

# 7<sup>th</sup> Obesity & Endocrinology Specialists Congress

October 10-12, 2016 Manchester, UK

## Spatio-temporal gait during flat ground walking and obstacle crossing one year after bariatric surgery

Simone V Gill

Boston University, USA

Obesity negatively impacts motor function leading to an increase in fall risk. Massive weight loss improves some aspects of gait on flat ground. However, we have little information about whether gait changes during flat ground walking and during more complex motor tasks beyond flat ground walking (e.g., crossing obstacles). The purpose of this study was to examine how massive weight loss after Roux-en-Y bariatric surgery influences gait during flat ground walking and obstacle crossing one year post bariatric surgery. Nineteen adult females walked under 5 conditions: Initial baseline walking on flat ground, crossing 3 obstacle heights and final baseline walking on flat ground for a total of 25 trials. Spatio-temporal gait parameters were collected simultaneously using a gait carpet and with body-worn sensors. Gait improved post-surgery with the strongest effect observed for double limb support time during both flat ground walking ( $p < .001$ ) and obstacle crossing ( $p < .001$ ). The reduction in body mass index was correlated with improved gait during both walking conditions ( $ps < .01$ ). As expected, an increase in obstacle height altered gait ( $ps < .01$ ). Improved gait post-surgery was more pronounced during the highest obstacle condition ( $ps < .01$ ). Massive weight loss results in improved spatio-temporal gait patterns during flat ground walking. Practice during obstacle crossing may facilitate improved gait. Examining how massive weight loss affects spatio-temporal gait may help create ways to minimize falls for adults with obesity and to encourage a more active lifestyle.

simvgill@bu.edu

## How did an albino patient lose 148 lbs of weight? A case report

Zarnain Shah<sup>1</sup>, Samaneh A Motanagh<sup>2</sup> and Syed Wajih Rizvi<sup>3</sup>

<sup>1</sup>Liaquat University of Medical & Health Sciences, Pakistan

<sup>2</sup>Ankara University, Turkey

<sup>3</sup>R-Endocrinology, USA

**Introduction:** Obesity is a highly prevalent and yet the most neglected disease. The number of overweight and obese people reached 2.3 billion and 700 million worldwide respectively, by the year 2015. Obesity is not a social disgrace but an actual disease with a major genetic component to its etiology. Obesity treatment is a lifelong task. Weight reduction medications should be used as an adjunct to diet restriction, exercise and behavioral modifications, when these measures alone have not resulted in adequate weight loss. We hereby present a case of a morbidly obese male patient with oculocutaneous albinism who has lost 148 lbs of weight. Furthermore, the report highlights the genetic link between oculocutaneous albinism and obesity.

**Case Presentation:** 28-year-old male with oculocutaneous albinism presented with 361.8 lbs of weight (BMI: 62.1) and complaint of difficulty in losing weight. Physical examination revealed hypertension, low intelligence, gynecomastia and infantile testicles. Lab investigations showed unregulated hyperlipidemia and hypotestosteronemia. The patient was prescribed Xenical (Orlistat) 120 mg. Over the period of 5 years, he lost 83.8 lbs. After this time, Xenical's effectiveness was significantly reduced. Consequently, the patient was started on Victoza (Liraglutide) on which he lost 64 lbs in 3 years. Thus, a sum of 147.8 lbs of weight was lost without any side effects of the drugs.

**Discussion:** Obesity needs to be treated within the healthcare system as any other complex disease. We observed Xenical and Victoza to be safe and effective in reducing obesity. Substantial literature has emerged to show that in both Oculocutaneous albinism and Prader-Willi syndrome (the most common genetic cause of obesity) the P gene is mutated on chromosome 15. This highlights the genetic susceptibility of our albino patient for developing morbid obesity.

**Conclusion:** Obesity develops from the interplay of both genetic and environmental factors. This case clearly illustrates that Xenical and Victoza can be safe and efficient for weight loss in a morbidly obese patient. Furthermore, scientific research in the genetic aspects of obesity can help develop new strategies towards its prevention and treatment.

syedazarnain@gmail.com