

Nutrition and Fitness Study Guide

(12/2008 2nd 9 wks)

1. What is Nutrition and Why Is It Important?

- Nutrition is your food intake or your diet.
- It is how you fuel your machine.
- Yes, it is very important! In terms of overall fitness and wellness!
- In many ways, nutrition is equally as important as exercise.

2. A Calorie – the Basis of It All

- Calories are units of energy.
- Our bodies need energy to function and stay alive.
- This energy comes from the foods we eat.
- One Calorie is the amount of energy required to increase the temperature on one kilogram of water, one degree Celsius.
- **1 pound = 3500 calories**

3. How Many Calories Do You Need?

- On average, your body need about 1800 calories per day.
- To lose 1 pound, you need to burn 3500 more calories than you take in.
- To gain 1 pound, you need to take in 3500 more calories than you burn.

4. The Basic Nutrients:

- Carbohydrates
- Fats
- Proteins
- Water
- Vitamins
- Minerals

5. Carbohydrates

- 1 gram of carbohydrate = 4 calories
- Primary source of energy
- 2 kinds of carbohydrates:
 - A. **Complex:** provide long-lasting energy - examples: grains, breads, cereals, fruits and vegetables
 - B. **Simple:** enters the bloodstream rapidly for quick energy - example: sugars

6. Fats

- 1 gram of fat = 9 calories
- A source of stored energy
- Fat is an insulator (body adapt to heat/cold), shock absorber (helps protect body organs/bones from injury) and helps body use vitamins effectively.
- 2 kinds of fats:
 - A. **Saturated fats:** from animal sources = bad kind, can raise cholesterol levels
 - B. **Unsaturated fats:** from plant sources = good kind)

7. Proteins

- 1 gram of protein = 4 calories
- Not used for energy
- Essential for growth, development and repair of all body tissues.
- **Animal sources:** meat, eggs, dairy products, fish, poultry (high quality protein)
- **Plant sources:** nuts, some vegetables, seeds, dried beans, some grains (lower quality protein)

8. Water

- **50% to 60%** of the body is made up of water.
- **Water:** regulates body temperature, carries nutrients and oxygen to cells, cushions joints, assist in digestion, removes toxins, maintains strength and endurance.
- Drink **eight 8 oz** glasses per day

- By the time you're thirsty, you are probably mildly dehydrated.
- Signs of dehydration: headache, fatigue, loss of appetite, light-headedness, dry mouth
- **Dehydration** can cause serious problems: heat exhaustion, heat stroke

9. Vitamins

- Facilitate chemical reactions within the body
- Special nutrients needed in small amounts for normal bodily functions
- Vitamins A, D, E, and K are stored in the body
- All other vitamins need to be eaten every day

10. Minerals

- Essential nutrients that help regulate the activities of cells.
- If you eat a balanced diet, you most likely get the proper amounts of minerals.
- Some minerals are especially important to young people:
 - A. calcium: builds and maintains teeth and bones
 - B. iron: proper formation and functioning of red blood cells
 - C. sodium: regulates internal water balance
- Other important minerals: phosphorus, magnesium, potassium, zinc.

11. Daily Requirements

Carbohydrates: **60%** of calories - more complex, less simple

Fats: **25%** of calories - more unsaturated, less saturates

Protein: **15%** of calories

12. Should You Take a Multi-Vitamin Supplement?

If you eat a good, balanced diet, you get everything your body needs!

If you are unsure about your diet, a multi-vitamin can be like insurance!

13. How does Nutrition affect your Body Composition?

- If you expend (burn) the same amount of calories that you take in, **your weight will stay the same.**
- If you expend (burn) more calories than you take in, **you will lose weight.**
- If you take in more than you expend (burn), **you will gain weight.**

14. Body Fat: How Much Is Good?

- **Underfat:** too little body fat.
- Health risks: eating disorders which can be fatal.
- **Anorexia Nervosa:** severely restricts the amount of food eaten in an attempt to be exceptionally underfat. Distorted view of the body, seen as fat when extremely thin. Life threatening condition.
- **Bulimia:** binge eating, followed by purging (vomiting or use of laxatives to rid the body of food and prevent digestion). Can result in loss of teeth, severe digestion problems, other health problems
- **Overfat:** too much body fat = Obesity.
- Higher risk for: heart disease, high blood pressure, diabetes, cancer, and other diseases.
- Tires easily, less efficient at work/play

15. Metabolism

- Basal Metabolism is the amount of energy (calories) your body uses to maintain its functions, from building new cells to digesting your supper.
- Metabolism is affected by heredity, age, and maturation. Young people have a high metabolism (body is growing and building muscles). As you grow older, your metabolism slows.
- Your metabolism greatly slows if you drastically slash calories from your diet.
- The best solution is to exercise and increase your metabolism. You will continue to burn calories at a higher rate for 30 minutes after you stop working out.
- Weight training can boost your metabolism, studies show that lean muscle tissue burns more calories.

16. The Bottom Line

- Your body need food to live!
- You are what you eat!
- Give your body what it needs to be healthy and active!!

