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treatment of childhood obesity. Am J Clin Nutr; 1998. 67:1130-5.

- 12-Ritchie LD, Welk G, Styne D, Gerstein DE. Family environment and pediatric overweight: what is a parent to do?. J Am Diet Assoc; 2005. 105: 70 79.
- 13- DiLorenzo TM, Stucky-Rupp RC, Vander Wal JS, Gotham HJ. Determinants of exercise among children II: a longitudinal analysis. Prev Med; 1998. 27:470–7.
- 14-Bungum TJ, Vincent ML. Determinants of physical activity among female adolescents. Am J Prev Med; 1997. 13:115–22.
- 15- Kuczmarski RJ, Ogden CL, Grummer-Strawn LM, Flegal KM, Guo SS, Wei R, et al. CDC Growth Charts: United States. Adv Data; 2000. 8 (314):1–27.
- 16-Lytle LA, Kubik MY. Nutritional issues for adolescents. Best Pract Res Clin Endocrinol Metab; 2003. 17(2): 177-189.
- 17-Deforche B, Bourdeaudhuij ID, Tanghe A, Hills A, De Bode P. Changes in physical activity and psychosocial determinants of physical activity in children and adolescents treated for obesity. Patient Edu Couns; 2004. 55: 407–415.
- 18-Dwyer JM, Allison KR, Makin S. Internal structure of a measure of self-efficacy in physical activity among high school student. Soc Sci Med; 1998. 46(9):1175-82.
- 19-O'Dea JA. Why do kids eat healthful food?: Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents. J Am Diet Assoc; 2003. 103: 497-501.
- 20- Epstein LH, Myers MD, Raynor HA, Saelens BE. Treatment of pediatric obesity. Pediatr; 1998. 101: 554–70.

- 1- Daniels SR, Arnett DK, Eckel RH, Gidding SS, Hyman LL, Kumanyika S, et al. Overweight in children and adolescents. Circulation; 2005. 111:1999-2012.
- 2- Strauss RS. Childhood obesity and self-esteem. Pediatr; 2000.105(1): 15-21.
- 3- Mannucci E, Ricca V, Barciulli E, Bernardo M. Quality of life and overweight the obesity related wellbeing (Orwell 97) Questionnaire. Addict Behav; 1999. 24 (3): 345–357.
- 4- Zabinski MF, Saelens BE, stein RI, Hayden-Wade HA. Overweight children's barriers to and support for physical activity. Obes Res; 2003. 11: 238-246.
- 5- USDA and U.S. Department of Health and Human Services (HHS). Dietary Guidelines for Americans. 5<sup>th</sup> ed. Washington: USDA; 2000.p.543-544.
- 6- Allison KR, Dwyer JJM, Makin S. Perceived barriers to physical activity among high school students. Prev Med; 1999. 28:608–15.
- 7- Sallis JF, Prochaska JJ, Taylor WC. A review of correlates of physical activity of children and adolescents. Med Sci Sports Exerc; 2000. 32:963–75.
- 8- Trost SG, Pate RR, Saunders R. A prospective study of the determinants of physical activity in rural fifth-grade children. Prev Med; 1997. 26:257–63.
- 9- Centers for Disease Control and Prevention. Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People. MMWR; 1997. 46(RR-6):1-22.
- 10- Phillips RG, Hill AJ. Fat, plain, but not friendless: selfesteem and peer acceptance of obese pre-adolescent girls. Int J Obes Relat Metab Disord; 1998. 22:287–93.
- 11-Golan M, Weizman A, Apter A, Fainaru M. Parents as the exclusive agents of change in the

## Barriers to and Support for Physical Activity in Overweight and Obese Compared with Normal Weight Adolescents

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## **Abstract:**

**Introduction and Aim:** As the prevalence of overweight increases among adolescents, thus factors that may influence children's participation in weight-related health behaviors need to be examied. This study examined barriers to and support for physical activity in overweight and obese adolescents compared with normal weight adolescents.

**Materials and Methods:** In this cross-sectional study, sample included 279 male students studying in two secondary schools in Tehran. Of all students, 179 (64.2%) were within normal weight range, 49(17.6%) were obese and 51(18.3%) were overweight. A questionnaire comprising demographic characteristics, and barriers to and support for physical activity, and also, a checklist of physical activity within current week were distributed to be filled out by students. Data were analyzed using One-Way ANOVA and Tukey's test.

**Results:** According to finding, adolescents with normal weight had significantly higher moderate and vigorous physical activity than obese adolescents and the time of TV watching were significantly more among overweight and obese adolescents than adolescents with normal weight. Body-related, social and fitness barriers were the most predominant ones among obese adolescents. There was no statistically significant difference between mean score of convenience and resource barriers among different weight groups. Obese adolescents also reported significantly lower levels of adult and peer support for physical activity.

**Conclusion:** Obese adolescents may be particularly vulnerable to body-related, social and fitness barriers to physical activity. Reducing these barriers may be helpful, as physical activity intervention is most relevant for overweight youth. Interventions should be implemented for reducing barriers to physical activity and also enhancing parents and peers support for physical activity among obese adolescents.

**Key words:** Exertion-Adolescence\_ Body Weight\_ Obesity\_ physical activity\_ Adolescents\_ Barriers and Support.

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