

Closing the Obesity Achievement Gap: Evidence-Based Practices That  
School Counselors Can Help Implement

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### Abstract

School counselors are charged with helping students in the personal/social, academic, and career development domains. Obesity creates adverse educational outcomes for students along these three domains, suggesting an obesity achievement gap. Thus, school counselors can benefit from knowing which interventions have been shown to be successful in working with students who are overweight. This article presents school counselors with five empirically-based interventions to confront obesity in their schools: Student Media Awareness to Reduce Television (SMART), Dance for Health, Planet Health, Stanford Health Heart Program, and PE4Life. The specific role that school counselors can assume to help implement these interventions is also reviewed.

## Closing the Obesity Achievement Gap: Evidence-Based Practices That School Counselors Can Help Implement

The achievement gap refers to disparities in academic achievement between groups of students, especially with regard to: test scores, grade point average, attendance, drop-out rates, high school graduation rates, and college admission rates. Traditionally, school counselors have focused on achievement gaps based on ethnicity, socioeconomic status, and gender. However, due to the rising obesity rates and corresponding educational outcomes, school counselors might also consider an obesity achievement gap.

### Obesity Achievement Gap

Obesity and its associated health, psychological, social, and other risk factors has been an increasingly researched topic. Obesity is defined as a condition where there is excess body weight due to an abnormal accumulation of adipose tissue (fat) to the extent that health is impaired (National Heart, Lung, and Blood Institute [NHLBI], 2000). Obesity is primarily determined using the Body Mass Index (BMI), which is calculated based on one's weight and height (Centers for Disease Control and Prevention [CDC], 2007). Obesity and overweight are often used interchangeably in the literature. These two labels refer to different weight status in the BMI range of measurement. The term *obesity*, however, is avoided for BMI use with children and adolescents due to the stigmatization, which may ensue once they are categorized as obese (Budd & Volpe, 2006). Alternatively, a child who has a BMI between 85th and 94th percentiles is considered as *at risk for overweight*, whereas a child with BMI greater than or equal to the 95th percentile is defined as *overweight* (CDC, 2007).

## Obesity and School Counseling

The American School Counselor Association (ASCA) National Model (2005) promotes school counselor accountability for academic achievement. To date, minimal research has been conducted on the school counselor's role in addressing obesity and its corresponding educational effects. However, Ballard and Alessi (2006) explored the impact of obesity on the academic, personal/social, and career development of children using the ASCA National Model delivery system. In their article, they listed ideas about how a school counselor might address obesity through classroom guidance, individual planning, responsive services, and system support.

The impact of childhood obesity extends far further than the known associated health risks, such as diabetes, heart disease, and stroke among others. Overweight children have significantly lower test scores in math and reading compared to their non-overweight peers (Datar, Strum, & Magnabosco, 2004; Judge & Jahns, 2007). Falkner et al. (2001) reported overweight adolescent girls were more likely to be held back a grade level as compared to non-overweight females. This trend persists past the elementary and secondary levels, into post-secondary education. Crosnoe (2007) indicated overweight females were half as likely to attend college as non-overweight females. In addition, a longitudinal study concluded that as compared to their non-overweight peers, women who were obese in their adolescence completed fewer total years of education (Gortmaker et al., 1993).

Participation in physical activity is greatest for teens and adolescents during the school day. However, with budget cuts and a focus on standardized testing, schools are allotting less time to physical education and recess, as well as cutting extracurricular

sports and activities (Ballard & Alessi, 2006). As time and money for physical education, recess, and after-school sports decrease, the rates of childhood obesity may become exacerbated, and lead to lower rates of academic achievement. Increased school counselor accountability is necessary as the relationship between obesity and academic achievement becomes more evident.

Several researchers have explored the effects of being overweight on academic achievement. For example, Datar, Strum, and Magnabosco (2004) analyzed the test scores of kindergartners and first graders using a national representative sample. Results showed lower math and reading scores in overweight children when compared to their non-overweight peers. However the discrepancies became insignificant when controlling for socioeconomic and behavioral variables, suggesting “overweight is a marker but not a causal factor [of obesity]” (Datar, Strum, & Magnabosco, 2004, p. 58). “Nevertheless, because young children’s peers are more likely to notice obesity, per se, the relationship between obesity and lower academic performance may contribute to the stigma associated with overweight” (Pyle et al., 2006, p. 365). A follow-up study indicated that becoming overweight between kindergarten and the completion of third grade was associated with reduction in test scores and positive teacher ratings on approaches to learning (e.g., attentiveness, task persistence, eagerness to learn, learning independence, flexibility, and organization), in girls (Datar & Strum, 2006).

Educational self-efficacy and student absenteeism are also related to the obesity achievement gap. Faulkner et al. (2001) reported that obese adolescents believe they are worse students as compared to their non-overweight peers, regardless of their actual academic achievement. Also, with an average of four missed days per month,

severely obese students have more absent school days than the general student population (Schwimmer et al., 2003). However, as Taras and Potts-Datema (2005) suggested, this may be due to the increased number of medical appointments that are necessary for severely obese children. Increased absenteeism may also be related to the teasing and bullying overweight children encounter in schools, as well as the students' "fear [of] being embarrassed or ostracized by their peers" (Janssen, Craig, Boyce, & Pickett, 2004; Geier et al., 2007, p. 2160).

While studies have shown that an obesity achievement gap exists, this gap becomes even greater for minority and low-income overweight students. As Burton and VanHeest (2007) stated, "overweight is disproportionately more prevalent in minority children" (p. 212). Specifically, 20% of Non-Hispanic Black children and 19% of Hispanic children were classified as overweight between 2003-2004, compared to 16% of non-Hispanic White children (Ogden et al., 2006). Datar, Strum, and Magnabosco (2004) found overweight children were significantly more likely to be Hispanic and poor, as well as have less educated mothers when compared with non-overweight children. The likelihood of childhood overweight and lower test scores increased for children with family incomes of less than \$75,000 and whose mothers did not have a bachelor's degree (Datar, Strum, & Magnabosco, 2004).

"When physical education and recess are reduced or eliminated in an effort to provide more academic instruction for students caught in the achievement gap, these measures may inadvertently contribute to a cycle of inactivity for a group that is significantly more at risk for overweight or is overweight" (Burton & VanHeest, 2007, p.

216). While researchers remain hesitant to name obesity as a causal factor of low academic achievement, obesity is undoubtedly a marker in the achievement gap.

#### Fitness and Academic Achievement

Similar to the findings related to being overweight and academic achievement, recent studies have suggested that level of fitness and physical education participation are also associated with academic achievement. Coe et al. (2006) reported that students who performed at least some vigorous activity during the day had significantly higher grades in four academic core classes than those who performed no vigorous activity. Further, Davis et al. (2007) conducted a fifteen-week study comparing the executive cognitive function of 150 overweight children. They were randomly assigned to one of three groups: high-dose group received 40 minutes of physical activity everyday after school, low-dose group had only 20-minute daily workout, and a control group, which received no exercise sessions. The results showed that the 40-minute group made the greatest cognitive gains, while the 20-minute group's improvements were 'merely' half as large. This suggested that higher levels of daily physical activity positively impact executive function, which in turn increases the planning, organizing, and goal-directed actions that are important for academic achievement.

The California Department of Education (2002) conducted a study to explore the relationship between academic achievement and the physical fitness of California's students. Results indicated higher achievement was associated with higher levels of fitness. Also, students who met the minimum fitness levels in three or more fitness areas showed the greatest improvements in academic achievement. The relationship between achievement and fitness was greater in mathematics than in reading, and

female students demonstrated greater academic achievement than males (California Department of Education, 2002). As former California State Superintendent of Public Instruction, Delaine Eastin, stated, “We now have the proof we’ve been looking for: students achieve best when they are physically fit” (NASPE, 2002, para. 4). This California finding is further corroborated by the massive literature review conducted in 2004 by a group of thirteen expert panelists from the fields of pediatrics, sports medicine, and kinesiology (Strong et al., 2005). This systematic review of more than 850 studies evaluated presently available evidence on the effects of physical activity among school-age youth. Evidence-based data suggested the positive association between physical fitness and academic performance. Similarly, physical activity was also revealed to present beneficial effects on students’ classroom behavior, memory, and concentration. In accordance with other positive health and behavior outcomes, the panel then recommended that school-age children should participate in 60 minute or more moderate to vigorous physical activity a day.

After the recent movement to reduce physical education classes due to budget concerns and increased focus on standardized testing, several researchers have begun to study the effects of physical education on academic achievement. For example, Carlson et al. (2008) conducted a six-year longitudinal study reviewing the time students spent in physical education classes and academic achievement (reading and mathematics scores). While data show no significant patterns in males, results indicated that females enrolled in higher amounts of physical education per week had a slight but significant increase in academic achievement, as defined by mathematics and reading scores. While educators may be concerned that spending time in physical education



classes decreases students' scores on standardized tests and other measures of academic achievement, research has shown this is not true. No negative effects on standardized test scores were found when students spent more time in physical education classes (Sallis et al., 1999). More recently, Castelli, Hillman, Buck, and Erwin (2007) found 3rd and 5th graders with higher fitness scores, as measured by BMI and aerobic ability, had higher scores on the state math and reading exams. Unlike other studies, this association held true after controlling for gender and SES.

The association between academic achievement and physical exercise emerges from the basic tenet of mind-body attunement/connection. According to John Ratey's findings in the brain research field, being physically active will optimize the blood oxygen flow to the brain, enhancing alertness, and memory and attention span – all factors that impact learning (Perry, 2003). This positive effect of exercise in learning environments has been termed 'enhanced learning readiness' (NBC5, 2007). Using exercise in an educational environment has also been shown to decrease student impulsiveness in class (NBC5, 2007). In other words, students appear more motivated to learn. Students have less desire to get out of their seats in class, which can reduce the number of disciplinary actions against students; and in turn, positively impact academic achievement (PE4Life, n.d.a). Thus, physical activity serves to facilitate and improve learning readiness, enabling students to learn more effectively and increase their academic achievement.

These data suggested that obesity and physical fitness levels are indirectly associated with academic achievement by means of learning readiness. Professional

school counselors can implement fitness-related interventions to address the obesity epidemic and in turn positively affect academic achievement.

### School-Based and Empirically-Supported Interventions

The body of literature has shown that the majority (80%) of childhood obesity intervention programs failed to produce significant treatment effects (Budd & Volpe, 2006). In fact, a recent meta-analysis of 46 school-based obesity intervention studies revealed that even fewer of the notably successful programs managed to demonstrate a sustainable effect in the long term (Stice, Shaw, & Marti, 2006). In adherence to the notion of best practices, it is therefore imperative for school counselors to ensure that the obesity intervention approaches employed by their schools are highly effective and well supported empirically.

An exhaustive literature review revealed five school-based primary prevention programs that might be implemented by school counselors working as leaders in collaboration with other stakeholders: SMART, Dance for Health, Planet Health, and Stanford Heart Health Program (Flores, 1995; Gortmaker et al., 1999; Killen et al., 1989; Robinson, 1999). These programs were evaluated on three specific criteria. First, the effectiveness of these programs were demonstrated not only in BMI changes, which has traditionally served as a main outcome measure in assessing obesity, but also in other composite indicators of obesity such as: skin-folds, resting heart-rates, fitness testing, and self-reported diet and health-related activity (e.g., exercise, television-watching, smoking). Secondly, these interventions represent developmentally-appropriate approaches in battling childhood and adolescent overweight. These grade-appropriate intervention programs were compiled from the various evidence-based practices

designed for specific student populations ranging from elementary to high school. Lastly, all four school-based interventions revolve around a population-based or primary prevention approach, in which all students were targeted without singling out individual or groups of overweight students. Rather than using a selected population (i.e., obese students, at-risk for overweight children, and so forth), these universal approaches benefit more students and limit the risk of stigmatizing overweight students.

The following outlines the empirically-verified school-based interventions which will be discussed in light of their school counseling implications. In each of these suggested programs, the school counselor can serve as a vital asset by working as a leader, advocate, and collaborator.

#### Student Media Awareness to Reduce Television (SMART).

SMART is a short-term behavior modification curriculum, which was shown to be effective for 3rd and 4th grade students (Robinson, 1999). This theory-based classroom curriculum aims to reduce sedentary behavior in forms of 'screen time' (watching television and playing video games), which is heavily linked to obesity. In accordance to 18-week classroom lessons, students were trained to self-monitor their screen-time at home. This weekly 30-50 minute lesson also educated young children to establish a television budget of 7 hours per week, hence directing and developing them to be intelligent and selective viewers. The culmination event of the curriculum involved instituting a 10-day television turn-off challenge. As a result, significant reductions were reported not only in terms of students' BMI, but also their screen time and the number of meals they consumed during screen time.

When implementing this intervention, the school counselor can collaborate with Physical Education (PE) teachers as well as parents. The school counselor might take part in delivering some of the classroom guidance lessons, such as how to carry out self-evaluation and behavior modification. In addition, SMART is among the few 'successful' childhood overweight interventions that incorporated a family-school partnership component, as parents are encouraged to conduct family monitoring of their children's screen time. The school counselor can help to facilitate this ongoing process of collaboration between parents and the PE teachers throughout the implementation.

#### Dance for Health

Dance for Health is a short-term dance-oriented physical activity curriculum that was found to be effective in reducing the BMI rate of female African American and Hispanic 7th graders (Flores, 1995). The two main components of this intervention are an aerobic dance class taken during regular PE time and a culturally-sensitive health education class. By combining these two components, this intensive 12-week program directed its prevention efforts in two domains; namely, behavior and cognition. First, the 50-minute aerobic class occurring three times per week, in which various dance routines were developed from 10-15 different popular songs, strived to increase students' moderate to vigorous physical activity during PE class. Complementary to the behavior component, a 30-minute, twice per week health education class aimed at changing one's attitude toward physical activity and obesity was also presented.

The positive treatment effects of this intervention demonstrated the significance of implementing a culturally-competent approach to fight the overweight epidemic, which has disproportionately affected poor and minority youth (Daniels, Queen, &

Schumacher, 2007). Pertinent to the culturally-sensitive health education component, which included the delivery of behavior-change and stress management materials, the involvement of school counselors as trainers and instructors would be highly relevant given their counseling skills and professional training in multicultural competence.

#### Planet Health and the Stanford Health Heart Programs

Two interventions included a comprehensive behavioral change curriculum: Planet Health (Gortmaker et al., 1999) and Stanford Health Heart Program (Killen et al., 1989). Despite many similarities between these two interventions, Planet Health and Stanford Health Heart Program differ in a number of ways. Research (Gortmaker et al., 1999; Budd & Volpe, 2007) stressed the effectiveness of the Planet Health intervention for middle school students (6th to 8th graders). This interdisciplinary health behavioral curriculum involves infusing 32 core health lessons into math, science, English, and social studies materials. Following a two-year implementation in 10 Boston middle schools, significant reductions of BMI, higher fruit and vegetable consumption, and fewer total energy intake/calories were observed among female students. Although Planet Health did not produce similar 'success' among boys in reduced body fat (BMI) and improved dietary patterns, it managed to yield some positive results across both genders that is reducing the number of hours spent on television viewing.

The Stanford Heart Health Program (Killen et al., 1989) was a successful school-based program to reduce obesity among 14- to 16-year-old high school students. Essentially, this intervention was designed as a cardiovascular disease (CVD) risk reduction program, which includes, but is not limited to, obesity prevention. Consequently, the primary outcome measures went beyond just BMI reduction. This 7-

week behavior change curriculum was comprised of three 50-minute classroom sessions per week which focused on the importance of physical exercise, stress reduction, heart-healthy diet and smoking avoidance. There was no gender effect reported for this intervention, as results showed significant reductions of BMI in both adolescent boys and girls. Moreover, it also produced other beneficial treatment effects such as resting heart rate, triceps skin-fold thickness, healthy-for-heart snack selection, regular physical exercise, and smoking cessation.

Both Planet Health and Stanford Heart Health Program were based upon behavioral choice and Bandura's social cognitive theories, which essentially aim to improve adolescent health behaviors by combining health-related instructions and behavior change approach (Stice et al., 2006). Subsequently, this primarily involves classroom training in goal setting, self-regulatory skills, cognitive restructuring, self-monitoring, problem solving and evaluation. School counselors can play an important role in this classroom-based curriculum by delivering various developmental classroom lessons and teaching students how to monitor their own behaviors, develop and evaluate action plan in order to reach a chosen behavior-change goal, while the regular classroom and PE teachers focus on teaching the health-related content of the curriculum (i.e., nutrition, exercise, sedentary behaviors, high-fat food intake). Considering the school counselor's helping skills, knowledge and expertise in the behavior-change approach, indirect service delivery might involve instituting a behavioral consultation model (Kratochwill & Bergan, 1990). For instance, school counselors might conduct consultation sessions with various PE and classroom instructors on how to teach variety behavioral-change techniques to students.

Moreover, there is specific facilitative function through which school counselors can leverage the effectiveness of Planet Health intervention. Planet health's distinction as "the most successful and best known obesity prevention program to date" is built around its interdisciplinary aspect, in which health lessons are incorporated into major subject areas and not just PE (Budd & Volpe, 2007, p. 486). This approach, however, could be considerably challenging especially among schools with minimum or no experience with interdisciplinary curricula. Given their standing in school as 'neutral' non-teaching staff who possess good knowledge of the schedule and other academic aspects of the school, school counselors might take the leading role in this school-wide coordination and collaboration effort.

#### PE4Life

PE4Life is an innovative physical education program, which was founded upon Phil Lawler's work at Naperville School District in Illinois. More specifically, "PE4Life programs incorporate cardiovascular fitness, muscular and strength endurance, team building and adventure education within the curriculum; utilize technology and individualized assessments; and encourage involvement with local health, medical, and business communities," (PE4Life, n.d.b).

PE4Life promotes students becoming physically active and more knowledgeable about their health. Results have indicated that students taking a Learning Readiness Physical Education (LRPE) class prior to math classes improved algebra readiness scores by 20%; those taking a LRPE class before literacy classes improved reading levels by 1.4 grade levels (PE4Life, n.d.a). Students enrolled in LRPE immediately prior to reading classes increased scores by twice the percentage as those who had LRPE

several hours before class (PE4Life, n.d.a). Also, after implementing PE4Life, disciplinary incidents decreased by 67% (PE4Life, n.d.a). While no significant changes in BMI have been found, the increase in physical activity through PE4Life has increased student academic achievement as indicated by math and reading scores.

Based on these successes, the Center for Disease Control has named PE4Life the prototype for what has been termed “New PE.” New PE refers to mandatory physical education classes that emphasize keeping students healthy and active (Samman, 1998). This represents a departure from the old PE paradigm, which traditionally stressed athletic achievement over physical fitness (Barovick, 2000). In practice, PE4Life and New PE suggest using heart monitors to gauge individual effort, rather than measuring students against certain athletic standards, such as how fast students should run a mile. School counselors would need to collaborate with physical education teachers to implement this broad-based program and assist with data collection and analysis of its effects on learning readiness.

### Conclusion

Ultimately, obesity is a complex, multi-faceted problem that stems from the interaction between one’s genetic make-up, behavior and the environment (Blom-Hoffman, 2008). Hence, current efforts to fight childhood obesity must be supported by school-wide systemic change. Based on the service delivery framework outlined by ASCA, school-based obesity prevention approaches would benefit from both direct and indirect involvement of school counselors. Congruent with the future direction of school-based obesity prevention approaches that move beyond targeting students at a personal level to targeting schools at the systemic level (Blom-Hoffman, 2008; Daniels



et al., 2007), school counselors would need to respond with leadership, advocacy, and collaboration skills in order to transform the school environment and produce a tenable long-term impact on the obesity achievement gap.

## References

- American School Counselor Association (ASCA). (2005). *The ASCA National Model: A framework for school counseling programs* (2<sup>nd</sup> ed.). Alexandria, VA: Author.
- Ballard, M. B., & Alessi, H. D. (2006, May 2). The impact of childhood obesity upon academic, personal/social, and career development: Implications for professional school counselors. *Journal of School Counseling, 4*(4). Retrieved June 15, 2008, from <http://www.jsc.montana.edu/articles/v4n4.pdf>
- Barovick, H. (2000). Fit for Life. *Time Magazine, 156*(23). Retrieved August 5, 2008, from <http://www.time.com/time/magazine/0,9263,7601001204,00.html>
- Blom-Hoffman, J. (2008). School-based promotion of fruit and vegetable consumption in multiculturally diverse, urban schools. *Psychology in the Schools, 45*, 16-27.
- Budd, G. M., & Volpe, S. L. (2006). School-based obesity prevention: Research, challenges, and recommendations. *School Health, 76*, 485-495.
- Burton, L. J. & VanHeest, J. L. (2007). The importance of physical activity in closing the achievement gap. *Quest, 59*, 212-218.
- California Department of Education (2002). *State study proves physically fit kids perform better academically*. Sacramento, CA: California Department of Education.
- Carlson, S. A., Fulton, J. E., Lee, S. M., Maynard, L. M., Brown, D. R., Kohl, H. W., Dietz, W. H. (2008). Physical education and academic achievement in elementary school: Data from the early childhood longitudinal study. *American Journal of Public Health, 98*(4), 721-727.

- Castelli, D., Hillman, C. H., Buck, S. M., Erwin, H. E. (2007). Physical fitness and academic achievement in third- and fifth-grade students. *Journal of Sport and Exercise Psychology, 29*, 239-252.
- Centers for Disease Control and Prevention [CDC]. (2007). *Body Mass Index*. Retrieved June 28, 2008, from <http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm>
- Coe, D. P., Pivarnik, J. M., Womack, C. J., Reeves, M. J., Malina, R.M. (2006). Effect of physical education and activity levels on academic achievement in children. *Medicine & Science in Sports & Exercise, 38(8)*, 1515-1519.
- Crosnoe, R. (2007). Gender, obesity, and education. *Sociology of Education, 80*, 241-246.
- Daniels, D. Y., Queen, J. A., & Schumacher, D. (2007). Obesity and poverty: A growing challenge. *Principal, 86*, 42-47.
- Datar, A., & Strum, R. (2006). Childhood overweight and elementary school outcomes. *International Journal of Obesity, 30*, 1449-1460.
- Datar, A., Strum, R., & Magnabosco, J.L. (2004). Childhood overweight and academic performance: National study of kindergartners and first-graders. *Obesity Research, 12(1)*, 58-68.
- Davis, C. L., Tomporowski, P. D., Boyle, C. A., Waller, J. L., Miller, P. H., Naglieri, J. A., et al. (2007). Effects of aerobic exercise on overweight children's cognitive functioning: A randomized controlled trial. *Research Quarterly for Exercise and Sport, 78*, 510-519.

- Falkner, N. H., Neumark-Sztainer, D., Story, M., Jeffery, R. W., Beuhring, T., & Resnick, M. D. (2001). Social, educational, and psychological correlates of weight status in adolescents. *Obesity Research, 9*, 32-42.
- Flores, R. (1995). Dance for health: Improving fitness in African American and Hispanic adolescents. *Public Health Reports, 110*, 189-193.
- Geier, A., Foster, G. D., Womble, L. G., McLaughlin, L., Borradaile, K. E., Nachmani, J., et al. (2007). The relationship between relative weight and school attendance among elementary schoolchildren. *Obesity, 15*(8), 2157-2161.
- Gortmaker, S. L., Must, A., Perrin, J. M., Sobol, A. M., & Dietz, W. H. (1993). Social and economic consequences of overweight in adolescence and young adulthood. *The New England Journal of Medicine, 329*, 1008-1012.
- Gortmaker, S. L., Peterson, K., Wiecha, J., Sobol, A. M., Dixit, S., Fox, M. K., et al. (1999). Reducing obesity via a school-based interdisciplinary intervention among youth: Planet health. *Archives of Pediatrics & Adolescent Medicine, 153*, 409-418.
- Janssen, I., Craig, W. M., Boyce, W. F., & Pickett, W. (2004). Associations between overweight and obesity with bullying behaviors in school-aged children. *Pediatrics, 113*(5), 1187-1194.
- Judge, S., & Jahns, L. (2007). Association of overweight with academic performance and social and behavioral problems: An update from the early childhood longitudinal study. *Journal of School Health, 77*, 672-678.
- Killen, J. D., Robinson, T. N., Telch, M. J., & Saylor, K. E. (1989). The Stanford adolescent heart health program. *Health Education Quarterly, 16*, 263-283.

- Kratochwill, T. R., & Bergan, J. R. (1990). *Behavioral consultation in applied settings: An individual guide*. New York: Plenum.
- National Association for Sport and Physical Education (NASPE). (2002). *New study supports physically fit kids perform better academically*. Retrieved June 15, 2008, from [http://www.aahperd.org/naspe/template.cfm?template=pr\\_121002.html](http://www.aahperd.org/naspe/template.cfm?template=pr_121002.html)
- National Heart, Lung and Blood Institute. (2000, October). *Practical guide to the identification, evaluation, and treatment of overweight and obesity in adults* (NIH Publication No. 00-4084). Retrieved June 30, 2008, from <http://www.obesity.org/information/practicalguide.asp>
- NBC5. (2007). *Building a better brain videos*. Retrieved August 4, 2008, from <http://video.nbc5.com/player/?id=103075>
- PE4Life. (n.d.a.). *PE4Life results*. Retrieved August 4, 2008, from <http://www.pe4life.org/sub/Results/index.cfm>
- PE4Life. (n.d.b.). *PE4Life: Building healthy student bodies one at a time*. [Brochure]. Kansas City, MO.
- Perry, P. (2003, July/August). Keeping kids fit for life. *The Saturday Evening Post*, pp.20-24, 76.
- Pyle, S. A., Sharkey, J., Yetter, G., Felix, E., Furlong, M. J., & Carlos Poston, W. S. (2006). Fighting an epidemic: The role of schools in reducing childhood obesity. *Psychology in the Schools*, 43(3), 361-376.
- Ogden, C. L., Carroll, M. D., Curtin, L. R., McDowell, M. A., Tabak, C. J., & Flegal, K. M. (2006). Prevalence of overweight and obesity in the United States, 1999-2004. *JAMA*, 295, 1549-1555.

- Robinson, T. N. (1999). Reducing children's television viewing to prevent obesity. *Journal of the American Medical Association, 282*, 1561-1567.
- Sallis, J. F., McKenzie, T. L., Lewis, B., Marsha, S., & Rosengard, P. (1999). Effects of health-related physical education on academic achievement: SPARK. *Research Quarterly for Exercise and Sport, 70*(2), 127-134.
- Samman, P. (1998). *Active youth: Ideas for implementing CDC physical activity promotion guidelines*. Atlanta, GA: Human Kinetics Publishers, Inc.
- Schwimmer, J. B., Burwinkle, T. M., & Varni, J. W. (2003). Health-related quality of life of severely obese children and adolescents. *Journal of the American Medical Association, 289*, 1813-1819.
- Stice, E., Shaw, H., & Marti, C. N. (2006). A meta-analytic review of obesity prevention programs for children and adolescents: The skinny on interventions that work. *Psychological Bulletin, 132*, 667-691.
- Strong, W. B. et al., (2005). Evidence based physical activity for school-age youth. *The Journal of Pediatrics, 146*(6), 732-737.
- Taras, H., & Potts-Datema, W. (2005). Obesity and student performance at school. *Journal of School Health, 75*(8), 291-295.

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