

CEC ARTICLE 4-2009: Sports Nutrition: Part 2 What you should know about food, and were afraid to ask.

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In part one we looked at calories, fats, carbohydrates, and proteins in a serious manner. We take a break here to look at it in a more layman's terms and go over where people make huge mistakes in what they eat. Calories are very hard to keep track of in today's world. Many times people think they are being healthy and they are actually making an uninformed or falsely advertised choice.

How many calories do you need? (The easy way)

Roughly, In order to maintain your weight multiply your body weight by 13 if sedentary and 15 if moderately active to get total calories per day.

If you want to be 130 lb and moderately active (60 minutes of exercise at the 450-650 calorie per workout range), you need to consume $130 \times 15 = 1950$ calories per day. (65 gm fat, 293 g carb, and 48 g protein)

If you want to be 170 lb and sedentary, you need to consume $170 \times 13 = 2210$ calories per day. (74 gm fat, 332 g carb, and 55 g protein)

Food contains fats, carbohydrates, and proteins.

For each gram of carbohydrate consumed you need to burn off 4 calories.

For each gram of protein consumed you need to burn off 4 calories.

For each gram of fat consumed you need to burn off 9 calories.

For each gram of alcohol consumed you need to burn off 7 calories.

How should you distribute your calories for optimal health? (Nutrition and Diet)

The old food pyramid is basically correct, but lacks specifics.

Bread and Grain Group	6-11 servings (1 slice of bread, 1 oz of cereal, 1/2 c rice)
Vegetable Group	3-5 servings (1 c. raw spinach, 1/2 c chopped vegetables)
Fruit Group	2-4 servings (1 apple, 1 orange, 1/2 c grapes)
Meat and Protein Group	2-3 servings (2-3 oz of cooked lean meats (<i>the size of deck of cards</i>), 1 egg, 2 TBL peanut butter)
Milk Group	2-3 servings (1 c milk or yogurt, 1.5 oz cheese)
Fats, Oils, and Sugars	sparingly

-Basically a serving size is the size of a deck of cards, what you can hold in one cupped hand or 1/2 c.

-The new pyramids are much better specifying serving size and types of foods in each category, male versus female and activity level. <http://www.mypyramid.gov>.

-Example from the web site: A 45-year-old female who get less than 30 min of exercise most days,
-The results from the website are based on an 1800-calorie pattern. This calorie level is only an estimate of her needs.

Per Day

Grains 6 ounces

Vegetables 2.5 cups

Fruits 1.5 cups

Milk 3 cups

Meat & Beans 5 ounces

1 Make Half Your Grains Whole. Aim for at least 3 whole grains a day

2 Vary Your Veggies. Aim for this much every week:

Dark Green Vegetables = 3 cups weekly

Orange Vegetables = 2 cups weekly

Dry Beans & Peas = 3 cups weekly

Starchy Vegetables = 3 cups weekly

Other Vegetables = 6 1/2 cups weekly

Oils & Discretionary Calories -Aim for 5 teaspoons of oils a day

Limit your extras (extra fats & sugars) to 195 Calories

Why are you always hungry and tired and diets don't work?

Atkins/South Beach Diets- what are the basis?

Refined processed sugars create a blood sugar cycle that gives a fast blood sugar high, followed by a low with feelings of tiredness and depression that promote cravings like an addiction. The concept is to break the cravings and body's dependence on the sugar swings with lean proteins and slowly digesting foods. Also when you eat calorie intense food, your body does not signal that it is satisfied and full.

I am personally very skeptical of diets and always go back to the food pyramid if possible. However, research is out on the setpoint theory for the body, which uses the premise that an individual's weight is regulated through biological signals to the brain's hypothalamus that drives the body to maintain a particular weight/body fat level. Blood glucose, lipid stores and body weight send signals to the hypothalamus to regulate appetite. If it senses a decrease in glucose or lipid stores, appetite is stimulate to re-establish the stores and conserve body fat. IE cravings.

Bare to Bones Analysis

Let's ask the essential questions for looking at any diet.

1. Does it provide the basic nutritional needs?
2. Does it provide enough calories and exercise to not reduce the metabolism and keep or increase muscle mass?
3. Does it answer the question of cravings and feelings of hunger?
4. Does it adversely affect cholesterol levels, liver or kidney function?
5. Are there any health risks associated with it?
6. Is it maintainable or short term?
7. Does it provide alternatives and substitutes to allow integration?
8. Is it radical?

If the setpoint theory is to be believed than a "good diet" is actually reprogramming the body to want "good foods" and feel satisfied with those foods. It should not have any adverse side affects and should be maintainable for life.

Let's bring in some other facts/research studies. Complex carbs with whole grains make you feel full; soups and foods with a lot of liquid (not cream – water) make you feel full. Vegetables and fruits raw or cooked lightly make you feel full.

Question 1? What keeps you feeling full longer? I can joke about glazed doughnuts. They are sugar, flour and fat (sugar coated lard balls) and you eat one and in 20 min. you're starving again. But lets look at orange juice versus an orange. Orange juice is temporarily filling, but an orange stays with you longer. Why's the cellular structure which takes longer to digest so stays with you longer.

Question 2? Why would something that takes longer to digest help? Well, it slows the introduction to your system so you don't spike your insulin or glucose levels. It stays in the stomach longer so you feel full. It takes more energy to digest and use (an extra benefit).

Well, steak and high animal fat food without the sugar make you feel full longer, BUT the cholesterol effect and strain on the liver and kidneys to process it is detrimental. The cellular structure of the meat takes longer to digest. The fat does not. So we need cellular structures more slowly digesting foods to get that full feeling longer, but we have to pick wisely.

THIS IS WHERE ALL THOSE DIETS COME IN!

Problems:

1. Humans have a hard time avoiding cravings and hunger pains.
2. We need slowly digesting foods that keep the blood lipids, glucose and insulin levels more even
3. We need to satisfy nutritional needs.
4. We need to avoid harmful health side effects

What is missing?

Another interesting aside -In Europe much of the food is cheese, cream and starch based, but they do not have the same widespread problem with obesity. Why? Their societies are based on foot, bike and mass transit with smaller portions. They get more exercise per day in their commuting than the average American. Also, their food is not nearly as processed as our food is. Maybe that is why most of those diet plans have in small print that you need to exercise too. All the aerobics industries promote that diet and exercise have to be combined to help change the setpoint and lose weight.

Are carbs bad? Some are, some aren't but the best diets have the complex ones even if they are added in later. Highly processed carbs (simple sugars, white flour, white rice) have several problems, these lose some for their nutritional value in the processing, they get digested quicker (take less energy to digest), they spike the blood sugar levels, and they may have residual additives from processing. Think about them as being partially digested before you ever get them. (Disgusting, but makes a point.)

Are proteins bad? Some are, some aren't but the best diets emphasize lean ones and make sure all the essential amino acids are addressed. Too much protein from red meat is hard on the liver and kidneys and increases cholesterol.

So what's wrong with the food pyramid? Nothing, but it needs guidance and more descriptions. American's are justifiers if we say 60% of the calories from carbs without specifying what kind. Most of them will justify pasta, white bread, and chocolate cake. If we say 10% protein doesn't a burger or chicken wings count?

A good diet does 5 major things. 1. It may change to percentages to help reset the setpoint, but brings back in all categories of the pyramid. 2. It does not adversely affect health or compromise nutrition. 3. It helps educate the person and good and bad forms of the categories, suggests recipes, substitutes, restaurants and fast food guides... (Spoon-feed them. Leave nothing out.) 4. It is maintainable from beginning to end answering cravings and hunger. 5. It includes exercise.

Eating Survival Tips

1. Water Water Everywhere

Drink at least one big glass of water before going to and two during a party or dinner. This helps fill you up and keep you hydrated.

2. Water Between Drinks

If you consume alcoholic beverages, non-alcoholic punches, or eggnog, drink a glass of water between each drink.

3. Tiny Bites

Try to train yourself to take smaller bites and chew well so you don't eat too much too fast. You need to allow time for your digestive system to tell your brain it has had enough.

4. Avoid Nibbling without Thinking

Avoid sitting near an appetizer tray. Having finger food in front of you leads to unconscious eating.

5. One Plate is Enough

For meals with too many choices of foods to eat, take small 1/2 servings of what you want to taste, but make sure it fits on one plate and don't go back for seconds.

6. Skip bad snacks not Workouts

Try not to skip your workouts. If you have to miss one try to make it up by taking another class, walking around the neighborhood, exercising at home, or taking the stairs at work.

Skip bad snacks whenever possible and replace them with good snacks

7. Simplicity in Food

Most of the calories and fat are in the condiments, toppings, appetizers, and desserts. Use condiments sparingly. Choose appetizers wisely (eat some of the vegetables without the dip, eat fruit, limit cheese and crackers, limit nuts, avoid chips and processed meats) Choose desserts wisely. (Pumpkin pie is much lower in calories than Pecan.)

8. Walk after heavy meals.

Walking after heavy meals helps decrease that bloated (Food Coma) feeling. It also burns some calories and keeps you away from after meal snacking.

9. Avoid eating late.

Eating later in the evening is particularly bad since you go to bed with a full stomach. Try to eat earlier in the evening.

10. Turn one meal into two.

If you are out to dinner or lunch, don't "clean your plate. Try and bring some home and eat the leftovers for another meal. This saves money as well as stretching out the calories.

Exercise and Weight loss?

***A single donut can be up to 500 calories. Some large coffee drinks with cream; whip cream and caramel are 700 calories.

Watch calorie dense foods, but not filling foods and snacks.

1 lb of strawberries is 190 calories and very filling

To translate calories into workouts and weight loss, you need to understand that 1 hour of moderately vigorous exercise is 450 calories. For every lb of fat you want to lose, you need to burn off 3500 calories must be burned. This translates to approximately 8 hours of vigorous exercise.

You must exercise some and reduce your calories in order to loose weight. Working out 7 days a week at 450 calories per day workouts without changing your eating corresponds to less than a 1 lb per week weight loss.

What are ways to burn off calories?

Running 1 hour	500 cal/ hour
Water Running 1 hour	750 cal/hour
Elliptical trainer with arms motion	450 cal/hour
Walking	210 cal/hour
Water Walking	450 cal/hour
Cycling (low resistance)	300 cal/hour
Cycling (intervals or hills)	500 cal/hour

So How often should you eat and how much?

If we are shooting for 3 meals and 2 snacks a day at around 2000 cal/day to keep our blood sugars at a constant level we should shoot for:

Breakfast 400 cal	Snack 200 cal
Lunch 500 cal	Snack 200 cal
Dinner 70 cal	

How easy is it to overeat when it comes to calories?

BE VERY CAREFUL ABOUT FOOLING YOURSELF ON THE CALORIE CONTENT OF FOOD

Most of this information is from the book, "Eat this not That" by David Zinczenko First, some of the worst foods in America.

Worst Fast-Food Chicken

5piece McDonald's chicken strips with creamy dressing 830 cal 55 g of fat.

Worst Drink

Jamba Juice's Chocolate Moo'd Power Smoothie 900 cal 183 g carbs

Worst Supermarket Meal

Pepperidge Farm's Roasted Chicken Pot Pie 1020 cal 64 g fat, 86 g carbs.

Worst "Healthy Burger"

Ruby Tuesday's Bella Turkey Burger 1145 cal 71 g fat 56 g carbs

Worst Mexican Food

Chipolte Mexican Grilled Chicken Burrito 1107 cal 44 g fat 113 g carb 2656 mg sodium

Worst Kid's Meal

Mararoni Grill's double Macaoni n Cheese 1210 cal 62 g fat 3450 mg sodium

Worst Sandwich

Quizno's Chicken Carbonara (Large) 1510 calories 82 g fat 106 g carbs 3750 mg sodium

Worst Salad

On the Border's Grande Taco Salad with Taco Beef 1450 cal 102 g fat 78 carbs
2410 mg sodium

Worst Burger

Carl Jr's Double Six Dollar Burger 1520 cal 111 g fat (get the regular six dollar burger lo-carb with lettuce instead of a bun and its down to 490 cal)

Worst Steak

Lonestar's 20 oz T-bone 1540 cal 124 g fat (with baked potato and lettuce wedge salad its and water 3700 cal) (Filets and sirloins are much leaner cuts)

Worst Breakfast

Bob Evan's Caramel Banana Pecan Cream Stacked and Stuffed Hotcakes 1540 cal 77g fat 190 g carbs

Worst Dessert

Chili's Chocolate Chip Paradise Pie with Vanilla Ice Cream 1600 cal 78 g fat 215 g carbs

Worst Chinese Entrée

P.F. Chang's Pork Lo Mein 1820 cal 127 g fat 95 g carbs

Worst Chicken Entrée

Chili's Honey Chipolte Crispers with Chipolte Sauce 2040 cal 99 g fat 240 g carbs

Worst Fish Entrée

On the Border's Dos XX Fish Tacos with Rice and Beans 2100 cal 130 g fat 169 g carbs

Worst Pizza

Uno Chicago Grill's Chicago Classic Deep Dish Personal Pizza 2310 cal 162g fat 123 g carbs 4470 mg sodium

Worst Pasta

Macaroni Grill's Spaghetti and Meatballs with Meat Sauce 2430 cal 128 g fat 207 g carbs 5290 mg sodium

Worst Nachos

On the Border's Stacked Border Naco's 2740 cal 166 g fat 191 g carbs 5280 mg sodium

Worst Starter

Chili's Awesome Blossom 2710 cal 203 g fat 194 g carbs 6380 mg sodium

Worst Drive Thru Combo Meal

Burger King's Triple Whopper with Cheese Fries and Coke king sized. 2200 cal 115 g fat 225 g carb 2590 mg sodium

Worst Food in America

Outback Steakhouse's Aussie Cheese Fries with Ranch Dressing 2900 cal 182 g fat 240 g carbs

Worst “Snacks”

Worst Coffee

Starbuck’s Venti Strawberry and Crème Frappucino Blended crème 750 cal 120 g carbs

Worst Doughnut

Krispy Kreme’s Carmel Kreme Crunch 380 cal 21 g fat 46 g carbs

Worst Breakfast Sandwich

Dunkin Doughnut’s Sausage Egg and Cheese Croissant 630 cal 45 g fat

Worst Minimart Snack

Hostess’s Fruit Pie 480 cal 33 g sugar 20 g fat

Worst Airport Snack

Cinnabon Classic Cinnamon Roll 813 cal 32 g fat 117 g carbs

Quick guidelines to Stopping the Maddness

Best Fast- Food Restaurants

Chic – Fil – A (no sandwich over 500 cal)
Subway

Boston Market
cal)

Worst Fast Food Restaurants

Pizza Hut
Panera (calorie loaded salads
and sandwiches)
Domino’s (2 slices of Feast 880

Best Sit-Down Restaurants

Bob Evans
Fazoli’s
Denny’s (Fit fare menu)

Worst Sit-Down Restaurants

Macaroni Grill
On the Border
P.F. Chang’s

8 Food groups to eat from every day (unless you have an allergy to them)

1. Spinach, kale, bok choy, romaine lettuce
2. Yogurt, kefir, soy yogurt
3. Tomatoes, red watermelon, pink grapefruit, persimmon, papaya, guava
4. Carrots, sweet potato, pumpkin, butternut squash, yellow bell pepper, mango
5. Blueberries, acai berries, purple grapes, prunes, raisins, strawberries
6. Black beans, peas, lentils, pinto beans, kidney beans, lima beans, fava beans
7. Walnuts, almonds, peanuts, pistachios, macadamia nuts, hazel nuts.
8. Oats, quino, flaxseed, wild rice

10 Quick tips if you must eat Fast food

Cheese Burger

McDonald's Big Mac has 220 cal and 18 g fat less than Burger King's Whopper with cheese

Pizza

2 slices of Domino's large cheese pizza with hand-tossed crust has 100 cal and 10 g fat less than Pizza Hut's large cheese pizza with hand-tossed crust

Turkey Sandwich

Subway's 6 inch Turkey Sub had 510 cal and 31.5 g fat less than Panera's Sierra Turkey Sandwich

Fish Sandwich

McDonald's Filet-o-Fish has 260 cal and 14 g fat less than Burger King's Big Fish Sandwich

Burrito

Taco Bell's Regular Style Steak Burrito Supreme is 736 cal and 31 g fat less than Chipotle Steak Burrito

Caesar Salad

Panera's Chicken Caesar Salad has 450 cal and 42 g of fat less than Chili's Chicken Caesar Salad

Breakfast Sandwich

McDonald's Egg McMuffin had 160 cal and 13 g of fat less than Starbucks Classic Sausage Egg & Aged Cheddar Breakfast Sandwich

Cinnamon Roll

Au Bon Pain Cinnamon Roll has 463 cal and 20 g of fat less than Cinnabon's Classic Cinnamon Roll

Donuts

Krispy Kreme's Original Glazed Doughnut has 130 cal and 6 g fat less than Dunkin' Doughnuts's Glazed Cake Doughnut

Banana Split

Dairy Queen's Classic Banana Split has 500 cal and 27 g fat less than Baskin-Robbins Banana Split

Visuals – If an Hour of exercise is approximately 450 cal what are some examples of 450 calories of food.

- | | |
|--|---|
| 7 navel oranges | 5 Bananas |
| 2 lb of strawberries | 2 lb of grapes |
| 3 quarts of fresh salsa | 2 lb of carrots |
| 4 baked potatoes | 1 McDonald hashbrown |
| 1 sm French fry | |
| 4 cans of progresso light soup | 1.5 cans progresso New England Clam Chowder |
| 5 Light Lucerene yogurt | 3 Low Fat Lucerene yougurt |
| 3 snack bags Smart Food popcorn | ½ cup of cheese-its |
| ½ cup of reduced fat wheat thins | 2 bags of beef jerky |
| 6 hard boiled eggs | 1.5 egg McMuffins |
| 1 package of turkey lunch meat and ½ package of Jalsburg light sliced cheese | |
| 1 Carls Jr regular burger with no bun | 1/3 of a Chipolte burrito |
| 1 Chick-Filet sandwich | ½ cup jelly beans |
| ½ cup jolly ranchers | ½ cup M&M's |
| 1 box Whoppers | 2 large Boxes of Dark Chocolate Raisenettes |
| 3 Packages of Peeps | 1 Lindt dark chocolate bar |
| 3 Cadbury crème eggs | 5 90 Cal Quaker Chewy Granola Bars |
| 2 Power Bars | |
| 1 bottle of red wine | 3 Stout beers |
| 5 light beers | 3 12 oz bottles of coke |
| 6 12 oz cans of V8 | |

CEC ARTICLE QUESTIONS VOL 3, 2009 (3 CEC's)

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1. Calculate the calorie needs/consumed to maintain the weights for the following people.
 - a. 130 lb sedentary
 - b. 130 lb active
 - c. 140 lb sedentary
 - d. 140 lb active
 - e. 150 lb sedentary
 - f. 150 lb active
 - g. 170 lb sedentary
 - h. 170 lb active
 - i. 190 lb sedentary
 - j. 190 lb active
 - k. 220 lb sedentary
 - l. 220 lb active

- m. 250 lb sedentary
 - n. 250 lb active
 - o. 300 lb sedentary
 - p. 350 lb active
2. What is the range of calories from minimum to maximum for people 130-190 lb from sedentary to active?
 3. Calculate the gram of fat based on the food pyramid guidelines of 30% of calories from fat to maintain the weights for the following people.
 - a. 130 lb sedentary
 - b. 130 lb active
 - c. 140 lb sedentary
 - d. 140 lb active
 - e. 150 lb sedentary
 - f. 150 lb active
 - g. 170 lb sedentary
 - h. 170 lb active
 - i. 190 lb sedentary
 - j. 190 lb active
 - k. 220 lb sedentary
 - l. 220 lb active
 - m. 250 lb sedentary
 - n. 250 lb active
 - o. 300 lb sedentary
 - p. 350 lb active
 4. What is the range of grams of fat from minimum to maximum for people 130-190 lb from sedentary to active?
 5. Calculate the gram of carbohydrates based on the food pyramid guidelines of 60% of calories from carbohydrates to maintain the weights for the following people.
 - a. 130 lb sedentary
 - b. 130 lb active
 - c. 140 lb sedentary
 - d. 140 lb active
 - e. 150 lb sedentary
 - f. 150 lb active
 - g. 170 lb sedentary
 - h. 170 lb active
 - i. 190 lb sedentary
 - j. 190 lb active
 - k. 220 lb sedentary
 - l. 220 lb active
 - m. 250 lb sedentary
 - n. 250 lb active
 - o. 300 lb sedentary
 - p. 350 lb active

6. What is the range of grams of carbohydrates from minimum to maximum for people 130-190 lb sedentary to active
7. Calculate the gram of protein based on the food pyramid guidelines of 10% of calories from protein to maintain the weights for the following people.
 - a. 130 lb sedentary
 - b. 130 lb active
 - c. 140 lb sedentary
 - d. 140 lb active
 - e. 150 lb sedentary
 - f. 150 lb active
 - g. 170 lb sedentary
 - h. 170 lb active
 - i. 190 lb sedentary
 - j. 190 lb active
 - k. 220 lb sedentary
 - l. 220 lb active
 - m. 250 lb sedentary
 - n. 250 lb active
 - o. 300 lb sedentary
 - p. 350 lb active
8. What is the range of grams of protein from minimum to maximum for people 130-190 lb sedentary to active?
9. How should you distribute your calories based on 5 meals/snacks per day based on a 2000 cal/day diet?
 - a. Breakfast
 - b. Snack
 - c. Lunch
 - d. Snack
 - e. Dinner
10. What worst food/snack has the highest grams of fat?
11. What worst food/snack has the highest number of calories?
12. You can have 3 quarts of fresh salsa or ___ Cadbury crème eggs for 450 calories.
13. You can have 6 cans of V8 or ___ cans of coke for 450 calories.
14. You can have 1.5 cans of clam chowder or ___ cans of light soup for 450 calories.
15. You can have 3 bags of smart food snack size popcorn or ___ reduced fat wheat thins for 450 calories.
16. You can have 2 lb of strawberries or ___ jelly beans for 450 calories.
17. You can have 4 potatoes or ___ hash browns for 450 calories.
18. How can you cut the calories of a Carl's Junior burger nearly in half?
19. How many oranges can you have for 450 calories?
20. You can have 6 hard boiled eggs or ___ egg mcmuffins for 450 calories.
21. How many carrots can you have for 450 calories?