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# The Role of the Certified Strength and Conditioning Specialist in Preventing Childhood Obesity

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## summary

Obesity is a leading cause of many chronic diseases. The likelihood of adult obesity increases if one is obese as a child. Certified Strength and Conditioning Specialist professionals in the high school setting can promote health and fitness to our youth through education and exercise prescription.

## Introduction

Sixty-four percent of adults in the United States are identified as either being overweight or obese (3). Obesity increases one's risk of developing heart disease, diabetes, hypertension, certain forms of cancer, and other chronic illnesses. Obesity can also contribute to the development of musculoskeletal injuries (2). Pediatricians and researchers are also recognizing an increase in children and teenagers with excess body fat (12). The number of children and adolescents who are overweight

has doubled and tripled, respectively, in the past 20 years (7).

Children who are overweight or obese risk social and psychological stress, have increased risk factors for cardiac disease, may have an elevated blood pressure, and are at risk for type 2 diabetes and restrictive or obstructive airway diseases (12, 14). Obesity may increase the risk of orthopedic conditions such as Blount disease, slipped capital femoral epiphysis, and flat feet (12).

Longitudinal studies have found the earlier the age that a child becomes obese the more obese that child will become, and there is an increased likelihood that obese children will be obese as adults (6, 10). If childhood obesity persists into the adult years, that individual faces increased morbidity and mortality (12).

Despite the national obesity epidemic, many primary health care providers fail to advise their overweight or obese patients to lose weight (4). For many high school athletes, the only contact that they may have with a medical provider is during their sports preparticipation physical examination (PPPE; 9). The PPPE is performed to identify athletes at risk of sudden death, other nonemer-

gent medical conditions, and to identify and counsel the athlete on other risky behaviors such as substance abuse. The PPPE meets the legal requirement for athletes to participate in sport, but as sports medicine medical doctors will attest "it is a mistake to assume, based on a signed waiver, that an athlete is in good health" (9).

LaFontaine (8) reviewed the twin epidemics of obesity and diabetes, the health care economic costs of obesity and diabetes, the causes of obesity (poor nutrition and physical inactivity), and strategies to help reduce or reverse the diabetes and obesity epidemic (8). The Centers for Disease Control and Prevention have published specific strategies to assist education professionals in promoting physical activity and fitness in the schools. The Certified Strength and Conditioning Specialist (CSCS) professional working in the school setting can promote health and fitness to our youth through education and exercise prescription.

## State of Physical and Health Education

Educating our youth about health has never been more challenging. They are bombarded by inaccurate or false mes-

sages in the media about fitness, nutrition, and personal health. Combined with the fact that many school districts are forced to make program cuts due to curriculum or budgetary issues, it is a challenging task to keep our youth fit.

The Centers for Disease Control and Prevention maintains statistics on student physical activity participation (5). In 2003, 33% of students did not participate in either at least 20 minutes of vigorous physical activity on 3 or more of the past 7 days or 30 minutes of moderate physical activity on 5 or more of the past 7 days (5). This is up 3% from 1999 (5). Almost 12% of all students had no participation in vigorous or moderate physical activity in the past 7 days (5). Inactivity increases between each grade, with high school seniors being the least active (5).

Experts now recommend that children require 60 minutes of exercise spread throughout the entire day (11). A majority of high school students fail to meet this goal at school (5). No school should be without any aspect of health and physical education. The American Academy of Pediatrics recommends daily physical education for all children in kindergarten through grade 12 as well as comprehensive health education in each grade (1). School faculty and the community at large should resist any changes to these programs. The impact of health education topics such as nutrition, risky health behaviors, exercise, and disease and injury prevention are as equally valuable as any other course.

### Education and Exercise Prescription

The CSCS professional (whether employed as a strength coach or an athletic trainer with an added certification) has the opportunity to interact daily with the student athlete. The CSCS should educate the student athlete on exercise principles. Empowering the student athlete with knowledge of anatomy, how to use

**Table 1**  
**Centers for Disease Control and Prevention 10 Key Strategies to Reduce Childhood Obesity in the Schools (13)**

1. Address physical activity and nutrition through a coordinated school health program.
2. Designate a school health coordinator and maintain an active school health council.
3. Assess the school's health policies and programs and develop a plan for improvements.
4. Strengthen the school's nutrition and physical activity policies.
5. Implement a high-quality health promotion program for school staff.
6. Implement a high-quality course of study in health education.
7. Implement a high-quality course of study in physical education.
8. Increase opportunities for students to engage in physical activity.
9. Implement a quality school meals program.
10. Ensure that students have appealing, healthy choices in foods and beverages offered outside of the school meals program.

equipment properly, and strength and conditioning training modes will prepare that individual to design his or her own future exercise routines. The CSCS should encourage proper diet habits, rest, and be available to counsel the athlete on health matters or refer the individual to the proper medical provider.

There may be many young nonathletes who fail to obtain routine medical evaluations due to either apparent good health or lack of medical insurance. The health or physical education teacher (and CSCS) may be the only professional educating that student on health and fitness. This invaluable role may empower that student to make healthy choices. To aid the educator or CSCS, the Centers for Disease Control and Prevention has published 10 key strategies (13) (Table 1). The Centers for Disease Control and Prevention and the American Academy of Pediatrics encourage schools to implement their recommendations. The high school physical education or health teacher and a high school CSCS are the ideal professionals to lead health and fitness promotion at their schools and encourage change when necessary.

### Conclusion

To reverse the obesity epidemic it will require the involvement of families,

schools, business, government, health care providers, and the media (14). While the schools should not carry the burden alone, they are in a position to have a significant impact on this epidemic. The high school CSCS (strength coach, educator, athletic trainer) has the education and practical skills to lead this fight. ♦

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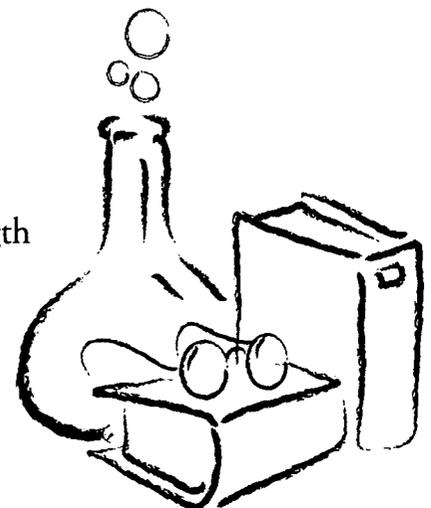
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