



Unit V – Wellness, Fitness and First Aid

Chapter 6 - Controlling Fat

Section 1 – Nutrition and Obesity



What You Will Learn to Do

Estimate your body fat content



Objectives

1. Identify the risks of obesity
2. Explore tendencies that encourage fat accumulation
3. Define current and desired state for healthy lifestyle
4. Identify steps that can lead to a lean body fat content
5. Relate food intake and physical activity to weight control



Key Terms

Essential Fat -

Fat that the body needs in certain amounts to maintain bodily functions

Storage Fat -

Fat that the body keeps in reserve which can lead to over-fat problems or obesity

Basal Metabolic Rate (BMR) -

The number of calories burned at complete rest; measurement of it indicates an individual's general Metabolism or state of health



Introduction



Obese and overweight people seek advice from all types of organizations and individuals.

These “experts attempt to encourage them and control their eating, the “what, when, how, why, how much of what,” etc.



Introduction

It's possible without difficulty to carry an amount of fat that is helpful to you, and that encourages the dynamic living principle.

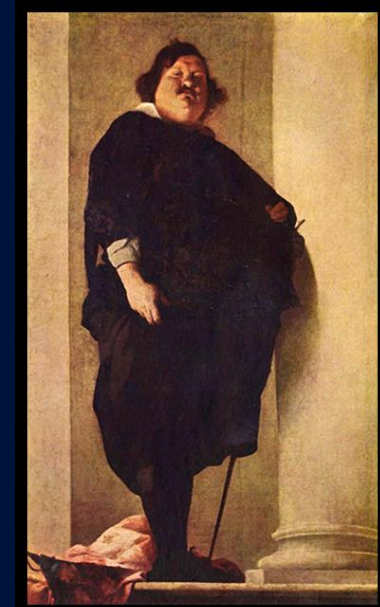
There is a method designed to keep you healthy and promote enjoyment of living while participating in life to your fullest potential.



Fat Control

Obese and overweight people have a greater risk of:

- Cardiovascular disease
- High blood pressure
- Gall bladder disease
- Diabetes
- Certain types of cancer



Obesity prevents you from performing at your highest potential, and may affect **self-esteem** and **self-assurance**.



Fat Control

Whether you are obese or overweight does not just depend on what you weigh on a scale.

We all have inherited body types with our own unique influences:

- Family eating habits
- A tendency to develop more fat cells
- A large skeletal structure
- Any number of unproved theories





Fat Control

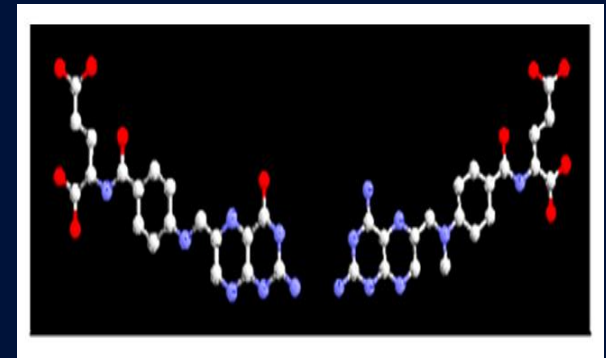
The guidelines below, and the steps that follow, will help you control your level of body fat so that you can follow a proven method for creating a healthier lifestyle.

Reduce fat intake
Get adequate exercise
Choose the right foods
Understand how to measure body fat
Understand how to use the information



Step 1: Reducing Your Fat Intake

When you diet, your body says it needs to store **more** fat, not less. This causes the body, especially in females, to slow down and reduce fat burning enzymes.



With each diet cycle, these enzymes are reduced, making it harder to lose weight. Additionally, fat levels that drop too low are unhealthy and unsafe. A certain amount of **essential fat** is necessary to maintain body functions.



Step 1: Reducing Your Fat Intake

There are important considerations about fat levels relative to each gender...

Most women should not go below **8%**. Doing so would upset their:

- Menstrual cycle
- Ability to conceive children
- Hormonal balance

Men should not go below **3-4%**.





Step 1: Reducing Your Fat Intake

Storage fat is our fat reserve, and can become a problem. Women in general seem to have a greater propensity to store fat, probably due to estrogen.



Evidence points to the hips, thighs and buttocks as the body's most desirable storage areas in females.





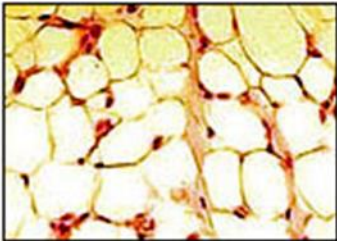
Step 1: Reducing Your Fat Intake

Body Fat Ratings for Ages 18-30 by Gender

Classification	 MALE	FEMALE 
Athletes	6 – 10%	10 – 15%
Good	11 – 14%	16 – 19%
Acceptable	15 – 17%	20 – 24%
Possibly overweight or obese	18%+	25%+



Step 1: Reducing Your Fat Intake



Adipose tissue

The average adult has **25 -30 billion** fat cells. An overweight adult could have **60-200 billion** fat cells.

Generally, when a person's growth and activities do not burn all the calories consumed, the body stores the excess calories as fat.

For maximum benefit, keep **saturated fat** to a minimum. Try tracking your saturated fat for seven days. If you are high one day, cut back the next.



Step 1: Reducing Your Fat Intake

When your fat content is where you want it, develop a lifetime guideline for healthy eating.

Calculate your daily intake of carbohydrates, fats and proteins, and choose an eating plan on the next slide that works for you and...

Stick with it!

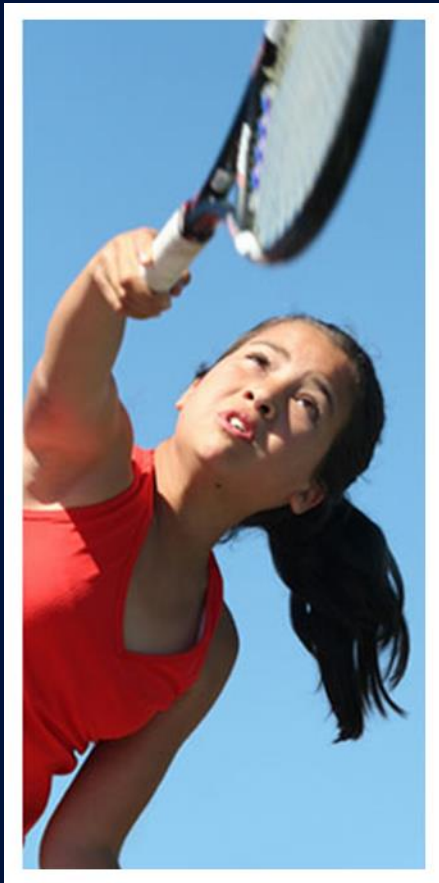


Step 1: Reducing Your Fat Intake

PLAN	Fat	Saturated Fat	Protein	Carbohydrates
#1 – Average American	37- 42%	12-15%	10-15%	40-45%
#2 – New American	20%	6%	10-15%	60-65%
#3 – Lifetime Eating	10%	Low	10-15%	75-80%
#4 – US Dietary Goals	30%	10%	10%	60%



Step 2: Exercise – How the Body Burns Food (Calories / Energy)



Balancing calories consumed with calories burned is the key.

One pound of body fat = about
3,500 calories

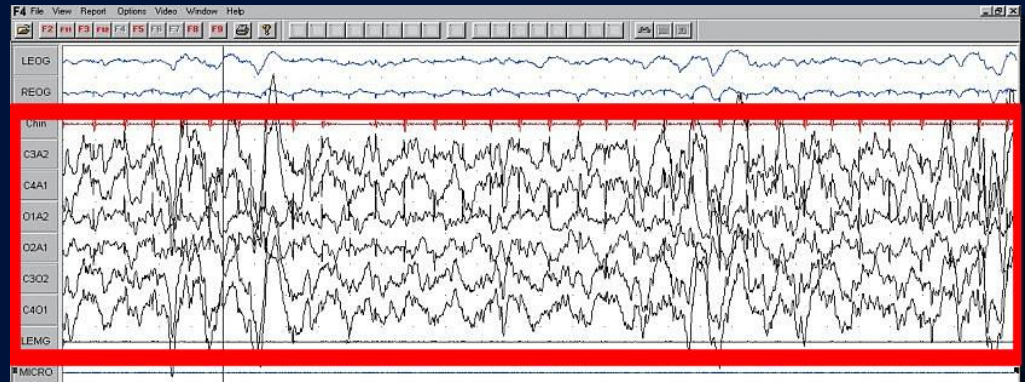
If you want to lose a pound a week, you must burn 3,500 more calories a week than you consume



Step 2: Exercise – How the Body Burns Food (Calories / Energy)

The calories your body burns during complete rest is your **basal metabolic rate (BMR)**. This varies with age, health and body size/shape/weight.

Your body also burns calories during muscle activity.



While you can't control your BMR, you can control your activity.

More activity = more calories burned.



Step 2: Exercise – How the Body Burns Food (Calories / Energy)

Choose an exercise program to improve your heart and lungs as well as your muscles.

Increase their efficiency by jogging, swimming or biking to increase your heart rate for a set period of time.



The time needed will vary according to your age, ability and the exercise.



Step 2: Exercise – How the Body Burns Food (Calories / Energy)

Improve your muscle strength by improving your muscle tone and/or your muscle size.

Muscle burns more energy than fat does, so the more muscle you have, the more calories you burn.



You can work your muscles through weight training or exercises like push-ups and sit-up.



Step 3: Food Control and Choice

People eat for different reasons:



- Hungry
- Time of Day
- Missed a meal
- Family routine

Whatever the reason, it is food choice that will make a difference in weight.



Step 3: Food Control and Choice

The most recent USDA-approved **Food Guide Pyramid** is an interactive website where you can design an eating program for you.

For example, if you are a 16-year old female who exercises 30-60 minutes a day, you should be getting 2,000 calories daily, ideally broken down like this:

- 6 ounces whole grain
- 2 ½ cups vegetables
- 2 cups fruit
- 3 cups milk
- 5 ½ ounces lean protein
- Limit oils and sugars to 265 calories/day



Step 4: Measuring Your Body Fat

There are two fairly accurate methods of measuring body fat. Remember that body types differ, so don't be discouraged.

1. Pinch an Inch Method

This test is done by pinching the skin fold of your triceps (women only), waist or thighs between your fingers. If the fat pinched is over an inch between your thumb and forefinger, you might consider reducing your body fat.





Step 4: Measuring Your Body Fat

2. Estimating Body Fat Method

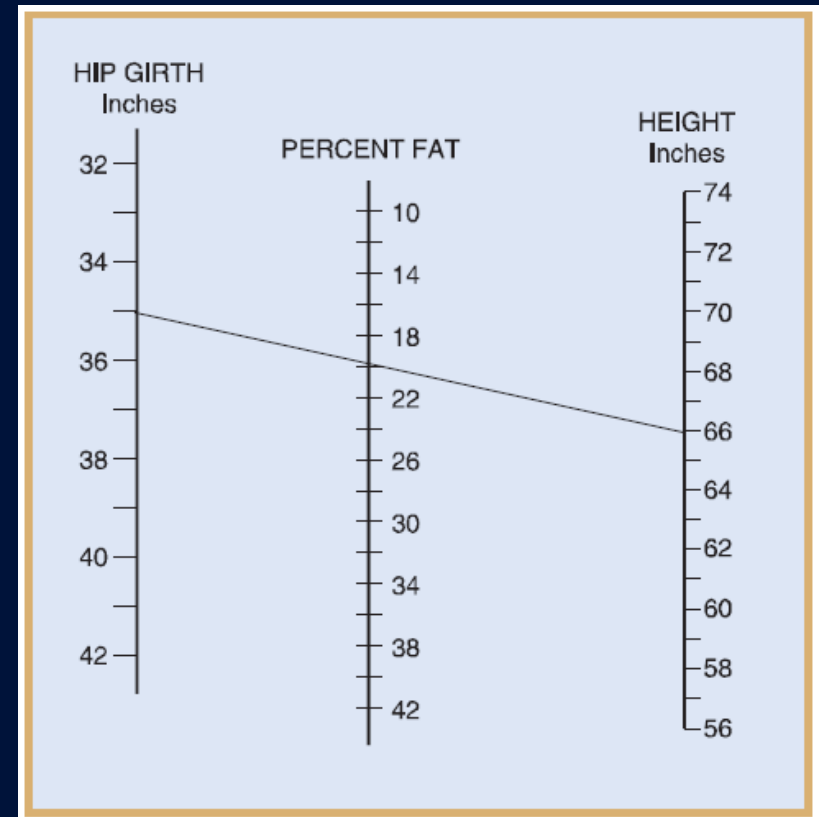
- Developed by exercise physiologist Jack Wilmore, this method uses body measurements which are then plotted on a chart, providing a final estimation number
- Separate charts for men and women
- Different methods for taking body measurements specific to men and women



Step 4: Measuring Your Body Fat

Estimating Body Fat – Women:

1. Measure hip circumference at widest point
2. Draw a line from that number to your height
3. Note the estimated body fat level on the center scale

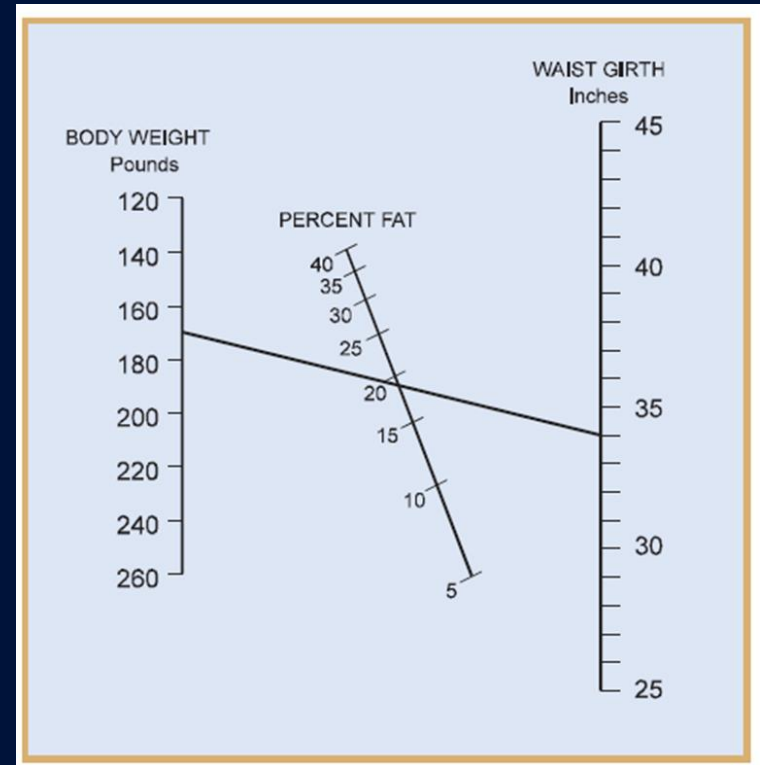




Step 4: Measuring Your Body Fat

Estimating Body Fat – Men:

1. Measure waist circumference at belly button level.
2. Mark this number on scale on the right side.
3. Draw a line from weight to waist girth scales, which will intersect estimated fat percentage.





The Road to Fat Control

A 1992 Consumer Reports survey with 68 nutritional experts indicated a deepening concern over America's dietary habits and implied the leading causes of death as being associated with **eating** and **drinking**.

These causes are:

- Coronary artery disease (heart attack)
- Cancer
- Cerebral vascular disease (stroke)
- Diabetes
- Liver disease
- Bowel disorders
- Osteoporosis



The Road to Fat Control

The experts agreed on a reasonable diet as one that closely resembles the dietary guidelines of the **US RDI** and the Department of Health and Human Services. Understanding the principles can help you develop a formula for a healthier lifestyle.

If used properly, this formula can help you maintain an ideal body fat content for life – which will provide the **ideal diet** to support the three health objectives of:

- Maximizing the immune system
- Reducing risk of disease
- Minimizing the process of aging



Carbohydrates: How to Eat Them

Natural foods describe the carbohydrate category perfectly.

Natural means that they are as **unrefined** as possible, and free from additives and preservatives.

Fruits, vegetables and grains in their natural state are key elements to a maximized immune system.





Carbohydrates: How to Eat Them

Varying with your gender, body type and level of activity, experts recommend:

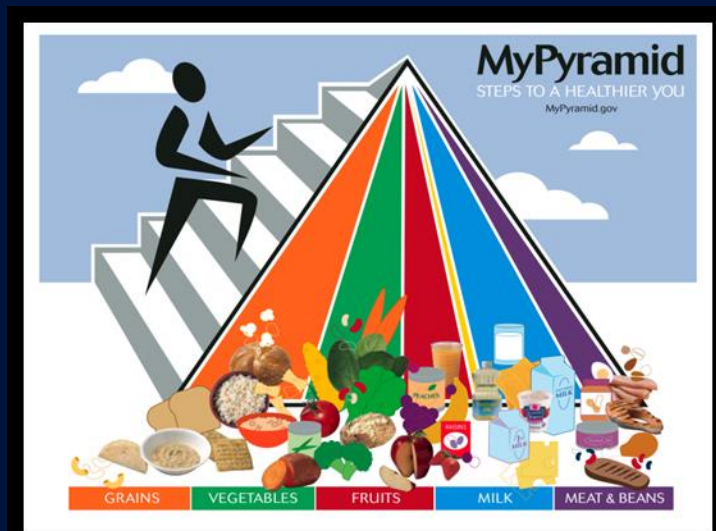
- At least 3 ounces of whole grains
- A variety of fruits and vegetables
- Low or no-fat dairy products
- Broiled, grilled or baked meats
- Limited fat and sugar

While our hurried lifestyles may make this difficult, small amounts of natural products several times a day maximizes benefits.



Carbohydrates: How to Eat Them

When you design your eating program at <http://www.nutrition.gov/smart-nutrition-101/myplate-food-pyramid-resources> it gives you a way to know you're getting all the carbohydrates you need, and fiber too.



It's okay to enjoy a sweet treat occasionally.

Just try to look at the label to keep the fat content reasonably low, and limit your sugar intake to nearly zero.



Protein: Don't Worry

If you eat the recommended amount of a variety of carbohydrates, you will probably also meet your protein needs.

85-90% should come from plant sources, which are typically complex carbohydrates.



Americans typically eat 70-75% of their protein from animal products – often leading to a higher incidence of health problems.



Vitamins, Minerals, and Water: The Regulators

Experts believe you can receive adequate vitamins and minerals from a well-balanced diet.



They also recommend drinking 6-8 glasses of water each day, and more if you work out rigorously.



Questions?

