



PURDUE UNIVERSITY NORTHWEST

# How to Eat Better

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# Introduction to the Integrative Physiology and Health Sciences Center Team

- John Durocher, PhD- Principal Investigator



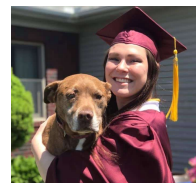
- Matthew Ladwig, PhD – Co-Investigator



- Grant Thivierge, MS – Project Coordinator



- Reagan Bishop, MS Student



# Today's Outline

1. Overview of Life's Simple 7
2. How to make smart choices and build healthy eating style.
3. How understanding food labels help you make healthier choices.
4. Tips on how to watch calories and eat smaller portions.
5. How diet-planning principles are used to plan a healthy diet.
6. How to choose products with lower amounts of sodium, saturated fats, and added sugars.
7. Questions & Discussion

# Icebreaker

Do you consider the nutrition quality of your food before you make your choices? If so, what drives your choices?



Christine Myastkovsky/Cengage

- Wen-Lei chooses foods based on price.
- Eli is busy and values convenience.
- Ella wants to perform well on her volleyball team.
- Amil is trying to lose weight.
- Keisha is trying to eat more nutritious foods.
- Jamar eats whatever his wife cooks.

**Let food be thy medicine  
and medicine be thy food**

Hippocrates



The above quote, though thousands of years old, acknowledges the importance of healthy eating and how the nutrients in various foods have healing properties.

# Life's Simple Essential 7 (8)

- **Life's Essential 8** are the key measures for improving and maintaining cardiovascular health, as defined by the American Heart Association.
- Better cardiovascular health helps lower the risk for heart disease, stroke and other major health problems.
- **What's new in 2022:**
  - Adds sleep as a component of heart health.
  - Creates a new guide to assess diet.
  - Accounts for vaping and secondhand smoke.
  - Adjusts cholesterol and blood sugar measures.
  - Scores each component to average an overall heart health score on a scale from 0-100.



Healthy For Good™



Most recent CDC data shows that 7 out of every 10 American adults are overweight or obese.



Get your My Life Check® Assessment now at [heart.org/mylifecheck](https://heart.org/mylifecheck).

\*Note that data shown in infographic is from 2017.

# Leading Causes of Death in the United States

- Food plays a vital role in supporting health
- Chronic diseases are the leading causes of death and disability among US adults and account for 90 percent of US health care costs.

	Percentage of Total Deaths
1. <b>Heart disease</b>	23.1
2. <b>Cancers</b>	21.1
3. Accidents	5.9
4. Chronic lung diseases	5.6
5. <b>Strokes</b>	5.2
6. Alzheimer's disease	4.3
7. <b>Diabetes mellitus</b>	3.0
8. Pneumonia and influenza	2.1
9. Kidney disease	1.8
10. Suicide	1.7

NOTE: The diseases highlighted in bold have relationships with diet.

SOURCE: NCHS, National Vital Statistics System, Mortality, *Data Brief 355: Mortality in the United States, 2018*.



# Fast Stats from CDC

## Fast Stats

### In the United States:



3 IN 4

INFANTS

are not exclusively  
breastfed for 6 months.



9 IN 10

AMERICANS

consume too  
much sodium.



1 in 6

PREGNANT  
WOMEN

have iron levels that are  
too low.



NEARLY \$173

BILLION

a year is spent on  
health care for obesity.

Most people in the **United States** don't eat a healthy **diet** and consume too much sodium, saturated fat, and sugar, increasing their risk of chronic diseases.



## The Situation

- **Poor diet is a major challenge in the United States.**
- **Less than 10% of American adults** eat the type of diet the American Heart Association recommends for ideal cardiovascular health.
- Consumers are challenged by eating right; many of us know we should eat healthier **but don't know where to start.**

## Why bother eating a well-balanced diet?

- **Heart disease is the No. 1 killer worldwide.**
- **Stroke ranks third globally.**
- Even when those conditions don't result in death, they can cause disability and diminish quality of life.





## WHY IT MATTERS

**WE WANT TO SEE  
A WORLD FREE OF  
CARDIOVASCULAR  
DISEASES AND STROKE.**

Heart disease and stroke  
can be prevented 80%  
of the time by making  
healthy choices.

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12

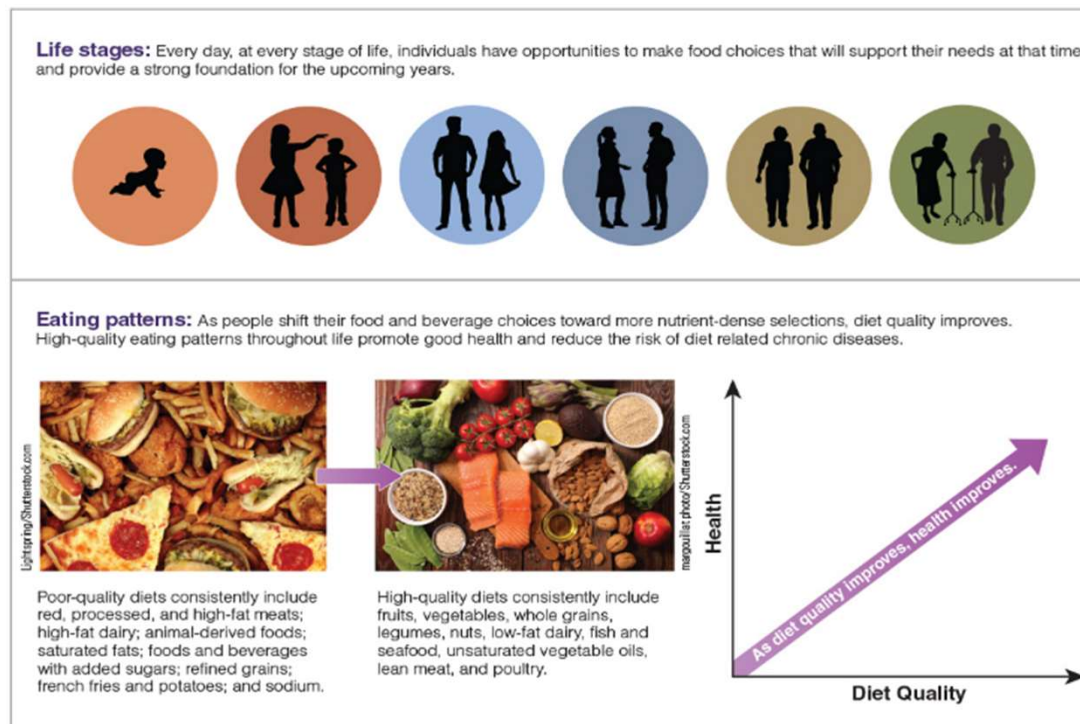
# Dietary Guidelines for Americans

- What should a person eat to stay healthy?
- The *Dietary Guidelines for Americans*, is an evidence-based document used to develop federal food, nutrition, and health policies and programs.



The *Dietary Guidelines* recommend physical activity to help balance energy (kcalorie) intakes to achieve and sustain a healthy body weight

# Helping Individuals With Diet Improvements



The 2020–2025 *Dietary Guidelines for Americans* are based on the two major themes. First, eating patterns must change throughout life to meet the needs at each life stage. Second, appropriate eating patterns support good health today and lay the foundation for continued good health at later stages.

# Six Principles of Healthy Eating



*Understanding Nutrition, 16<sup>th</sup> edition*, by Ellie Whitney; Sharon Rady Rolfes

# Principles of Healthy Eating

1. **Adequacy-** Enough calories (energy) and nutrients to support health.
2. **Balance- Combination of foods** for adequate nutrients and calories. (Examples: milk provides calcium and protein, fruit provides vitamins and fiber, fish provides protein and iron).  
**One type of food will not provide all nutrients.**
3. **Energy Control-** **Calories consumed** = basic energy needs + calories from activity. Energy control is necessary for a healthy weight.

*Understanding Nutrition, 16<sup>th</sup> edition, by Ellie Whitney; Sharon Rady Rolfes*



# Principles of Healthy Eating

**4. Nutrient Density- Variety and amount** of nutrients in relation to calorie content (Example:1 cup watermelon: 45 calories and good source of vitamin C and fiber. It also contains potassium, copper, vitamin B5, and vitamin A.).

**5. Moderation-** Consumption of **nutrient dense foods most of the time** and consuming foods that are not nutrient dense, but may be enjoyable, only occasionally.

**6. Variety-** Selection of **foods from each food group** and varying choices within groups. Different foods within groups contain different nutrients. (Example: strawberries (fruit) are rich in vitamin C while mangos (fruit) are rich in vitamin A).

*Understanding Nutrition, 16<sup>th</sup> edition, by Ellie Whitney; Sharon Rady Rolfes*

# Knowledge Check

Which Diet-Planning Principle encourages choosing foods from all major food groups as well as choosing multiple, different foods within each food group?

- A. Adequacy
- B. Balance
- C. Energy control (Calories)
- D. Nutrient density
- E. Moderation
- F. Variety

# Resources for Diet Planning

USDA Food Patterns are based on the Dietary Guidelines for Americans

Healthy eating patterns are flexible to accommodate an individual's personal, cultural, traditional preferences, and financial resources. The USDA Food Patterns assign foods to five major groups:



Depending on individual calorie levels, there are recommended daily amounts of foods from each group to meet nutrient needs.

# USDA Food Patterns: Fruits and Vegetables



1 c fruit =  
1 c fresh, frozen, or canned fruit  
½ c dried fruit  
1 c 100% fruit juice

**Fruits** contribute folate, vitamin A, vitamin C, potassium, and fiber.

**Consume a variety of fruits, and choose whole or cut-up fruits more often than fruit juice.**

Apples, apricots, avocados, bananas, blueberries, cantaloupe, cherries, grapefruit, grapes, guava, honeydew, kiwi, mango, nectarines, oranges, papaya, peaches, pears, pineapples, plums, raspberries, strawberries, tangerines, watermelon; dried fruit (dates, figs, prunes, raisins); 100% fruit juices

**Limit these fruits that contain solid fats and/or added sugars:**

Canned or frozen fruit in syrup; juices, punches, ades, and fruit drinks with added sugars; fried plantains



1 c vegetables =  
1 c cut-up raw or cooked vegetables  
1 c cooked legumes  
1 c vegetable juice  
2 c raw, leafy greens

**Vegetables** contribute folate, vitamin A, vitamin C, vitamin K, vitamin E, magnesium, potassium, and fiber.

**Consume a variety of vegetables each day, and choose from all five subgroups several times a week.**

Dark-green vegetables: Broccoli and leafy greens such as arugula, beet greens, bok choy, collard greens, kale, mustard greens, romaine lettuce, spinach, turnip greens, watercress

Red and orange vegetables: Carrots, carrot juice, pumpkin, red bell peppers, sweet potatoes, tomatoes, tomato juice, vegetable juice, winter squash (acorn, butternut)

Legumes: Black beans, black-eyed peas, garbanzo beans (chickpeas), kidney beans, lentils, navy beans, pinto beans, soybeans and soy products such as tofu, split peas, white beans

Starchy vegetables: Cassava, corn, green peas, hominy, lima beans, potatoes

Other vegetables: Artichokes, asparagus, bamboo shoots, bean sprouts, beets, brussels sprouts, cabbages, cactus, cauliflower, celery, cucumbers, eggplant, green beans, green bell peppers, iceberg lettuce, mushrooms, okra, onions, seaweed, snow peas, zucchini

**Limit these vegetables that contain solid fats and/or added sugars:**

Baked beans, candied sweet potatoes, coleslaw, french fries, potato salad, refried beans, scalloped potatoes, tempura vegetables

*Understanding Nutrition, 16<sup>th</sup> edition, by Ellie Whitney; Sharon Rady Rolfes*

# USDA Food Patterns: Grains and Protein foods



1 oz grains =  
1 slice bread  
½ c cooked rice, pasta, or cereal  
1 oz dry pasta or rice  
1 c ready-to-eat cereal  
3 c popped popcorn

**Grains** contribute folate, niacin, riboflavin, thiamin, iron, magnesium, selenium, and fiber.

**Make most (at least half) of the grain selections whole grains.**

Whole grains: amaranth, barley, brown rice, buckwheat, bulgur, cornmeal, millet, oats, quinoa, rye, wheat, wild rice and whole-grain products such as breads, cereals, crackers, and pastas; popcorn

Enriched refined products: bagels, breads, cereals, pastas (couscous, macaroni, spaghetti), pretzels, white rice, rolls, tortillas

**Limit these grains that contain solid fats and/or added sugars:**

Biscuits, cakes, cookies, cornbread, crackers, croissants, doughnuts, fried rice, granola, muffins, pastries, pies, presweetened cereals, taco shells



1 oz protein foods =  
1 oz cooked lean meat, poultry, or seafood  
1 egg  
¼ c cooked legumes or tofu  
1 tbs peanut butter  
½ oz nuts or seeds

**Protein foods** contribute protein, essential fatty acids, niacin, thiamin, vitamin B<sub>6</sub>, vitamin B<sub>12</sub>, iron, magnesium, potassium, and zinc.

**Choose a variety of protein foods from the three subgroups, including seafood in place of meat or poultry twice a week.**

Seafood: Fish (catfish, cod, flounder, haddock, halibut, herring, mackerel, pollock, salmon, sardines, sea bass, snapper, trout, tuna), shellfish (clams, crab, lobster, mussels, oysters, scallops, shrimp)

Meats, poultry, eggs: Lean or low-fat meats (fat-trimmed beef, game, ham, lamb, pork, veal), poultry (no skin), eggs

Nuts, seeds, soy products: Unsalted nuts (almonds, cashews, filberts, pecans, pistachios, walnuts), seeds (flaxseeds, pumpkin seeds, sesame seeds, sunflower seeds), legumes, soy products (textured vegetable protein, tofu, tempeh), peanut butter, peanuts

**Limit these protein foods that contain solid fats and/or added sugars:**

Bacon; baked beans; fried meat, seafood, poultry, eggs, or tofu; refried beans; ground beef; hot dogs; luncheon meats; marbled steaks; poultry with skin; sausages; spare ribs

*Understanding Nutrition, 16<sup>th</sup> edition, by Ellie Whitney; Sharon Rady Rolfes*

# USDA Food Patterns: Milk and milk products



1 c milk or milk product =  
1 c milk, yogurt, or fortified soy milk  
1½ oz natural cheese  
2 oz processed cheese

**Milk and milk products** contribute protein, riboflavin, vitamin B<sub>12</sub>, calcium, potassium, and, when fortified, vitamin A and vitamin D.

**Make fat-free or low-fat choices. Choose other calcium-rich foods if you don't consume milk.**

Fat-free or 1% low-fat milk and fat-free or 1% low-fat milk products such as buttermilk, cheeses, cottage cheese, yogurt; fat-free fortified soy milk

**Limit these milk products that contain solid fats and/or added sugars:**

2% reduced-fat milk and whole milk; 2% reduced-fat and whole-milk products such as cheeses, cottage cheese, and yogurt; flavored milk with added sugars such as chocolate milk, custard, frozen yogurt, ice cream, milk shakes, pudding, sherbet; fortified soy milk



1 tsp oil =  
1 tsp vegetable oil  
1 tsp soft margarine  
1 tbs low-fat mayonnaise  
2 tbs light salad dressing

**Oils** are not a food group, but are featured here because they contribute vitamin E and essential fatty acids.

**Use oils instead of solid fats, when possible.**

Liquid vegetable oils such as canola, corn, flaxseed, nut, olive, peanut, safflower, sesame, soybean, sunflower oils; mayonnaise, oil-based salad dressing, soft *trans*-fat-free margarine; unsaturated oils that occur naturally in foods such as avocados, fatty fish, nuts, olives, seeds (flaxseeds, sesame seeds), shellfish

**Limit these solid fats:**

Butter, animal fats, stick margarine, shortening

*Understanding Nutrition, 16<sup>th</sup> edition*, by Ellie Whitney; Sharon Rady Rolfes

## Focus on what you can change: reducing controllable risk factors

- Adopting better dietary **habits** and choosing a **varied** combination of foods is your first step.
- **Consuming the right amount of the proper foods** maybe the single most important thing to lower your risk.



# The SOLUTION



American Heart Association®

Healthy for Good™

- Healthy for Good is a revolutionary movement to inspire you to create lasting change in your health and your life, one small step at a time. The approach is simple:







## • **EAT SMART**

- Healthy eating starts with healthy food choices. You don't need to be a chef to create nutritious, heart-healthy meals your family will love.
- Learn what to look for at the grocery store, restaurants, your workplace and any eating occasion.

# Create a Healthy Eating Pattern

- **Enjoy:** vegetables, fruits, whole grains, beans, legumes, nuts, plant-based proteins, lean animal proteins, skinless poultry, fish and seafood.
- **Limit:** sweetened drinks, alcohol, sodium, red and processed meats, refined carbohydrates like added sugars and processed grain foods, full-fat dairy products, highly processed foods, tropical oils like coconut and palm.
- **Avoid:** Saturated fats, trans fat and partially hydrogenated oils (found in some commercial baked goods and fried foods).



## Add Color

- Eating a healthy diet rich in fruits and vegetables is directly linked to a longer, healthier life.
- An easy first step to eating healthy is to include fruits and vegetables at every meal and snack. All forms (fresh, frozen, canned and dried) and all colors count, so go ahead and add color to your plate – and your life.



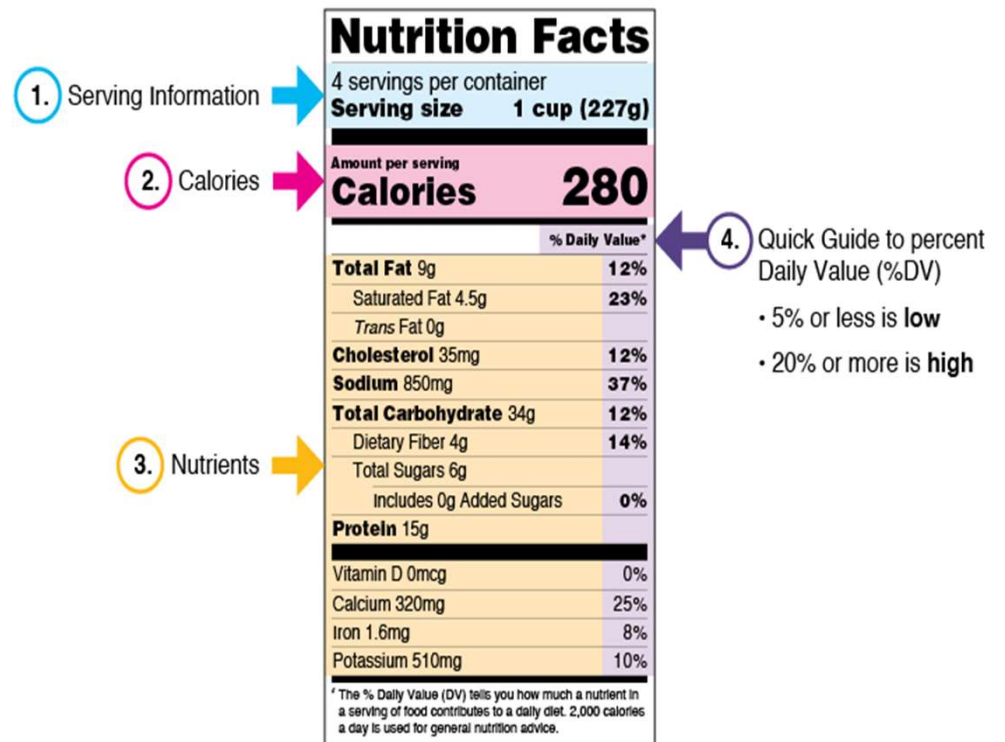
## CHECK FOR THE HEART-CHECK MARK

**Simply look for AHA familiar red heart with a white check mark on the package.**

When you see the Heart-Check mark from the American Heart Association on a food product, you know it has been put through a robust certification process.

# Read Food Labels

- Learning how to read and understand food labels can help you make healthier choices.
- When you have more than one choice, compare nutrition facts.
- Choose products with lower amounts of **sodium**, **saturated fat** and **added sugars**.



# Tips for success

1. **Watch calories-** eat only as many calories as you use up through physical activity. Understand serving sizes and keep portions reasonable.
2. **Cook at home-** take control over the nutritional content of your food by learning healthy preparation methods.
3. **Look for the heart-check-** the Heart-Check mark helps you find foods that can be part of a healthy eating plan.
4. **IN NEED OF INSPIRATION?-** the American Heart Association has hundreds of heart-healthy recipes to choose from.
5. **Stay positive!**
6. **Take baby steps**

# HEALTHY EATING RESOURCES



## RECIPE HUB

Cooking at home can benefit your health and your budget. Find healthy recipes, cooking tips and skills, videos, articles and much more. Our recipes are simple, nutritious and budget-friendly, with easy-to-follow preparation videos. For more information, visit [heart.org/recipes](https://heart.org/recipes).



## HEART-CHECK

The Heart-Check mark makes it easy to spot healthier choices in the grocery store. When you see the Heart-Check mark, you know the food meets specific nutritional criteria. We also have Heart-Check certified recipes. For more information, visit [heartcheck.org](https://heartcheck.org).



## COOKBOOKS

We have a wide variety of cookbooks and recipe magazines available with everything from quick and easy recipes to special dietary needs such as lowering cholesterol or sodium intake. For more information, visit [heart.org/cookbooks](https://heart.org/cookbooks).



## ADVOCACY

You deserve the right to choose what's in your food, but that decision isn't always up to you. Join us and demand change! More food and restaurant companies are listening to us and offering healthier options. It's important to recognize their progress and to keep asking for healthy changes. Join the movement and take action today. For more information, visit [youarethecure.org](https://youarethecure.org).

# HEALTHY EATING RESOURCES



## **WORKPLACE HEALTH SOLUTIONS**

The AHA offers a suite of evidence-based tools to help companies maximize their employee health and well-being initiatives. With our solutions, you can assess your organization's culture of health, engage employees with tools to reach ideal cardiovascular health, monitor and report progress, and qualify for recognition from the AHA. For more information, visit [heart.org/workplacehealth](http://heart.org/workplacehealth).



## **HEALTHY ENVIRONMENTS FOOD & BEVERAGE TOOLKIT**

We provide tools to help you improve your organization's food environment and promote a culture of health, with practical suggestions and nutrition standards that are easy to understand and apply in any size organization. Meetings, catered meals, snacks and vending are addressed. For more information, visit [heart.org/foodwhereur](http://heart.org/foodwhereur).



## **HEALTHY FOR LIFE® 20 By 20**

Healthy for Life® 20 By 20 is an evidence-based community nutrition and well-being program that empowers people to make healthy food, nutrition and lifestyle choices. It aims to change food and health attitudes and behaviors, equipping individuals with new skills for healthy living. The program incorporates interactive components such as healthy cooking demonstrations, shopping skills presentations and nutrition and heart health workshops. For more information, visit [heart.org/healthyforlife](http://heart.org/healthyforlife).



## **EAT SMART MONTH**

Our National Eating Healthy Day in November has been expanded to a month-long celebration. Eat Smart Month is part of our Healthy for Good movement encouraging people to Eat smart. Add color. For more information, visit [heart.org/en/healthy-living/healthy-eating/eat-smart/eat-smart-month](http://heart.org/en/healthy-living/healthy-eating/eat-smart/eat-smart-month).



## **MY LIFE CHECK**

Our interactive online tools like My Life Check® help people assess and track their heart health information and gain a better understanding of their risk of heart disease and stroke. Visit [heart.org/mylifecheck](http://heart.org/mylifecheck).