

Editorial

Our Obesity Crisis Requires the Development of New, Widely Available Options: Can Yoga Function in a Major Role?

Raj Majithia and Timothy R. Koch*

Section of Gastroenterology and Center for Advanced Laparoscopic & Bariatric Surgery, Washington Hospital Center, USA

Abstract

The percentage of individuals in the United States who are obese continues to grow. Obesity is associated with the development of a broad group of malignant, metabolic, cardiovascular, and neurological disorders. The origins for this major health crisis are presently under investigation. However, potential explanations for this rise in the prevalence of obesity include a sedentary life style, increased number of daily meals, the presence of an eating disorder, a changing job market, or an effect of a yet unidentified environmental agent or exposure. Diet and activity programs in clinical trials provide only modest weight loss, with poor long term maintenance of weight loss. Many patients with medically-complicated obesity therefore consider surgical options for weight loss, termed bariatric surgery. A percentage of individuals do not lose weight after bariatric surgery, while the risk of weight regain after Roux-en-Y gastric bypass surgery may be as high as 40% among post-operative patients. The potential role of yoga in the promotion of post-operative weight loss and the prevention of post-operative weight regain remains to be more fully explored.

Introduction

The prevalence of obesity in the United States continues to rise; obesity has now been identified in 32% of adult men and 35% of adult women [1]. Obesity is associated with the development of a broad group of malignant, metabolic, cardiovascular, and neurological disorders. Of importance in the treatment of and prevention of diabetes mellitus, myocardial infarction, peripheral vascular disease, and cerebral infarction, obesity is a major factor in the development of metabolic syndrome.

The origins for this major health crisis are presently under investigation. However, potential explanations for this rise in the prevalence of obesity include a sedentary life style, increased number of daily meals, the presence of an eating disorder, a changing job market, or an effect of a yet unidentified environmental agent or exposure. Because there is either insufficient weight loss or poor maintenance of weight loss with the use of diet and activity programs, bariatric surgery has become a major treatment option in those patients with medicallycomplicated obesity.

There are now an estimated 220,000 bariatric procedures performed each year in the USA and Canada [2]. Among the surgical approaches for treatment of medically-complicated obesity, the 'divided' or 'disconnected' Roux-en-Y gastric bypass (RYGB) is the most commonly performed bariatric surgical procedure in the USA and Canada. A small percentage of individuals have no significant weight loss after RYGB, and the risk of significant weight regain after RYGB is as high as 40% among post-operative individuals [3]. The weight regain frequently occurs 2 to 4 years after RYGB, and the reasons for this weight regain are not well understood or presently preventable.

Attempts to prevent weight regain after RYGB have centered on psychological assistance, dietary advice, behavioral modification techniques, and the use of an ongoing activity or exercise program. The results have been disappointing. Therefore, could yoga provide a new major technique for management of this clinical problem? This question has been raised by our post-operative bariatric patients who utilize yoga as part of P90X (Power 90 Extreme), a commerciallyavailable home exercise system. A major advantage of yoga is its availability in major population centers in the United States. The organization of yoga may improve patient compliance, in contrast to compliance obtained with the use of behavior modification techniques.

We are not aware of any published trials of the utilization of yoga in conjunction with bariatric surgery. However, the potential impact of yoga on obesity has been reported. In one 6 day study of yoga with a low fat vegetarian diet, there was an average of a 1.6% decrease in body mass index [4]. One mechanism by which yoga may be of benefit in the treatment of obesity is by controlling binge eating. In a 12 week study of a yoga treatment program for binge eating in 25 obese patients, a positive effect was reported [5]. In an older study from Seattle, Washington, yoga practice for 4 or more years was associated with an 18.5 lb lower weight gain among overweight participants [6]. This is a significant finding; however there clearly there has not yet been an effective approach to control of, treatment of, or prevention of obesity through the use of yoga. One study has indeed reported that obese adults have a lower prevalence in the use of yoga therapy [7].

In summary, we have a growing national health crisis due to obesity. Surgical treatment of medically-complicated obesity is ineffective in a small percentage of individuals, while up to 40% of patients have weight regain after RYGB. Yoga is available in major population centers in the United States. In small published studies, yoga is effective in reducing weight gain among overweight or obese individuals and may be of benefit in reducing the risk of binge eating. Yoga should be examined as an adjuvant therapy after bariatric surgery to determine whether it improves post-operative weight loss and whether is reduces the risk of post-operative weight regain.

*Corresponding author: Timothy R. Koch, M.D, FACG, Center for Advanced Laparoscopic & Bariatric Surgery, Washington Hospital Center, Washington , DC 20010, E-mail: timothy.r.koch@medstar.net

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