

# Eye conditions linked with obstructive sleep apnea

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If a good night's sleep helps the brain and body perform better, it's a good guess that sleep problems can cause more than just fatigue. Numerous studies have shown a connection between sleep disorders and medical conditions such as cardiovascular disease, cerebrovascular disease, and metabolic disorders, including the risk of obesity and diabetes mellitus.

In the November issue of Mayo Clinic Proceedings, Mayo Clinic researchers outline several interesting associations between sleep disorders and eye disease.

More than 12 million people in the United States have obstructive sleep apnea -- a potentially serious sleep disorder in which breathing repeatedly stops and starts during sleep. Sleep apnea has several types. The most common is obstructive sleep apnea (OSA), which occurs when throat muscles relax and block the airway.

Multiple studies have identified OSA as an independent risk factor for the development of several medical conditions, including high blood pressure, which are related to impairments or alterations in a person's vascular (circulatory) system. With their own complex and sensitive vascular system, the eyes can sometimes signal and be affected by systemic vascular problems.

"Given the vascular consequences of OSA, it is not surprising that ophthalmologic manifestations exist," explains the article's lead author, E. Andrew Waller, M.D., a Mayo Clinic pulmonologist and sleep specialist.

The researchers conducted a literature search focused on sleep disorders and eye disease. In the article, they discuss a variety of ophthalmologic conditions associated with obstructive sleep apnea. Highlighted below are a few findings.

-- Floppy eyelid syndrome: This disorder causes

eyelids to evert (turn inside-out) spontaneously during sleep, resulting in excessive watering, stickiness, discomfort and blurred vision. While not a serious medical problem, this syndrome can signal that a person also has OSA, which can lead to more significant health problems.

-- Glaucoma: This condition is the second most common cause of blindness and the most common cause of irreversible blindness. OSA is linked to two forms of this disease -- primary open-angle glaucoma (POAG) and normal-tension glaucoma (NTG). The severity of glaucoma appears to correlate with the number and duration of apnea episodes in patients with OSA.

-- Nonarteritic anterior ischemic optic neuropathy (NAION): Research shows an increased incidence of OSA in people diagnosed with NAION. This condition is characterized by the sudden painless onset of vision loss in one eye, often noticed upon awakening. Up to 6,000 patients annually in the United States are diagnosed with this condition, which can cause irreversible vision loss.

-- Papilledema: People with OSA may have a higher incidence of papilledema, swelling of the optic nerve in both eyes. Papilledema typically occurs due to increased pressure within the skull and can lead to progressively worsening vision and, in some cases, blindness.

According to Dr. Waller, knowing the links between these eye conditions and OSA may hasten early diagnosis and appropriate treatment.

"Our understanding of the mechanisms that link these disorders is minimal," says Dr. Waller. "However, the recognition of these associations is important for primary care physicians, ophthalmologists, and sleep physicians. For patients with OSA, a routine eye examination to evaluate for early signs of glaucoma, particularly in the setting of visual loss or change, should be

recommended. Patients with ophthalmologic diseases known to be associated with sleep apnea should be screened clinically for sleep apnea and referred to a sleep center if signs or symptoms are present."

Source: Mayo Clinic

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