

## Eat Well, Be Active in 2009

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## The Obesity Epidemic

- 66% of US adults are overweight or obese.
- Over 30% of US children and adolescents are overweight or obese.
- If current trends continue, 86% of US adults will be overweight or obese by 2030 and 51% will be obese.

Wang, Beydoun, Liang, Caballero, and Kumanyika. (2008). Will all Americans become overweight or obese? Estimating the progression and cost of the US obesity epidemic. Obesity, 16, 10, 2323-2330.

## Trends in Body Weight 1960 – 1962 to 1999 – 2002

- Average Man: 166# to 191#
- Average Woman: 140# to 164#
- Average 10 y.o. Boy: 74# to 85#
- Average 10 y.o. Girl: 77# to 88#

Ogden, CL, CDC Advance Data; No. 347, 27 October 2004.

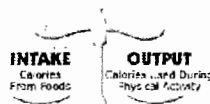
## Evaluating Weight Status

- **Body Mass Index (BMI)** is gold standard
- **BMI** = [weight (lb) / height (in)<sup>2</sup>] x 703

BMI Values	Adult Classification
< 18.5	Underweight
18.5 – 24.9	Normal Weight
25.0 – 29.9	Overweight
30.0 – 39.9	Obese
> 40.0	Morbid Obesity

## Why the Weight Problem?

- **Endogenous Causes**
  - Genetic and Hormonal Influences
  - Genetic and Hormonal Defects
- **Exogenous Causes**
  - Physical Inactivity
  - Dietary Intake



THE ENERGY BALANCE

## What can we do?

## Physical Activity Recommendations

- **Duration**
  - **30 minutes** most days to reduce risk of chronic disease
  - **60 minutes** most days for weight management
  - **60 – 90 minutes** most days to sustain weight loss
- **Intensity**
  - Moderate to Vigorous
- **Type**
  - **Cardiovascular** Conditioning
  - **Stretching** for Flexibility
  - **Resistance** for Muscle Strength and Endurance



## Easy Tips for Becoming More Active

- Wear a pedometer; shoot for 10,000 steps/day.
- Park further away from your destination.
- In cold or bad weather, go to the mall for exercise.
- Walk the dog.
- Take the stairs.

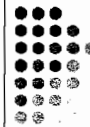


## Calories Burned in 30 Minutes

Activity	Calories Burned at 150*	Calories Burned at 200*	Calories Burned at 250*
Bicycling	220	294	367
Gardening	162	215	270
Golfing (No Cart)	130	174	217
Housekeeping	121	162	202
Walking Briskly	198	264	330
Raking	171	228	285
Mowing Lawn	162	216	270



## Eating Well



## 2005 Dietary Guidelines Key Recommendations

- Consume diet high in a variety of fruits and vegetables.
- Consume 3 or more ounce equivalents of whole grains daily.
- Consume 3 servings of low-fat or fat-free dairy daily.
- Limit sugar, salt, and alcoholic beverages.
- Consume diet low in saturated fat, cholesterol, and trans fat.



## We're Missing the Mark

- 74% of Americans have a diet that needs improvement.
- 16% of Americans have poor diet quality.

Bastien, Carlson, Gerritt, Jain, and Lips (2004). The Healthy Eating Index, 1999 – 2000: charting dietary patterns of Americans. *Family Economics and Nutrition Review*, 16(1), 38-48.



## Why So Bad and What Can We Do?



- Fast Paced Lifestyles
  - More women in workforce
  - Less time for meal preparation and family meals
- Pervasive Fast Food Access
  - Drive Thru
  - Dine in/ Take out
  - Meal Delivery
- Super-Sizing



## Eat Well, Be Active in 2009



- Comments/Questions
- For additional information, email [williamsk@marshall.edu](mailto:williamsk@marshall.edu)



# Sample Menus for a 2000 Calorie Food Pattern

Averaged over a week, this seven day menu provides all of the recommended amounts of nutrients and food from each food group. (Italicized foods are part of the dish or food that precedes it.)

<p><b>Day 1</b></p> <p><b>BREAKFAST</b></p> <p>Breakfast burrito  <i>1 flour tortilla (7" diameter)</i>  <i>1 scrambled egg (in 1 tsp soft margarine)</i>  <i>1/3 cup black beans*</i>  <i>2 tbsp salsa</i>            1 cup orange juice            1 cup fat-free milk</p> <p><b>LUNCH</b></p> <p>Roast beef sandwich  <i>1 whole grain sandwich bun</i>  <i>3 ounces lean roast beef</i>  <i>2 slices tomato</i>  <i>1/4 cup shredded romaine lettuce</i>  <i>1/8 cup sauteed mushrooms (in 1 tsp oil)</i>  <i>1 1/2 ounce part-skim mozzarella cheese</i>  <i>1 tsp yellow mustard</i>            3/4 cup baked potato wedges*  <i>1 tbsp ketchup</i>            1 unsweetened beverage</p> <p><b>DINNER</b></p> <p>Stuffed broiled salmon  <i>5 ounce salmon filet</i>  <i>1 ounce bread stuffing mix</i>  <i>1 tbsp chopped onions</i>  <i>1 tbsp diced celery</i>  <i>2 tsp canola oil</i>            1/2 cup saffron (white) rice  <i>1 ounce slivered almonds</i>            1/2 cup steamed broccoli  <i>1 tsp soft margarine</i>            1 cup fat-free milk</p> <p><b>SNACKS</b></p> <p>1 cup cantaloupe</p>
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<p><b>Day 2</b></p> <p><b>BREAKFAST</b></p> <p>Hot cereal  <i>1/2 cup cooked oatmeal</i>  <i>2 tbsp raisins</i>  <i>1 tsp soft margarine</i>            1/2 cup fat-free milk            1 cup orange juice</p> <p><b>LUNCH</b></p> <p>Taco salad  <i>2 ounces tortilla chips</i>  <i>2 ounces ground turkey, sauteed in 2 tsp sunflower oil</i>  <i>1/2 cup black beans*</i>  <i>1/2 cup iceberg lettuce</i>  <i>2 slices tomato</i>  <i>1 ounce low-fat cheddar cheese</i>  <i>2 tbsp salsa</i>  <i>1/2 cup avocado</i>  <i>1 tsp lime juice</i>            1 unsweetened beverage</p> <p><b>DINNER</b></p> <p>Spinach lasagna  <i>1 cup lasagna noodles, cooked (2 oz dry)</i>  <i>2/3 cup cooked spinach</i>  <i>1/2 cup ricotta cheese</i>  <i>1/2 cup tomato sauce tomato bits*</i>  <i>1 ounce part-skim mozzarella cheese</i>            1 ounce whole wheat dinner roll            1 cup fat-free milk</p> <p><b>SNACKS</b></p> <p>1/2 ounce dry-roasted almonds*            1/4 cup pineapple            2 tbsp raisins</p>
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<p><b>Day 3</b></p> <p><b>BREAKFAST</b></p> <p>Cold cereal  <i>1 cup bran flakes</i>  <i>1 cup fat-free milk</i>  <i>1 small banana</i>            1 slice whole wheat toast  <i>1 tsp soft margarine</i>            1 cup prune juice</p> <p><b>LUNCH</b></p> <p>Tuna fish sandwich  <i>2 slices rye bread</i>  <i>3 ounces tuna (packed in water, drained)</i>  <i>2 tsp mayonnaise</i>  <i>1 tbsp diced celery</i>  <i>1/4 cup shredded romaine lettuce</i>  <i>2 slices tomato</i>            1 medium pear            1 cup fat-free milk</p> <p><b>DINNER</b></p> <p>Roasted chicken breast  <i>3 ounces boneless skinless chicken breast*</i>            1 large baked sweetpotato            1/2 cup peas and onions  <i>1 tsp soft margarine</i>            1 ounce whole wheat dinner roll  <i>1 tsp soft margarine</i>            1 cup leafy greens salad  <i>3 tsp sunflower oil and vinegar dressing</i></p> <p><b>SNACKS</b></p> <p>1/4 cup dried apricots            1 cup low-fat fruited yogurt</p>
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<p><b>Day 4</b></p> <p><b>BREAKFAST</b></p> <p>1 whole wheat English muffin  <i>2 tsp soft margarine</i>  <i>1 tbsp jam or preserves</i>            1 medium grapefruit            1 hard-cooked egg            1 unsweetened beverage</p> <p><b>LUNCH</b></p> <p>White bean-vegetable soup  <i>1 1/4 cup chunky vegetable soup</i>  <i>1/2 cup white beans*</i>            2 ounce breadstick            8 baby carrots            1 cup fat-free milk</p> <p><b>DINNER</b></p> <p>Rigatoni with meat sauce  <i>1 cup rigatoni pasta (2 ounces dry)</i>  <i>1/2 cup tomato sauce tomato bits*</i>  <i>2 ounces extra lean cooked ground beef (sauteed in 2 tsp vegetable oil)</i>  <i>3 tbsp grated Parmesan cheese</i>            Spinach salad  <i>1 cup baby spinach leaves</i>  <i>1/2 cup tangerine slices</i>  <i>1/2 ounce chopped walnuts</i>  <i>3 tsp sunflower oil and vinegar dressing</i>            1 cup fat-free milk</p> <p><b>SNACKS</b></p> <p>1 cup low-fat fruited yogurt</p>
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Averaged over a week, this seven day menu provides all of the recommended amounts of nutrients and food from each food group. (Italicized foods are part of the dish or food that precedes it.)

Day 5
<b>BREAKFAST</b>
Cold cereal <i>1 cup shredded wheat cereal</i> <i>1 tbsp raisins</i> <i>1 cup fat-free milk</i> 1 small banana 1 slice whole wheat toast <i>1 tsp soft margarine</i> <i>1 tsp jelly</i>
<b>LUNCH</b>
Smoked turkey sandwich <i>2 ounces whole wheat pita bread</i> <i>1/4 cup romaine lettuce</i> <i>2 slices tomato</i> <i>3 ounces sliced smoked turkey breast*</i> <i>1 tbsp mayo-type salad dressing</i> <i>1 tsp yellow mustard</i> 1/2 cup apple slices 1 cup tomato juice*
<b>DINNER</b>
Grilled top loin steak <i>5 ounces grilled top loin steak</i> 3/4 cup mashed potatoes <i>2 tsp soft margarine</i> 1/2 cup steamed carrots <i>1 tsp honey</i> 2 ounces whole wheat dinner roll <i>1 tsp soft margarine</i> 1 cup fat-free milk
<b>SNACKS</b>
1 cup low-fat fruited yogurt

Day 6
<b>BREAKFAST</b>
French toast 2 slices whole wheat French toast <i>2 tsp soft margarine</i> <i>2 tbsp maple syrup</i> 1/2 medium grapefruit 1 cup fat-free milk
<b>LUNCH</b>
Vegetarian chili on baked potato <i>1 cup kidney beans*</i> <i>1/2 cup tomato sauce w/ tomato tidbits*</i> <i>3 tbsp chopped onions</i> <i>1 ounce lowfat cheddar cheese</i> <i>1 tsp vegetable oil</i> <i>1 medium baked potato</i> 1/2 cup cantaloupe 3/4 cup lemonade
<b>DINNER</b>
Hawaiian pizza <i>2 slices cheese pizza</i> <i>1 ounce canadian bacon</i> <i>1/4 cup pineapple</i> <i>2 tbsp mushrooms</i> <i>2 tbsp chopped onions</i> Green salad <i>1 cup leafy greens</i> <i>3 tsp sunflower oil and vinegar dressing</i> 1 cup fat-free milk
<b>SNACKS</b>
5 whole wheat crackers* 1/8 cup hummus 1/2 cup fruit cocktail (in water or juice)

Day 7
<b>BREAKFAST</b>
Pancakes 3 buckwheat pancakes <i>2 tsp soft margarine</i> <i>3 tbsp maple syrup</i> 1/2 cup strawberries 3/4 cup honeydew melon 1/2 cup fat-free milk
<b>LUNCH</b>
Manhattan clam chowder <i>3 ounces canned clams (drained)</i> <i>3/4 cup mixed vegetables</i> <i>1 cup canned tomatoes*</i> 10 whole wheat crackers* 1 medium orange 1 cup fat-free milk
<b>DINNER</b>
Vegetable stir-fry <i>4 ounces tofu (firm)</i> <i>1/4 cup green and red bell peppers</i> <i>1/2 cup bok choy</i> <i>2 tbsp vegetable oil</i> 1 cup brown rice 1 cup lemon-flavored iced tea
<b>SNACKS</b>
1 ounce sunflower seeds* 1 large banana 1 cup low-fat fruited yogurt

\* Starred items are foods that are labeled as no-salt-added, low-sodium, or low-salt versions of the foods. They can also be prepared from scratch with little or no added salt. All other foods are regular commercial products which contain variable levels of sodium. Average sodium level of the 7 day menu assumes no-salt-added in cooking or at the table



# Sample Menus for a 2000 calorie food pattern

Averaged over a week, this seven day menu provides all of the recommended amounts of nutrients and food from each food group. (Italicized foods are part of the dish or food that precedes it, which is not italicized.)



Food Group	Daily Average Over One Week	Nutrient	Daily Average Over One Week
<b>GRAINS</b>	Total Grains (oz eq) 6.0	Calories	1994
	Whole Grains 3.4	Protein, g	98
	Refined Grains 2.6	Protein, % kcal	20
<b>VEGETABLES *</b>	Total Veg* (cups) 2.6	Carbohydrate, g	264
		Carbohydrate, % kcal	53
		Total fat, g	67
		Total fat, % kcal	30
		Saturated fat, g	16
		Saturated fat, % kcal	7.0
		Monounsaturated fat, g	23
		Polyunsaturated fat, g	23
		Linoleic Acid, g	21
		Alpha-linolenic Acid, g	1.1
<b>FRUITS</b>	Fruits (cups) 2.1	Cholesterol, mg	207
		Total dietary fiber, g	31
<b>MILK</b>	Milk (cups) 3.1	Potassium, mg	4715
		Sodium, mg*	1948
		Calcium, mg	1389
		Magnesium, mg	432
		Copper, mg	1.9
		Iron, mg	21
		Phosphorus, mg	1830
		Zinc, mg	14
		Thiamin, mg	1.9
		Riboflavin, mg	2.5
<b>MEAT &amp; BEANS</b>	Meat/ Beans (oz eq) 5.6	Niacin Equivalents, mg	24
		Vitamin B6, mg	2.9
<b>OILS</b>	Oils (tsp/grams) 7.2 tsp/32.4 g	Vitamin B12, mcg	18.4
		Vitamin C, mg	190
		Vitamin E, mg (AT)	18.9
		Vitamin A, mcg (RAE)	1430
		Dietary Folate Equivalents, mcg	558

*Vegetable subgroups	(weekly totals)
Dk-Green Veg (cups)	3.3
Orange Veg (cups)	2.3
Beans/ Peas (cups)	3.0
Starchy Veg (cups)	3.4
Other Veg (cups)	6.6

\* Starred items are foods that are labeled as no-salt-added, low-sodium, or low-salt versions of the foods. They can also be prepared from scratch with little or no added salt. All other foods are regular commercial products which contain variable levels of sodium. Average sodium level of the 7 day menu assumes no-salt-added in cooking or at the table.

# Nutrition Notes

## Read the Label

Most packaged foods include nutrition labels. You can use the Nutrition Facts label to make smart food choices quickly and easily. Follow these simple tips:

Amount Per Serving	Cereal with 1/2 cup Skim Milk	
	Cereal	Cereal with 1/2 cup Skim Milk
<b>Calories</b>	140	190
Calories from Fat	25	30
	% Daily Value**	
<b>Total Fat</b> 3g	5%	5%
Saturated Fat 0.5g	10%	10%
<b>Cholesterol</b> 0mg	0%	0%
<b>Sodium</b> 0mg	0%	0%
<b>Total Carbohydrate</b> 26g	9%	11%
Dietary Fiber 4g	16%	16%
Soluble Fiber 2g		
Sugars 0g		
<b>Protein</b> 5g		6%
Vitamin A	0%	2%
Vitamin C	0%	15%
Calcium	10%	10%

1. **Be sure to make all of your calories count**  
Look at the calories on the label and compare them with nutrients in the food to decide whether it is worth eating
2. **Check the number of servings and calories**  
Check the serving size versus how many servings you actually consume: If you double the servings you eat, you double the calories and nutrients
3. **Keep the following nutrients at a minimum:**  
Total fat, saturated fats, trans fats, cholesterol, and sodium
  - Keep total fat intake between 20% to 35% of calories your total calories
  - **Look for foods low in saturated fats, trans fats, and cholesterol** to help reduce the risk of heart disease (5% DV or less is low, 20% DV or more is high)
  - Most of the fats you eat should be polyunsaturated and monounsaturated fats
4. **Look for foods and beverages low in added sugars:** Sugars contribute calories with few, if any, nutrients
  - Make sure that added sugars are not within the first few items on the ingredient list (sugar, sucrose, glucose, high fructose corn syrup, corn syrup, maple syrup, and fructose)
5. **Get enough:** Potassium, fiber, vitamins A and C, calcium, & iron
  - **Use the % Daily Value (DV) column when possible:** 5% DV or less is low, 20% DV or more is high
  - **Reduce sodium (salt) and increase potassium:** Research shows that eating less than 2,300 milligrams of sodium (about 1 tsp of salt) per day may reduce the risk of high blood pressure. Most of the sodium people eat comes from processed foods, not from the saltshaker. Also look for foods high in potassium, which may help counteract some of sodium's effects on blood pressure

Find more specific information, please visit [www.health.gov/dietaryguidelines](http://www.health.gov/dietaryguidelines)

Source: <http://www.health.gov/dietaryguidelines/dga2005/document/html/brochure.htm#b7>

HHS Publication number: HHS-ODPHP-2005-01-DGA-B

USDA Publication number: Home and Garden Bulletin No. 232-CP

# Nutrition Notes

## Website Resources for Healthy Eating

### Nutrition & Healthy Eating

#### US Dietary Guidelines:

[www.healthierus.gov/dietaryguidelines](http://www.healthierus.gov/dietaryguidelines)

#### My Pyramid: [MyPyramid.gov](http://MyPyramid.gov)

**Nutrition.gov:** [www.nutrition.gov](http://www.nutrition.gov)

#### USDA:

<http://www.usda.gov/wps/portal/usdahome>

**FDA:** <http://www.fda.gov>

#### Food & Nutrition Information Center:

[http://fnic.nal.usda.gov/nal\\_display/index.php?info\\_center=4&tax\\_level=1](http://fnic.nal.usda.gov/nal_display/index.php?info_center=4&tax_level=1)

#### American Dietetic Association:

[www.eatright.org](http://www.eatright.org)

#### ADA's Nutrition Fact Sheets:

[www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition\\_350\\_ENU\\_HTML.htm](http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/nutrition_350_ENU_HTML.htm)

#### Calorie Control Council:

[www.caloriecontrol.org/index.html](http://www.caloriecontrol.org/index.html)

### Menu Planning/General Information

#### Campbell's Soups:

[www.campbellwellness.com/index.asp](http://www.campbellwellness.com/index.asp)

#### Create a diet:

[www.nhlbisupport.com/cgi-bin/chd1/step2.cgi](http://www.nhlbisupport.com/cgi-bin/chd1/step2.cgi)

### Portion Sizes

#### Power Point slides on My pyramid and portion sizes:

<http://lancaster.unl.edu/food/MyPyramid.shtml>

### Recipes

#### American Institute for Cancer Research Recipe Corner:

[www.aicr.org](http://www.aicr.org)

#### American Heart Association:

[www.deliciousdecisions.org](http://www.deliciousdecisions.org)

### Exercise/Fitness

#### US Department of Health & Human Services:

[www.smallstep.gov](http://www.smallstep.gov)



### Dining Out

#### Healthy Dining:

[www.healthy-dining.com](http://www.healthy-dining.com)

#### National Restaurant Association:

[www.foodfit.com/nra/dineoutsmart.asp](http://www.foodfit.com/nra/dineoutsmart.asp)

#### American Heart Association:

[www.americanheart.org/presenter.jhtml?identifier=531](http://www.americanheart.org/presenter.jhtml?identifier=531)

### Heart Health

#### American Heart Association website:

[www.americanheart.org](http://www.americanheart.org)

[www.goredforwomen.org](http://www.goredforwomen.org)

#### NIH Learn Your Cholesterol Number:

[www.nhlbi.nih.gov/health/public/heart/ot/her/chdblack/empower.pdf](http://www.nhlbi.nih.gov/health/public/heart/ot/her/chdblack/empower.pdf)

### DASH Diet

#### National Institutes of Health

[www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm](http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm)

### Supplements

#### FDA Consumer Health Information

[www.fda.gov/consumer/updates/dietary/supps062207.html](http://www.fda.gov/consumer/updates/dietary/supps062207.html)

#### Office of Dietary Supplements

<http://dietary-supplements.info.nih.gov/>

**For more information: [www.beckydorner.com](http://www.beckydorner.com)**