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Study links lack of sleep to obesity

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ST. LOUIS - If you can't tame your appetite and your weight keeps rising, you may not be getting enough sleep.

Poor sleep habits have become so closely associated with obesity that some scientists want obesity therapists to address sleep with the same intensity as diet and exercise, according to the National Sleep Foundation.

"There's an association between (poor, inadequate) sleep and obesity," said Dr. Joseph Ojile, head of the Clayton Sleep Institute.

There's also a double whammy, said Dr. Joseph Espiritu, an expert in sleep medicine with St. Louis University School of Medicine.

Once you're obese, you're more prone to sleep apnea, the collapse of the upper windpipe, which interrupts breathing during sleep. That's the vicious circle: sleep apnea can help cause obesity, and obesity can cause sleep apnea.

For decades, studies found that overweight and obese people tended to have poor sleep habits. But the evidence was statistical, not scientific.

The physiological proof, albeit in a relatively small study, came in December 2004, when a University of Chicago researcher in endocrinology, Eve van Cauter, found that poor sleep disrupted two hormones associated with appetite.

It works this way:

Sleep and insulin choreograph the dance between leptin, which tells the brain there's no need for food, and ghrelin, which tells the brain it's chow time. Poor sleep, researchers learned, causes the dancers to start tripping over one another.

Here's what happened: The test subjects slept only four hours a night rather than eight. In only two nights, the hormones malfunctioned. Leptin production decreased by 18 percent and ghrelin production increased by 28 percent.

On top of that, the test subjects - healthy, young male college students - started eating as though they were at a frat party. They reported craving more high-calorie, high-density, high-carbohydrate foods - including a 24 percent increase in appetite for candy, cookies, chips, nuts and starchy foods, such as bread and pasta.

A week into the experiment, blood tests showed an inability to use insulin so intense that it mimicked diabetes. Also, lack of sleep increased the production of cortisol, a hormone associated with increased belly fat.

The researchers concluded that sleep starvation boosted appetite. Increased appetite caused overeating, overeating

caused weight gain and weight gain causes obesity.

A major effect of the study has been to change the medical community's perception that sleep problems cause only mental problems, not physical problems, experts say.

While the medical community is encouraged, researchers want bigger studies on a bigger selection of people and a wider range of physiological effects before saying poor sleep "causes" obesity.

"But the association is clear," Ojile said. "As a health-conscious society, this is enough data that we should incorporate good sleep health into our total health package. If I'm going to go exercise, watch my diet, go low-fat, good sleep should be part of that."

As for the test subjects from the University of Chicago study, all returned to normal health immediately upon paying their "sleep debt," the amount of sleep they lost during they study.

Dietitian Lisa Galati of St. Anthony's Medical Center said that, after 25 years of connecting the dots, she found that many of her clients who needed help with obesity also needed help with sleeping problems.

One of the first questions she asks her patients is how much sleep are they getting - "They look at me as if to say, 'Why are you asking that?' "

She said she finds a concentration of people with sleep-weight problems in high-tension corporate jobs. She sends them to their doctors for sleep assessments.

After a while, Galati said, "They come back to me and say they're feeling better or they had sleep apnea and didn't know it."

Among her first questions are: Do you sleep uninterrupted for at least seven hours a night? And do you wake up and have trouble returning to sleep, or do you go over your work or get up and get something to eat?

"I know their sleeping pattern is a whole part of the package," Galati said. "Those are the people who will be less motivated to make changes in their lives because during the day they're just tired."

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