Nemours Cardiologist Chaired American Heart Association Statement on Sleep Apnea and Children

Obstructive Sleep Apnea Is Common in Kids, May Affect Blood Pressure & Heart Health

WILMINGTON, Del. (August 18, 2021)– Obstructive sleep apnea is common in children and adolescents and may be linked to elevated blood pressure and changes in heart structure, according to a scientific statement from the American Heart Association (AHA). The statement was published today in the *Journal of the American Heart Association*. It is an expert analysis of current research and may inform future guidelines.

Chairing the group that authored the statement was Carissa Baker-Smith, MD, MPH, MS, director of pediatric preventive cardiology at Nemours Children's Health in Wilmington, Del., and associate professor of pediatric cardiology at Thomas Jefferson University.

"Obstructive sleep apnea affects 1-6% of all children and 30-60% of obese adolescents, so it is more common in youth than people think," said Dr. Baker-Smith. "These sleep disruptions can raise blood pressure and are also linked with insulin resistance and abnormal lipids—all of which can harm cardiovascular health in later years."

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Obstructive sleep apnea (OSA) is a type of sleep-disordered breathing, when someone experiences abnormal episodes of labored breathing, snoring and snoring sounds during sleep. Its disruption of sleep can impact emotional health as well as the immune, metabolic, and cardiovascular systems. In adults, OSA is associated with cardiovascular disease, but less is known about its immediate and long-term effects in children and adolescents.

"Risk factors will vary by age, but they include obesity, upper or lower airway disease, allergic rhinitis, poor muscle tone, enlarged tonsils and adenoids, craniofacial malformations, neuromuscular disorders, and sickle cell disease," said Dr. Baker-Smith. "What we are learning about obstructive sleep apnea in children may benefit a future generation by creating heart-healthy kids."

Symptoms of OSA in children include snoring more than 3 nights per week, gasps or snorting during sleep, labored breathing during sleep, choosing to sleep in a seated position or with neck hyperextended, daytime sleepiness, headache upon waking, or signs of upper airway obstruction. The best way to diagnose any form or sleep-disordered breathing is a sleep study. In addition, children and teens with obstructive sleep apnea should have their blood pressure monitored over 24 hours to check for a smaller-than-normal dip in blood pressure while sleeping, which is linked with higher risk of cardiovascular events in adults.

"Dr. Baker-Smith's selection to chair this important scientific statement is a testament to her national leadership in preventive cardiology for children," said Mary M. Lee, MD, FAAP, Enterprise Chief Scientific Officer for Nemours Children's Health. "She brings strong research experience, deep clinical expertise, and an outstanding ability to communicate preventive cardiology strategies to families as well as her peers."

In pediatric cardiology, Nemours' research encompasses preventive cardiology, congenital heart disease, heart failure and transplantation, and translational research, which helps bring basic discoveries to clinical use.

The AHA statement calls for additional studies of cardiovascular risk associated with OSA in childhood, including 24-hour blood pressure monitoring and measuring metabolic syndrome factors.

The scientific statement was drafted by an expert volunteer writing group on behalf of the AHA's Atherosclerosis, Hypertension, and Obesity in the Young subcommittee of the Council on Cardiovascular Disease in the Young.

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About Nemours Children's Health

Nemours Children's Health is one of the nation's largest multistate pediatric health systems, including two free-standing children's hospitals and a network of nearly 80 primary and specialty care practices across five states. Nemours seeks to transform the health of children by adopting a holistic health model that utilizes innovative, safe, and high quality care, while also caring for the health of the whole child beyond medicine. Nemours also powers the world's most-visited website for information on the health of children and teens, KidsHealth.org.

The Nemours Foundation, established through the legacy and philanthropy of Alfred I. duPont, provides pediatric clinical

care, research, education, advocacy, and prevention programs to the children, families and communities it serves.

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