

FACT SHEET: OBSTRUCTIVE SLEEP APNEA AND OBESITY

KEY FACTS

- According to data from the National Health and Nutrition Examination Survey (NHANES) conducted by the Center for Disease Control and Prevention (CDC), about 1/3 of US adults are obese with about another 1/3 exceeding what has been defined as normal for their height and weight.
- Estimates of OSA prevalence in patients preparing for bariatric are as high as 90%. A routine part of evaluating these patients is assessment for OSA. When OSA is newly diagnosed in this process, surgery may be postponed until a treatment regimen is established for the OSA.

Q: WHAT IS THE RELATIONSHIP BETWEEN OBESITY AND OBSTRUCTIVE SLEEP APNEA (OSA)?

A: Obesity is one of the primary risk factors for OSA. Prevalence of OSA in obese adults is nearly double in comparison to those with normal weight and about 70% of patients diagnosed with OSA are obese. Studies have shown that as individuals gain weight, the severity and prevalence of OSA increases.

Q: HOW DOES OBESITY AFFECT BREATHING DURING SLEEP?

A: The deposition of fat tissue in and around the nasal and oral airway increases the chance of airway collapse. During wakefulness, muscles in the upper airway compensate for this increased tissue, but during sleep these muscles are less effective. Further, increased weight around the chest and abdomen contributes to decreased efficiency in ventilation of the lungs. Increased weight in these areas tends to have a greater effect in men than in women. Since women tend to gain weight in their lower body and men tend to gain more weight around the abdomen and neck area, it is logical to conclude that men have a greater chance of developing sleep apnea with increasing weight. This may contribute to the fact that men are more prone to sleep apnea.

Q: HOW DOES OSA AFFECT MY BODY WEIGHT?

A: Although not conclusive, there is growing evidence that the intermittent low oxygen levels in the blood resulting from sleep apnea, along with fragmented sleep, can cause changes in metabolism. Decreased metabolism, associated with increased appetite, is known to cause an increase in weight. Subsequently, daytime sleepiness and reduced activity further contribute to weight gain.

Q: IF I TREAT MY OSA WILL I LOSE WEIGHT?

A: Studies on the effect of treating OSA with Positive Airway Pressure (PAP) treatment have not shown evidence of enhanced weight loss. One study showed a reduction of visceral fat detected

by CT scan after a brief trial of PAP therapy, although the subjects did not experience an overall weight loss. The bottom line is that treatment of OSA has not been proven to result in weight loss. On the other hand, since OSA is known to contribute to weight gain, treatment will likely contribute to the success of other weight loss strategies.

Q: IF I LOSE WEIGHT WILL MY OSA IMPROVE?

A: The severity of OSA has been demonstrated to increase or decrease with weight gain or loss respectively. Most studies are related to bariatric (weight loss) surgery used to produce significant weight loss. Even in cases of dramatic weight loss, there may be residual OSA significant enough to require continued treatment. Although weight loss may alleviate symptoms of OSA, it is important to follow up with your physician to determine if continued PAP therapy is required. The positive outcome is that weight loss can lower the required pressure to effectively treat OSA, which may also contribute to improved long term use.

Q: WHAT OTHER DISEASES ARE ASSOCIATED WITH OSA AND OBESITY?

A: Hypertension is very closely linked to both OSA and obesity. When patients present with hypertension, especially when it is difficult to control, this is a strong indication for evaluation to rule out OSA. It is well documented that OSA causes episodic fluctuation in blood pressure making it difficult to manage and treat. Hypertension has a negative long-term effect on cardiovascular disease.

FURTHER READING

1. <http://www.nhlbi.nih.gov/guidelines/obesity/eltxtbk/appndx/apndx4.htm>
2. http://usatoday30.usatoday.com/news/health/2009-01-24-obesity-sleep-apnea_N.htm
3. <http://www.sleepfoundation.org/article/sleep-topics/obesity-and-sleep>



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