

# Skimping on sleep may contribute to gestational diabetes

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The amount of time spent sleeping in the United States has dropped significantly in the past twenty years with almost a quarter of women and 16 percent of men experiencing insufficient sleep. Now, a new study has found that lack of sleep among pregnant women may be a contributing factor to the development of gestational diabetes.

The findings are reported in the journal *Sleep Medicine Reviews*.

"Links between reduced sleep duration and increased [diabetes risk](#) have been reported in several large studies in non-pregnant populations," said Dr. Sirimon Reutrakul, associate professor of endocrinology, diabetes and metabolism in the University of Illinois at Chicago College of Medicine and lead author of the study.

A few studies have linked short sleep duration to elevated blood sugar levels in [pregnant women](#), but many of them were small. "More information is needed to determine if short sleep duration is a contributing factor to the development of [gestational diabetes](#)," said Reutrakul.

Gestational diabetes is a condition that most often occurs in the second or third trimester. Most health care providers suggest that pregnant women undergo a blood sugar screening test between 24 and 28 weeks of pregnancy. Elevated blood sugar levels indicate that a woman is at an increased risk for having gestational diabetes, and an additional test is then needed to diagnose gestational diabetes.

Gestational diabetes affects between three and seven percent of all pregnancies in the United States. Usually, there are no symptoms in the mother, and blood sugar levels return to normal after the baby is born. Babies born to mothers with gestational diabetes tend to have high birth weights. Women who have gestational diabetes are at an increased risk for developing type 2 diabetes later. Their babies are also at an increased risk for type 2 diabetes as well as obesity.

Reutrakul and her colleagues performed a meta-analysis of eight studies that included 17,308 pregnant women who were assessed for sleep duration (all studies used self-reported questionnaires except one which measured sleep objectively using an accelerometer) and gestational diabetes. The researchers also obtained raw individual participant data from the authors of four additional studies that included measurements of blood sugar levels and measured sleep duration objectively in 287 pregnant women with gestational diabetes for further analysis.

In their analysis of the studies, the researchers found that average sleep duration of less than 6 hours was associated with a 1.7 fold increase in the risk of being diagnosed with gestational diabetes. Among participants from studies where sleep was measured objectively and where individual patient data were made available, those who slept less than 6.25 hours per night had a 2.84 fold increase in risk for having gestational diabetes compared to [women](#) who slept more than 6.25 hours per night,

and also had higher blood sugar levels on their screening test.

"This is the first meta-analysis to find that both self-reported and objectively measured short [sleep duration](#) was associated with elevated [blood sugar levels](#) in pregnancy as well as an [increased risk](#) for developing gestational diabetes," said Reutrakul. "More research is needed to confirm our findings, and to determine whether sleep extension may be beneficial in lowering the risk of gestational [diabetes](#)."

**More information:** Sirimon Reutrakul et al, Short Sleep Duration and Hyperglycemia in Pregnancy: Aggregate and Individual Patient Data Meta-Analysis, *Sleep Medicine Reviews* (2017). [DOI: 10.1016/j.smrv.2017.09.003](#)

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