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Teenage Obesity and Solutions

In the United States, obesity is becoming more prevalent in any age group, which can cause many severe problems for society and hinder its development. The most important factors that can influence body fat percentage of adolescent are diet and exercise. However, as economy and negligence of awareness of negative consequences of consuming high-calorie foods grow, people tend to buy foods with high energy content and get less exercise as they have more spare time (Zwiauer, 2000, p. 58). Apovian (2016) states that the rate of obesity in the United States is rising every year: In both adults and children and adolescents, its prevalence has increased from 4% in 2004 to 6% in 2011 (p. 177). Therefore, it is really necessary for society to conduct effective measures to reduce teenage obesity rate as soon as possible.

With the increasing rate of teenage obesity, various treatments have been discussed and evaluated by public. Zwiauer (2000) claims that the prevention and treatment of obesity is a new area of interest in recent years, as treatment has been unsuccessful in the long term while the prevalence of obesity has been rising rapidly (p. 57). In addition, the author further states that the management of children and adolescents who already have symptoms of obesity can significantly reduce the number of adults who become obese (p. 57). Therefore, knowing the most effective treatment or prevention methods that can reduce the incidence of adolescent obesity can benefit the whole American society. Society now proposes three measures that can reduce obesity: medication, bariatric surgery, and improving living habits. Although using medicine and undergoing bariatric surgery have each been suggested as a solution to the problem of American teenage obesity, the most workable solution is improving the living habits of children and teenagers.

In the United States, adolescent obesity can cause severe negative impact on the health and even the lives of young people. Obesity is not an epidemic, but obese people can still have a negative impact on the health of others. Inge et al. (2004) claim that if one parent of an adolescent has obesity, their risk of obesity is about 80% (p. 217). In addition, obesity is associated with other diseases. Jackson et al. (2019) claim that the incidence of life-threatening diseases such as heart disease, diabetes and high blood pressure is increased by obesity, and other psychosocial problems such as poor self-image and failure to achieve good grades in school are among the negative effects of obesity as well (p. 71). Moreover, obesity can also have a negative psychological impact on young people. Tevie and shaya (2015) claim that because obesity and depression share common pathological mechanisms and symptoms such as sleep problems and sedentary behavior, obesity is closely related to psychological disorders such as depression (p. 501). They further state that a study conducted on American teenagers and children shows that maintaining a normal BMI, which is a measure of body fat based on height and weight, can go a long way in improving the mental health of America's youth (p. 501). Therefore, it is necessary for teenage obesity to be addressed to improve the health condition of teenagers.

In addition to the negative impacts on health of teenagers, obesity can also impose many economic burdens on society because of the largeness of the group size. Jackson et al. state that there is $190 billion spent on obesity-related treatments, including $14 billion on childhood obesity, so obesity is an economic drain on society and can cause a public health disparity (p. 71). Therefore, since the negative consequences of teenage obesity can cause many problems, it is necessary for society to implement the best measure to reduce the rate of teenage obesity.

Perhaps the most common solution that is proposed for reducing teenage obesity rate is using medicine. Some drugs such as orlistat can help teenagers lose some weight and avoid regaining weight to a certain degree. Chanoine et al. (2005) state that in a research, the adolescent group using placebo gained 1.68 kg and lost only 0.6 kg of fat, while the adolescent group using orlistat lost 0.35 kg and lost 2.53 kg of fat (p. 2880). Moreover, Davidson (1999) claims that obese teens maintained two-thirds of their weight loss a year after taking orlistat (p. 240). Considering how medication functions on teenagers’ weight loss, it is reasonable to believe that this method will help reduce rate of teenage obesity to a certain degree.

Utilizing medicine is able to help obese teenagers to effectively lose some weight and thus decreases the rate of obesity teenagers in U.S. society, but it additionally has potential a dark side. The kinds of useful medicine are not enough. Although orlistat can be utilized to treat teenage obesity, there are almost no other medicine can be used. Apovian (2016) claims that only orlistat and metformin are approved for use in adolescents and children, while other drugs that have been approved in recent years to treat obesity, such as phentermine-topiramate and naltrexone-bupropion, are only approved for use in adults and other drugs that may be able to treat adolescent obesity, such as Exenatide, are not approved by the Food and Drug Administration (FDA) (p. 178). Moreover, the efficiency of orlistat is not large enough and there are some severe side-effects of using orlistat. J. Capella and R. Capella (2003) state that the group using orlistat in a study of children and adolescents with obesity regained some weight after one year and had lost an average of only 5.56 kg after two years (p. 827). Ozkan et al. (2004) claim that in one study, 30% of patients experienced gastrointestinal and hair loss problems after taking orlistat (p. 740). Therefore, although using medication can reduce the rate of teenage obesity to a certain degree, it still have some drawbacks, which makes it rather ineffective.

Choosing to avoid the limitations of medication on usage and its possible negative physiological effects, some obese teenagers choose to undergo bariatric surgery. Bariatric surgery has greater efficiency than using medicine. Abu-Abeid et al. (2003) claim that in the short term, bariatric surgery for adolescents is safe and effective, and obese teenagers in one study maintain weight loss 2 to 3 years after surgery (p. 1381). In additional, with bariatric surgery, the weight loss effects last even after the surgery. Apovian (2016) claims that weight loss due to bariatric surgery leads to hypothalamic signaling and thus hormonal changes in the gut to enhance satiety (p. 178). Consequently, teenagers will intake less energy after taking the surgery. Moreover, bariatric surgery is able to eliminate other problems as well. Black et al. (2013) state that after obese teenagers taking the surgery, approximately 70 to 80 percent of their obesity complications such as diabetes, hypertension and apnea are resolved (p. 641). As a result, bariatric surgery can help teens with obesity to lose weight efficiently and in the post-treatment phase more effectively than medication for sustained weight loss in obese teenagers.

While bariatric surgery is more effective in terms of long-term and short-term weight loss, this procedure still has some limitations and negative influences on teenagers. Losing weight through surgery is usually not a practical choice. Inge et al. (2004) claim that adolescents are not candidates for surgery if there are situations, such as the adolescent has had a substance abuse problem in the past year, or a patient and his or her parents not understanding the procedure and its outcome (p. 219). Additionally, there are still many risks associated with bariatric surgery for teenagers. On the one hand, adolescents are not mature enough to take care of their health. Inge et al. (2004) claim that careful medical monitoring of teens after bariatric surgery is necessary (p. 221). However, Apovian (2016) claims adolescents are not able to comply with post-bariatric surgery care and treatment as consistently as adults (p. 178). Therefore, if a teenager behaves inappropriately after surgery, it can also cause damage to the body. On the other hand, the bariatric surgery itself can negatively impact a teen's health. Apovian states that one study indicated that more than half of the adolescents had symptoms of ferritin deficiency and some had undergone additional abdominal surgery (p. 178). Moreover, bariatric surgery can result in negatively psychological effects on them due to the influences on their appearance. J. Capella and R. Capella (2003) state that teenagers suffering from obesity are more concerned with their appearance, isolation and humiliation, and weight loss surgery can leave them with excess skin, which causes them to feel dissatisfied and disappointed (p. 831). They further point out that although some teenagers choose to undergo plastic surgery, their bodies are still left with scars and stretch marks (p. 831). Therefore, the uncertainty of whether adolescents will be able to continue to consciously care for their bodies after bariatric surgery and the negative effects of bariatric surgery make this solution one that should not be unthinkingly adopted by society.

Because of the negative effects on personal appearance and the mental prerequisites of undergoing surgery, stressing better living habits of teenagers and children is the most effective teenage obesity treatment for U.S. society. Good living habits include healthy eating habits and moderate exercise. Proper diet can play a big role in stopping weight gain of teenagers. However, Sullivan et al. (2014) claim that about one-third of the daily energy intake of American adolescents and children comes from dense but nutrient-poor foods (p. 453). Therefore, the implementation of this program to make people have better eating habits can positively affect a lot of people, including teenagers. Moreover, there have been some new and effective weight loss diets that have been successfully researched. Zwiauer (2000) states that although severely obese children and adolescents have failed with traditional weight loss methods, the use of very low calorie diets (VLCD) or protein saving fast diets (PSMF) has been effective in their weight loss (p.62). In additional, this solution is superior to using medication. The medicine still needs proper diet control to have some positive effects on treating obesity. Davidson et al. (1999) claim that when using orlistat with controlled dietary energy intake, obese adolescents had some weight loss, but after becoming on a weight maintenance diet, their weight went back up. (p. 240). Therefore, the use of drugs alone does not have a good effect on weight loss, teenagers still need a reasonable diet.

Besides the efficiency of good diet on reducing teenager obesity rate, keeping physical exercise can also be a proper and effective measure to reduce teenage obesity rate in the United States. A Lack of exercise has strong relationship with high rate for having obesity and even death. Ruotsalainen et al. (2015) state that the fourth global risk factor for mortality is physical inactivity. (p. 2461). Moreover, Zwiauer (2000) points out that inactive teens are more likely to develop obesity (p. 62). Therefore, having exercise is important for teenagers. Exercising can be effective in reducing the incidence of obesity. Jackson et al. (2019) claim that aerobic exercise is effective in reducing body fat in adolescents, thus improving their health and eliminating the effects of complications (p. 73). With the benefits of exercise for obese teenagers, Ruotsalainen et al. (2015) claim that schools should provide education and activities on physical health (p. 2471). In additional, losing weight through exercise is a better experience for teenagers and is more likely to be sustainable to lose weight than using medication and bariatric surgery. Wilson et al. (2012) state that young people exercising in a cohesive environment will make them more enjoyable (p. 1233). After losing weight through exercise for a period of time, adolescents will become compliant with exercise and thus continue to lose weight through continued exercise (Oliveira et al., 2016, p. 608). Therefore, exercising to lose weight not only does not have the side effects of medication and bariatric surgery, but also brings other benefits to adolescents, such as a pleasant mood and exercise habits that can promote their adherence to exercise.

In addition to improving the lifestyle habits of adolescents to treat obesity, maintaining good dietary habits in children can help reduce the incidence of obesity in adolescents more effectively. Jackson et al. (2019) claim that obesity does not abate as teens or children get older (p. 71). Studies shows that children with symptoms of obesity are more likely to develop life-threatening illnesses because about 50% to 80% of these obese children remain obese for several years or into adulthood (Inge et al., 2004, p. 217). Thus, the prevalence of childhood obesity has a significant impact on the prevalence of adolescent obesity. Apovian (2016) states that because intervention in the early stages of lifestyle formation is more effective, governments and the food industry should promote in schools and in society the consumption of healthier foods and increased physical activity for all children to reduce their likelihood of obesity when they become adolescents (p. 178). Therefore, reducing the prevalence of childhood obesity can be effective in reducing the future prevalence of obesity in adolescents.

Teenage obesity is a serious problem in society, and it requires effective treatments. Taking medication is a fairly common treatment option for obese teenagers, but it has the limitation of causing side-effects. Sometimes it is suggested that obese teenagers avoid taking medication and use bariatric surgery to treat their obesity. Although bariatric surgery has better efficiency on treating obesity and other complications, improving living habits of teenagers and children to have healthier diet and more exercise help them lose weight is more favorable without any cost or sacrifices. Not having the side-effects of medication nor the harm on mental and limitations of bariatric surgery, improvement on living habits of teenagers and children seems to be the most effective measure for reducing teenage obesity in current or in future in the United States.

References

Abu-Abeid, S., Gavert, N., Klausner, J., & Szoldab, A., (2003). Bariatric surgery in adolescence. *Journal of Pediatric Surgery. 38*, 1379-1382. doi:10.1016/S0022-3468(03)00400-7

Apovian, C. (2016). The obesity epidemic — Understanding the disease and the treatment. *The New England Journal of Medicine. 374,* 177-179. doi: 10.1056/NEJMe1514957

Black, A., White, B., Viner, M., & Simmons, K. (2013). Bariatric surgery for obese children and adolescents: a systematic review and meta-analysis. *Obesity Reviews. 14*(8), 634–644. doi:10.1111/obr.12037

Capella, J. & Capella, R., (2003), Bariatric surgery in adolescence. Is this the best age to operate? *OBES SURG. 13*. 826–832. doi:10.1381/096089203322618597

Chanoine. J., Hampl. S., Jensen. C., Boldrin. M. & Hauptman. J. (2005). Effect of orlistat on weight and body composition in obese adolescents: A randomized controlled trial. *JAMA. 293*(23). 2873–2883. doi:10.1001/jama.293.23.2873

Davidson, M. et al. (1999). Weight control and risk factor reduction in obese subjects treated for 2 Years with orlistat: A randomized controlled trial. *JAMA. 281*(3) 235–242. doi:10.1001/jama.281.3.235

Inge, H. et al. (2004). Bariatric surgery for severely overweight adolescents: concerns and recommendations. *Pediatrics. 114*(1), 217–223. doi:10.1542/peds.114.1.217

Jackson, S., Kimeli, G., & Eley, S. (2019). The impact of aerobic exercises in reducing obesity among African- American adolescents. *Pediatric Nursing, 45*(2), 71. Retrieved from https://www.thefreelibrary.com/The+Impact+of+Aerobic+Exercises+In+Reducing+Obesity+among...-a0584263655

Oliveira, A., Monteiro, A., Jácome, C., Afreixo, V., & Marques, A., (2016). Effects of group sports on health‐related physical fitness of overweight youth: A systematic review and meta‐analysis. *Scandinavian Journey of Medicine and Science in Sports. 27.* 604-611. doi: 10.1111/sms.12784

Ozkan, B., Bereket, A., Turan, S. & Keskin, S., (2004). Addition of orlistat to conventional treatment in adolescents with severe obesity. *Eur J Pediatr. 163.* 738–741. doi: 10.1007/s00431-004-1534-6

Ruotsalainen, H., Kyngäs, H., Tammelin, T., & Kääriäinen, M. (2015). Systematic review of physical activity and exercise interventions on body mass indices, subsequent physical activity and psychological symptoms in overweight and obese adolescents. *Journal of Advanced Nursing, 71*(11), 2461–2477. doi: 10.1111/jan.12696

Sullivan, T. et al. (2014). Dairy product consumption, dietary nutrient and energy density and associations with obesity in Australian adolescents. *Journey of Human Nutrition and Dietetics. 28*. 452-464. doi: 10.1111/jhn.12264

Tevie, J, & Shaya, F., (2015). Association between mental health and comorbid obesityand hypertension among children and adolescents in the US. *Eur Child Adolesc Psychiatry, 24*, 497–502. doi:10.1007/s00787-014-0598-8

Wilson, A. J., Jung, M. E., Cramp, A., Simatovic, J., Prapavessis, H., & Clarson, C. (2012). Effects of a group-based exercise and self-regulatory intervention on obese adolescents’ physical activity, social cognitions, body composition and strength: A randomized feasibility study. *Journal of Health Psychology, 17*(8), 1223–1237. doi: 10.1177/1359105311434050

Zwiauer, K., (2000). Prevention and treatment of overweight and obesity in children and adolescents. *Eur J Pediatr, 159*, 56-68. doi:10.1007/PL00014367