

6 hours of sleep? It's not enough

By Elizabeth Weise, USA TODAY

SAN FRANCISCO — Scientists have good and bad news for hard-driving people who boast they need only six hours of sleep a night.

The good news is a few may be right: Researchers at the University of California-San Francisco have identified a family with a genetic mutation that causes members to require only six hours sleep a night. The bad news? The gene is vanishingly rare in humans, found in less than 3% of people.

INSOMNIA THERAPY: [What works, what doesn't?](#)

EXTENDED SLEEP: [May give athletes a boost](#)

So almost everyone who says he needs only six hours' sleep is kidding himself. And the consequences of chronic sleep deprivation are serious, says Clete Kushida, president of the American Academy of Sleep Medicine and director of Stanford University's Sleep Medicine Center. Sleep deprivation has been linked to an increase in motor vehicle accidents, deficiencies in short-term memory, focus and attention. It's also tied to depressed mood and a decrease in the ability to control appetite.

The family members — a mother and daughter with the gene mutation — were discovered by researchers at UCSF studying circadian rhythms, the waxing and waning biochemical cycles that govern sleep, hunger and activity. Neither woman needed more than six to 6½ hours of sleep a night, and yet both were well-rested, healthy and energetic.

"One of them is over 70, always traveling internationally and extremely active. She dances three or four nights a week," says Ying-Hui Fu, a professor of neurology at UCSF.

When scientists examined the pair's DNA, they found a mutation in a gene called DEC2, which governs cell production and circadian rhythm.

The mutation seems to result in people who need much less than the normal eight to 8½ hours that most humans require for well-rested functioning, according to the paper, which is published in today's edition of the journal *Science*. The research by Fu and her colleagues determined that humans and mice that carry the mutation get more intense sleep, as measured by slow-wave electrical activity in the brain, and so they need less of it.

But Fu estimates that only about 3% of the population is likely to have this gene and cautions that most people who habitually get less than eight hours sleep a night are only building up a large, and dangerous, sleep debt.

Fu says her lab is investigating whether it might be possible to mimic the effects of the gene with therapeutic compounds, but she cautions the research is only at the very beginning. For now, the only real answer to true productivity is to sleep as much as your body needs, she says.

READERS: How much sleep do you need per night? How much do you usually get?

http://www.usatoday.com/tech/science/2009-08-13-sleep-gene_N.htm