



**UNDER EMBARGO UNTIL:
1 p.m. CT/2 p.m. ET, Monday
July 28, 2008**

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Statement highlights:

- *Large-scale studies are needed to determine the exact relationship between heart disease and sleep apnea.*
- *Patients should ask their doctors about treatment and prevention for both their sleep apnea and their cardiovascular disease.*

American Heart Association/American College of Cardiology joint scientific statement

Link between heart disease, sleep apnea should be probed

DALLAS, July 28 — Medical researchers need to undertake large-scale studies to determine the exact relationship between heart disease and the different forms of sleep apnea, according to a joint statement from the American Heart Association and the American College of Cardiology, published online in *Circulation: Journal of the American Heart Association* and the *Journal of the American College of Cardiology*.

“There have been a number of studies on sleep apnea in the last decade, and those looking at cardiovascular diseases and their associations with sleep apnea are especially compelling,” said Virend K. Somers, M.D., D.Phil., chair of the joint statement writing committee. “We feel it is important to alert the cardiovascular community to the implications of this emerging area of research. It is possible that diagnosing and treating sleep apnea may prove to be an important opportunity to advance our efforts at preventing and treating heart disease.”

Though the link between sleep apnea and heart disease is not fully understood, the committee issued the statement because of the increasing evidence, the widespread prevalence of sleep apnea, and the rising levels of obesity, particularly in young people. Obesity is a major cause of sleep apnea, and “the epidemic of childhood obesity may be changing the epidemiology of obstructive sleep apnea in children,” said Somers, who is professor of medicine and cardiovascular diseases at the Mayo Clinic in Rochester, Minn.

“We need to more clearly define the cause and effect relationship between sleep apnea and cardiovascular diseases and risk factors,” Somers said. “There is evidence that sleep apnea may be a cause of some cases of high blood pressure, but for other cardiovascular conditions, the evidence is largely circumstantial.”

The issues are more complex than the age-old “Which comes first?” debate, he said. People with sleep apnea often have other disorders, such as obesity, and people with heart disease often have additional medical issues, making it difficult to separate the role of sleep apnea in the cardiovascular disease process.

Sleep apnea has more effects than day-time tiredness. It can result in low oxygen levels, frequent arousals from sleep and chronic sleep deprivation, with consequences that persist throughout the day. It can also affect the nervous system, lead to abnormal function of cells lining blood vessels, and promote abnormal chemical responses. In the longer term, it is possible that these changes may damage the heart and blood vessels.

“For now, until we have more clear information as to who should be treated and what the benefits of treatment would be, patients should be assessed on an individualized basis,” Somers said. “Until we know the cause and effect relationship between sleep apnea and cardiovascular disease, it would be best to take a two-pronged approach and treat patients from both perspectives: in other words, treat both their sleep apnea and their cardiovascular disease.”

The statement warns that sleep apnea cases are expected to increase due to the current epidemics of obesity, high blood pressure, atrial fibrillation and heart failure in the United States.

Co-authors are: David P. White, M.D. (co-chair); Raouf Amin, M.D. (co-chair); William T. Abraham, M.D.; Fernando Costa, M.D.; Antonio Culebras, M.D.; Stephen Daniels, M.D., Ph.D.; John S. Floras, M.D., D.Phil.; Carl E. Hunt, M.D.; Lyle J. Olson, M.D.; Thomas G. Pickering, M.D., D.Phil.; Richard Russell, M.D.; Mary Woo, R.N., Ph.D.; and Terry Young, Ph.D.

Author disclosures are available on the manuscript.

The statement was written in collaboration with the National Heart, Lung, and Blood Institute’s National Center on Sleep Disorders Research.

The American Heart Association/American Stroke Association receives funding primarily from individuals. In addition, foundations and corporations – including pharmaceutical, device manufacturers and other companies – make donations and fund specific American Heart Association/American Stroke Association programs and events. Revenues from pharmaceutical and device corporations are disclosed at www.americanheart.org.

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NR08-1065 (CIRC/Somers)

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About the American College of Cardiology (ACC):

The American College of Cardiology is leading the way to optimal cardiovascular care and disease prevention. The College is a 34,000-member nonprofit medical society and bestows the credential Fellow of the American College of Cardiology upon physicians who meet its stringent qualifications. The College is a leader in the formulation of health policy, standards and guidelines, and is a staunch supporter of cardiovascular research. The ACC provides professional education and operates national registries for the measurement and improvement of quality care. For more information, visit www.acc.org.

About the American Heart Association (AHA):

The American Heart Association is the nation’s oldest and largest voluntary health organization dedicated to building healthier lives, free of heart disease and stroke. These diseases, America’s No. 1 and No. 3 killers, with all other cardiovascular diseases claim nearly 870,000 lives a year. In fiscal year 2006-07 the association invested more than \$554 million in research, professional and public education, advocacy and community service programs to help all Americans live longer, healthier lives. To learn more, call 1-800-AHA-USA1 or visit americanheart.org.