

## **Breathing Problems, Sleep Disorders, and ADHD**

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For

Your Health Magazine July 2015

In a New York Times wellness blog, Kate Murphy posted, "Many children are given a diagnosis of ADHD, researchers say, when in fact they have another problem: a sleep disorder, like sleep apnea. The confusion may account for a significant number of ADHD cases in children, and the drugs used to treat them may only be exacerbating the problem."

She suggested "a link between inadequate sleep and A.D.H.D. symptoms", referencing a March of 2012 Pediatrics publication of a study of 11,000 British children, whose sleep was affected by breathing problems like snoring, mouth breathing or apnea. It showed they were 40 to 100 percent more likely than normal breathers to develop behavioral problems resembling ADHD.

Ms. Murphy added that, after their adenoids and tonsils were removed, children were "significantly less likely than untreated children with sleep-disordered breathing to be given an ADHD diagnosis in the ensuing months and years", concluding, because they were getting a better night's sleep.

I question the validity of this conclusion because:

- ADHD behavior is while the child is awake. A broader perspective is that this is an airway problem affecting us round-the-clock. And, Obstructive Sleep Apnea (OSA) is partial description of it during sleep.
- It's Anatomical! The pharyngeal component of the Oral-Pharyngeal airway (throat) is "static" in nature; therefore, tonsillar influence on airflow and ability to breath is constant. In contrast, the "oral component", namely, the tongue, in its relation to the throat, is dynamic, "constantly" changing.
- It's Dental! Oral-Pharyngeal posture and position changes of the "tongue" impacts swallowing, speaking and breathing. This, in turn, is influenced by the posture, position, size and shape of the jaws and mouth, that houses it.
- And, reduction of tongue space, when a child's baby teeth are replaced by larger adult teeth, occurs at the time the incidence of ADHD diagnosis is highest.

Consider one's reaction to a compromised airway – when one can't breathe. It causes a "flight or fight," "adrenaline" or "stress" response that interferes with restful sleep and how we feel when awake. These stress hormones biochemically support and induce whatever physiological or physical activity needed, to keep the airway open, and oxygen flowing. This has an impact on all behavior including the ability to sleep, quality of activity during sleep and behavior while awake, including that of ADHD.

Consider ADHD behavior socially unsophisticated reaction to the "stress" sensations of the "heart pounding or fluttering". Physical activity more effectively uses up excess 'catecholamines" in circulation, than does mental activity as seen in "insomnia" ..

Understanding the dental impact upon stress is critical to improving the anatomy and quality of life.