

Mom's mood, baby's sleep: what's the connection?

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If there's one thing that everyone knows about newborn babies, it's that they don't sleep through the night, and neither do their parents. But in fact, those first six months of life are crucial to developing the regular sleeping and waking patterns, known as circadian rhythms, that a child will need for a healthy future.

Some children may start life with the sleep odds stacked against them, though, say University of Michigan sleep experts who study the issue. They will present data from their study next week at the European Sleep Research Society meeting in Glasgow, Scotland.

Babies whose mothers experienced depression any time before they became pregnant, or developed mood problems while they were pregnant, are much more prone to having chaotic sleep patterns in the first half-year of life than babies born to non-depressed moms, the team has found.

For instance, infants born to depressed moms nap more during the day, take much longer to settle down to sleep at night, and wake up more often during the night. It's a baby form of the insomnia that millions of adults know all too well.

Not only does this add to parents' sleepless nights, but it may help set these children up for their own depression later in life.

But this doesn't mean that babies born to depressed moms are doomed to

follow in their mothers' shoes, even though depression does tend to run in families, says Roseanne Armitage, Ph.D., the leader of the U-M Sleep & Chronophysiology Laboratory team at the U-M Depression Center.

Nor does it mean that parents who haven't suffered depression can ignore the importance of their babies' sleep.

Rather, it means that all parents – especially ones with a history of depression – must pay close attention to the conditions they create for their infant's sleep, from birth.

"Keeping a very regular sleep schedule is incredibly important," says Armitage. "We know that for both children and adults, and from this study we now know that for infants, the more stable the bedtime the less chaotic sleep is during the night."

Armitage and her team have devoted years to studying the links between sleep and depression, and the circadian rhythms, light-dark exposure, and other factors that appear to make a difference in sleep and mood. Over the past decade, they've shown that all are strongly linked.

Recently, their research in depressed adults, teenagers and pre-teens led them to wonder if the links were as strong among babies. Infants need a lot more sleep than grownups, but tend to get it in shorter chunks of time throughout the day and night, at least for the first months of life.

The research that Armitage and her colleagues will present next week, and also this fall at the American Academy of Child & Adolescent Psychiatry annual meeting, is based on sleep studies involving two groups of new mothers and their babies. It's funded by the Cohen Sleep Research Fund and the Drs. Jack and Barbara Berman Depression Research Fund at the U-M Depression Center.

One group was made up of mothers who sought help for depression during pregnancy from the U-M Depression Center's Women's Mood Disorders Program. The other group was mothers who had no past or current depression. Each group agreed to wear wristwatch-like devices called actigraphs, which measure sleep time at night, light exposure and daytime activity/rest patterns.

The moms began wearing the devices during the last trimester of pregnancy, and then after their babies were born the team fitted each child with a tiny actigraph at the age of two weeks. Then, the team downloaded the information from the devices every month until the babies were eight months old.

So far, the analysis of the data they collected show that babies born to depressed moms had little or no evidence of an in-born 24-hour circadian rhythm soon after they were born – unlike the babies born to women who weren't depressed. This irregular pattern continued until the study ended in the babies' eighth month.

"We think we've identified one of the risk factors that may contribute to these infants' going on to develop depression later in life," says Armitage. "Not everybody who has poor sleep or weak circadian rhythms will develop depression, but if sleep stays consistently disrupted and circadian rhythms are weak, the risk is significantly elevated."

That's why, she says, it's so crucial to help all babies – and new parents – get the sleep they need.

Those first few months, in fact, are a kind of training camp for the baby's sleep in the future, Armitage says. Babies' bodies and brains need to be trained to understand that they should sleep when it's dark, and be awake when it's light – the basic circadian rhythm that governs sleep patterns for a person's entire life. This sets the baby's "body clock" right

from the start.

Of course, infants and toddlers need to nap during the daytime to get all the sleep they need – 11 to 18 hours for newborns in the first two months, 11 to 15 hours for the next ten months, and 12 to 14 hours from ages 1 to 3 years. And, newborns wake up in the night when they need food.

"But going to bed at the same time, getting up at the same time, establishing rituals around the bedtime helps infants begin to distinguish between night sleep and day sleep," says Armitage. "Put the baby in day clothes for naps, and in night clothes for night sleep – babies pick up these cues."

Parents can also make sure that babies are regularly around bright light during the day, which helps the body develop circadian rhythms linked to light cycles. Of course, the bright light shouldn't shine directly in babies' eyes, and they should be shielded from direct sunlight or wear sunscreen outside.

By four months of age, a baby's sleep schedule should have become regular, more focused on nighttime sleep, and their blocks of sleep more "consolidated" or longer – especially at night.

The main thing, she says, is to make sure babies and small children get enough sleep on an increasingly regular schedule – and that their moms do too.

The period immediately after giving birth is a high-risk time for depression, even in women who have never had depression before. Those who have had depression, or have relatives who have suffered depression, are most at risk. This "postpartum depression" as it is called can be worsened by lack of sleep – or perhaps even partly triggered by it.

"Chronic sleep deprivation is associated with an elevated risk for depression in everybody, at all stages of life, but in new moms, because of the hormonal changes and the need to recover from the pregnancy and birth, sleep deprivation can really be a problem," says Armitage, a professor of psychiatry at the U-M Medical School. "It can interfere with the social rhythms that are important for keeping the circadian clock in the brain in sync, it can minimize the amount of energy moms have to care for their infants, and it can contribute to the development of depression."

Source: University of Michigan

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