

Two Servings of Dairy Per Day are Associated with Less Severe Sleep Apnea

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Letter to the Editor

Sleep apnea is a worldwide problem. The estimated prevalence of sleep apnea is between 7%-10% in adult men and 3%-9% among women, with the prevalence increasing with age [1,2]. The elderly, African Americans, Asians, and women tend to have more severe sleep apnea. Sleep apnea is emerging as a risk factor for a number of chronic diseases. There is an increased risk of hypertension, diabetes, stroke, and cardiovascular disease in patients with moderate to severe obstructive sleep apnea (OSA) [3]. Obstructive sleep apnea is defined by the occurrence of daytime sleepiness, loud snoring, witnessed breathing interruptions, or awakenings due to gasping or choking in the presence of at least 5 obstructive respiratory events per hour of sleep [4].

The Apnea-Hypopnea Index (AHI) is the number of these events recorded per hour of sleep. Severity of the disease is based on how many times a patient have these abnormal episodes where they awaken and have breathing interruptions per hour of sleep. An AHI of 5-15 is considered mild disease, an AHI of 15-30 is moderate and more than 30 events per hour characterize severe sleep apnea. Risk factors for Obstructive Sleep Apnea include being of the male sex, older age, overweight or obese, increased neck size, experiencing snoring and frequent breathing pauses [5].

Due to the fact that not all sleep apnea patients are obese, we hypothesized that certain types of food could be involved. We had newly diagnosed patients with sleep apnea (104) complete four validated diet surveys, and patients then had a sleep study. Subjects were divided using BMI in to obese and overweight categories. Regression analysis was performed to predict severity of OSA from gender, BMI, age, percent of energy from fat, and the individual dietary components of REAP. We found that patients who had 2 servings a day of dairy products were associated with less severe sleep apnea disease at presentation (AHI 26.2 \pm 15.6 vs 39.7 \pm 31; p=0.04), presumably due to their anti-inflammatory effects. In contrast, another finding was that eating processed meats was associated with more severe disease at presentation.

Dairy intake has been shown to be anti-inflammatory in a few studies. Studies of the dietary intake of low fat dairy and disease protection have mostly centered on gout. Interestingly, in a Harvard study, 2 cups of milk per day was found to be preventative of gout [6]. It has a urate lowering effect. Certain dairy fractions, [7] particularly glycomacropeptide and G600 milk fat extract, have anti-inflammatory properties in experimental models of acute gout. Other mechanisms are also postulated, such as inhibition of the inflammatory response to monosodium urate crystals within the joint [8].

A recent evidence based review included encouragement of low-fat dairy in the management of gout [9]. Other studies have also found dairy to be associated with less inflammation. In regards to metabolism, a small study of patients with metabolic syndrome, 3 servings of dairy per day was found to be associated with lower systemic inflammation and liver enzymes [10]. In another study, it was shown to be associated with the prevention of Type II Diabetes, particularly with yogurt consumption [11]. We have recommended that patients who eat dairy products eat those that are low fat.

More studies with nutrition are warranted in sleep apnea. One limitation of our work was that we did not ask patients to differentiate between dairy products, e.g., yogurt versus milk, and that would be another area of interest to investigate to see if there was a difference in relationship to presentation of sleep apnea. This could be an area of future research.

References

- Peppard PE, Young T, Barnet JH, Palta M, Hagen EW, et al. (2013) Increased prevalence of sleep-disordered breathing in adults. Am J Epidemiol 177: 1006-1014.
- Tan X, Saarinen A, Mikkola TM (2013) Effects of exercise and diet interventions on obesity-related sleep disorders in men: Study protocol for a randomized controlled trial. Trials 14: 235.
- 3. Bauters F, Rietzschel ER, Hertegonne KBC, Chirinos JA (2016) The link between obstructive sleep apnea and cardiovascular disease. Curr Atheroscler Rep 18: 1-11.
- Epstein LJ, Kristo D, Strollo PJJ (2009) Clinical guideline for the evaluation, management and long-term care of obstructive sleep apnea in adults. J Clin Sleep Med 5: 263-276.
- Young T, Shahar E, Nieto FJ (2002) Predictors of sleep-disordered breathing in community-dwelling adults: The sleep heart health study. Arch Intern Med 162: 893-900.
- 6. Dairy-rich diet may help prevent gout (2004) Tufts University Health & Nutrition Letter 22: 2-2.
- 7. Bray GA (2012) Fructose and risk of cardiometabolic disease. Curr Atheroscler Rep 14: 570-578.
- 8. Dalbeth N, Palmano K (2011) Effects of dairy intake on hyperuricemia and gout. Curr Rheumatol Rep 13: 132-137.
- 9. Hainer BL, Matheson E, Travis Wilkes R (2014) Diagnosis, treatment, and prevention of gout. Am Fam Phys 90: 831-836.
- 10. Dugan CE, Aguilar D, Park Y, Lee J, Fernandez ML (2016) Dairy consumption lowers systemic inflammation and liver enzymes in typically

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low-dairy consumers with clinical characteristics of metabolic syndrome. J Am Coll Nutr 35: 255-261.

11. Gijsbers L, Ding EL, Malik VS, de Goede J, Geleijnse JM, et al. (2016) Consumption of dairy foods and diabetes incidence: A dose-response meta-analysis of observational studies. Am J Clin Nutr 103: 1111-1124.