

Pregnancy and Sleep Disorders:

This section is primarily extracted from an article by Grace W. Pien, MD and Richard J. Schwab, MD. Their article was a review of the existing English publications that looked at various aspects of sleep and pregnancy. The citation is: Pien GW; Schwab RJ. Sleep disorders during pregnancy. SLEEP 2004;27(7):1405-17.

During pregnancy the majority of women experience changes in their sleep. Sleepiness is a common first-trimester complaint. Late in the second trimester, there is a drop in total sleep time and an increase in sleep complaints. During the third trimester, almost all women report altered sleep.

What causes some of these changes?

Hormone changes:

Starting almost from conception, women experience changes in their hormones. Both Progesterone and Estrogen increase throughout the pregnancy and rapidly return to normal levels after delivery. How do these hormones affect sleep?

Progesterone: Decreases the amount of dream sleep a person has and increases the non-dream portion of sleep. It can decrease the amount of time between getting into bed and falling asleep.

Estrogen: This also decreases the amount of dream sleep.

General discomfort:

Back ache, urinary frequency, spontaneous awakening, fetal movement, heartburn, leg discomfort, difficulty falling asleep or staying asleep

Following delivery the greatest problem with sleep occurs in the first month due to demands the baby places on the primary care taker. One study showed that women who nurse their children have get more than twice as much restorative slow wave sleep than mothers who bottle feed their babies.

Obstructive Sleep Apnea and pregnancy.

It is possible that pregnant women can develop sleep apnea during pregnancy. In studies of non-pregnant populations, a 20 % weight gain has a very significant impact on the development of OSA. Since pregnant women often have similar weight gains it is theoretically possible that many will develop breathing problems that can affect the developing fetus.

Snoring is the lowest level of sleep disordered breathing. Only 4% of healthy young women snore; the fact that reports of snoring increase to 25% of pregnant women by the third trimester, points to other possible negative side-effects of compromised breathing. The more overweight a woman is before she gets pregnant, the more likely there will be alterations in her breathing at night. Studies of pregnant women show that snorers have higher blood pressure than non-snorers.

Sleep apnea is known to increase blood pressure in patients, in the beginning this is seen only during sleep and could be missed at a medical appointment. There is a pregnancy-induced hypertension that can develop after the 20th week of pregnancy and can cause many problems with the developing baby and the mother's health. When this gets out of control, it is called preeclampsia or, worse yet, eclampsia and can be fatal. Known risk factors for preeclampsia include family history, advancing maternal age, obesity, chronic hypertension and kidney disease.

As of now, no one knows if sleep apnea, and the intermittent lack of oxygen it causes at night, causes the blood vessel breakdown in the placenta seen with preeclampsia or if the retention of fluid from the preeclampsia causes the breathing problems due to tissue swelling all over the mother's body. Obstetricians are always on the lookout for this condition and will treat it aggressively.

Treatment of Sleep Apnea during pregnancy:

Who should be treated?

Any woman who is diagnosed with severe sleep apnea or who has drops in her blood oxygen level below 90% must be treated as quickly as possible. If the mother is not breathing properly at night, the fetus can suffer growth retardation which impacts the baby's survival after delivery.

How should she be treated?

CPAP (Continuous Positive Air Pressure)

There is no other option that will be as helpful for the fetus. It is not sexy, or comfortable, but it is only required during the remainder of the pregnancy and will help protect the baby.

Oral appliances, though effective, require time to fabricate and up to three months to be maximally effective. By the time effective oral appliance therapy is instituted, the pregnancy will be over. All oral appliances accepted by the FDA are custom fabricated and must be obtained from a dentist trained in the fabrication of these appliances; this makes them too expensive and under-effective for use during pregnancy. Even women who were diagnosed with sleep apnea prior to pregnancy and have been using an oral appliance effectively, a return to CPAP use during pregnancy is highly recommended. One of the many changes taking place in the pregnant woman's body is a 'relaxation' of joints to allow passage of the baby through the birth canal; oral appliances put significant pressure on the jaw joint at night, and the natural 'relaxation of joints' during pregnancy can rapidly lead to permanent changes in the position of the woman's jaw.

Surgery: is less effective than any other therapy for sleep apnea and not an approach to be taken during pregnancy unless there is

What to do after delivery?

Women who develop sleep apnea during pregnancy should have a follow-up sleep study after regaining her normal weight (2-3 months after delivery) This will verify if the sleep apnea has resolved. Some women take longer to shed the extra weight of pregnancy and may continue to have sleep apnea. Since sleep apnea makes people feel sleepy, and a new baby also disrupts a mother's sleep, treatment is necessary to keep the new mother

from experiencing severe sleep deprivation. *Some researchers have wondered if this loss of sleep may be part of the cause of “post-partum depression”.*

All women who have developed sleep apnea during a pregnancy must be monitored with each subsequent pregnancy to determine if the sleep apnea has gotten worse.