CHAPTER 2 The Impact of Physical Activity on Adolescents

Chapter Summary

An overview of the impact of physical activity on the growing adolescent is described in this chapter. The chapter also looks at important research and cites empirical evidence supporting the value of an active lifestyle in promoting optimum growth and development in secondary school students. Differences in growth patterns and maturation rates of students impact the physical performance of youth. The needs of overweight youth are discussed and methodology is presented for teaching them in a manner that promotes increased physical activity. Promoting lifestyle activity is an important outcome for quality physical education programs.

Chapter Highlights

• Healthy People 2020 objectives (U.S. Department of Health and Human Services, 2010) suggest goals based on physical activity rather than fitness. National goals for physical activity promotion for youth and national goals for increasing physical education in the schools are included.

• The following organizations and publications promote public health through physical activity and healthy eating habits: NASPE National Standards for Physical Education (2013), American Heart Association Statement on Physical Activity in Children and Youth (2006), Centers for Disease Control and Prevention Physical Activity Guidelines for Americans (2008), and the American College of Sports Medicine and American Heart Association Physical Activity and Public Health Guidelines (Haskell et al., 2007).

• Growth patterns are generally controlled by genetic makeup at birth, while physical maturity is unique by individual. Physical activity has little or no impact on the stature of maturing students (Malina, Bourchard, & Bar-Or, 2004).
• In adolescents, aerobic power can be increased 10 to 20 percent through training. However, not all individuals respond to training in a similar fashion.

• It is important to have compassion for overweight students because it is often perceived that they are not putting in the same effort as others or do not enjoy activity. Teachers should consider offering alternative activities to running for these individuals.

• During adolescence, rapid increase in strength occurs. When differences in strength between the sexes are adjusted for height, there is no difference in lower body strength from age 7 through 17. When the same adjustment is made for upper-body strength, however, males have more upper extremity and trunk strength.
It is important for the physical educator to promote physical activity for students outside of the school setting because, despite the nation’s enthusiasm for physical activity, physical education programs have not necessarily been positively affected.

Physical education dropouts usually occur in middle school because it is offered as an elective; teachers should avoid predicting who will be an outstanding athlete at a young age so they will not turn youngsters away from physical activity.

There are several research studies indicating positive associations between physical activity and academic performance.

Physical education should be touted as an important content area because contributions to the physical well-being of youngsters cannot be developed elsewhere in the school curriculum.

Several safety guidelines for exercise and physical activity should be addressed and followed by physical education teachers. These include issues related to moderate to vigorous physical activity, exercise and heat stress, distance running and fitness testing, and resistance training.

Learning Outcomes

After reading this chapter, the student will be able to:

- Discuss how physical maturity affects the physical skills of students.
- Identify the impact of regular physical activity on adolescent students.
- Describe the general health and activity status of students in American schools.
- Explain the harmful effects that being overweight can have on the health and well-being of a student.
- Defend physical education with research and empirical evidence that is available.
- Identify principles to follow for exercising safely in warm climates.
- Describe a safe approach for distance running with adolescent students.
Key Concepts

NASPE Surgeon General’s Report on Guidelines for Physical standards Physical Activity and Health Activity overweight Promotion for youth Centers for Disease Control and Children and Youth physical Prevention maturity American Heart Association statement on lifestyle physical activity

Discussion Topics

1. Why has the promotion of physical activity engagement become a central goal for physical education programs today?

2. Why is learning new and complex skills difficult for youngsters aged 9-15?

3. Discuss reasons why efforts to raise fitness levels in youth have been relatively unsuccessful.

4. What items should be considered with regard to safety in physical education?

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In-Class Activities

1. Assign students to small groups to discuss potential ways to provide physical activity for middle school or high school students beyond physical education.

2. Have students role play their position as a physical educator and describe to their peers why they should not predict outstanding athletes among their students.
3. Ask pairs of students to evaluate how physical maturity affects the physical skills of students.

Written Assignments

1. List three reasons why physical education is an important content area in the school curriculum. Outline these in a 30-second elevator speech that the physical education teacher could give to an administrator or a school board member to support his or her program.

2. List the proposed Healthy People 2020 objectives included in the text and describe three organizations that support these goals.

3. Read the executive report of the Centers for Disease Control and Prevention report (*The association between school-based physical activity, including physical education, and academic performance*). Identify the types of academic achievement in the report. Describe the associations between physical activity and academic achievement.

Community Activities

1. Compose a newsletter for a middle or high school physical education website describing why physical education is an important content area and why it should remain in the curriculum. Use at least three facts from the text to back up your points.

2. Assign students to find out physical education requirements in the local area and compare them to the proposed Healthy People 2020 objectives.

3. Interview three secondary physical education teachers regarding their safety practices with regard to moderation, exercise and heat, distance running, and resistance training. Compare and contrast responses with guidelines from the text.
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COOPERATIVE LEARNING TASK SHEET

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Directions: Your cooperative learning group will become the content experts by finding the answers to the items listed below. Discuss these items with your group and be ready to report on one or all of them at the end of the class period.

1. Explain the reasons behind recent efforts to make the promotion of physical activity engagement a central goal for school physical education programs.

2. Why have efforts to raise physical fitness levels in youth largely been unsuccessful?

3. What are lifespan activities, and how are they integrated into today’s curriculum?

4. What is the value of lifespan activities and sports?

5. Discuss the reason behind the recent efforts to promote activity in female students.

6. Describe the relationship between chronological age and skeletal age.

7. Why is learning new and more complex skills difficult for students aged 9-15?
   8. Discuss why overweight youngsters perceive aerobic tasks as overly demanding and not enjoyable.
   9. Discuss the rationale for basing fitness workloads on time rather than distance or number.

10. Why is physical activity, as compared to rigid diets, a much more successful intervention to treating those who are overweight?

11. Explain why physical education professionals should be concerned when the emphasis on “back to the basics” continues.