

Diabetes and sleep loss: Evil twins that can wreak further health havoc

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David Lombrozo was never a good sleeper. "Then I started my own company, and it got worse," said the Marietta, Ga., owner of an information-technology management company. "I got to bed later, got up earlier, wasn't eating well. I gained 15 pounds, which made me snore and woke me up even more."

As a result, Type 2 diabetes, which had been lurking in his family genes, caught up with him. Now Lombrozo must give himself a daily insulin injection and test his blood-sugar levels several times a day to keep the disease in check.

Like the 27 million other Americans afflicted with Type 2 diabetes, Lombrozo learned that [sleep](#) deprivation and diabetes feed on each other: Diabetes symptoms disturb sleep, while [sleep loss](#) contributes to diabetes. Add obesity and stress, and you have a vicious circle.

Formerly known as adult-onset diabetes, Type 2 means having too little insulin (a hormone that helps the body use sugar) and too much glucose (sugar). As Americans' average number of sleep hours has decreased, Type 2 diabetes has become more common.

Seven to nine hours of sleep per night is ideal, according to the American Diabetes Association, but 35 percent of us get less.

Thanks to [diabetes complications](#) such as restless-leg syndrome and neuropathy (nerve pain or numbness), many diabetics cannot sleep well,

causing their condition to worsen. But the road to diabetes can start from the other direction, too, meaning [sleep deprivation](#).

The No. 1 sleep enemy is apnea, a breathing interruption caused by obstructed airways.

"Sleep apnea and diabetes go hand in hand," said Dr. Florence Comite, a New York City endocrinologist. About 36 percent of Type 2 diabetics have [sleep apnea](#), according to the diabetes association.

"Sleep helps our bodies restore themselves," Comite explained. "Without enough sleep, we can actually bring on diabetes." It's all about hormones, she explained, starting with insulin, the hormone that's in short supply for diabetics.

Adequate sleep allows HGH (human-growth hormone) and IGF-1 (insulin-like growth factor 1) to grow cells and repair tissues.

With enough sleep, the body produces leptin, the hormone that depresses the appetite. Without enough sleep, it produces more ghrelin, which stimulates the appetite.

Sleep deprivation increases cortisol, the "stress hormone" that prevents insulin from getting into the cells ("insulin resistance").

In addition to preventing sleep, apneas reduce the amount of oxygen going to the brain and heart. "The pressure from trying to breathe stretches the heart, which puts out a diuretic," explained Robert Rosenberg, DO, a Prescott Valley, Ariz., sleep specialist. "Men blame their prostates, and women blame menopause, but really it's their sleep apnea that's causing them to have to go to the bathroom at night."

Sleep apnea is more common among people who are male, older, have

thick necks or sunken chins, and among those who carry their excess weight at their waists.

Though being overweight elevates sleep apnea risk, even diabetics who are not obese are at risk.

The doctor diagnoses apnea with a home monitor or by sending you to a sleep center for the night.

OSA ([obstructive sleep apnea](#)) is the most common form of apnea and causes breathing to stop briefly. With the less common but more dangerous type, CSA (central sleep apnea), breathing stops completely for longer periods. This can be fatal.

The first line of sleep apnea treatment is weight loss. If that doesn't help, the doctor prescribes a mask or nose plugs that feed pressurized air into the airways. If this fails, surgery to unblock obstructions might be an option.

If obesity is not part of the diabetes-sleep equation to start, it often becomes one. A hormone imbalance causes the diabetic to eat the wrong foods and be too tired to exercise. The threat of heart disease causes worry, which makes comfort foods like cookies more enticing.

"No wonder people just give up," said Dr. Charlie Seltzer, a Philadelphia obesity medicine physician who lost 75 pounds by following his own advice: "Figure out how many calories you take in, and eat less."

For Seltzer, having diabetes in his family scared him into a healthier lifestyle, he said. Others can prevent Type 2 diabetes with his multipart prescription of more sleep, more hours at the gym, and healthy foods instead of sugary and salty foods.

Because restaurant meals encourage overeating, Seltzer offers this tip: "Before you go to the restaurant in the evening, look at the menu and calorie count online. Choose your entree before you go so you won't order on impulse. Then you work backward to wear off the calories by evening."

Lombrozo can shrug off stress, which affects sleep and diabetes prevention, even if he gets a late-night call from a client. "I'm one of those people who can turn it off," he said. But others must consciously de-stress to keep their cortisol levels down.

Following are ways to fight the battle:

Exercise in the morning so your body can wind down before bedtime, advised the doctors. Avoid drinking alcohol, caffeine and big meals in the evening. Go to bed at the same time, even on weekends, but sleep late on weekends if you need to catch up.

Make your bedroom relaxing, dark and free of electronic devices, including computers, TVs, tablets and cellphones. "They emit blue light, which destroys melatonin production," Rosenberg explained.

If your partner must have a bedroom TV, use an eye mask and earplugs to block light and noise. "Or get a separate room," Rosenberg said.

Parents know what helps their kids sleep but seldom indulge themselves in the routine, Comite said. "Take a warm bath and talk quietly," she said. "Then wear out a melodic book like 'Goodnight Moon.'"

Resources

The following are resources for more information about the diabetes/sleep link:

American Academy of Sleep Medicine, aasmnet.org

American Diabetes Association, diabetes.org

Robert Rosenberg's answersforsleep.com where he pledges to answer questions within 72 hours.

Seltzer's blog, drseltzerweightloss.com/newsblog

"Sleep Soundly Every Night," a book by Rosenberg

"Diabetes for Dummies," a book by Dr. Alan L. Rubin

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