

# Serum Testosterone, Sleep Apnea May Be Linked

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CARMEL, CALIF. — Low baseline total serum testosterone levels could be a marker for obstructive sleep apnea in older men, Yao Schmidt reported at the Western regional meeting of the American Federation for Medical Research.

Of men aged 60-80 years, 20%-60% have borderline hypogonadism, said Ms. Schmidt, who is a second-year medical

student at the University of Colorado Health Sciences Center, Denver.

She and associates evaluated 28 men aged 60-80 years. They recorded apnea-hypopnea index (AHI), baseline total serum testosterone level, age, body mass index (BMI), neck size, and LDL cholesterol level. Mean age was 67 years, mean BMI was 29 kg/m<sup>2</sup>, mean serum testosterone level was 288 ng/dL, mean neck diameter was 16 inches, and mean LDL cholesterol level was 103 mg/dL.

Patients were divided into two groups: 14 with obstructive sleep apnea, defined as having an AHI of 10 or greater, and 14 men without.

Mean baseline serum testosterone level in the men with obstructive sleep apnea was 262 ng/dL, compared with a mean of 315 ng/dL in the men without, which was statistically significant. There were no significant differences between groups in age, BMI, neck diameter, and LDL cholesterol level.

“Does obstructive sleep apnea cause lower testosterone levels, or do lower testosterone levels cause obstructive sleep apnea?” Ms. Schmidt asked. “It’s unclear. Chronic hypoxemia could cause some brief atrophy, which could possibly [affect] the hypothalamus-pituitary axis.”

Limitations of the study include the fact that the range of testosterone levels was limited to 200-350 ng/dL and the evaluation did not include overnight polysomnography. ■

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\*Results from 2 identically designed, 52-week (12 weeks pharmacotherapy, 40 weeks nonpharmacotherapy follow-up), randomized, double-blind, parallel-group, multicenter clinical trials (study 4: N=1022; study 5: N=1023) in which CHANTIX 1 mg bid was compared with Zyban 150 mg bid and placebo for efficacy and safety in smoking cessation. For trial inclusion, subjects must have smoked at least 10 cigarettes per day over the past year, with no period of abstinence greater than 3 months, and must have been bupropion naive. The primary efficacy end point in both trials was the carbon monoxide (CO)-confirmed 4-week continuous abstinence rate for weeks 9 through 12, defined as the percentage of subjects who reported no smoking (not even a puff) or use of any nicotine-containing products confirmed by an exhaled CO measurement of 10 ppm or less at each clinic visit. (Studies 4 and 5 from the CHANTIX package insert.)<sup>1,2</sup>

Subjects were provided with an educational booklet on smoking cessation and received up to 10 minutes of smoking cessation counseling at each clinic visit in accordance with Agency for Healthcare Research and Quality guidelines.<sup>1</sup>