

Food is Medicine

Session #: T29

Anne L. Hague, PhD, MS, RDN, LD, RDH, CLT
anne@riteforyouwellness.com

Rite For You Nutrition Center
171 Green Meadows Drive South
Lewis Center, Ohio 43035
614-985-6569



Objectives

- Identify key principles of health promoting diets that reduce the risk of disease.
- Compare the benefits of whole foods to processed foods.
- State strategies for the incorporation of health promoting foods in your diet.

Presentation Outline

- Introduction
- Health promoting diets
 - Mediterranean Diet
 - Therapeutic Lifestyle Changes Diet
 - DASH Diet
- Anti-inflammatory foods
- Eat Your Rainbow
- Conclusion

**“Let Thy Food Be Thy
Medicine, And Thy Medicine
Be Thy Food”**

Hippocrates, 460 B.C.
The Father of Medicine

**“The doctor of the future will
give no medicine, but will
interest his patients in the
care of the human body, in
diet, and in the cause and
prevention of disease.”**



Thomas Edison

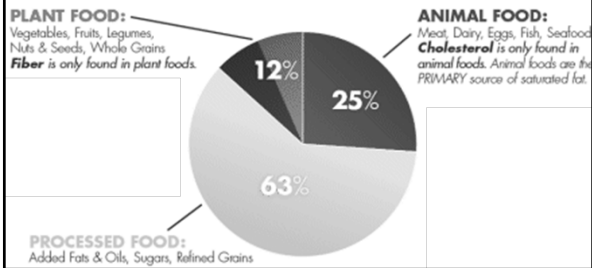
1847-1931

You Are What You Eat!

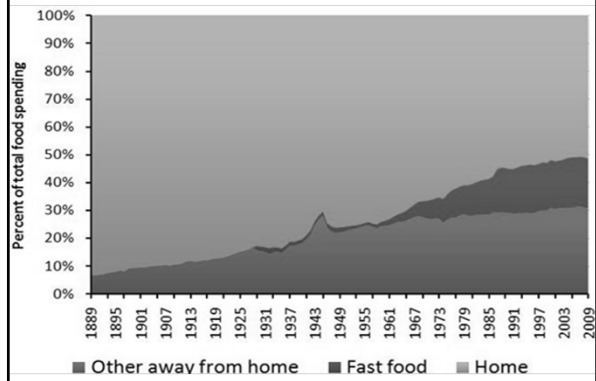
We have a choice in what we are made of....



U.S. FOOD CONSUMPTION AS A % OF CALORIES



Where Americans Eat



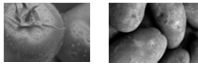
Mindless Eating....

- Our fast-paced society fosters a mindless eating where quality of food becomes secondary.
- Mindless eating denies us the experience, the purpose and the role of food. Eventually it denies us our very lifestyle.

How Foods Compare....

Whole Foods

- More nutrients
- Less calories
- Anti-inflammatory
- Non-addictive
- No added ingredients

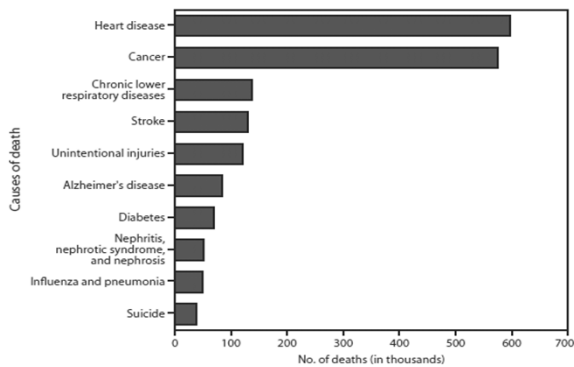


Processed Foods

- Less nutrients
- More calories
- Pro-inflammatory
- Addictive
- Added sugars, salt and/or unhealthy fats



10 Leading Causes of Death



Nutrigenomics

- Diet can be a serious risk factor for a number of diseases
 - Dietary chemicals can alter gene expression or structure
- Some diet-regulated genes can play a role in the onset, incidence, progress and/or severity of chronic disease



Nutrigenomics

How foods affect our genes



How individual genetic differences affect the way we respond to nutrients

Personalized Nutrition


- More research is needed:
 - Used to prevent, mitigate or cure chronic disease
 - Knowledge gained from nutrigenomics can be integrated into the everyday lives of consumers

Health Promoting Diets



"Because we are what we eat,
we can literally
transform
our bodies
and **minds**
by choosing an Inspiring diet."

Mediterranean Diet



Daily Beverage Recommendations:
6 Glasses of Water

Wine in moderation

MEAT Monthly

SWEETS Weekly

EGGS Weekly

POULTRY Weekly

FISH Weekly

CHEESE & YOGURT Daily

OLIVE OIL Daily

FRUITS Daily

BEANS, LEGUMES & NUTS Daily

VEGETABLES Daily

BREAD, PASTA, RICE, COUSCOUS, POLENTA, OTHER WHOLE GRAINS & POTATOES Daily

Daily Physical Activity

Therapeutic Lifestyle Changes Diet

- Diet:
 - Saturated fat: <7% of total calories
 - Cholesterol: <200mg/day
 - Sodium: <2400mg/day
 - Fat calories: 25-35% of total daily calories
- Exercise:
 - At least 30 minutes of exercise/day
- Maintain a healthy weight

Effect of Diet on LDL

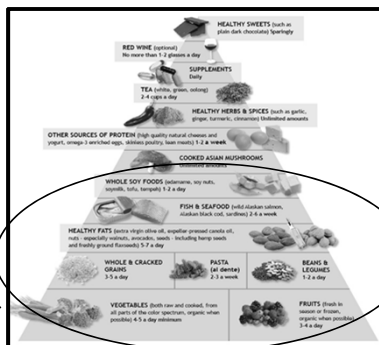
Dietary Components	Dietary Change	Approximate LDL Reduction
Saturated Fat	<7% of calories	8-10%
Dietary Cholesterol	<200mg/day	3-5%
Viscous Fiber	5-10 grams/day	3-5%
Plant sterol/stanol esters	2 grams/day	6-15%

Source: Adapted from National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) 2002.

DASH Diet

- Dietary Approaches to Stop Hypertension (DASH)
 - Diet is fully compatible with recommendations for reducing risk of CVD, osteoporosis and cancer
 - High in whole grains, fruits, vegetables, and low-fat dairy
 - Adequate Calcium, Potassium, Magnesium
 - Low in red meat, sweets and sugar beverages
 - Low in saturated and trans fat and cholesterol

Dr. Weil's Anti-Inflammatory Food Pyramid



Anti-inflammatory Foods

- Fruits and Vegetables
- Whole grains
- Legumes
- Whole soy foods
- Healthy Fats



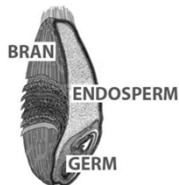
Fruits and Vegetables

- A rich source of:
 - Vitamins & minerals
 - Antioxidants & phytonutrients
 - Complex & simple carbohydrates
 - Fiber



Whole Grains

- Source of protein, fiber, vitamins, minerals and low-glycemic carbohydrates
- Intact or cracked grains
 - Outer bran and germ layers remain



Legumes

- Rich in vitamins, minerals and fiber
 - Folic acid, magnesium, potassium, B vitamins, complex carbohydrates and soluble fiber
- 20-25% protein by weight
- Aid in blood sugar regulation
- Lower blood fat levels

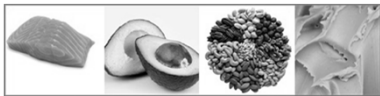


Whole Soy Foods

- Member of legume family
- Excellent source of plant-based protein
- Rich in vitamins, healthy fats, fiber and phytonutrients
- Low in saturated fat



Healthy Fats



GOOD FATS

vs.

BAD FATS



Target 1:2:1 ratio

Saturated: monounsaturated: polyunsaturated fat

Omega-3 Fatty Acids

- Benefits
 - Omega-3s encourage the production of body chemicals to control inflammation
 - Reduce negative effects of Omega 6's
- Examples
 - Coldwater fish, walnuts, flaxseed, fish oil supplements

Anti-Inflammatory Meal

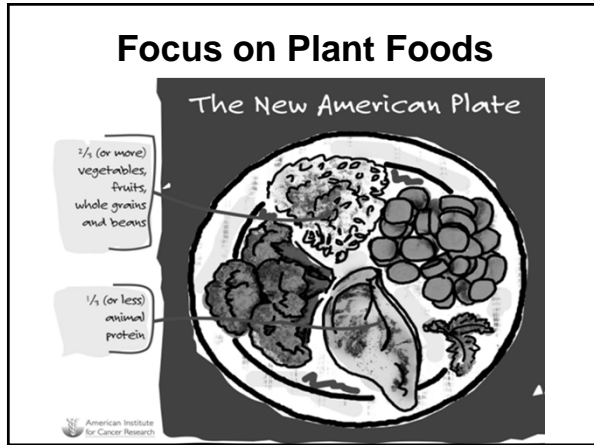
- 3-4 ounces Salmon
- ½ cup steamed asparagus
- ¾ cup brown rice
- Peaches sliced and sprinkled with cinnamon

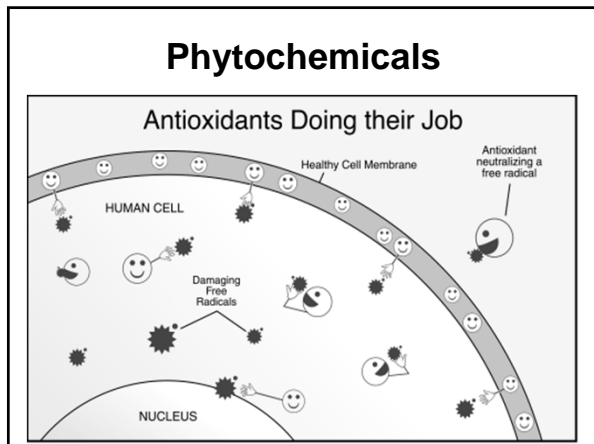


Eat Your Rainbow



Eat a Rainbow of Colors	
Color	Examples
Green	Kale, Spinach, Leafy Greens, Broccoli, Cabbage, Brussels Sprouts
Orange	Carrots, Sweet Potatoes, Pumpkin, Butternut Squash, Oranges, Clementines, Yellow Peppers, Pineapple, Pears
Red	Tomato-based products, Watermelon, Raspberries, Strawberries, Red Apples, Kidney Beans, Red Beans
Blue/Purple	Blueberries, Blackberries, Purple Grapes, Black Currants, Plums, Prunes, Eggplant, Raisins
White	Garlic, Onions, Leeks, Scallions, Chives





Rainbow Color: Green

Phytonutrients:

▪**Lutein** (yellow-green and leafy greens)

▪**Indoles** (cruciferous vegetables)



Benefits:

Lutein: Helps maintain good vision, reduces the risk of cataracts or macular degeneration

Indoles: Reduces the risk of cancer and tumor growth

Rainbow Color: Orange

Phytonutrients:

▪**Beta-Carotene** (dark orange)

▪**Bioflavonoids** (yellow orange)



Benefits:

Beta-Carotene: Boosts immunity, reduces risk for cancer and heart attack, helps maintain good vision

Bioflavonoids: Reduces risk of heart attacks and cancer, helps maintain strong bones, teeth, skin and vision

Rainbow Color: Red

Phytonutrients:

▪**Lycopene**

▪**Anthocyanins**



Benefits:

Lycopene: Reduces risk of cancer (prostate, breast, skin) and heart attacks

Anthocyanins: Reduces risk of heart attacks, cancer, Alzheimer's disease and diabetes complications


**Rainbow Color:
Blue/Purple**

Phytonutrients:

- Anthocyanins
- Phenolics

Benefits:

Anthocyanins:
Reduces risk of cancer, heart attacks, Alzheimer’s disease and diabetes complications



Phenolics: Powerful antioxidants, may slow some effects of aging


Rainbow Color: White

Phytonutrients:

Allicin

Benefits:

Allicin: Boosts immunity, reduces risk of heart attacks and spread of cancer (particularly stomach and colon cancer) and helps control high blood pressure



In the Kitchen.....



How Many Vegetables Do You Need Daily?

Daily recommendation*		
Women	19-30 years old	2½ cups**
	31-50 years old	2½ cups**
	51+ years old	2 cups**
Men	19-30 years old	3 cups**
	31-50 years old	3 cups**
	51+ years old	2½ cups**

Source: <http://www.choosemyplate.gov/food-groups/vegetables-amount.html>

How Many Vegetables Do You Need Weekly?

		Dark green vegetables	Red and orange vegetables	Beans and peas	Starchy vegetables	Other vegetables
AMOUNT PER WEEK**						
Women	19-30 yrs old	1½ cups	5½ cups	1½ cups	5 cups	4 cups
	31-50 yrs old	1½ cups	5½ cups	1½ cups	5 cups	4 cups
	51+ yrs old	1½ cups	4 cups	1 cup	4 cups	3½ cups
Men	19-30 yrs old	2 cups	6 cups	2 cups	6 cups	5 cups
	31-50 yrs old	2 cups	6 cups	2 cups	6 cups	5 cups
	51+ yrs old	1½ cups	5½ cups	1½ cups	5 cups	4 cups

Source: <http://www.choosemyplate.gov/food-groups/vegetables-amount.html>

How Much Fruit Do You Need Daily?

Daily recommendation*		
Women	19-30 years old	2 cups**
	31-50 years old	1 ½ cups**
	51+ years old	1 ½ cups**
Men	19-30 years old	2 cups**
	31-50 years old	2 cups**
	51+ years old	2 cups**

Source: <http://www.choosemyplate.gov/food-groups/fruits-amount.html>

Practical Ways to Increase Fruits and Vegetables

- Eat fruits and vegetables on the go
- Add more fruits and vegetables to your meals
- All forms count!



Sample Meals Loaded with Fruits & Veggies

Breakfast: Egg white omelet with veggies (e.g. spinach, tomatoes, and onions) topped with a slice of reduced-fat cheese.

Lunch: Leafy greens topped with tuna salad, dried cranberries, feta cheese, and lite dressing. Orange slices.

Dinner: Grilled chicken topped with a mango salsa with brown rice, cucumber rolls and broccoli. Pineapple chunks.



Conclusion

- Reduce Your Risk for Disease
 - Health promoting diets
 - Anti-inflammatory foods
 - Whole-food based
 - Eat Your Rainbow!



Questions





Thank You!

Savor the Spectrum

Color Your Daily Diet with Fruits and Vegetables

Color	Phytonutrient	Benefits	Found in
 <p>Green</p>	<p>Lutein (Yellow-Green and Leafy Greens)</p> <p>Indoles (Cruciferous Vegetables)</p>	<p>Helps Maintain Good Vision; Reduces the Risk of Cataracts or Macular Degeneration.</p> <p>Reduce the Risk of Cancer (Particularly Breast and Prostate Cancers); Reduce the Risk of Tumor Growth in Cancer Patients.</p>	<p>Kale, Spinach, Leafy Greens (Turnip, Collard, Mustard), Romaine Lettuce, Broccoli, Green Peas, Kiwifruit, Honeydew Melon.</p> <p>Broccoli, Cabbage, Brussels Sprouts, Bok Choy, Arugala, Swiss Chard, Turnips, Rutabaga, Watercress, Cauliflower, Kale.</p>
 <p>Orange</p>	<p>Beta-Carotene (Dark Orange)</p> <p>Bioflavonoids (Yellow-Orange)</p>	<p>Powerful Antioxidant; Boosts Immunity; Reduces the Risk for Cancer; Reduces the Risk of Heart Attacks; Helps Maintain Good Vision.</p> <p>Powerful Antioxidants; Work with Vitamin C to Reduce the Risk of Heart Attacks, Reduce the Risk of Cancer, and to Help Maintain Strong Bones/Teeth, Healthy Skin, and Good Vision.</p>	<p>Carrots; Sweet Potatoes; Pumpkin; Butternut Squash; Cantaloupe; Mangos, Apricots, Peaches.</p> <p>Oranges, Grapefruit, Lemons, Tangerines, Clementines, Peaches, Papaya, Apricots, Nectarines, Pears, Pineapple, Yellow Raisins, Yellow Pepper.</p>
 <p>Red</p>	<p>Lycopene</p> <p>Anthocyanins</p>	<p>Reduces the Risk of Prostate, Breast, and Skin Cancer; Reduces the Risk of Heart Attacks.</p> <p>Reduce the Risk of Cancer; Powerful Antioxidants; Help Control High Blood Pressure; Reduce the Risk of Diabetes Complications; Reduce the Risk of Heart Attacks; Reduce the Risk of Alzheimer's Disease.</p>	<p>Tomato-based Products (Tomato Juice, Spaghetti Sauce, Tomato Soup, Tomato Paste), Watermelon, Pink Grapefruit, Fresh Tomato, Guava.</p> <p>Red Raspberries, Sweet Cherries, Strawberries, Cranberries, Beets, Red Apples (with skin), Red Cabbage, Red Onion, Kidney Beans, Red Beans.</p>
 <p>Blue/Purple</p>	<p>Anthocyanins</p> <p>Phenolics</p>	<p>Reduce the Risk of Cancer; Powerful Antioxidants; Reduce the Risk of Age-Related Memory Loss; Help Control High Blood Pressure; Reduce the Risk of Diabetes Complications; Reduce the Risk of Heart Attacks; Reduce the Risk of Alzheimer's Disease.</p> <p>Powerful Antioxidants; May Slow Some of the Effects of Aging.</p>	<p>Blueberries, Blackberries, Purple Grapes, Black Currants, Elderberries.</p> <p>Dried Plums (Prunes), Raisins, Plums, Eggplant.</p>
 <p>White</p>	<p>Allicin</p>	<p>Boosts Immunity; Helps Lower High Cholesterol; Helps Control High Blood Pressure; Reduces the Risk of Heart Attacks; Reduces the Risk for Spread of Cancer (particularly stomach and colon cancer).</p>	<p>Garlic, Onions, Leeks, Scallions, Chives.</p>

*Fresh, Frozen, Dried and Canned Varieties all count.



What Color is Your Food?

Taste a rainbow of fruits and
vegetables for better health

Julie Garden-Robinson, Ph.D., L.R.D.
Food and Nutrition Specialist

NDSU
Extension Service

North Dakota State University

Reviewed and Reprinted May 2011

People need different amounts of fruits and vegetables depending on their age, gender and amount of daily physical activity. To learn your daily recommendation, visit www.fruitsandveggiesmatter.gov/.

For example, the recommendation for a 40-year-old male who gets about 60 minutes of daily physical activity is 2 cups of fruit and 3½ cups of vegetables. The recommendation for a 15-year-old female who gets less than 30 minutes of daily physical activity is 1½ cups of fruit and 2½ cups of vegetables.

To meet their daily goal, most people need to increase the amount of fruits and vegetables they eat every day. All product forms count – fresh, frozen, canned, dried and 100% juice. Whole fruits, however, usually contain more fiber than juice.

Eat more fruits and vegetables every day!

People who eat more generous amounts of fruits and vegetables as part of a healthy diet are likely to have reduced risk of chronic diseases, including strokes, type 2 diabetes, some types of cancer, and perhaps heart disease and high blood pressure.



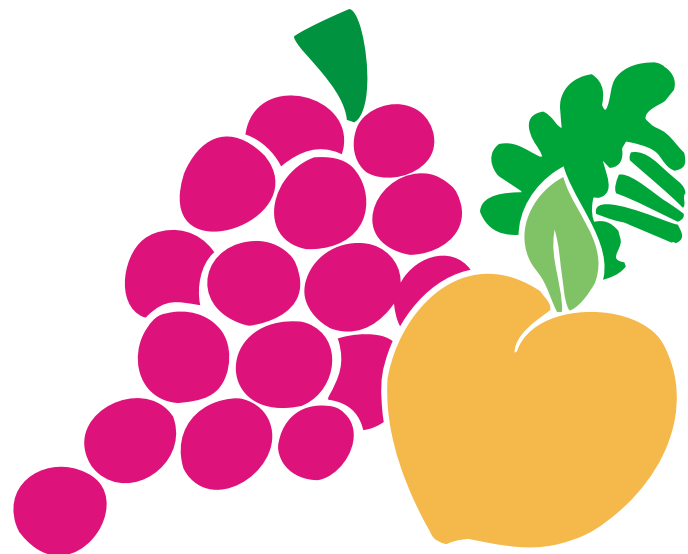
Sample the spectrum of fruits and vegetables

Scientists are regularly reporting new health benefits associated with fruits and vegetables. Eating more fruits and vegetables is a worthwhile goal. Eating a variety of different colors of fruits and vegetables every day is a new way of thinking about meeting the goal.

What's a serving size anyway?

Recommendations for fruits and vegetables are now in cups. One cup equals:

- 1 small apple
- 1 large banana
- 2 cups of raw greens
- 12 baby carrots
- 1 large orange
- 1 large bell pepper
- 1 medium grapefruit
- 1 large sweet potato



Healthy reasons to eat a rainbow of colorful fruits and vegetables

Red fruits and vegetables are colored by natural plant pigments called “lycopene” or “anthocyanins.” Lycopene in tomatoes, watermelon and pink grapefruit, for example, may help reduce risk of several types of cancer, especially prostate cancer. Lycopene in foods containing cooked tomatoes, such as spaghetti sauce, and a small amount of fat are absorbed better than lycopene from raw tomatoes.

Anthocyanins in strawberries, raspberries, red grapes and other fruits and vegetables act as powerful antioxidants that protect cells from damage. Antioxidants are linked with keeping our hearts healthy, too.

These are some examples of the red group:

- Red apples
- Beets
- Red cabbage
- Cherries
- Cranberries
- Pink grapefruit
- Red grapes
- Red peppers
- Pomegranates
- Red potatoes
- Radishes
- Raspberries
- Rhubarb
- Strawberries
- Tomatoes
- Watermelon

Orange/yellow fruits and vegetables are usually colored by natural plant pigments called “carotenoids.” Beta-carotene in sweet potatoes, pumpkins and carrots is converted to vitamin A, which helps maintain healthy mucous membranes and healthy eyes. Scientists have also reported that carotenoid-rich foods can help reduce risk of cancer, heart disease and can improve immune system function.

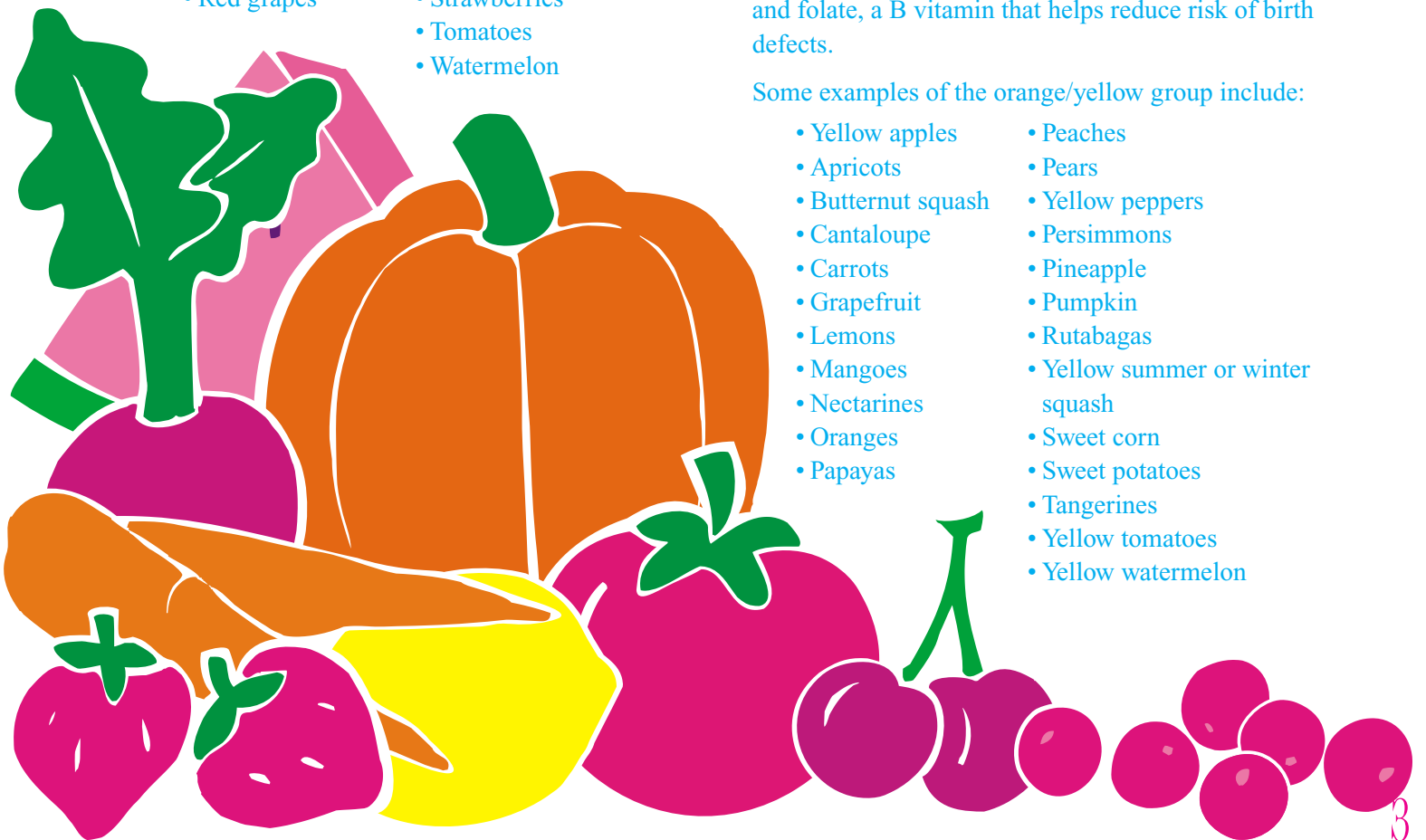
One study found that people who ate a diet high in carotenoid-rich vegetables were 43 percent less likely to develop age-related macular degeneration, an eye disorder common among the elderly, which can lead to blindness.

Carotenoids also may be good for your heart. One study found that men with high cholesterol who ate plenty of vegetables high in carotenoids had a 36 percent lower chance of heart attack and death than their counterparts who shunned vegetables.

Citrus fruits like oranges are not a good source of vitamin A. They are an excellent source of vitamin C and folate, a B vitamin that helps reduce risk of birth defects.

Some examples of the orange/yellow group include:

- Yellow apples
- Apricots
- Butternut squash
- Cantaloupe
- Carrots
- Grapefruit
- Lemons
- Mangoes
- Nectarines
- Oranges
- Papayas
- Peaches
- Pears
- Yellow peppers
- Persimmons
- Pineapple
- Pumpkin
- Rutabagas
- Yellow summer or winter squash
- Sweet corn
- Sweet potatoes
- Tangerines
- Yellow tomatoes
- Yellow watermelon



Green fruits and vegetables

are colored by natural plant pigment called “chlorophyll.”

Some members of the green group, including spinach and other dark leafy greens, green peppers, peas, cucumber and celery, contain lutein. Lutein works with another chemical, zeaxanthin, found in corn, red peppers, oranges, grapes and egg yolks to help keep eyes healthy. Together, these chemicals may help reduce risk of cataracts and age-related macular degeneration, which can lead to blindness if untreated.

The “indoles” in broccoli, cauliflower, cabbage and other cruciferous vegetables may help protect against some types of cancer. Leafy greens such as spinach and broccoli are excellent sources of folate, a B vitamin that helps reduce risk of birth defects.

Some examples of the green group include:

- Green apples
- Artichokes
- Asparagus
- Avocados
- Green beans
- Broccoli
- Brussels sprouts
- Green cabbage
- Cucumbers
- Green grapes
- Honeydew melon
- Kiwi
- Lettuce
- Limes
- Green onions
- Peas
- Green pepper
- Spinach
- Zucchini

Blue/purple fruits and vegetables

are colored by natural plant pigments called “anthocyanins.” Anthocyanins in blueberries, grapes and raisins act as powerful antioxidants that protect cells from damage. They may help reduce risk of cancer, stroke and heart disease. Other studies have shown that eating more blueberries is linked with improved memory function and healthy aging.

These are some examples of the blue/purple group:

- Blackberries
- Blueberries
- Eggplant
- Figs
- Juneberries
- Plums
- Prunes
- Purple grapes
- Raisins



White fruits and vegetables are colored by pigments called “anthoxanthins.” They may contain health-promoting chemicals such as allicin, which may help lower cholesterol and blood pressure and may help reduce risk of stomach cancer and heart disease. Some members of the white group, such as bananas and potatoes, are good sources of the mineral potassium, too.

Some examples of the white group include:

- Bananas
- Cauliflower
- Garlic
- Ginger
- Jicama
- Mushrooms
- Onions
- Parsnips
- Potatoes
- Turnips

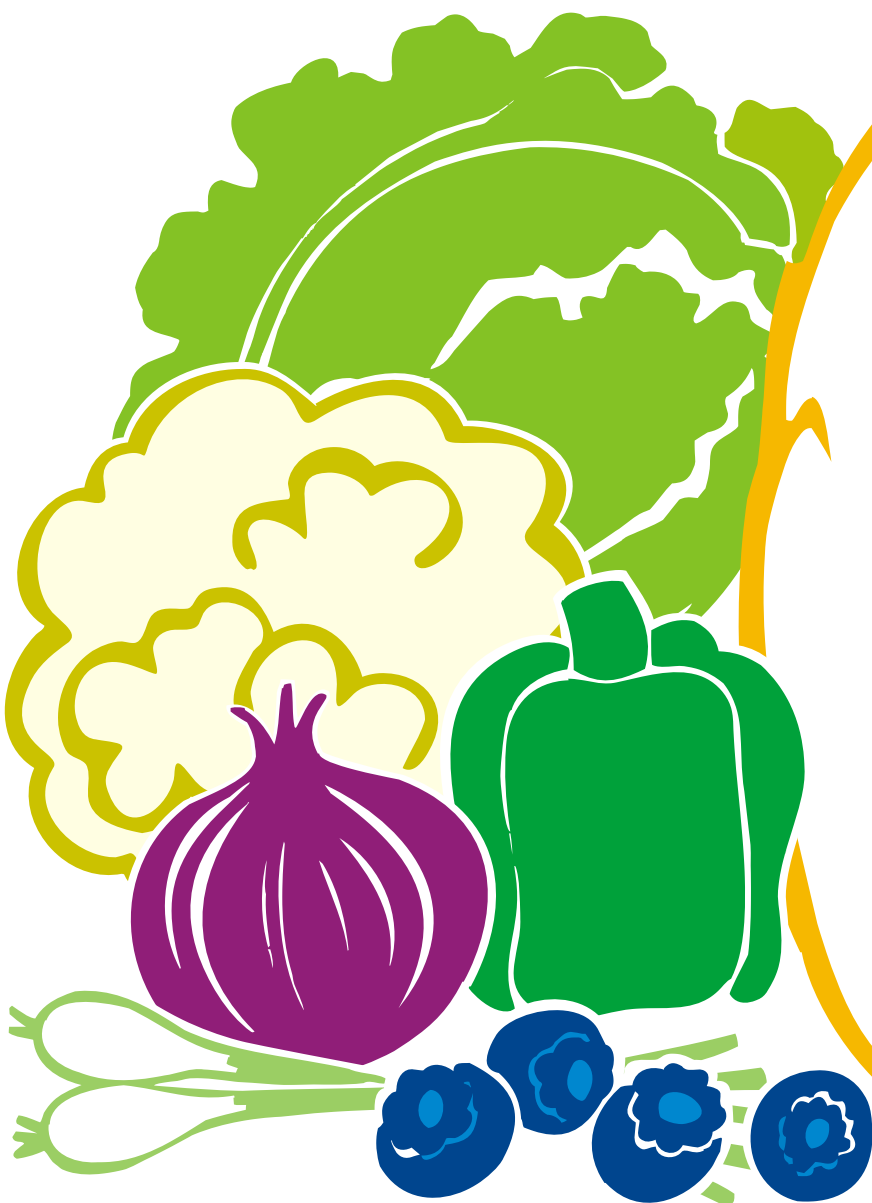


How are you doing?

If you're like many Americans, your plate may benefit from some added color from fruits and vegetables.

1. Write down all the fruits and vegetables you ate yesterday, or keep track of what you eat today. Did you have any fruit for breakfast? Lunch? Snacks? Dinner?

2. What color groupings did you try?



Add some color to your plate

This menu for a day is missing fruits and vegetables. Add some fruits and vegetables to each meal or snack, and try to include some fruits and/or vegetables from each color grouping. Keep the main items the same. There are no “right” or “wrong” answers. A colorful menu follows, with a nutrition analysis of both menus.

Menu 1

Breakfast

Oatmeal (1 cup) with low-fat milk (½ cup)
Whole wheat toast (1 slice) with peanut butter (1 tsp.)
Coffee (1 cup)

Lunch

Roast beef (3 oz.) with mustard (1 tsp.) on whole wheat bread (2 slices)
Low-fat milk (1 cup)

Snack

Graham crackers (4)
Ice water

Dinner

Grilled pork chop (4 oz.)
Wild rice blend (½ cup)
Dinner roll (1)
Angel food cake (1 slice) with whipped topping (1 Tbsp.)
Low-fat milk (1 cup)

Colorful and nutritious menu makeover

Menu 2

Breakfast

Oatmeal (1 cup) with **raisins** (¼ cup) and low-fat milk (½ cup)
Whole wheat toast (1 slice) and **raspberry jam** (1 Tbsp.)
Orange juice (¾ cup)
Coffee (1 cup)

Lunch

Roast beef (3 oz.) sandwich on whole wheat bread (2 slices), **lettuce** (2 leaves), **tomato** (1 slice) and **onion** (1 slice)
Vegetable soup (1 cup)
Mini-carrots (7)
Low-fat milk (1 cup)

Snack

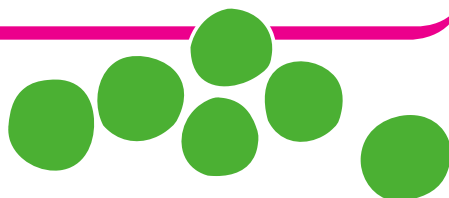
Graham crackers (4)
Apple slices (1 medium apple)
Ice water

Dinner

Grilled pork chop (4 oz.)
Wild rice blend (½ cup)
Steamed broccoli-cauliflower blend (½ cup)
Spinach and strawberry salad (1 cup greens, ¼ cup berries)
Dinner roll (1)
Angel food cake (1 slice) with whipped topping (1 Tbsp) and **blueberries** (¼ cup)
Low-fat milk (1 cup)

Snack

Banana (1)



Nutrition analysis of menus

As the following table shows, adding fruits and vegetables increases nutrients essential to good health without adding lots of calories and fat. The Nutrition Facts label doesn't list all the beneficial phytochemicals in a more colorful diet – like lycopene and lutein – but they are included in the table below.

Nutrient	Menu 1	Menu 2
*Calories	1667	2010
*Protein (g)	83.6	92.6
*Total carbohydrate (g)	235	335
*Fat (g)	47	43
*Saturated fat (g)	17.6 (88.7% RDI**)	13.5 (68% RDI)
*Sodium (mg)	3,147 (131% RDI)	3,595 (150% RDI)
*Fiber (g)	19 (76% RDI)	36 (145% RDI)
*Sugars, total (g)	44.7	138
*Iron (mg)	11.8 (65% RDI)	17 (94% RDI)
*Calcium (mg)	983 (98% RDI)	1,184 (118% RDI)
*Vitamin C (mg)	8.8 (15% RDI)	250 (417% RDI)
*Vitamin A (IU)	1,745 (35% RDI)	18,261 (365% RDI)
Vitamin E (IU)	7 (24% RDI)	11 (37% RDI)
Folate (µg)	183 (46% RDI)	406 (102% RDI)
Lycopene (µg)	0	1,815
Lutein and zeaxanthin (µg)	0	2,294
Beta-carotene (µg)	15.8	6,173
Vitamin K (µg)	32 (41% RDI)	337 (422% RDI)

*Listed on Nutrition Facts label

**RDI = "Recommended Daily Intake." RDIs are based on U.S. Recommended Daily Allowances.

Key: g = grams; mg = milligrams; IU = International Units; µg = micrograms

Tips to increase fruits and vegetables in your diet

Eat a variety of food groups from all the food groups every day. Check the strategies you will try:

- Keep cleaned fruits and vegetables in the refrigerator — ready to eat.
- Have vegetables with low-fat dip for a snack.
- Try commercial prepackaged salads and stir-fry mixes to save prep time.
- Add vegetables to casseroles, stews and soups.
- Drink 100% fruit juice instead of fruit-flavored drinks or soda pop.
- Have fruit for dessert.
- Keep a bowl of apples, bananas and/or oranges on the table.
- Choose a side salad made with a variety of leafy greens.
- Bake with raisin, date or prune puree to reduce fat and increase fiber.
- Add lettuce, onions, peppers and/or tomatoes to sandwiches.
- Order veggie toppings on your pizza.
- Enjoy fruit smoothies for breakfast or snacks.
- Pack fresh or dried fruits for quick snacks.

Preserve some nutrients

To preserve nutrients when preparing fruits and vegetables, consider these tips:

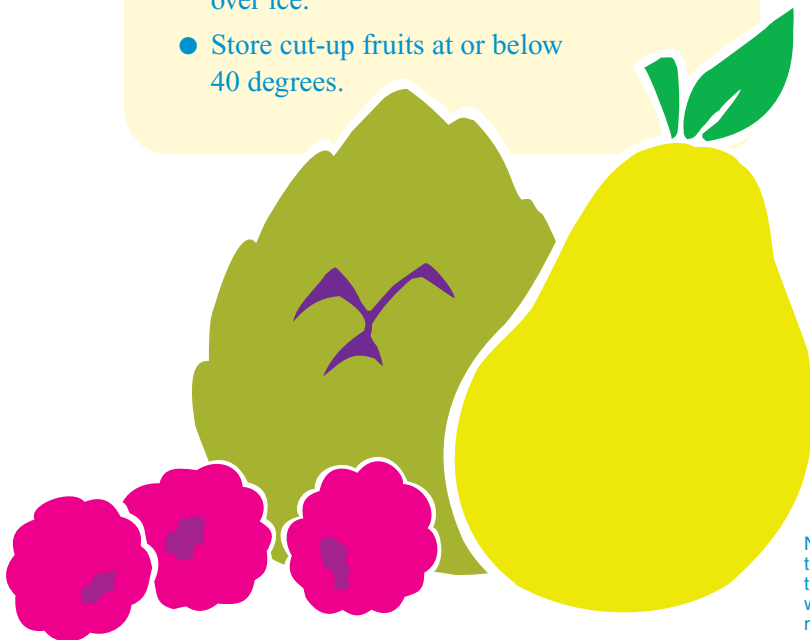
- Limit peeling to preserve fiber content.
- Steam, broil, microwave or cook in small amount of water.
- Avoid boiling. Prolonged exposure to water and heat can break down chemicals unstable to high temperatures.
- Serve foods promptly. The longer they stand, the more nutrients are lost.



Fruit and vegetable safety

Improperly handled fruits and vegetables can become contaminated with *Salmonella* and *E. coli*, potentially leading to foodborne illnesses. Fresh fruits and vegetables should be washed well with plenty of running water to be safe. Cross contamination must also be avoided. Follow these tips to keep produce safe from store to home:

- Examine fresh fruits and vegetables for signs of freshness before purchase.
- Pack fresh produce away from meats in the grocery cart and in separate bags.
- Wash hands with warm water and soap for 20 seconds before preparing fruits and vegetables.
- Rinse all fresh produce with running water, using a brush if necessary. Do not use soap.
- Remove outer leaves of lettuce and cabbage.
- Use separate cutting boards for cutting up fresh produce and for meat.
- Clean cutting boards with soap and water. Sanitize with a solution of 1 tsp. bleach per 1 quart water.
- Serve cut-up fresh produce in containers over ice.
- Store cut-up fruits at or below 40 degrees.



Set some goals

List two goals about adding colorful fruits and vegetables to your diet. Check back in a month to see your progress. Then set some new ones!

Date: _____

Web-based resources with fruit and vegetable information:

www.fruitsandveggiesmatter.gov/ — A site sponsored by the Centers for Disease Control and Prevention, Department of Health and Human Services, National Cancer Institute. It features interactive tools, recipes and links

www.ag.ndsu.edu/food — NDSU Extension Service food and nutrition site with information about nutrition, preparation and preservation of a variety of foods

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