Women and Sleep

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Sleep is a basic biologic need, with sex hormones playing a role in both the quantity and quality of sleep.

Right from infancy there is a difference between the sleep of infant boys and girls. Infant girls have more total sleep and less frequent awakenings than infant boys. Additionally infant girls have less REM sleep and more NREM sleep.

With the onset of menstruation, there are changes in the quality of sleep during the various phases of the menstrual cycle (follicular versus luteal) and women are more likely to have mood disorders. There is a 28% higher risk of women reporting insomnia than men. Pre-menstrual syndrome and dysmenorrhea (painful menstruation) can adversely affect the quality of sleep. Adolescent girls take longer to fall asleep, tend to sleep longer and have better sleep efficiency when comparedwith adolescent boys.

Perhaps the greatest impact on the quality of sleep is during pregnancy, affecting both the quantity and quality of sleep.

During the first trimester, women may wake up repeatedly to urinate. In the first trimester, around the 10th week, the total amount of sleep increases with a longer sleep period at night and frequent daytime naps.Sleep becomes less efficient with frequent awakenings and decreased amount of deep sleep and more frequent complaints about sleep quality.

The musculoskeletal system is making changes to help accommodate the growing fetus and this disturbs sleep in the first and second trimesters.Fetal movements, uterine contractions and nasal congestion, in addition, can contribute to sleep disturbance in the second trimester. During weeks 13-28, i.e. the second trimester, sleep efficiency tends to improve and once asleep, the pregnant women awakens less often.Night time awakenings increase towards the end of the second trimester.

During the third trimester, nocturia, fetal movement, uterine contractions, heartburn, orthopnea, leg cramps, nasal congestion and difficulty getting into a comfortable sleeping position can adversely affect sleep. In the third trimester, women have more nighttime awakenings with more frequent daytime naps. The duration of sleep also decreases as the pregnancy progresses.

Poor quality sleep or sleep apnea in a pregnancy is associated with gestational diabetes. Some studies have shown an association of sleep apnea in pregnant women with high blood pressure.

Premenopausal women have better sleep efficiency, greater sleep complaints, greater delta sleep, shorter sleep onset latencies and longer total sleep times when compared with men.

Overall women have a greater prevalence of insomnia (50% higher than men do).

Menopause has other sleep challenges with reduced efficiency of sleep, especially in those with hot flashes and night sweats. The prevalence of obstructive sleep apnea increases in the postmenopausal women and hormone replacement therapy does provide some protection; however, hormone replacement therapy is not without its own risk.

Understanding sleep in the context of gender is important.