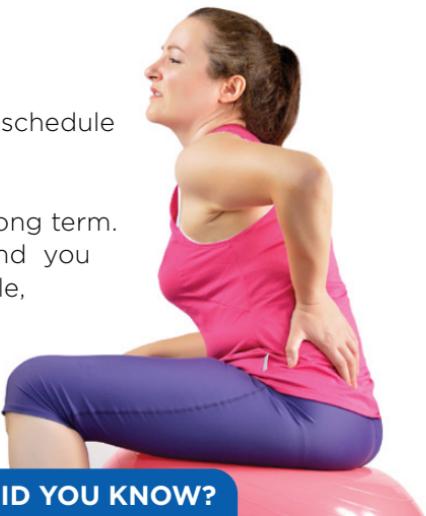
- ◆ Focus on keeping it up over the long term. If you enjoy it, it's practical, and you make it a priority in your schedule, it's easier for you to sustain it. While some people like to do the same thing over and over again, other people like variety, so you may try different activities or cross-train with different exercises.

## RESISTANCE TRAINING

- ◆ Aerobic exercise is very important for weight management because it burns a lot of calories. More and more evidence suggests that resistance training, or strength training, helps with weight management.
- ◆ All types of resistance training involve working your muscles against some form of resistance. This is typically done with free weights, weight machines, or resistance bands. You can also exercise using the weight of your own body as the resistance, as you do with exercises such as push-ups, lunges, and standing squats. Regardless of the method you choose, begin slowly. If you start with too much resistance or too many repetitions, you may damage muscles and joints.

### DID YOU KNOW?

If you have an illness or injury, you may need to modify your physical activity. In general, when you're sick, it's a good rule of thumb to rest and let your body fight the illness. However, if you have a chronic illness, you may want to try to incorporate whatever physical activity you can to help with long-term health. With injuries, it is key to not do too much activity, particularly with the injured body part, because it may make it even more difficult for your body to recover from the injury.



- ◆ Try to do resistance training two to three days a week. You can work your whole body during each session, or you can focus on your upper body during one session and your lower body during the next. To allow time for your muscles to recover, take at least one day off before working the same muscle group again.
- ◆ Here are some basic guidelines for safe, effective resistance training:

- Complete all movements slowly and with control. If you're unable to maintain good form, decrease the weight you're using or the number of repetitions you perform.
- Breathe normally and freely. Exhale as you lift a weight and inhale as you lower it.
- Stop if you feel pain. The intensity level should be somewhat hard, but you shouldn't feel pain.
- Change your routine frequently to avoid injury and prevent boredom.
- Listen to your body. Mild muscle soreness for a few days after starting resistance training is normal. Sharp pain and sore or swollen joints can mean that you've overdone it.



### DID YOU KNOW?

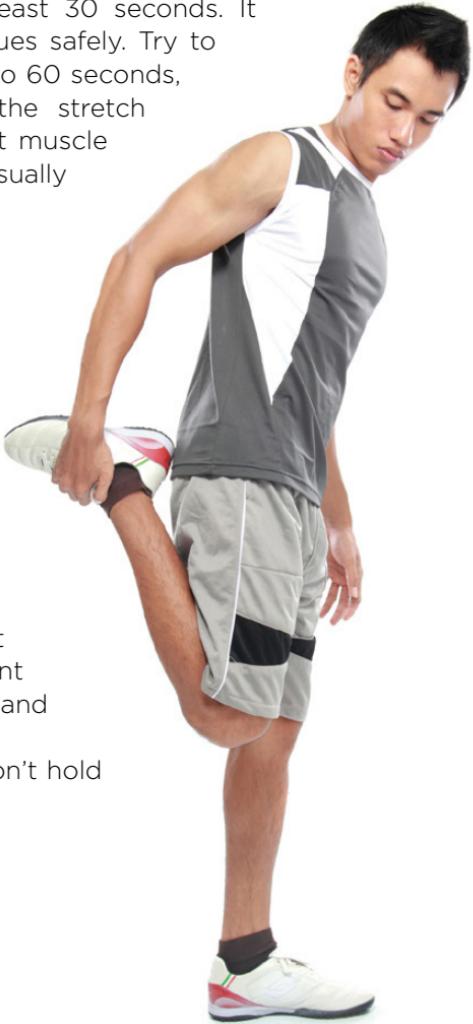
Whatever type of physical activity you do, tracking can help. As you continue to do physical activity, you can continue tracking with the habit tracker like you did in the *Lose It!* phase, or you can do it in more detailed ways, such as with *The Mayo Clinic Diet Journal*, by writing down what you do every day on paper, or with some type of technology.

- › Before your workout, do a few minutes of low-intensity aerobic exercise, such as walking on a treadmill, to warm up your muscles. Stretch your muscles after you finish your resistance work.
- › If you're new to resistance training, consider working with a certified professional at a fitness center to learn proper technique or look for a class offered through a community education program.

## THE IMPORTANCE OF STRETCHING

- ◆ Another important part of exercise is flexibility. As we grow older, we all get a little stiffer, and part of quality of life is maintaining good range of motion of different joints. Stretching and flexibility can help with this.
- ◆ As a general rule, it's a good idea to stretch whenever you exercise. Many people stretch before they exercise, but the best time to stretch is after you exercise, when your muscles are warm. If you're particularly tight, you might want to stretch every day or even twice a day. You might consider signing up for a yoga or tai chi class, which promotes flexibility.
- ◆ When stretching on your own, here are the key points to keep in mind:
  - › Warm up first. Stretching muscles when they're cold increases your risk of injury, including pulled muscles. Just like with strength training, you can warm up by walking or doing another favorite exercise at low intensity for about five minutes.
  - › Target major muscle groups. Focus on your calves, thighs, hips, lower back, neck, and shoulders. Also stretch muscles and joints that you routinely use at work or play.

- Hold each stretch for at least 30 seconds. It takes time to lengthen tissues safely. Try to hold your stretches for 30 to 60 seconds, if possible. Then, repeat the stretch on the other side. For most muscle groups, a single stretch is usually sufficient.
- Don't bounce. Bouncing as you stretch can cause small tears in the muscle. These tears leave scar tissue as the muscle heals, which tightens the muscle even further, making you less flexible and more prone to pain.
- Focus on pain-free stretching. You may feel tension while you're stretching, but it shouldn't hurt. Back off to the point where you don't feel pain and hold the stretch.
- Relax and breathe freely. Don't hold your breath.



## Suggested Reading

Barnes, et al, "The Projected Effect of Risk Factor Reduction on Alzheimer's Disease Prevalence."

Bouchard, et al, "Less Sitting, More Physical Activity, or Higher Fitness?"

Carnethon, et al, "Cardiorespiratory Fitness in Young Adulthood."

Ekelund, et al, "Does Physical Activity Attenuate, or Even Eliminate, the Detrimental Association of Sitting Time with Mortality?"

Erickson, et al, "Exercise Training Increases Size of Hippocampus and Improves Memory."

Fraser, et al, "Risk Factors for All-Cause and Coronary Heart Disease Mortality in the Oldest-Old."

Hensrud, *The Mayo Clinic Diet*.

Landhuis, et al, "Programming Obesity and Poor Fitness."

Leskinen, et al, "Leisure-Time Physical Activity and High-Risk Fat."

Matthews, et al, "Amount of Time Spent in Sedentary Behaviors and Cause-Specific Mortality in U.S. Adults."

Owen, et al, "Sedentary Behavior."

Stessman, et al, "Physical Activity, Function, and Longevity among the Very Old."



## LECTURE 9

# BEHAVIORAL STRATEGIES FOR WEIGHT LOSS

Weight loss involves changes in diet and physical activity, and people tend to focus on that. But to achieve long-term success, it's important to change your behaviors in those areas. And that can be very challenging. Habits are difficult to break, and it's challenging to make new ones. But that's what's really important to do in long-term weight management. So, this lecture will teach you how to make changes stick.

## MAKING CHANGES AND MAKING THEM STICK

- ◆ One of the starting points for any behavior change—whether it's quitting smoking or changing eating habits—is to identify your triggers and high-risk situations, or situations that are going to be difficult for you to be healthy in. If you can identify those problems ahead of time, then you can generate solutions in advance.
- ◆ When analyzing behaviors that people are trying to change, certain categories of triggers tend to emerge.
  - Social. Some people tend to eat pretty healthily when they are by themselves but tend to overeat when around family or coworkers. Other people behave in the opposite way. Sometimes there is social pressure to eat; other times, there is an internal dialogue that puts pressure on you.
  - Physical. The main physical trigger is hunger. Managing hunger is part of a successful weight-management plan. Pain is another common physical trigger. For example, if you have chronic back pain, eating can be seen as a source of comfort or distraction from the pain.
  - Emotional. Some people turn to food for comfort and stress relief. If you're a stress eater and you have an important deadline coming up, realize that you're going to have to put extra effort into eating healthy.
  - Environmental. You might be out shopping and smell food from a nearby bakery, or you go get a cup of coffee in the break room and there's a vending machine with all kinds of foods.
  - Thoughts. Sometimes we have thoughts that can get us into trouble in terms of our eating behaviors. It's your birthday, so you think that you should be able to eat whatever you want.
- ◆ Identify your main triggers and plan most carefully for those situations. Once you have identified your personal triggers,

there are a few strategies that can be used to overcome them. You can avoid some triggers entirely. For example, if you tend to make poor choices whenever you're at a fast-food establishment, maybe avoid eating in fast-food restaurants.

- ◆ But you can't avoid all of your triggers, so you have to come up with solutions for these. In a social eating situation, maybe your solution is to bring a healthy food so that you make a commitment to eating something healthy ahead of time.
- ◆ Social support is really important for weight management. There are two kinds of support: emotional and practical. In terms of weight management, sometimes you need practical support: You need someone to say, "Let's go for a walk when we both get home from work." Other times, you need emotional support: You just want to vent about how difficult it is to be tracking your food and planning physical activity. Think about what kind of support you need and who in your life could help support you.
- ◆ The Mayo Clinic Diet program places a strong emphasis on tracking your food and activity.

## Where Can You Go for Help in Changing Behaviors?

Ideally, this course is one step in the right direction. The Mayo Clinic Diet is also offered in an online program. For people who want to have an immersive experience, there are many onsite weight-loss programs around the United States, including the Mayo Clinic Diet Experience within the Mayo Clinic Healthy Living Program in Rochester, Minnesota.

In many onsite programs, people eat better, are more active, and temporarily change their behaviors. The challenge is sustaining behavior change—and weight loss—after returning home.

In the Healthy Living Program, Mayo Clinic helps people deal with this in at least three ways: by helping people design their own individualized plan, by showing (not just telling) people what to do, and by using wellness coaches who work with people onsite and then stay in touch with them for a year after the program to help facilitate ongoing and sustainable behavior changes.

Tracking is a very powerful tool for helping you lose weight and keep it off. Unless we're writing down what we're eating, we're not really aware of what we're eating.

- ◆ A big topic in behavioral psychology for weight management is mindful eating, which is simply being aware of what we're eating. Making a food record not only provides a written record of what you are eating, but it also reminds you to slow down when you're eating and think about the content of the food instead. The act of writing down can motivate you and help you set goals.
- ◆ We're all programmed to pay attention to threats. With a technique called gratitude journaling, each day we write down the things that are positive in our life, and we tend to be more grateful and happier, sleep better, and eat healthier.

## HOW TO CHANGE BEHAVIOR

- ◆ Here's a general outline of some ways you can make behavior changes:
  - Write down the behaviors that you'd like to change. This creates an objective record that can help remind you and keep you accountable.
  - Once you have a list of behaviors to change, don't try to tackle them all at once. Try an easier one first. And don't get discouraged if you're not successful every time you try. With certain behaviors, you may have to try multiple times.
  - After you've identified a behavior you'd like to change from your list, think about what drives that behavior. What benefit do you get out of it? Why do you do that behavior?
  - After you've identified a behavior and thought about the reasons you do it, come up with a few different strategies to change that behavior. For example, let's say you tend to

## Having the Right Attitude

Many behavioral changes involve having the right attitude toward new behaviors.

- Once you've identified some strategies, come up with a specific plan. The more specific you can be, the greater the chance your strategy will work. But even with a specific plan, keep in mind that things aren't always going to go perfectly.
- If you have been successful, consider what you'll need to sustain that behavior change over time. This is vitally important if you want to be able to change a behavior to help you lose weight and keep it off.

After doing this with one behavior, you can go back and try this process with another behavior.

- Acknowledge your successes, big and small. Your plan is not going to be perfect, and you may have to try different things and see what sticks and what works. Some days are tougher than others, and you may be off track for a little or eat something that you normally wouldn't. Those things need to be expected, and if a lapse happens, that's okay.
- Try to stick to a plan. You can outline the strategies ahead of time and have a plan that you follow; then, slowly, habits will develop over time.
- Keep the big picture in mind. Don't focus on short-term changes that may not last. It takes time to make changes. Be gentle on yourself as you move forward.

You can apply these ideas to behavior change regardless of the details.

These tips should help you keep your perspective as you decide what changes you want to make and what goals you want to set to achieve them.

## DEALING WITH STRESS

- Stress is an obstacle that comes up with a large number of people. If stress is an issue and you've identified behaviors you want to change, try to identify specific stressors that you may have. Then, try to look at the stressor in perspective. How big is this stress? Will it matter five years

from now? Is this something that's stressful enough that it's going to change your life? And it may be—but sometimes we get stressed out over things that aren't as big as they seem to be at the time.

- ◆ There are two types of stress: internal and external. External stress is objective. It's the situations that happen to you, such as major life changes and unpredictable events. But many times it's the internal stress—the subjective stories that we tell ourselves—that may cause us to blow external stress out of proportion and not deal with it effectively. We may not be able to change external stress, but we can change the way we internally react to external stress.



- ◆ It's good to have a variety of stress-busting techniques in your pocket. Here are a number of recommended techniques:
  - Prioritize, plan, and pace your activities. Don't try to pack in a lot in a little amount of time.
  - Get enough sleep to help clear your mind and get you ready for the day.
  - Get plenty of exercise. During physical activity, your body releases endorphins, which are chemicals produced in the body that help alleviate stress and anxiety.
  - Take stretch breaks throughout the day.
  - Organize your work spaces so you know where things are.
  - Learn to delegate responsibility.
  - Don't feel guilty if you're not productive every minute of every day. Take time to relax.
  - Spend time with people who have a positive outlook and sense of humor. Positive vibes rub off!
  - Socialize and spend time with others you enjoy.
  - Do something good just for yourself or for somebody else—something that doesn't involve food.
  - Take a day off with no set plans.

## PLANNING

- ◆ Planning can make a big difference in successful behavior change. It's very easy to fall off track if you don't have a plan for your day.
- ◆ For example, if you're traveling and all of a sudden you're hungry and in an airport, and you look around and fast food is the only option, it can be difficult not to deviate from your dietary targets. If you plan ahead for that situation, you can make this a more successful experience. For example, taking some healthy snacks with you can help prevent having to eat only whatever is around.



- ◆ Another area that requires strategies for behavior change is grocery shopping. This can be a big issue in weight loss. You don't want to shop when you're hungry, for example. When you go to the grocery store, remind yourself that if it's in the cart, it'll be in the house, and if it's in the house, it'll be in your mouth.
- ◆ This is related to the issue of willpower. Many people say that they don't have enough willpower, but that's not really true. We all have willpower. It's just that with food, we have to eat, and sometimes we don't have the willpower that we want at the time when we want it. But there are things that can enhance our willpower to help us make behavior changes, and there are things that can deplete our willpower.
- ◆ Getting enough sleep, staying physically active, and eating regular meals so you have enough food to keep you comfortable can enhance your willpower. Other things can deplete your willpower. Alcohol and stress are two examples.

Emotional reactions and having to make difficult decisions can also deplete your willpower. They can put you in a position where you may not make the best choice.

- ◆ The key to overcoming these challenges to willpower is having a plan. No matter how careful you are, you will be faced with temptations and other drains on your willpower every once in a while. Your plan should be to incorporate strategies for dealing with them, such as deciding ahead of time what you are going to do, avoiding temptation entirely, redirecting yourself elsewhere, or fighting it by just saying no.

## Guilt and Forgiveness

Two emotions related to behavior changes are guilt and forgiveness. Both of these are very important.

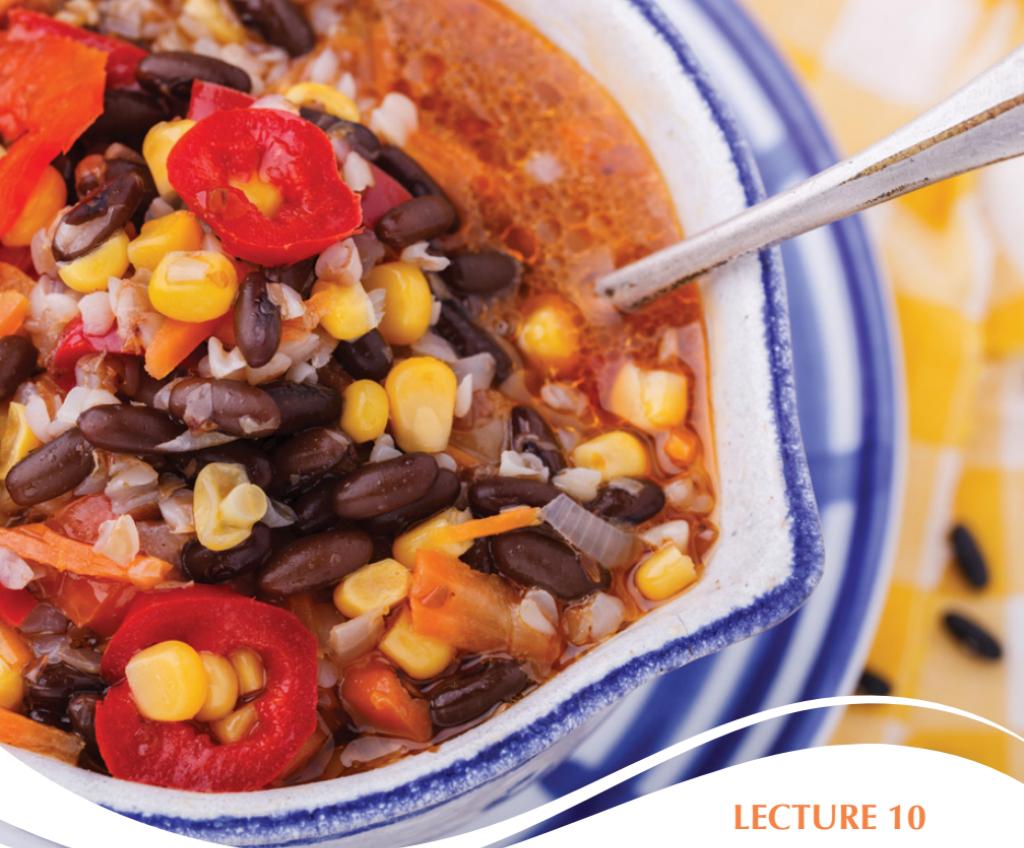
Guilt is present too much in weight-loss behavior change, and forgiveness is not present enough. We tend to beat ourselves up with guilt, and it usually doesn't lead to any positive changes. When those guilty feelings start to seep in, try to use forgiveness instead. Forgiveness can have the opposite effect of guilt; instead of perpetuating vicious cycles, it can reverse them and start a healing, positive cycle.

## Suggested Reading

Ames, et al, "Further Statistical and Clinical Validity for the Weight Efficacy Lifestyle Questionnaire-Short Form."

Clark, et al, "The Effectiveness of Wellness Coaching for Improving Quality of Life."

Hensrud, *The Mayo Clinic Diet*.



## LECTURE 10

# COOKING THE MAYO CLINIC DIET WAY

This lecture takes you to the kitchen at the Mayo Clinic Healthy Living Program to show you how to put some of the principles you've learned into practice, by taking a simple list of ingredients and mixing and matching them to create a week's worth of delicious and healthy dishes. This lecture offers proof that healthy cooking can be simple, fun, and full of variety.

## MAKING A GROCERY LIST

- ◆ When making a grocery list for the week, the most important thing is to make it simple, keeping it streamlined and practical.
- ◆ Start with vegetables. Pick five or six vegetables that you can use throughout the week that can be prepared in different ways, such as broccoli, peppers, onions, zucchini, and green onions. Pick staple vegetables that will make it easier to cross-utilize throughout the week. For example, you can use peppers in many different ways, including to make a stir-fry, chili, an omelet, fajitas, pizza, or pasta.
- ◆ Then, you want to have some grains, which are starches. This includes brown rice, quinoa, and whole-wheat pasta, pitas, and tortillas. Maybe pick three of these options for the week and then change up the selection for the next week. The key is to figure out what kinds of meals you can make with grains throughout the week and then mass-produce them. If you're going to take the time to make brown rice, make a big batch so that you don't have to make it again for another month. After you make a big batch of your chosen grain, let it cool and then portion it out into reusable storage containers or Ziploc bags. Then, write the date on them and store them in the freezer—for up to three months, as a general rule of thumb.
- ◆ For protein, options include low-sodium canned black beans, shrimp, chicken, lean



### DID YOU KNOW?

Many people buy tortillas to make tacos or quesadillas but don't plan to use them until later, and by the time they open them, they're stale or dry. Instead, make a plan to use them. If you buy tortillas, plan on having tacos one night, quesadillas another night, and wraps another night.

ground beef, and salmon. Again, you don't have to use all of these proteins in a week; maybe you just use three for a particular week and then switch up your choices. Black beans and whole grains are a good vegetarian combination that you can make many meals with, such as black beans and rice, chili, soup, stews, and quesadillas.

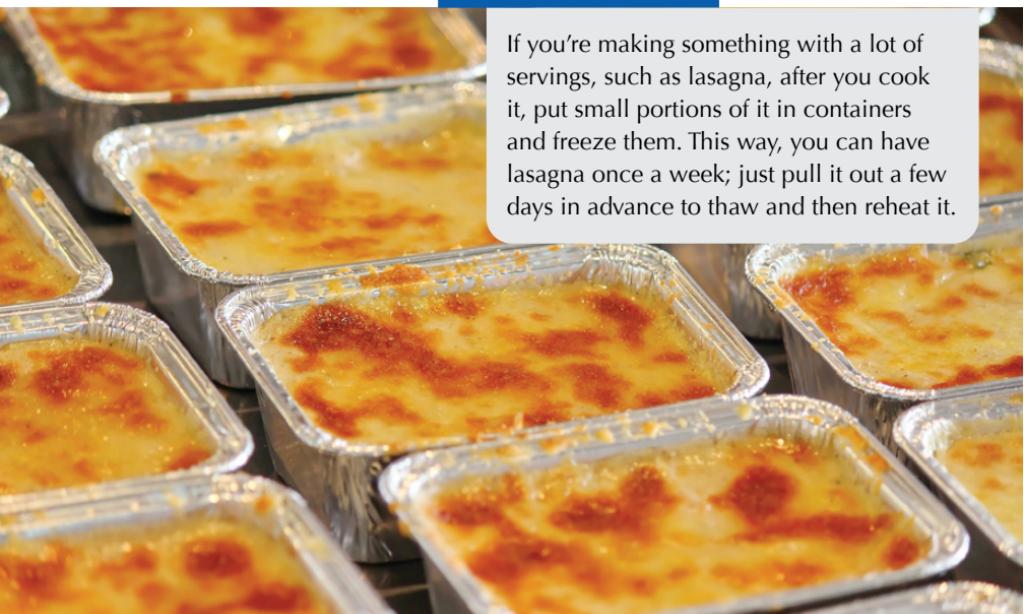
## CROSS-UTILIZING INGREDIENTS

- ◆ In preparation for assembling meals throughout the week, take the time up front to roast or sauté some vegetables and cook some grains. Once you have done this prep work, you can easily make these food items intersect with each other. It's all about how you can cross-utilize different ingredients to maximize your time when cooking and preparing food.
- ◆ For example, you could mix some steamed broccoli with whole-wheat penne pasta, pesto sauce, and shrimp for one night's dinner and then have the steamed broccoli again with spaghetti and a lean-beef Bolognese sauce on another night. As another example, you could use pre-sautéed vegetables to make fajitas or a stir-fry during the week.
- ◆ You could also add the pre-sautéed vegetables to some precooked grilled chicken, place the mixture on a whole-wheat tortilla, and sprinkle on black beans or feta cheese to make a vegetable chicken quesadilla. This is a meal that can be planned ahead of time and that might only take you about 15 minutes to assemble on a weeknight. Another use for precooked vegetables is chopping them up to make a quinoa pilaf or a brown rice pilaf, which can be paired with chicken breast, sautéed or grilled shrimp, or salmon.
- ◆ Another idea is to add your precooked vegetables to some scrambled eggs in the morning. This is a great way to add

vegetables to your breakfast, which is usually pretty difficult. You can also make an egg bake or casserole, which is easy to make with precooked vegetables.

- ◆ You'll want to have a few different sauces—such as barbecue sauce and marinara sauce—on hand to add flavor to your meals. With barbecue sauce, you could make barbecue salmon, a barbecue pita pizza with grilled chicken and roasted vegetables, or a barbecue black bean and brown rice dish with tofu as a vegetarian option. With marinara, you could make a lean-beef Bolognese sauce, a pita pizza, spaghetti, or lasagna with roasted vegetables.
- ◆ Another meal you could make with whatever ingredients you have pre-prepared is tacos. Use some chopped precooked chicken, pre-sautéed peppers, salsa, and low-fat cheese sprinkled on top.

#### DID YOU KNOW?



If you're making something with a lot of servings, such as lasagna, after you cook it, put small portions of it in containers and freeze them. This way, you can have lasagna once a week; just pull it out a few days in advance to thaw and then reheat it.

## Barbecue Chicken Pita Pizza

### Ingredients

- precooked chicken
- whole-wheat pita pocket
- barbecue sauce
- pre-roasted vegetables
- part-skim mozzarella
- feta cheese



### Instructions:

- ◆ Chop up some precooked chicken breast.
- ◆ Place a pita on a sheet pan.
- ◆ Spread with barbecue sauce, either homemade or low-sugar, store-bought sauce.
- ◆ Load on chopped roasted vegetables.
- ◆ Sprinkle with part-skim mozzarella and enhance the flavor with feta cheese, if desired (substitute feta with Gorgonzola, Gouda, or Parmesan, if preferred).
- ◆ Cook in the convection oven just until the ingredients are heated and the cheese is melted and a little browned.

### TIP

Make several barbecue chicken pita pizzas and put one in the oven and the rest in the freezer for a quick meal later. Preheat the oven and cook the pita pizzas from their frozen state.



## Barbecue Salmon Filet with Quinoa Pilaf

### Ingredients

- precooked salmon
- barbecue sauce
- precooked vegetables
- salt
- pepper
- precooked quinoa
- slivered almonds
- dried cranberries



### Instructions:

- ◆ Spread a small amount of barbecue sauce on top of precooked salmon. (Don't use too much barbecue sauce because the natural sugars in it will burn.)
- ◆ Heat the salmon for about 10 minutes in a convection oven.
- ◆ To make the pilaf, preheat a lightly oiled pan on the stove.
- ◆ Add precooked vegetables—chopped small—to the pan.
- ◆ Sprinkle with salt and pepper.
- ◆ Add the precooked quinoa to the vegetables in the pan and stir.
- ◆ Add bonus ingredients, such as slivered almonds or dried cranberries, if desired.
- ◆ Once all of the ingredients have been thoroughly heated, remove from the pan.
- ◆ Once the salmon has developed a nice glaze, remove from the oven and plate with the pilaf. Top the salmon with more barbecue sauce, if desired.



## Chicken Stir-Fry

### Ingredients

- precooked chicken
- precooked vegetables
- oil
- low-sodium soy sauce
- mirin
- precooked brown rice



### Instructions:

- ◆ Preheat a lightly oiled pan on the stove.
- ◆ Add precooked vegetables to the pan.
- ◆ Add low-sodium soy sauce and mirin, which is a sweet Japanese cooking wine.
- ◆ Add the chicken to the pan to heat it up briefly.
- ◆ Reheat the precooked brown rice. To get the best flavor, fill a glass measuring cup with water and microwave it until it's boiling. Then, pour the water over the precooked brown rice, reheating it and rehydrating it. Let it steep for about a minute and then drain the water. Alternatively, you could measure out the amount of precooked brown rice you want and add it right to the pan with the vegetables.
- ◆ Combine the vegetables, chicken, and brown rice.



## Chicken Tacos

### Ingredients

- precooked chicken
- precooked onions and peppers
- oil
- dried cumin
- fresh lime juice
- whole-wheat tortillas
- black beans
- feta cheese or *queso fresco*
- *pico de gallo* or salsa



### Instructions:

- ◆ Preheat a lightly oiled pan on the stove.
- ◆ Add precooked onions and peppers.
- ◆ Let the onions and peppers start to break down a little. Stir.
- ◆ Cut up some precooked chicken. Alternatively, you could use shrimp or strips of pork tenderloin.
- ◆ After about a minute of sautéing, once the onions have started to caramelize, add the chicken. Add some water to the pan, if needed.
- ◆ Sprinkle cumin into the pan. For extra spice, add a few drops of hot sauce.
- ◆ Squeeze lime juice into the pan.
- ◆ Once the ingredients in the pan are sufficiently cooked, build tacos with small whole-wheat tortillas, starting with the pan ingredients.
- ◆ Add some black beans for extra fiber.
- ◆ Top with *pico de gallo* or salsa and feta cheese or *queso fresco*.



## Beef Bolognese Pasta

### Ingredients

- lean beef
- oil
- dried oregano
- dried basil
- ground fennel
- garlic powder
- salt
- pepper
- broccoli
- zucchini
- marinara sauce
- precooked penne pasta
- feta cheese, part-skim mozzarella, or Parmesan



### Instructions:

- ◆ Preheat a lightly oiled pan on the stove.
- ◆ Sauté lean beef in a hot pan. Stir vigorously to keep from burning.
- ◆ Season the beef with dried oregano, dried basil, ground fennel, garlic powder, salt, and pepper.
- ◆ Steam the broccoli and zucchini in a separate pot.
- ◆ Add marinara sauce—homemade or low-sugar, low-salt jarred—to the beef, turn down the heat, and let it simmer.
- ◆ Add precooked penne pasta along with steamed broccoli and zucchini to a bowl. Top with the Bolognese sauce made in the pan. Garnish with feta cheese, part-skim mozzarella, or Parmesan.



## Shrimp Pesto Pasta

### Ingredients

- shrimp
- oil
- broccoli
- zucchini
- precooked penne pasta
- pesto



### Instructions:

- ◆ Preheat a lightly oiled pan on the stove.
- ◆ Add the shrimp to the pan and sauté it in the olive oil.
- ◆ Steam the broccoli and zucchini in a separate pot.
- ◆ Once the shrimp are bright red-pink on one side, flip them over in the pan.
- ◆ Once the shrimp are fully cooked, add the precooked penne pasta to the pan.
- ◆ Add pesto—homemade or store-bought—and steamed broccoli and zucchini. Stir.



## Suggested Reading

Dorneburg and Page, *Culinary Artistry*.

Hensrud, *The Mayo Clinic Diet*.

Herbst, *The New Food Lover's Companion*.



## LECTURE 11

# OVERCOMING OBSTACLES TO WEIGHT LOSS

When we're trying to make changes in the way we eat and in how much physical activity we get, we all experience obstacles. Overcoming these challenges comes down to planning for them. But sometimes we need ideas for how to deal with them. *The Mayo Clinic Diet* book includes an Action Guide that lists many different challenges that we all experience, along with strategies on how to deal with them. This lecture addresses obstacles encountered with eating well and physical activity.

## NOT LIKING TO COOK

- ◆ Some people just don't like to cook. Many people are reluctant to change their diets because they worry that a healthier eating plan means spending too many hours in the kitchen or struggling with complicated recipes. But healthy eating doesn't require advanced cooking skills, and many healthy meals can be made with minimal time and effort.
- ◆ Here are several ways you can overcome the challenge of not liking to cook:
  - Try a variety of cooking techniques. You might not like baking, but microwaving or grilling may be your thing.
  - Be creative. Use shortcuts, such as prepackaged raw vegetables or precooked lean meats.
  - If you don't enjoy cooking but want to try, start by purchasing a cookbook that offers quick-and-easy healthy meals, or check one out at your local library.
  - Develop a collection of quick-and-easy recipes, such as burritos; pasta with vegetables and healthy bottled tomato sauce; brown minute rice with frozen vegetables and spices; and quick salads.
  - Base your meals on fresh fruits and vegetables, none of which take much preparation or cooking time.

## NOT LIKING VEGETABLES AND FRUITS

- ◆ As part of the Mayo Clinic Diet, it is recommended that you consume virtually all of the vegetables and fruits that you want to eat. Paradoxically, one of the challenges on the Mayo Clinic Diet is getting people to eat enough fruits and vegetables. And that can be especially challenging if you're not used to eating them or if you don't like them.

- ◆ If you don't like fruits and vegetables, just focus on a few that you do like. There also may be some that you haven't tried yet but might like.
- ◆ There are other things you can do just to get more vegetables and fruits in your diet. You can add vegetables and fruits to your meals by adding vegetables to casseroles and hiding them in soups; incorporating vegetables with something you're used to eating, such as pizza; putting fruit on your cereal in the morning; mixing fruit with yogurt, cottage cheese, or a healthy granola; or making a smoothie.
- ◆ Another strategy is to prepare your fruits and vegetables differently. For example, grilled fruits can be a very good dessert or even a side dish. Grilled vegetables are also good. You can use different low-calorie sauces and dips.
- ◆ Sometimes, though, it's not your feelings about fruit and vegetables that cause an obstacle, but your family's—especially if you're the family cook. Family support is important when you're trying to lose weight, but don't let your family stop you from trying something new or exploring different ways of preparing favorite foods. Ask them if there are some vegetables or fruits they would like to try. Your good habits may eventually rub off on them, too.



- ◆ Here are some strategies to try if it's difficult for you to get your family on board with the healthy-eating changes you're trying to make:
  - Try offering a family favorite dish that's prepared using a different cooking method. For example, instead of frying chicken breasts, bake or grill them.
  - Try to involve your family in your meal planning. Ask family members what they'd like to try that's different and healthy. If they can choose, they might be more willing to experiment.
  - Keep more fruits and vegetables in the house, and keep fruit in a location where it's visible, such as a fruit bowl.
- ◆ If you need to get your family on board with your new healthy-eating plan, take it slow. Make a few small changes at a time. Eventually, these small changes add up, they'll get on board, and soon you'll all be following a healthier eating plan.

## COST OBSTACLES

- ◆ If you have a whole family to feed and you're on a tight budget, then maybe cost is an obstacle for you. Although fresh produce and fish can be expensive, you may find that your overall grocery bill on the Mayo Clinic Diet is lower because you're eating less of other foods, such as meat, chips, cookies, and ice cream. Processed foods can be costly. Plus, you may find that you're eating more meals at home and fewer in restaurants—this, too, can save money.
- ◆ Here are a few more ideas to help keep your healthy-eating plan budget-friendly.
  - The secret to eating healthy on a budget is smart planning. When you're making your weekly meal plan, check your options at the grocery store and watch for specials. Buy

grains in bulk. Food co-ops are often good at offering foods in bulk.

- In the summer, visit a farmers market if you have one nearby. You can usually pick up the freshest produce at the lowest prices that way. And if you have the space, consider growing some of your own produce. If you don't have room for a whole garden, you can grow items such as tomatoes and peppers in outdoor pots.
- It's okay to eat simple meals sometimes. A bowl of soup and a few pieces of fruit doesn't cost much and fills you up.

## STRUGGLES OF EATING OUT

- ◆ Another challenge that we all deal with is eating out. It's unrealistic to say that you should never eat out, but we would all benefit if we didn't eat out as much as we do. Because it probably can't be avoided, here are some tips to better deal with eating out:
  - Keep your plan in mind and plan ahead. Think about the menu before you get to the restaurant. Appetizers can add a lot of extra calories.
  - Be careful about breads. Sometimes the bread basket will come out before anything else. One way around this is to ask your server to hold off on the bread.
  - If you're eating an entrée, you don't want to sacrifice taste, but there are foods on almost every menu that will satisfy your tastes as well as your health and diet needs.
  - Beware of salads. Sometimes salads have high-calorie dressings or high-calorie items in them. When you're considering a salad, choose one with a good base of greens or other vegetables.
  - Be careful with salad dressings; some of them are high in calories. You can get them on the side. Sometimes a low-fat dressing may have sugar and other less-healthy



### DID YOU KNOW?

An average meal at a chain restaurant contains approximately 1,300 calories. If your daily calorie goal is 1,200 calories, one meal at a chain restaurant can provide more calories than you should consume for an entire day.

ingredients added. A small amount of olive oil and vinegar may be your best bet.

- Be careful about other things that are added to salads. Grilled salmon, for example, would be a good choice, but not something that's fried or high in calories. Also, although you don't need to limit the portion sizes of the lettuce and vegetables on the salad, keep an eye on the portion size of foods from other food groups.
- ◆ Beverages may be a source of hidden extra calories. Instead of a sweetened soda or soft drink, try water or seltzer with a slice of lemon, low-fat or skim milk, or unsweetened tea or coffee. With coffee, be careful about what you put in it. While mixed alcoholic drinks often have a lot of added sugar

## Taming Your Sweet Tooth

Some people just can't resist certain foods, such as chocolate and candy. The trick is not to resist sweets, but to fit occasional sweets or junk food into your overall eating plan without destroying your goals. Give yourself permission to eat these foods on occasion and in moderation. If you try to avoid these foods completely, you'll feel deprived when you can't have them, which leads to disillusionment and to binge eating. Here are a few things to keep in mind:

- Plan ahead for the events occurring during the upcoming week that put you around sweets and junk food. In appropriate situations, enjoy some of your favorite foods in moderate portions.
- Know that once you've sampled a favorite food, you may crave more, so determine in advance how much you'll eat and stick to that portion.
- If you eat healthy foods before dessert arrives, when it comes time to enjoy a favorite sweet or junk food, you won't be as hungry and will eat less.
- Don't keep high-calorie foods, junk foods, or "problem" foods at home. If you get an urge to eat such foods, but you have to go out and buy them first, the urge might pass. If you do buy chocolate or junk food, buy it in small amounts, such as single servings.

and calories on top of the alcohol, wine or light beer can be a leaner choice, as long as you don't overdo it.

- ◆ You can even make smart choices about dessert—if you still have some sweets left in your diet plan for the day. First, be sure to finish your main meal before ordering dessert. By the time you're done, you may not even want dessert. If you do order dessert, consider splitting it with one of your companions, and choose a lighter option.
- ◆ Some restaurants provide customers with calorie information for all of its menu items. So take advantage of that information if available. The next time you stop at a fast food restaurant,

pay attention to the calorie listings. Taking a few minutes to compare the items on the menu can really pay off.

- ◆ When you're at a fast-food or fast-casual restaurant, try these tips:
  - Look for the "light" or "healthy" section of the menu. A lot of places have one now, and you're more likely to find lower-calorie choices there, including fruits and vegetables.
  - Don't super-size your meal. Avoid oversized items. They can be nearly double the calories of a small order.
  - Go for grilled options, rather than breaded or fried. For example, a grilled chicken sandwich can have one-third fewer calories than a crispy chicken sandwich.
  - And as at a sit-down restaurant, ask for substitutions. If ordering a combination meal, for example. Ask if you can substitute a side salad for the French fries. If not, avoid combo meals and order the items separately.



- ◆ When eating out, trying different ethnic cuisines can provide taste yet be healthy and low in calories. Depending on the choices you make, some ethnic cuisines can offer wonderful flavor and taste, but not a lot of calories.
- ◆ Here are a few tips that can help you enjoy Italian food and stick with your healthy-eating goals:
  - Go for tomato-based sauces. Avoid dishes with creamy sauces, such as Alfredo. Opt for marinara, which is mostly tomatoes with garlic and onions; Marsala, which is based in wine; or cacciatora, which is a dish cooked with tomatoes, herbs, and sometimes wine.
  - Limit the cheese. A little cheese adds flavor and texture to your meal, but too much will load up your plate with unwanted calories.
  - Stay away from high-fat meats, such as sausage.
  - Try to avoid stuffed pasta. It's usually packed with cheese or fatty meat.
  - Choose vegetable-based soups, such as minestrone.
- ◆ Here are ways to enjoy Mexican food while still sticking to your plan:
  - Skip the tortilla chips. About 20 chips and 2 tablespoons of salsa contain up to 300 calories.
  - Steer clear of fried entrées.
  - Choose tacos. Tacos are a smart choice because the shells are often smaller than other non-fried Mexican entrées.
  - Don't clean your plate. Entrées at Mexican restaurants are often served on oversized plates with rice and beans. One cup of rice and half a cup



of refried beans can add nearly 400 calories to your meal. If you're worried about waste, split your entrée with a friend or take half of your dish home.

- ◆ Here are some tips that are helpful when eating Chinese food:
  - Opt for stir-fry, especially stir-fried dishes with lots of vegetables.
  - If you order meat, choose meat that's not breaded.
  - Ask to have your dish prepared with little or no oil, and limit yourself to one portion—an amount that fits easily on a 10-inch plate.
  - When given the option, select steamed rice instead of fried. Brown rice is even better, if it's available.
  - Avoid fried appetizers.
- ◆ If you're going to a new place, look at the menu online to get an idea of what you're going to order ahead of time and look for the healthier items.
- ◆ Most restaurants will make modifications for you. If there's something that you don't like on the menu that's higher in calories or that you want to modify somehow, don't be afraid to ask them to make changes.



## OBSTACLES TO PHYSICAL ACTIVITY

- ◆ Most people don't have extra time to exercise. Much of the time, it's a matter of priorities rather than time. Realize that



### DID YOU KNOW?

exercise is one of the most important things you can work into your day for your health.

- ◆ Even if you don't like to exercise, you can work physical activity into your daily schedule. You can take a walk at different times. You can take the stairs during your normal day instead of taking the elevator. Take activity breaks if you have a desk job. Have a walking meeting with a colleague.
- ◆ Try looking for hidden time sinks in your schedule. For example, the average American watches more than four hours of television each day and more than 10 hours of total screen time daily.
- ◆ There are some times when you might not feel motivated to exercise. In those situations, try telling yourself that you'll do it for just five minutes. Many times, if you do it for five minutes, once you make that initial effort, it's easier to continue for a longer period of time.

If you sit during a 30-minute meeting, you'll burn around 75 calories. However, if you walk briskly during your meeting at 3.5 miles per hour, you'll burn about 250 calories.

- ◆ Don't think about how you're feeling before you exercise, but how you'll feel afterward. Most people feel more relaxed, and they're glad they did it.
- ◆ If you can't find a solid window of at least 30 minutes during your day to exercise, look for several 10-minute windows.
- ◆ You may say that you don't exercise because you're too tired to exercise. But that may be because you're not exercising enough. Many people find that they're less tired once they're involved with a regular exercise program because regular physical activity gives you more energy and because fatigue is more often mental than it is physical. If you're fatigued due to stress, exercise is a great stress reliever.
- ◆ Here are several other tips that can help you overcome this obstacle:
  - If you are tired, start short and slow. Begin with just five to 10 minutes of activity. Keep in mind that a little activity is better than none. And once you start, you might keep going longer.
  - Exercise in the morning. This may give you more energy throughout the day.
  - When you get home from work, don't sit down to watch television or use the computer. Instead, put on your walking shoes as soon as you arrive home and go for a walk.
  - Write down what motivates you to lose weight and post the list somewhere that you see regularly.

## Suggested Reading

Hensrud, *The Mayo Clinic Diet*.



## LECTURE 12

# HANDLING LAPSES AND KEEPING WEIGHT OFF

In weight management, nobody's going to achieve perfection. Lapses are going to happen. We just don't want a lapse—a temporary setback—to turn into a relapse—when you throw in the towel. Things aren't going to be great all the time, but if you deal with that and stick with your program, you won't let a lapse turn into a relapse.

## OVERCOMING Lapses AND PREVENTING RELAPSES

- ◆ A lapse is going to happen sooner or later. Let's say that you went out to eat and blew most of your entire day's worth of servings in one meal and had dessert on top of it. Here are several ways you can prevent this lapse from turning into a relapse:
  - Don't let negative thoughts take over. Remember that you're not perfect. Be kind to yourself and start anew.
  - Identify the problem, and then create a list of possible solutions. From that list, choose a solution to try. If it works, it may help prevent another lapse. If it doesn't work, try something else.
  - Enlist support. Talk to family, friends, or a health-care professional. They'll usually understand more than you anticipate.
  - Stay active. Exercise can help you work out your frustrations and help you feel better.
  - Recommit to your initial goals. Review your goals and make sure that they're still realistic and what you want to accomplish. You could even consider repeating *Lose It!* to get back on track in a big way.
- ◆ Lapses sometimes involve a chain of events. For example, let's say that something stressful happened at work. Then, you got home late from work. You feel stressed out, it's late, and you revert back to eating large amounts of comfort food. The next day you feel guilty, and you eat more comfort food. The lapse is turning into a relapse.
- ◆ Sometimes it's hard to identify a behavioral sequence of events in a lapse, but if you are able to do that, you can break the chain at various points. For example, the next time something stressful happens at work, try a stress-management activity, such as deep breathing, early on. Or instead of eating comfort

food, choose something healthier to eat that will help you stay on your program.

- ◆ One way to avoid or minimize lapses is to identify situations that cause you trouble. Consider what your eating triggers might be and plot strategies to overcome them.
- ◆ For example, are there certain times of the day when you're more susceptible to overeating? Maybe you do well in the mornings and afternoons but have a tough time with food cravings in the evenings. Or perhaps in that lull between lunch and dinner, you get a strong, uncontrollable urge to snack.
- ◆ Maybe you find that you eat more when doing certain activities. Do you find yourself constantly snacking while watching television? Is food how you deal with activities you don't enjoy, such as paying bills?



- ◆ If so, find a way to replace eating with something else. Try drinking a glass of water or another calorie-free beverage, which engages the same muscle memory but without throwing you off your plan. Chewing gum works for some people, too. And vegetables are always an option.
- ◆ Eating is also a common response to a negative mood. Do you find that certain feelings cause you to snack mindlessly? Do you tend to eat when you're bored, lonely, depressed, stressed, or anxious? There are healthier ways to address all of these emotions. Addressing the emotions head on, rather than by masking them with eating, is always the best choice.
- ◆ Have you noticed that you eat more when you're around certain people? Maybe you have a good friend who likes to go out to eat or frequently invites you over for coffee and a "little snack." Sometimes just being aware of this trigger can help you control it. Other times, you have to ask your friend to help you out by not putting you in temptation's way. Have the coffee and skip the "little snack."
- ◆ Do you find that you just can't eat some foods in moderation, such as ice cream, chocolate, or chips and salsa? Keeping those foods out of the house as much as possible is the best strategy. But you also might be restricting yourself a little too much. Would a small piece of dark chocolate once a week help you resist cookies?
- ◆ Does how you physically feel cause you to overeat? If you skip breakfast, do hunger pangs cause you to lose control of your eating? When you're fatigued, do you turn to junk food for energy? If skipping meals is the issue, don't do that; make sure you're eating regularly when you're hungry. If you're eating from fatigue, try to find the cause of the fatigue.

- ◆ Avoiding perfectionism and knowing your triggers should help you keep a lapse from turning into a relapse. But in addition to lapses, another common experience is a plateau. You're going to hit a plateau—a point when your body reaches a new equilibrium. You're eating fewer calories, and as you lose weight, your metabolic rate declines a little, and sooner or later the calories in are going to balance with the calories you burn because you'll be burning less as you lose weight.
- ◆ Plateaus are natural; they are going to happen. The problem is that plateaus usually happen sooner than people want them to.
- ◆ How can you deal with a plateau? Once again, expect it. It's going to happen, so don't be frustrated when it does. When plateaus happen, and you don't know why, you may just break through them with a little bit of time. Be patient, and the weight loss may pick up again.
- ◆ But if waiting doesn't work, then you have to ask yourself two questions:
  1. Can I change my eating habits in my diet further so that I can decrease calories in a sustainable and enjoyable manner?
  2. Can I increase my physical activity to burn more calories, either through exercise or through activities throughout the day?
- ◆ If you can do that, great! But if the answer to those two questions is no, then you need to take a look at your goals and possibly change them.
- ◆ Maybe it's not realistic to lose 10 or 20 more pounds at this time. Maybe it's best to stay on the program and celebrate the weight that you've lost so far.

- ◆ As you move along in your weight-loss program, occasionally take a look back. Celebrate your successes, and then conduct an attitude check. Are you enjoying your program? Are there some things you can do to enjoy it more? Is it time to do some new physical activity or try some new foods? Ongoing change can help keep things fresh and vibrant and can also help you stay motivated.

## CURBING NEGATIVE SELF-TALK

- ◆ If you're not reaching your goals, try not to use negative self-talk, which includes habits of mind, such as magnifying the negative aspects of a situation and filtering out the positive ones; personalizing bad events, so that when something bad occurs, you automatically blame yourself; catastrophizing, meaning that when things go even a little bit off track, you automatically anticipate the worst; and polarizing, which is seeing things only as either good or bad when most things in life are somewhere in between.
- ◆ You can learn to turn negative thinking into positive thinking. The process is simple, but it does take time and practice. Here are some ways to think and behave in a more positive and optimistic way:

### The Benefits of Positive Thinking

The benefits of positive thinking go beyond success at weight loss and weight maintenance. Research indicates that positive thinkers have a lot of health advantages, including greater resistance to the common cold, lower rates of depression and distress, reduced risk of cardiovascular disease, and even increased life span.

It's not clear why positive thinkers experience these health benefits, but it may have to do, in part, with better stress management. Positive and optimistic people may also live healthier lifestyles; they may get more physical activity and follow a healthier diet. This may have many effects in the body, such as on immune function.

- Identify areas to change—the areas of your life that you typically think negatively about, whether it's work, your daily commute, or a relationship. You can start small by focusing on one area to approach in a more positive way.
- Check yourself periodically during the day. Stop and evaluate what you're thinking. If you find that your thoughts are mainly negative, try to find a way to put a positive spin on them. Here are a few ways you can do that:
  - Be open to humor. Give yourself permission to smile or laugh, especially during difficult times. Seek humor in everyday happenings. When you can laugh at life, you feel less stressed.
  - Surround yourself with positive people. Make sure those in your life are positive, supportive people you can depend on to give helpful advice and feedback. Negative people may increase your stress level and make you doubt your ability to manage stress in healthy ways.



- To practice positive self-talk, start by following one simple rule: Don't say anything to yourself that you wouldn't say to anyone else. Be gentle and encouraging with yourself. If a negative thought enters your mind, evaluate it rationally and respond with affirmations of what is good about you.
- ◆ Following a healthy diet and a healthy exercise program can improve your mood overall, which will help reduce stress and help you keep a positive attitude. The right attitude and the right lifestyle changes work together to improve your physical and emotional health.
- ◆ Part of positive self-talk is self-acceptance and self-esteem. Over the years, struggles with your weight may have resulted in some damaging blows to your self-esteem. Some of these may be self-imposed, such as an inability to measure up to your own expectations. Others may come from family, friends, colleagues, or even strangers.
- ◆ It's important to maintain a sense of self-worth. The better you feel about yourself, the better you'll take care of yourself. In addition, a positive self-image has been linked to better health and a stronger immune system.
- ◆ Positive thinking can have a positive effect on your self-esteem. As you learn how to control and positively express your emotions, you'll feel better about yourself and more confident in your abilities, including your ability to lead a healthier life.

## MAINTAINING MOTIVATION OVER TIME

- ◆ Motivation comes in many forms, but the best motivation comes from within—your own personal reasons for wanting to manage weight. Once you've taken a look at and gauged your attitude, here are several ways you can stay motivated:

- Set goals. Review the goals you first set for yourself and set more short-term goals.
- Keep track of your progress and celebrate your successes, no matter how big or small.
- Make a contract with yourself to follow the healthy-living plan you set for yourself and post it where you can see it.
- Don't be afraid to use your support team. Don't forget to involve others. Ask your family and friends to cheer you on; they can offer support and help keep things fresh.
- Recognize success—not only in weight loss, but how your clothes fit and how you feel.
- Reward yourself. Celebrate your successes often, but preferably not with food. Take a trip. Buy yourself some new clothes, especially if you need some new clothes because you've lost weight. You deserve it.
- Practice positive self-talk.
- Cut yourself some slack. Remember that no one is perfect. If you need a day to recharge from exercise, enjoy it and then get back on the program.

## Suggested Reading

Brownell, et al, "Understanding and Preventing Relapse."

Carver, "Optimism."

Hensrud, *The Mayo Clinic Diet*.

Kiernan, et al, "Social Support for Healthy Behaviors."

Singh, et al, "Physician Diagnosis of Overweight Status Predicts Attempted and Successful Weight Loss."

Sood, *The Mayo Clinic Guide to Stress-Free Living*.

Wang, "Influence of Family, Friend, and Coworker Social Support and Social Undermining on Weight Gain Prevention among Adults."

# BIBLIOGRAPHY

American Dietetic Association. "Position of the American Dietetic Association: Health Implications of Dietary Fiber." *Journal of the American Dietetic Association* 108, no. 10 (2008): 1716-1731.

Ames, Gretchen E., et al. "Further Statistical and Clinical Validity for the Weight Efficacy Lifestyle Questionnaire-Short Form." *Eating Behaviors* 18 (2015): 115-119.

Anderson, James W., et al. "Health Benefits of Dietary Fiber." *Nutrition Reviews* 67, no. 4 (2009): 188-205.

Barnes, Deborah E., et al. "The Projected Effect of Risk Factor Reduction on Alzheimer's Disease Prevalence." *The Lancet Neurology* 10, no. 9 (2011): 819-828.

Biswas, Aviroop, et al. "Sedentary Time and Its Association with Risk for Disease Incidence, Mortality, and Hospitalization in Adults." *Annals of Internal Medicine* 162 (2015): 123-132.

Bouchard, Claude, et al. "Less Sitting, More Physical Activity, or Higher Fitness?" *Mayo Clinic Proceedings* 90, no. 11 (2015): 1533-1540.

Brown, Ruth E., et al. "Calorie Estimation in Adults Differing in Body Weight Class and Weight Loss Status." *Medicine & Science in Sports & Medicine* 48, no. 3 (2016): 521-526.

Brownell, Kelly D., et al. "Understanding and Preventing Relapse." *The American Psychologist* 41, no. 7 (1986): 765-782.

Carnethon, Mercedes R., et al. "Cardiorespiratory Fitness in Young Adulthood and the Development of Cardiovascular Disease Risk Factors." *JAMA* 290, no. 23 (2003): 3092-3100.

Carver, Charles S., et al. "Optimism." *Clinical Psychology Review* 30, no. 7 (2010): 879-889.

Cho, Susan S., et al. "Consumption of Cereal Fiber, Mixtures of Whole Grains and Bran, and Whole Grains and Risk Reduction in Type 2 Diabetes, Obesity, and Cardiovascular Disease." *American Journal of Clinical Nutrition* 98 (2013): 594-619.

Clark, Matthew M., et al. "The Effectiveness of Wellness Coaching for Improving Quality of Life." *Mayo Clinic Proceedings* 89, no. 11 (2014): 1537-1544.

Colditz, Graham A. "Healthy Diet in Adults." *UpToDate*. <https://www.uptodate.com/contents/healthy-diet-in-adults>.

Dagan, Shiri S., et al. "Waist Circumference vs Body Mass Index in Association with Cardiorespiratory Fitness in Healthy Men and Women: A Cross Sectional Analysis of 403 Subjects." *Nutrition Journal* 12, no. 12 (2013): 1-8.

De Vet, Emely, et al. "Ain't No Mountain High Enough? Setting High Weight Loss Goals Predict Effort and Short-term Weight Loss." *Journal of Health Psychology* 18, no. 5 (2012): 638-647.

Dorneburg, Andrew, and Karen Page. *Culinary Artistry*. New York, NY: John Wiley & Sons, 1996.

Ebbert, Jon O., et al. "Fat Depots, Free Fatty Acids, and Dyslipidemia." *Nutrients* 5, no. 2 (2013): 498-508.

Ekelund, Ulf, et al. "Does Physical Activity Attenuate, or Even Eliminate, the Detrimental Association of Sitting Time with Mortality? A Harmonised Meta-Analysis of Data from More Than 1 Million Men and Women." *The Lancet* 388, no. 10051 (2016): 1302-1310.

Elliot, Jeffrey, and James DeWan. *The Complete Book of Knife Skills: The Essential Guide to Use, Techniques & Care*. Toronto, ON: Robert Rose Inc., 2010.

Erickson, Kirk I., et al. "Exercise Training Increases Size of Hippocampus and Improves Memory." *Proceedings of the National Academy of Sciences of the United States of America* 108, no. 7 (2011): 3017-3022.

Farias, Maria M., et al. "Set-Point Theory and Obesity." *Metabolic Syndrome and Related Disorders* 9, no. 2 (2011): 85-89.

Flores-Mateo, Gemma, et al. "Nut Intake and Adiposity: Meta-Analysis of Clinical Trials." *American Journal of Clinical Nutrition* 97 (2013): 1346-1355.

Foster, Gary D., et al. "What Is a Reasonable Weight Loss? Patients' Expectations and Evaluations of Obesity Treatment and Outcomes." *Journal of Consulting & Clinical Psychology* 65, no. 1 (1997): 79-85.

Fraser, Gary E., et al. "Risk Factors for All-Cause and Coronary Heart Disease Mortality in the Oldest-Old." *The Adventist Health Study* 157, no. 19 (1997): 2249-2258.

Frassetto, L. A., et al. "Metabolic and Physiologic Improvements from Consuming a Paleolithic, Hunter-Gatherer Type Diet." *European Journal of Clinical Nutrition* 63 (2009): 947-955.

Hensrud, Donald D. "Diet and Obesity." *Current Opinion in Gastroenterology* 20, no. 2 (2004): 119-124.

———. *The Mayo Clinic Diet*. 2<sup>nd</sup> ed. Rochester, MN: Mayo Foundation for Medical Education and Research, 2017.

Hensrud, Donald D., et al. "Extreme Obesity: A New Medical Crisis in the United States." *Mayo Clinic Proceedings* 81, no. 10 [suppl] (2006): S5-S10.

Herbst, Ron, and Sharon Tyler Herbst. *The New Food Lover's Companion*. 5<sup>th</sup> ed. Hauppauge, NY: Barron's Educational Series, 2013.

Hu, Frank B. "Resolved: There Is Sufficient Scientific Evidence That Decreasing Sugar-Sweetened Beverage Consumption Will Reduce the Prevalence of Obesity and Obesity-Related Diseases." *Obesity Reviews* 14, no. 8 (2013): 606-619.

Jensen, Michael D., et al. "2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults." *Circulation* 129 [suppl 2] (2014): S102-S138.

Kerns, Jennifer C., et al. "Thiamin Deficiency in People with Obesity." *Advances in Nutrition* 6, no. 2 (2015): 147-153.

Kiernan, Michaela, et al. "Social Support for Healthy Behaviors: Scale Psychometrics and Prediction of Weight Loss among Women in a Behavioral Program." *Obesity* 20, no. 4 (2012): 756-764.

Landhuis, C. Erik, et al. "Programming Obesity and Poor Fitness: The Long-Term Impact of Childhood Television." *Obesity* 16, no. 6 (2008): 1457-1459.

Lappe, F. M. *Diet for a Small Planet*. New York: Ballantine Books, an imprint of The Random House Publishing Group, 1991.

Lee, I-Min, et al. "Physical Activity and Weight Gain Prevention." *JAMA* 303, no. 2 (2010): 1173-1179.

Lee, Jane J., et al. "Upper Body Subcutaneous Fat Is Associated with Cardiometabolic Risk Factors." *The American Journal of Medicine*. In press.

Lent, Michelle R., et al. "Initial Weight Loss Goals: Have They Changed and Do They Matter?" *Obesity Science & Practice* 2, no. 2 (2016): 154-161.

Leskinen, T., et al. "Leisure-Time Physical Activity and High-Risk Fat: A Longitudinal Population-Based Twin Study." *International Journal of Obesity* 33 (2009): 1211-1218.

Lichtman, Steven W., et al. "Discrepancy between Self-Reported and Actual Caloric Intake and Exercise in Obese Subjects." *The New England Journal of Medicine* 327, no. 27 (1992): 1893-1898.

Matthews, Charles E., et al. "Amount of Time Spent in Sedentary Behaviors and Cause-Specific Mortality in U.S. Adults." *American Journal of Clinical Nutrition* 95, no. 2 (2012): 437-445.

Mitrou, Panagiota N., et al. "Mediterranean Dietary Pattern and Prediction of All-Cause Mortality in a U.S. Population." *Archives of Internal Medicine* 167, no. 22 (2007): 2461-2468.

Mozaffarian, Dariush, et al. "Changes in Diet and Lifestyle and Long-Term Weight Gain in Women and Men." *The New England Journal of Medicine* 364, no. 25 (2011): 2392-2404.

Owen, Neville, et al. "Sedentary Behavior: Emerging Evidence for a New Health Risk." *Mayo Clinic Proceedings* 85, no. 12 (2010): 1138-1141.

Pan, An, et al. "Red Meat Consumption and Mortality: Results from Two Prospective Cohort Studies." *Archives of Internal Medicine* 172, no. 7 (2012): 555-563.

Pontzer, Herman. "Hunter-Gatherer Energetics and Human Obesity." *PLoS One* 7, no. 7 (2012): 1-8.

Rolls, Barbara J. "The Relationship between Dietary Energy Density and Energy Intake." *Physiology and Behavior* 97, no. 5 (2009): 609-615.

Ros, Emilio. "Health Benefits of Nut Consumption." *Nutrients* 2, no. 7 (2010): 652-682.

Rosenquist, Klara J., et al. "Visceral and Subcutaneous Fat Quality Is Associated with Cardiometabolic Risk." *JACC Cardiovascular Imaging* 6, no. 7 (2013): 762-771.

Schoeller, D. A., et al. "Inaccuracies in Self-Reported Intake Identified by Comparison with the Doubly Labeled Water Method." *Proceedings of the Nutrition Society* 68, no. 7 (1990): 941-949.

Singh, Siddarth, et al. "Physician Diagnosis of Overweight Status Predicts Attempted and Successful Weight Loss in Patients with Cardiovascular Disease and Central Obesity." *American Heart Journal* 160, no. 5 (2010): 934-942.

Sinha, Rashmi, et al. "Meat Intake and Mortality: A Prospective Study of Over Half a Million People." *Archives of Internal Medicine* 169, no. 6 (2009): 562-571.

Sofi, Francesco, et al. "Adherence to Mediterranean Diet and Health Status: Meta-Analysis." *BMJ* 337 (2008): a1344-a1350.

Sood, Amit. *The Mayo Clinic Guide to Stress-Free Living*. Cambridge, MA: Da Capo Press/Lifelong Books, 2013.

Stessman, Jochanan, et al. "Physical Activity, Function, and Longevity among the Very Old." *Archives of Internal Medicine* 169, no. 16 (2009): 1476-1483.

USDA Center for Nutrition Policy and Promotion. “A Brief History of USDA Food Guides.” <https://www.choosemyplate.gov/brief-history-usda-food-guides>.

U.S. Department of Health and Human Services. “Dietary Guidelines for Americans, 2015–2020.” <http://health.gov/dietaryguidelines/2015/guidelines>.

Villalbancha, Pedro A., et al. “Nonexercise Activity Thermogenesis in Obesity Management.” *Mayo Clinic Proceedings* 90, no. 4 (2015): 509–519.

Wang, Monica L., et al. “Influence of Family, Friend, and Coworker Social Support and Social Undermining on Weight Gain Prevention among Adults.” *Obesity* 22, no. 9 (2014): 1973–1980.

Williams, Peter G. “The Benefits of Breakfast Cereal Consumption: A Systematic Review of the Evidence.” *Advances in Nutrition* 5, no. 5 (2014): 636S–673S.

Woolf, Peter J., et al. “Protein: Identifying Optimal Amino Acid Complements from Plant-Based Foods.” *PLoS One* 6, no. 4 (2011): 1–7.

Ye, Eva Qing, et al. “Greater Whole-Grain Intake Is Associated with Lower Risk of Type 2 Diabetes, Cardiovascular Disease, and Weight Gain.” *The Journal of Nutrition* 142 (2012): 1304–1313.

# IMAGE CREDITS

Page 4: © gpointstudio/iStock/Thinkstock.

Page 8: © Design Pics/Thinkstock.

Page 12: © roberthyrons/iStock/Thinkstock.

Page 13: © Ryan McVay/Stockbyte/Thinkstock.

Page 14: © monkeybusinessimages/iStock/Thinkstock.

Page 16: © FabrikaCr/iStock/Thinkstock.

Page 19: © Michael Blann/DigitalVision/Thinkstock.

Page 23: © Boarding1Now/iStock/Thinkstock.

Page 25: © gbh007/iStock/Thinkstock.

Page 27: © nathanaparise/iStock/Thinkstock.

Page 28 (whole wheat bread): © Amarita/iStock/Thinkstock.

Page 28 (nuts and oil): © Serg\_Velusceac/iStock/Thinkstock.

Page 29: © ghoststone/iStock/Thinkstock.

Page 31: © Jupiterimages/iStock/Thinkstock.

Page 32: © HandmadePictures/iStock/Thinkstock.

Page 35: © Pixland/iStock/Thinkstock.

Page 37: © Photodisc/Thinkstock.

Page 39: © Magone/iStock/Thinkstock.

Page 44: © monkeybusinessimages/iStock/Thinkstock.

Page 47: © alisafarov/iStock/Thinkstock.

Page 49: © Serg\_Velusceac/iStock/Thinkstock.

Page 52 (candy): © Suradech14/iStock/Thinkstock.

Page 52 (apple): © Ingram Publishing/Thinkstock.

Page 52 (pear): © atoss/iStock/Thinkstock.

Page 52 (banana): © Boarding1Now/iStock/Thinkstock.

Page 52 (orange): © Vasil\_Onyskiv/iStock/Thinkstock.

Page 53: © dionisvero/iStock/Thinkstock.

Page 55: © monkeybusinessimages/iStock/Thinkstock.

Page 57: © gbh007/iStock/Thinkstock.

Page 59: © JulyProkopiv/iStock/Thinkstock.

Page 60: © Ljupco/iStock/Thinkstock.

Page 61: © ShotShare/iStock/Thinkstock.

Page 64: © dolgachov/iStock/Thinkstock.

Page 66: © ariwasabi/iStock/Thinkstock.

Page 67: © Magone/iStock/Thinkstock.

Page 69: © OksanaKiian/iStock/Thinkstock.

Page 70: © Sarsmis/iStock/Thinkstock.

Page 72 : © marilyna/iStock/Thinkstock.

Page 73: © United States Department of Agriculture/  
Wikimedia Commons/Public Domain.

Page 74: © OSTILL/iStock/Thinkstock.

Page 76: © goir/iStock/Thinkstock.

Page 78: © Wavebreakmedia/iStock/Thinkstock.

Page 80: © Wavebreakmedia Ltd/Wavebreak Media/Thinkstock.

Page 83: © Cunaplus\_M.Faba/iStock/Thinkstock.

Page 84: © Antonio\_Diaz/iStock/Thinkstock.

Page 86: © ferlistockphoto/iStock/Thinkstock.

Page 88: © monkeybusinessimages/iStock/Thinkstock.

Page 93: © seb\_ra/iStock/Thinkstock.

Page 95: © Dangubic/iStock/Thinkstock.

Page 97: © lily\_rochha/iStock/Thinkstock.

Page 98: © Bellisimo/iStock/Thinkstock.

Page 100: © SuriyaDesatit/iStock/Thinkstock.

Page 101 (feta cheese): © Geshas/iStock/Thinkstock.

Page 101 (wheat pita pocket): © Dmitry Margolin/Hemera/  
Thinkstock.

Page 102 (boiled quinoa): © Magone/iStock/Thinkstock.

Page 102 (precooked salmon): © Jan Sandvik/Hemera/Thinkstock.

Page 103 (cooked chicken): © anna1311/iStock/Thinkstock.

Page 103 (cooked brown rice): © memmore/iStock/Thinkstock.

Page 104 (pico de gallo): © cheche22/iStock/Thinkstock.

Page 104 (whole wheat taco): © BWFolsom/iStock/Thinkstock.

Page 105 (lean beef): © HandmadePictures/iStock/Thinkstock.

Page 105 (penne pasta): © HandmadePictures/iStock/Thinkstock.

Page 106 (shrimp): © KittisakJirasittichai/iStock/Thinkstock.

Page 106 (pesto sauce): © bigacis/iStock/Thinkstock.

Page 108: © Ridofranz/iStock/Thinkstock.

Page 110: © Magone/iStock/Thinkstock.

Page 113: © Wavebreakmedia Ltd/Wavebreak Media/Thinkstock.

Page 115: © bhofack2/iStock/Thinkstock.

Page 116: © IgorDutina/iStock/Thinkstock.

Page 117: © bonchan/iStock/Thinkstock.

Page 118: © MangoStar\_Studio/iStock/Thinkstock.

Page 120: © SolisImages/iStock/Thinkstock.

Page 122: © KatarzynaBialasiewicz/iStock/Thinkstock.

Page 126: © bowdenimages/iStock/Thinkstock.