Healthy Eating
Lecture Narrative

1 What you choose to eat can have significant effects on your health and well-being. Nutrition is an important health promotion because of the connection between lifetime nutritional habits and the risk of some major chronic diseases. During this presentation you will be introduced to the new U.S. government healthy eating recommendations and we will explore some tools and strategies for incorporating them into your lifestyle.

2 In your lifetime, you’ll spend about 6 years eating—eating about 70,000 meals and over 60 tons of food. When you’re eating your 60 tons of food, are you making good food choices? Are you a healthy eater? How do you compare to these college students?

3 How do you know if you’re eating healthy? How do you judge the quality of your diet? A good place to start is with the Dietary Guidelines for Americans. These national guidelines are published jointly every 5 years by the U.S. Department of Health and Human Services (HHS) and the U.S. Department of Agriculture (USDA). The latest edition was published in January of 2005. The 2005 Guidelines provide science-based advice about how good dietary habits can promote health and reduce risk for major chronic diseases.

The major theme of these new guidelines is: Feel better today. Stay healthy for tomorrow...meaning the food and physical activity choices you make everyday affect your health—how you feel today, tomorrow, and in the future.

4 How are the new guidelines different from those in the past? Well, the 2005 Dietary Guidelines place a stronger emphasis on decreasing calorie intake and increasing physical activity than past guidelines. There are also more specific guidelines about the types and amounts of foods to eat. And finally, the guidelines encourage a greater consumption of nutrient-dense foods-- those foods packed with vitamins, minerals, fiber, and other nutrients but lower in calories.

5 Eating right and being physically active aren't just a "diet" or a "program"—they are keys to a healthy lifestyle. With healthful habits, you may reduce your risk of many chronic diseases such as heart disease, diabetes, osteoporosis, and certain cancers, and increase your chances for a longer life.

Let’s take a look at the key points of the 2005 Dietary Guidelines.

6 The basic strategy for healthy eating is simple: meet your recommended daily intake of all nutrients and do it without exceeding the number of calories that meet your personal energy needs. In other words, get everything your body needs, but don’t
consume any extra calories meeting those needs. Think of it this way, you have a “calorie allowance” and you must spend it very carefully. Spending it carefully means eating foods that are high in nutrients and avoiding foods that provide empty calories.

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To address the ever-expanding waistlines of Americans, the new guidelines place a specific emphasis on weight management. The guidelines insist that in order to be healthy you must maintain a proper weight. To maintain body weight in a healthy range, the guidelines suggest that you balance calories from foods and beverages with calories expended. So calories-IN should equal calories-OUT.

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One way to keep your calories-in and calories-out balanced is to adjust the amount of food you take in. Another equally important way is to adjust your calorie expenditure. Previous dietary guidelines have not addressed physical activity, however the 2005 Guidelines do by encouraging all Americans to engage in regular physical activity and to reduce sedentary activities. In addition to helping you maintain a healthy body weight, regular physical activity reduces your risk of chronic disease and promotes psychological well-being.

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When it comes to the food groups, the new Guidelines do play favorites. Keeping in mind that you should always stay within your calorie or energy needs, you should also increase your intake fruits and vegetables, whole grains, and low-fat dairy products.

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The only direction American’s received from the old Food Guide Pyramid was to “eat fats sparingly,” the new Guidelines are much more specific. They not only indicate how much fat you should have, but they also distinguish between the different types of fat.

Keep total fat intake between 20 to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils. Consume less than 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol. Keep trans fatty acid consumption as low as possible. What does all of this mean for you?

11

What is fat such a problem in our diets? Why should we limit our intake of fat?

First of all because too much fat may make you fat. High fat diets are associated with obesity probably because fat is more fattening than proteins or carbohydrates. What do I mean by that? It is caloric density that makes fat fattening. Each gram of fat contains nine calories, compared to four for carbohydrates and protein. A one level tablespoon of solid fat or oil contains more calories than one-third to one-half cup of a complex carbohydrate, such as rice or potatoes. One level tablespoon of any fat contains about 100 calories and 10 grams of fat.
Another important reason to watch your fat intake is because research shows that a diet lower in fat and higher in complex carbohydrates can reduce your risk of a wide range of chronic diseases including: cancer, diabetes, obesity, and cardio-vascular disorders.

What is the difference between saturated and unsaturated fats? How can you look at a fat and tell if it is saturated or unsaturated? Fats that are normally solid at room temperature—namely butter, lard, the fat in and around meat, the tropical oils like coconut and palm—are considered saturated because they are stuffed full of hydrogen atoms. They are saturated with hydrogen.

Sometimes a process called hydrogenation is used to add hydrogen atoms to oils that are normally liquid. Many margarines, for example, contain partially hydrogenated oils. Naturally saturated fats and those that have been completely hydrogenated raise cholesterol levels and build up plaque which can lead to heart attack or stroke.

This chart shows the risks and benefits of the different types of fat and also lists sources of these fats.

Take a look at this chart and see which fats are the more healthier ones…remember you want to keep your intake of the unsaturated fats higher and the saturated fats lower.

What about cholesterol? When you eat something low in cholesterol can you assume that it is also low in fat? No! Cholesterol is a type of fat. Dietary cholesterol is found only in animal products. So if it’s not from an animal then it doesn’t have cholesterol. So on this list only “lard” would have cholesterol, although all of the products contain fat.

One of the problems with the 2000 Guidelines and Pyramid was that carbohydrate consumption was encouraged with out any regard to what type of carbohydrate. The 2005 Guidelines promote nutrient-rich, whole-grains foods and discourage food choices with overly processed or high in sugar.

One of the most important health benefits of eating whole grains is FIBER. Fiber is the indigestible part of plant foods. For example, It is the bran of the wheat, the skin of the fruit and the seeds of vegetables. It is non-nutritive, meaning it doesn’t supply any of the essential nutrients. However fiber provides some pretty significant health benefits: 

• It helps reduce blood cholesterol levels and may lower risk of heart disease.
• It is important for proper bowel function and it helps reduce constipation and diverticulosis.

Fiber-containing foods such as whole grains help provide a feeling of fullness with fewer calories.
Whole grains are also good sources of dietary fiber; most refined (or processed) grains contain little fiber. And because many of the grains we eat are the refined ones like white bread, sugared cereals and processed pastas, most American do not get enough fiber. We need about 30 grams of fiber per day, but the average American consume only about 11 grams a day.

And boy do we eat a lot of it! The average American eats about 200 pounds of sugar a year! Much of that (about 125 lbs. of it) is from “added sugar” which is sugar that has already been added into the products we eat.

The USDA recommends that no more than 8% of the calories in our diet come from sugar, but here in America we eat about twice that much, most of it from packaged foods and sodas. Our sugar consumption has risen about 25% since the 1960s. Why do you think this increase has occurred?

Most experts contend that sugar consumption has risen so drastically because of our increased intake of processed and package food. You may be thinking: “I check food labels and I don’t think I eat all that much sugar. “ Perhaps you rarely even see sugar listed as an ingredient. But keep in mind when you check the ingredients list on a food label that sugar has any aliases. And no matter what you call it, it’s still sugar.

Take a look at some foods that have added sugar. Chocolate bars and sugared cereal are pretty obvious examples. You expect them to have sugar…But what about these?

Consider ketchup…every tablespoon of ketchup has one teaspoon of sugar. There are 3 teaspoons in a tablespoon, so one third of ketchup is pure sugar.

Even a Whopper has 3 teaspoons of sugar…maybe it’s in the sauce.

Even foods that are considered weight-loss products can be packed full of sugar. For example, one can of Slim Fast has almost 9 teaspoons of sugar. 66% of its total calories are from sugar! That’s more than a small bag of M&Ms. Sure, it has some added vitamin and minerals, but you could probably have the M&Ms and a multi-vitamin pill and come out about the same nutritionally.
The biggest single source of sugar in the American diets is soft drinks…what some nutritionist term “liquid candy.” The latest research from the Center for Science in the Public Interest suggests that:

- On average, children drink 868 sodas a year
- Soft drinks are the biggest single source of sugar in a child’s diet, accounting for about 45% of their daily sugar intake of 34 tsp.
- Sugar also accounts for about 11% of a child’s daily calories

Another concern is the fact that as children tripled their consumption of soda over the last 30 years, they also drank 40% less milk. Today on, average Americans drink twice as much empty calorie-laden soda as they do nutrient-rich milk.

The Guidelines also encourage Americans to eat foods low in salt. You should eat less than 2,300 mg (approximately 1 teaspoon) of sodium per day.

Keep in mind that some salt is a good thing, because sodium is an essential mineral. However, the body only needs about 500 mg. of sodium per day. Unfortunately, most American get much more salt than that, on average more than five times that amount..

One of the reasons that good health depends on limiting salt intake is because studies have confirmed a cause and effect relationship between salt and hypertension. Sodium can constrict vessels, making the heart have to push more vigorously to get blood throughout the body. Even a small rise in pressure can have deadly implications. In 2004 the National Heart, Lung and Blood Institute announced that your blood pressure must be lower than what was originally thought in order to be considered normal. Researchers found that starting at blood pressure reading of 115/75, every 20 point increase in your systolic reading (the top number) or 10 point increase in your diastolic reading (the bottom number) doubles the chance of death from stroke or heart disease.

American intake of salt increased 7% in 1990s. While most people think their sodium intake is within normal limits if they don’t use the salt shaker, it may not be. An estimated 75% of the sodium Americans eat comes from processed foods, not the salt shaker.

You may never actually add salt to the any of the foods you eat, but still get way too much of it. The problem is that there is salt already in many of the foods you eat—especially in processed or pre-prepared foods.

In addition to these examples, a fast food hamburger already has about 1000 mg of salt before you even pull out the salt shaker. Chicken noodle soup has about 1200 mg.
While you may expect soy sauce and fried chicken sandwiches to be high in salt, the salt content in some foods is less obvious. For example, a cup of cottage cheese has 851 milligrams and a cup of macaroni and cheese has 1058. How about a McDonald’s chocolate milkshake? Would you be surprised to learn that it has 500 milligrams of salt, about 1 quarter of your daily limit?

Generally anything more than moderate drinking can be harmful to your health. So if you choose to drink alcohol, do so in moderation. Moderate drinking means up to 1 drink a day for women and up to 2 drinks a day for men. Also remember that from a nutrition perspective, alcohol is poor choice. Alcoholic beverages have a significant number of calories but are low in nutritional value.

To avoid food borne illness, know how to prepare, handle, and store food safely. Important safe food procedures include:
* Clean your hands, food contact surfaces, and fruits and vegetables. Meat and poultry should not be washed or rinsed.
* Separate raw, cooked, and ready-to-eat foods while shopping, preparing, or storing foods.
* Cook foods to a safe temperature to kill microorganisms.
* Refrigerate perishable food promptly and defrost foods properly.

Avoid unpasteurized milk or any products made from it. Also avoid raw or partially cooked eggs or foods containing raw eggs, raw or undercooked meat and poultry, unpasteurized juices, and raw sprouts.

We all have our own excuses for not eating more healthy. What are some of yours?

The USDA provides two important tools to help Americans evaluate their diets: The “Nutrition Facts” labeling system and the new and improved food guide pyramid.

An important tool to help you follow the new dietary guidelines is the “Nutrition Facts” label that is required by law to be on all packaged foods. Let’s take a look at some of the important information provided by the Nutrition Facts label.

The first place to start when you look at the Nutrition Facts label is the serving size and the number of servings in the package. Serving sizes are standardized to make it easier to compare similar foods. They are provided in familiar units, such as cups or pieces, followed by the amount in grams.
The size of the serving on the food package influences the number of calories and all the nutrient amounts listed on the top part of the label. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, "How many servings am I actually consuming?

In this sample label, one serving of macaroni and cheese equals one cup. So if you ate the whole package, you would eat two cups. That doubles the calories and other nutrient numbers, including the % Daily Values.

Calories provide a measure of how much energy you get from a serving of this food. Many Americans consume more calories than they need without meeting recommended intakes for a number of nutrients. The calorie section of the label can help you manage your weight. Remember: the number of servings you consume determines the number of calories you actually eat.

In our example, there are 250 calories in one serving of this macaroni and cheese. How many calories from fat are there in ONE serving? Answer: 110 calories, which means almost half the calories in a single serving come from fat. What if you ate the whole package content? Then, you would consume two servings, or 500 calories, and 220 would come from fat.

Of course, eating too many calories per day is linked to overweight and obesity. If you are trying to determine if a food product is a high-calorie choice, follow these general guidelines:
* 40 calories per serving is considered “low calorie”
* 100 calories is “moderate calorie”
* 400 calories or more is “high calorie”

You can use the Nutrition Facts label not only to help limit those nutrients you want to cut back on but also to increase those nutrients you need to consume in greater amounts.

The nutrients listed first are the ones Americans generally eat in adequate amounts, or even too much. They are identified in yellow as Limit these Nutrients. As discussed earlier, eating too much fat, saturated fat, trans fat, cholesterol, or sodium may increase your risk of certain chronic diseases, like heart disease, some cancers, or high blood pressure.

Most Americans don't get enough dietary fiber, vitamin A, vitamin C, calcium, and iron in their diets. They are identified on the Nutrition Facts label in blue as “Get Enough of These” nutrients. Eating enough of these nutrients can improve your health and help reduce the risk of some diseases and conditions. For example, getting enough calcium may reduce the risk of osteoporosis, a condition that results in brittle
bones as one ages. Eating a diet high in dietary fiber promotes healthy bowel function. Additionally, a diet rich in fruits, vegetables, and grain products that contain dietary fiber, particularly soluble fiber, and low in saturated fat and cholesterol may reduce the risk of heart disease.

42 The %Daily Value column can help you determine if a serving of food is high or low in a nutrient. These numbers are based on the Daily Value recommendations for key nutrients for a 2,000 calorie daily diet. You, like most people, may not know how many calories you consume in a day. But you can still use the %Daily Value as a frame of reference whether or not you consume more or less than 2,000 calories. In general 5%Daily Value is considered LOW and 20% or more is considered HIGH for most nutrients.

43 In addition to the Nutrition Facts label, another important tool for evaluating your diet is the food pyramid. In Spring of 2005, the United States Department of Agriculture (USDA) released the latest food pyramid. It’s called the My Pyramid Food Guidance System. My Pyramid replaces the ten-year old Food Guide Pyramid. It is based on the 2005 Dietary Guidelines for Americans and provides specific recommendations for making food choices that will improve the quality of an average American diet. Let’s take a look at some of the features of the new My Pyramid.

44 The new pyramid symbolizes a personalized approach to healthy eating and physical activity. Researchers have identified six important components of an effective diet and exercise plan which are represented on the new pyramid. These component include:

- **PROPOTIONALITY** suggests that you should eat more of some foods like fruits, vegetables and whole grains and less of others like foods high certain fats and sugar. Proportionality is represented on the pyramid by the different widths of the food group bands. The widths suggest how much food a person should choose from each group.
- To have VARIETY in your diet, eat foods from all food groups and subgroups. Variety is symbolized by the 6 color bands representing the 5 food groups of the Pyramids and oils.
- For MODERATION choose forms of foods that limit intake of saturated and trans fats, added sugars, cholesterol, salt and alcohol. Moderation is represented by the narrowing of each food group from bottom to top.
- You should be physically active each day. ACTIVITY is represented by the steps and the person climbing them, as a reminder of the importance of daily physical activity.
- GRADUAL IMPROVEMENT is encouraged by the slogan. It suggests that individuals can benefit from taking small steps to improve their diet and lifestyle each day.
Because of our activity levels and energy needs, no one Pyramid is right for everyone. PERSONALIZATION is shown by the person on the steps, the slogan and the URL.

To learn more about My Pyramid view this animation from the USDA.

My Pyramid visually depicts the five different food groups including: grains, vegetables, fruits, milk and meat and beans. Let’s take a look at suggested dietary guidelines for each of these groups.

The average person needs 6 oz. of grains everyday. One ounce is about 1 slice of bread, or 1 cup of breakfast cereal or 1/2 cup of cooked rice, cereal or pasta. Grains are divided into two groups: WHOLE grains and REFINED grains. Whole grains contain the entire grain kernel while refined grains have been milled-- a process that removes the bran and the germ.

It is important that you make at least half of your grains whole grains like whole-wheat flour, oatmeal and brown rice for these are very rich in the B vitamins and certain minerals like. The B vitamins play a key role in metabolism. They help the body release energy from protein, fat, and carbohydrates and are also essential for a healthy nervous system. Folic acid another B vitamin, helps the body form red blood cells. Magnesium is a mineral used in building bones and releasing energy from muscles. Selenium protects cells from oxidation. It is also important for a healthy immune system.

Consuming foods rich in fiber, such as whole grains, as part of a healthy diet, reduces the risk of coronary heart disease and certain gastro-intestinal diseases.

Another good source of fiber are fruits. You should have 2 servings of fruit everyday. A serving is 1 cup of cut fruit or one small whole fruit like an apple, pear or banana.

Most fruits are naturally low in fat, and sodium and none have cholesterol. Eating foods such as fruits that are low in calories instead of some other higher-calorie food may be useful in helping to lower calorie intake. Fruits also provide nutrients vital for health and maintenance of your body. They are an important potassium, vitamin C, folic acid and dietary fiber.

People who eat more fruits as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases including Type 2 diabetes, coronary heart disease, kidney stones and certain cancers such as mouth, stomach and colorectal.
My Pyramid requires 2 1/2 cups a day of vegetables. In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup from the vegetable group.

People who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Vegetables provide nutrients vital for health and maintenance of your body and also provide loads of fiber. It is important to eat all types of vegetables as different vegetables provide different nutrients. So vary your veggies!

All foods made from meat, poultry, fish, dry beans or peas, eggs, nuts, and seeds are considered part of this group. While 5-and-a-half ounces is the average requirement, the amount of food from the Meat and Beans Group you need to eat depends on age, sex, and level of physical activity. Most Americans actually eat enough food from this group. What we need to focus on is making leaner and more varied selections of these foods.

Most meat and poultry choices should be lean or low-fat. Fish, nuts, and seeds contain healthy oils, so choose these foods frequently instead of meat or poultry. Foods in the protein group provide nutrients that are vital for health and maintenance of your body. However, choosing foods from this group that are high in saturated fat and cholesterol may have negative health implications. So keep it lean with your protein!

All fluid milk products and many foods made from milk are considered part of this food group. Foods made from milk that retain their calcium content are part of the group, while foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not. On average you need 3 cups per day with most of your choices fat-free or low-fat.

Because it is such a great source of calcium, milk and milk products can reduce the risk of low bone mass throughout the life cycle. Foods in the milk group also provide other nutrients that are vital for health and maintenance of your body including potassium, vitamin D, and protein.

Milk may also help with weight control. In a new study, adults on a reduced-calorie diet who ate 3-4 servings of dairy foods each day lost an average of 24 pounds, significantly more than those who just reduced calories or took calcium supplements.

Keep in mind that all milk products are not created equal. While all of the products above provide calcium, compare the chocolate ice cream to the others. Yes, it
does provide 200 mg. of calcium, but it also adds a whopping 39 grams of fat and 660 calories!

59
The Oil category on the new pyramid includes only those fats that are liquid at room temperature, like the vegetable oils used in cooking. Most oils are high in monounsaturated or polyunsaturated fats, and low in saturated fats. Oils from plant sources (vegetable and nut oils) do not contain any cholesterol. In fact, no foods from plants sources contain cholesterol. A few plant oils, however, including coconut oil and palm kernel oil, are high in saturated fats and for nutritional purposes should be considered to be solid fats. They, along with trans fats, should be avoided.

The exact amount of food you need in any one category will vary based on your age, activity level and other unique nutritional needs. Consequently, the USDA has developed 12 Pyramids. To find the one that is right for you, visit this link.

Awareness of how you eating might be the first step to improving your food choices. At the address above, the USDA provides an online tool for those who want a detailed assessment and analysis of their current eating and physical activity habits. Simply enter of all foods eaten each day and all physical activities performed, From this information, the tool will provide your current nutritional status in comparison to the 2005 Dietary Guidelines recommendations, you nutrient intake, and you energy balance. A history function will allow you to track your progress over time, for up to one year.

College life can pose some new challenges for eating healthy. For many students college, especially those living in the dorms, every meal is eaten out. Some students really like what the food and food choices offered at their colleges and some students don’t. What about you? How’s your campus cuisine?