Yoga for Pediatric Obesity

Binal S. Patel and Sandra Benavides
Pharmacy Student, College of Pharmacy, PharmD, Nova Southeastern University, USA

Yoga for Pediatric Obesity

Pediatric obesity is on the rise worldwide and is the most prevalent nutritional disorder in the United States. Data from the 2007-2008 National Health and Nutrition Examination Survey (NHANES) show that an estimated 17 percent of American children and adolescents ages 2-19 years are obese and that another 21-24 percent are overweight [1,2]. Obese children and adolescents are placed at an increased risk for health issues during their youth and as adults. Risk factors for childhood obesity can predispose them to various diseases, such as hypertension, type II diabetes, and hyperlipidemia, along with adult-onset obesity.

Over the years, several studies have been conducted with the practice of yoga in pediatrics in regards to physical health, behavior, and mental and psychological disorders; however, limited data exists for obesity. The use of alternative medicine has been shown effective in several studies [3,4,8]. Mind-body medicine is widely used in children for the management of stress, depression, anxiety, low self-esteem, and coping, all of which have been shown to occur in children who are obese [5]. With this in mind, if we as clinicians can reduce the rates of childhood obesity, wouldn’t that improve the overall health of this population?

One approach to fight this worldwide epidemic of childhood obesity is the use of mind-body integrative medicine, such as yoga. Researchers believe that yoga may improve physical and mental health by down-regulating the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system (SNS) [6,7]. The effect of stress is mediated through the HPA axis and the SNS. When the HPA axis and SNS are triggered by internal or external stressors, the body releases cortisol and catecholamines. In response to cortisol, the body increases blood fats, sugar, and the release of insulin. Constant firing of the HPA axis and SNS from chronic stress can lead to dysfunction of the system and ultimately lead to diseases such as obesity, diabetes, depression, and cardiovascular complications. Without appropriate alternatives to cope with stress, society is heading in the direction of unhealthy practices which can eventually lead to obesity. Current research suggests that yoga may be a beneficial practice to combat obesity not only in adults, but also in the pediatric population [9,10]. In a study by Sharpe et al, 57.4% of the 372 adult respondents used yoga as a means of weight control over a period of 12 months [11]. In 2007, there were over 1.5 million pediatric yoga users in the United States [12].

In a recent study of yoga in children and adolescents with obesity by Benavides and Caballero, of the participants who were analyzed there was on average a 2 kg weight loss [10]. Also assessed in this study were metabolic parameters, including lipid panels and C-reactive protein (CRP) levels. Two participants had abnormal lipid panels and elevated CRP. The lipid panels in both participants improved with a decrease in total cholesterol and an increase in HDL. After completion of the study, the CRP levels also decreased in both participants [10]. This study provides evidence that yoga can be an alternative for weight loss in children and adolescents.

Literature shows that yoga is beneficial for children, but data is not strong. Many studies include a small number of participants [4,10]. Other limitations are that several studies do not have a comparison or control group, or did not conduct randomized trials [10]. Since yoga is often a subset of a larger intervention, results cannot be attributable to yoga alone [9]. There are many forms and techniques to yoga, yet many studies do not differentiate the type of yoga practiced among participants to show the most effective method for weight management [4,6,9]. The length of a study is important to justify long-term outcomes. Future studies need to incorporate lengthier trials along with addressing adverse effects in participants practicing yoga. It is imperative to conduct future studies which take into account these limitations in regards to yoga in obese children and adolescents.

Equally important to conducting high quality research studies in this population is the publication and availability of the results. The Journal of Yoga and Physical Therapy is a multidisciplinary, rigorously peer-reviewed Open-Access journal focused on the practice of yoga for physical health. Publishing in the Journal of Yoga and Physical Therapy allows authors to share newly found results with researchers and readers around the world. Additionally, the general public (and patients) who may not otherwise have access to such literature will be able to fully access the Journal and published research, in turn increasing the use of yoga as a treatment for obesity in children and adolescents.

References

7. Hyman, MA (2005) Refrigerator rights-the missing link in health, disease, and

*Corresponding author: Sandra Benavides, Assistant Professor, Nova Southeastern University, College of Pharmacy, Florida, USA. Tel: 1-954-262-1372; Fax: 1-954-262-2278; E-mail: sbenavid@nova.edu

Received February 17, 2011; Accepted October 22, 2011; Published October 24, 2011

Citation: Patel BS, Benavides S (2011) Yoga for Pediatric Obesity. J Yoga Phys Therapy 1:e105. doi:10.4172/2157-7595.1000e105

Copyright: © 2011 Patel BS, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.


