



CHAPTER #1

INTRODUCTION TO WELLNESS, FITNESS AND LIFESTYLE MANAGEMENT

DEFINE KEY TERMS AND CONCEPTS

1. Wellness
2. Infectious disease
3. Chronic disease
4. Physical fitness
5. Health diet
6. Unintentional injuries
7. Lifestyle management
8. Target behavior
9. Self-efficacy

10. Locus of control

11. Visualization

12. Barriers to change

13. Contemplation

14. Procrastination

STUDY QUESTIONS

Wellness: The New Health Goal

Briefly describe the concept of “wellness”.

List the six dimensions of wellness.

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

The Dimensions of Wellness

List the six interrelated dimensions of wellness

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

Physical Wellness

List five requirements for obtaining physical wellness.

- 1.
- 2.
- 3.
- 4.
- 5.

Emotional Wellness

List five characteristics of emotional wellness.

- 1.
- 2.
- 3.
- 4.
- 5.

Intellectual Wellness

List three characteristics of intellectual wellness

- 1.
- 2.
- 3.

Spiritual Wellness

List three characteristics of spiritual wellness

- 1.
- 2.
- 3.

Interpersonal and Social Wellness

List two characteristics of interpersonal and social wellness.

- 1.
- 2.

Environmental, or Planetary Wellness

List two characteristics of environmental wellness.

- 1.
- 2.

New Opportunities, New Responsibilities

Give one reason life expectancy has nearly doubled in the last century.

List the three leading chronic diseases of the modern era.

- 1.
- 2.
- 3.

Give the “best” treatment for chronic disease.

Behaviors That Contribute to Wellness

List six behaviors and habits most important to maintain wellness.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Be Physically Active

More than _____% of Americans are not regularly physically active, and more than _____% are not active at all.

Name four chronic diseases positively affected by chronic physical activity.

- 1.
- 2.
- 3.
- 4.

Choose a Healthy Diet

List three dietary factors that contribute to the development chronic diseases.

- 1.
- 2.
- 3.

Maintain a Healthy Body Weight

List three diseases associated with obesity.

- 1.
- 2.
- 3.

Manage Stress Effectively

List two negative behaviors generally associated with higher stress levels.

- 1.
- 2.

Avoid tobacco and Drug Use and Limit Alcohol Consumption

Tobacco use is associated with ____ of the top 10 causes of death in the US.

Excessive alcohol consumption is associated with ____ of the top 10 causes of death in the United States.

List the five leading causes of death in the United States.

- 1.
- 2.
- 3.
- 4.
- 5.

Protect Yourself from Disease and Injury

Give the best way to deal with injury and disease.

Role of Other Factors in Wellness

Name two other factors besides behavior involved in good health.

- 1.
- 2.

National Wellness Goals

Give the two major goals of the United States government's national Healthy People initiative.

- 1.
- 2.

List three healthy people 2010 objectives.

- 1.
- 2.
- 3.

Reaching Wellness Through Lifestyle Management.

Give three benefits derived from making progress towards a healthy lifestyle.

- 1.
- 2.
- 3.

Getting Serious About Your Health

Building Motivation to Change

List two factors related to motivation you need to consider when planning changing behaviors.

1.

2.

Give an example of a short-term and long-term benefits, and costs of changing an inactive lifestyle.

Short-term benefit-

Short-term cost-

Long-term benefit-

Long-term cost-

List two factors that can increase motivation to change.

1.

2.

Boosting Self-Efficacy

Give one strategy for boosting self-efficacy.

Briefly describe internal locus of control.

Give two examples of external locus of control

1.

2.

List one way to boost self-confidence.

Identifying and Overcoming Key Barriers to Change

List one example of a barrier to change.

Enhancing Your Readiness to Change

Name the model that serves as an effective approach to lifestyle self-management.

Identify the six steps in the “stages of change” model of self-management.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Developing Skill for Change: Creating a Personalized Plan

A well thought-out plan includes the following three parts.

- 1.
- 2.
- 3.

List the six steps when designing a plan of action for behavior change.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Putting Your Plan into Action**Staying With It**

Briefly list four motivation booster ideas.

- 1.
- 2.
- 3.
- 4.

Being Fit and Well For Life

List seven specific signs of wellness.

1. 5.
2. 6.
3. 7.
- 4.

PRACTICE QUIZ**Multiple Choice Questions**

1. The six dimensions of wellness include all of the following EXCEPT:
 - a. emotional wellness
 - b. environmental, or planetary, wellness
 - c. spiritual wellness
 - d. dietary wellness
2. Physical wellness includes:
 - a. learning about symptoms of disease
 - b. self-confidence
 - c. compassion
 - d. cultivating a support network of caring friends and/or family
3. Optimism, trust, and self-confidence are components of:
 - a. physical wellness
 - b. emotional wellness
 - c. spiritual wellness
 - d. interpersonal wellness
4. A capacity to think critically is an example of:
 - a. emotional wellness
 - b. intellectual wellness
 - c. interpersonal and social wellness
 - d. spiritual wellness
5. Best describes emotional wellness?
 - a. taking time to explore your thoughts
 - b. getting regular medical checkups
 - c. being open to new ideas
 - d. finding principles by which to live your life

True/False Questions

1. The wellness concept defines health as absence of disease.

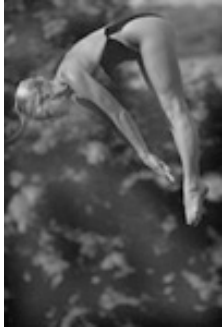
2. Self-control is one characteristic of a person who possesses good emotional health.
3. In 1900, a person most likely to die from chronic diseases.
4. Prevention is the most effective way to deal with chronic disease.
5. Approximately 60% of all Americans exercise regularly.

LABORATORY ACTIVITIES

Complete Lab 1.1 and 1.2. Explain your findings and briefly discuss their importance relative to your overall health and wellness.

THOUGHT QUESTIONS

1. Discuss barriers to wellness specific to males and females and people of different ethnic backgrounds.
2. Fast forward 25 years and project what you believe will be your major health issues.



CHAPTER #2

BASIC PRINCIPLES OF PHYSICAL FITNESS

DEFINE KEY TERMS AND CONCEPTS

1. Physical activity
2. Exercise
3. Health-related fitness
4. Cardiorespiratory endurance
5. Muscular strength
6. Metabolism muscular endurance
7. Flexibility
8. Body composition
9. Fat-free mass

10. Skill-related fitness

11. Physical training

12. Specificity

13. Progressive overload

14. Principles of physical training

15. Reversibility

16. Exercise stress test

17. Graded exercise test (GXT)

18. Physical activity pyramid

19. Overtraining

20. FITT

21. Progressive overload

22. Training threshold

STUDY QUESTIONS

List five major benefits of physical activity.

- 1.
- 2.
- 3.
- 4.
- 5.

Physical Activity and Exercise for Health and Fitness

Give the average percentage of adults currently engaged in all types of physical activity (see figure 2.1)

List two summary points from the 1996 Surgeon General's report on physical activity and health.

- 1.
- 2.

Give one reason why people are not more physically active.

Physical Activity on a Continuum

Give one way physical activities can be defined.

Explain the main difference between exercise and physical activity.

Lifestyle Physical Activity for Health Promotion

Give the Surgeon General's recommendation regarding the amount of kCals that should be expended on most days for most people.

Give three examples of “moderate” amounts of physical activity.

- 1.
- 2.
- 3.

Give five examples of ways to fit increased physical activity into your lifestyle.

- 1.
- 2.
- 3.
- 4.
- 5.

True or False: The daily total amount of physical activity must be accumulated in a single prolonged bout of activity each day.

True or False: A program of 30 minutes of lifestyle activity per day may also not be enough activity for some people to achieve a healthy body weight or increase physical fitness.

Lifestyle Physical Activity for Health Promotion and Weight Management

Give the number of minutes per day of physical activity recommended by the Institute of Medicine to achieve and maintain a healthy bodyweight for many people.

How Much Physical Activity is Enough?

Briefly discuss factors to consider when deciding how much physical activity a person requires.

Health Related Components of Physical Fitness

List the five components of physical fitness important for health.

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | |

Cardiorespiratory Endurance

List seven factors that determine cardiorespiratory endurance.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Muscular Strength

List two factors that determine muscle strength

- 1.
- 2.

Give two reasons why strong muscles are important.

- 1.
- 2.

Older people tend to lose both _____ and _____ of muscle cells.

Muscular Endurance

List three factors that determine muscle endurance.

- 1.
- 2.
- 3.

Muscular _____ in the trunk muscle is more important than muscular _____ to prevent back pain.

Flexibility

List three factors that determine joint flexibility.

- 1.
- 2.
- 3.

Body Composition

A person with excessive body fat, especially located in the _____ is more likely to experience a variety of health problems.

The best way to add muscle mass is through _____ training.

Skill-Related Components of Fitness

List six components of skill-related fitness.

- | | |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

Give the best way to improve skill-related fitness.

Principles of Physical Training: Adaptation to Stress

List two goals of physical training

- 1.
- 2.

Specificity- Adapting to Type of Training

Give one example of specificity of training.

Progressive Overload- Adapting to Amount of Training and the FITT Principle

Give an example of progressive overload.

List two factors that determine the amount of exercise needed to obtain maximum benefits from training.

- 1.
- 2.

List the four variables that represent the FITT principle.

- | | |
|----|----|
| 1. | 3. |
| 2. | 4. |

Frequency

Give the optimum frequency (in days per week) of regular physical activity to develop cardiorespiratory endurance.

Intensity

Fitness benefits occur when a person exercises _____ than his or her normal level of activity.

Time

What is the optimum duration (time) required to develop cardiorespiratory endurance.

Type

What is the optimum mode of activity to develop cardiorespiratory endurance.

Reversibility- Adapting to a Reduction in Training

When a person stops exercise, up to ___% of fitness improvements are lost within ___ months.

True or False: All fitness levels reverse at the same rate.

Individual Differences- Limits on Adaptability

Give one example of individual differences related to training.

Designing Your Own Exercise Program

List three variables you need to consider when designing an exercise program.

- 1.
- 2.
- 3.

Medical Clearance

List three health conditions that would require a medical clearance prior to starting an exercise program.

- 1.
- 2.
- 3.

Assessment

Give the primary purpose of pre-exercise assessment.

Setting Goals

State the ultimate goal of every health-related fitness program.

Choosing Activities for a Balanced Program

List the different components of the physical activity pyramid.

List the four components of a well-balanced fitness program.

- 1.
- 2.
- 3.
- 4.

Guidelines for Training

List and briefly describe twelve guidelines to ensure an effective and successful exercise-training program.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.

PRACTICE QUIZ

Multiple Choice Questions

1. What percentage of Americans are not physically active at all?
 - a. 5%
 - b. 15%
 - c. 25%
 - d. 50%
2. According to the Surgeon General's report on physical activity, which of the following statements is FALSE?
 - a. people of all ages benefit from regular physical activity.
 - b. a modest increase in daily activity can improve health.
 - c. more vigorous or longer duration activity can lead to greater health.
 - d. women receive more benefits than men from regular exercise.
3. Physical activity can be defined as:
 - a. muscular movement of the body that requires energy to produce the movement.
 - b. any condition that elevates heart rate.
 - c. aerobic exercise.
 - d. strength training.
4. Exercise is a subset of physical activity that is:
 - a. discontinuous and unplanned.
 - b. planned, structured, and repetitive.
 - c. not a contributor to physical fitness.
 - d. random or unstructured.
5. The Surgeon General's report on physical activity recommends:
 - a. high-intensity exercise.
 - b. exercising 1 or 2 days per week.
 - c. burning about 150 calories per day through physical activity.
 - d. some type of resistance training every day.

True/False Questions

1. Physical activity levels have decreased in recent years.
2. To obtain health benefits, daily physical activity should be done in one session rather than multiple bouts.
3. Low-intensity physical activity is likely to improve health but not fitness.
4. Cardiorespiratory endurance training is the best way to increase fat-free mass.
5. Balance is considered a skill-related component of fitness.

LABORATORY ACTIVITIES

Complete Lab 2.1, 2.2 and 2.3. Explain your findings and briefly discuss their importance relative to your overall health and wellness.

THOUGHT QUESTIONS

Describe the most important components of physical fitness and different exercises that promotes optimal fitness.



CHAPTER #3

CARDIORESPIRATORY ENDURANCE

DEFINE KEY TERMS AND CONCEPTS

1. Physical activity
2. Pulmonary circulation
3. Systemic circulation
4. Atria
5. Venae cavae
6. Ventricles aorta
7. SA node
8. Systole
9. Diastole

10. Blood pressure
11. Veins arteries
12. Capillaries
13. Respiratory system
14. Alveoli
15. Cardiac output
16. Glucose
17. Glycogen
18. Adenosine triphosphate
19. Immediate energy system
20. Non oxidative energy system
21. Anaerobic

22. Lactic acid

23. Oxidative energy system

24. Aerobic

25. Mitochondria

26. VO_{2max}

27. Free radicals

28. Cardiovascular disease

29. Lipoproteins

30. Coronary heart disease

31. Endorphins

32. Neurotransmitters

33. Target heart rate zone

34. Heart rate reserve

35. Rating of perceived exertion

36. Synovial fluid

37. Dehydration

38. Heat cramps

39. Heat exhaustion

40. Heat stroke

41. Hypothermia

42. Frostbite

43. Wind chill

44. Heat index

45. R-I-C-E

STUDY QUESTIONS

Basic Physiology of Cardiorespiratory Endurance Exercise

The Cardiorespiratory System

State the main purpose of the cardiorespiratory system.

List three components of the cardiorespiratory system

- 1.
- 2.
- 3.

The Heart

Explain the heart's major role.

Describe the pulmonary circulation.

Describe the systemic circulation.

Name the body's largest vein.

Name the body's largest artery.

About how much blood does a 150 lb person have?

Blood Vessels

Give two ways to classify blood vessels.

- 1.
- 2.

Describe the function of capillaries.

Draw a schematic view of the heart and trace the direction of blood through it starting from the right ventricle.

Describe the leading cause of heart attacks.

The Respiratory System

Describe the main function of the respiratory system.

The Cardiorespiratory System at Rest and During Exercise

Give the average resting heart rate per minute during rest.

Give the average resting number of breaths per minute.

Give the average resting blood pressure.

Give a typical maximum heart rate during exercise.

Give a typical cardiac output during rest.

Give a typical percentage of blood distributed to muscle during rest.

Give a typical percentage of blood distributed to muscle during exercise.

Energy from Food

List three classes of energy-containing nutrients.

- 1.
- 2.
- 3.

Glucose is stored in the liver as _____.

Protein in the diet is used primarily to _____.

ATP: The Energy "Currency" of Cells

Give three facts about ATP.

- 1.
- 2.
- 3.

Exercise and the Three Energy Systems

List the body's three energy systems

- 1.
- 2.
- 3.

The _____ and _____ of activity determine which energy system predominates.

List the fuel substrate primarily used by the different energy systems.

Immediate:

Nonoxidatives:

Oxidative:

Give sample activities primarily supported by the different energy systems.

Immediate:

Nonoxidatives:

Oxidative:

List the two key limiting factors for the nonoxidative energy system.

- 1.
- 2.

Oxidative energy production takes place in the _____.

Give the predominate fuel for the oxidative energy system.

True or False: Glucose serves as the predominate fuel for the oxidative energy system.

Physical Fitness and Energy Production

Give the energy system considered the key component of any health-related fitness program.

Benefits of Cardiorespiratory Endurance Exercise

List six major physiological adaptations and long-term benefits of regular endurance exercise

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Improved Cardiorespiratory Functioning

List four principal cardiorespiratory responses to exercise.

- 1.
- 2.
- 3.
- 4.

Improved Cellular Metabolism

Give two improved cellular functions from endurance exercise.

- 1.
- 2.

Reduced Risk of Chronic Disease

List three chronic diseases positively affected by endurance exercise.

- 1.
- 2.
- 3.

Describe the relationship between level of cardiorespiratory fitness and relative death risk.

Better Control of Body Fat

Give one explanation of how endurance exercises helps to control body fat.

Improved Immune Function

Briefly explain how endurance exercise improves immune function.

Improved Psychological and Emotional Well-Being

Give two examples of social, psychological or emotional benefits from endurance exercise.

- 1.
- 2.

Assessing Cardiorespiratory Fitness

Give the best quantitative measure of cardiorespiratory endurance capacity.

Assessment Tests

Briefly describe one test to measure cardiorespiratory endurance capacity.

Monitoring Your Heart Rate

Describe two sites to count pulse rate.

- 1.
- 2.

Heart rate is usually assessed in _____.

Developing a Cardiorespiratory Endurance Program

List five variables important in creating a successful endurance exercise program.

- 1.
- 2.
- 3.
- 4.
- 5.

Give the percentage range of possible improvement in VO_{2max} following a training program.

Give the direction of change (increase/decrease) in resting heart rate to endurance exercise training.

Applying the FITT Equation

Give the four variables described by the acronym FITT.

1. 3.
2. 4.

The target heart rate zone ranges between ___% and ___%.

Use the standard method to calculate the target heart rate zone for a 21-year old male.

Use the heart rate reserve method ((resting HR = 60 bpm) calculate the target heart rate zone for a 21-year old male.

If you are 25 years old and your heart beats 25 times in 10 seconds, give your approximate target heart rate range.

Give the recommended duration of exercise to improve cardiorespiratory endurance.

Give the optimum type of exercise to improve cardiorespiratory endurance.

Warming Up and Cooling Down

Give the major benefit of warming-up prior to exercise.

Give the amount of time that represents an adequate warm-up period.

Give the amount of time that represents an adequate cool-down period.

Building Cardiorespiratory Fitness

List three factors that determine the rate of progress to build fitness.

1. 3.
- 2.

List the three stages of an endurance-training program.

- 1.
- 2.
- 3.

Give one sign of too rapid progression in overload during the initial stage of an endurance-training program.

Exercise Safety and Injury Prevention

Hot Weather and Heat Stress

Describe how the body releases body heat produced during exercise.

List four heat stress induced problems.

- 1.
- 2.
- 3.
- 4.

Dehydration

True or False: Dehydration can occur in comfortable temperatures if fluid intake is inadequate.

Give three results of dehydration.

- 1.
- 2.
- 3.

As a rule of thumb, drink at least ___ cups of fluid ___ hours before exercise and then drink enough during exercise to _____ fluid loss in _____.

Heat Cramps

The primary cause for cramps is _____.

The best treatment for heat cramps is a combination of _____ and _____.

Heat Exhaustion

List three symptoms of heat exhaustion.

- 1.
- 2.
- 3.

Describe the normal treatment for heat exhaustion.

Heat Stroke

List three symptoms of heat stroke

- 1.
- 2.
- 3.

Cold Weather

Describe a primary symptom of hypothermia.

Frostbite within 30 minutes is possible in calm conditions when the temperature is colder than _____°F.

List the two places on the body most susceptible to frostbite.

- 1.
- 2.

Poor Air Quality

Give the time of day when air quality is usually better.

Exercise Injuries

List four common exercise-induced injuries and their treatments.

<u>Injury</u>	<u>Treatment</u>
1.	
2.	
3.	
4.	

List five measures to prevent injuries.

- 1.
- 2.
- 3.
- 4.
- 5.

PRACTICE QUIZ

Multiple Choice Questions

1. NOT one of the functions of the cardiorespiratory system?
 - a. to transport oxygen
 - b. to pick up waste products
 - c. to transport nutrients
 - d. to produce ATP
2. NOT a component of the cardiorespiratory system?
 - a. the brain
 - b. the heart
 - c. the blood vessels
 - d. the lungs
3. The portion of the circulation governed by the right side of the heart is the _____ circulation.
 - a. systemic
 - b. pulmonary
 - c. cerebral
 - d. extremity
4. Systemic circulation carries blood to all organs of the body EXCEPT.
 - a. the brain
 - b. the lungs
 - c. the heart
 - d. the liver.
5. Two upper heart chambers where blood collects before passing to the lower chambers.
 - a. ventricles
 - b. atria
 - c. septum
 - d. valves

True/False Questions

1. The aorta circulates oxygenated blood to the lungs.
2. The vena cava is the largest artery in the body.
3. Blood pressure is greater during systole than diastole.
4. Arteries carry oxygenated blood away from the heart.
5. Exercise reduces cardiac output.

LABORATORY ACTIVITIES

Complete Lab 3.1, and 3.2. Explain your findings and briefly discuss their importance relative to your overall health and wellness.

THOUGHT QUESTIONS

1. Create two sample programs to develop cardiorespiratory endurance program should be for a beginning exerciser, the other for a more fit individual. For each, apply the FITT principle.
2. What advice would you give your parents regarding the importance of exercise.

ANSWERS TO QUIZ QUESTIONS

Chapter 1

Multiple Choice Questions

1. Answer: d Page: 2–3
2. Answer: a Page: 2
3. Answer: b Page: 2
4. Answer: b Page: 2
5. Answer: a Page: 2

True/False Questions

1. Answer: F Page: 2
2. Answer: T Page: 2
3. Answer: F Page: 3
4. Answer: T Page: 3
5. Answer: F Page: 4–5

Chapter 2

Multiple Choice Questions

1. Answer: c Page: 28
2. Answer: d Page: 28
3. Answer: a Page: 28
4. Answer: b Page: 29
5. Answer: c Page: 29

True/False Questions

1. Answer: T Page: 28
2. Answer: F Page: 29
3. Answer: T Page: 32
4. Answer: F Page: 33
5. Answer: T Page: 34

Chapter 3

Multiple Choice Questions

1. Answer: d Page: 56
2. Answer: a Page: 56
3. Answer: b Page: 56
4. Answer: b Page: 56
5. Answer: b Page: 56

True/False Questions

1. Answer: F Page: 56
2. Answer: F Page: 56
3. Answer: T Page: 56
4. Answer: T Page: 57
5. Answer: F Page: 58