



Study Finds SIDS Link

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Babies who die of Sudden Infant Death Syndrome (SIDS) have lower levels of serotonin, according to a new study released by researchers at Harvard and Rady Children's Hospital-San Diego.

The study, to be published Wednesday in the Journal of the American Medical Association (JAMA), found that SIDS babies had decreased levels of serotonin in their brainstems.

Serotonin is the chemical that helps regulate breathing, blood pressure and heart rate in the brain during sleep.

Researchers obtained tissue samples from the autopsies of infants with and without SIDS between 2004 and 2008, obtained from the San Diego County Medical Examiner's Office through the San Diego SIDS Research Project.

They found that serotonin levels were 26% lower in SIDS cases compared with the control group. Additionally, levels of tryptophan hydroxylase, a key biosynthetic enzyme of serotonin, were 22% lower in SIDS cases.

"The current findings extend those of our earlier research further and suggest that SIDS can be caused by one or more defects in the brainstem serotonergic system that regulates serotonin production and binding," according to Dr. Henry Krous, Director of Pathology Research at Rady Children's Hospital-San Diego and a co-author of the article.

One of the Boston researchers suggests that if a baby is put face down in the bed, it begins to re-breathe carbon dioxide which is toxic.

"A normal baby could respond to that challenge, lift its head up, turn its head and arouse or wake up but a baby who has a defect in those brain stem circuits that use serotonin can't do that when challenged and they go on to die," said Hannah C. Kinney, M.D. with Children's Hospital Boston.

Researchers believe the findings may give a biological basis for infants to be put to sleep on their backs.

SIDS is the leading cause of unexpected death in babies one month to one year. Risk factors for SIDS include prone (stomach) sleep position, bedsharing and sleeping on soft porous surfaces.

The full text of this study will be available on the JAMA website.

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