

Hard to arouse, hard to calm down

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A scale used to assess the behavior of newborns exposed to methamphetamine before birth might be able to identify those children who will develop problems later on, according to a study that will be presented Sunday, May 1, at the Pediatric Academic Societies (PAS) annual meeting in Denver.

A large body of research shows that [prenatal exposure](#) to cocaine can lead to cognitive and behavioral problems in children. Recently, [methamphetamine](#) has become the drug of choice for many pregnant drug users, according to study co-author Barry M. Lester, PhD. Despite its widespread use, little is known about the potential consequences of prenatal meth exposure on the development of children.

Dr. Lester and his colleagues undertook the Infant Development, Environment, and Lifestyle (IDEAL) Study to look at the neurobehavioral effects of prenatal meth exposure in 185 [newborns](#) at four clinical centers. A comparison group included 195 newborns who were not exposed to methamphetamine but were exposed prenatally to alcohol, tobacco or [marijuana](#). This allowed researchers to tease out any effects due to methamphetamine exposure rather than effects that may have been due to other substances commonly used in conjunction with meth.

Researchers used the NICU Network Neurobehavioral Scale (NNNS) to evaluate the newborns during the first four days of life and again at 1 month of age. The NNNS assesses muscle tone, reflexes, behavioral state, motor development and stress.

"There are certain characteristics that are real clues to whether or not the baby does well later on. Stress is one of them, arousal is another," said Dr. Lester, who has studied babies exposed to [cocaine](#) in utero.

Results showed that newborns whose mothers used methamphetamine while pregnant were hard

to arouse, but once awakened, they could not be calmed easily, said Dr. Lester, professor of psychiatry and pediatrics and director of the Center for the Study of Children at Risk at the Warren Alpert Medical School of Brown University and Women & Infants Hospital.

At 1 month, improvements were seen in arousal and total stress among the methamphetamine-exposed group. In addition, both groups showed higher quality of movement, less lethargy and fewer asymmetric reflexes.

"The beauty of these data is showing that we can identify the kids who are doing well, those that improved," Dr. Lester said. "We can also pull out the ones who are not doing as well and arrange intervention and prevention services for them before some abnormality shows itself."

Dr. Lester noted that many babies are labeled "high-risk," but there aren't enough resources to provide treatment services to all of them. If those likely to develop problems later on can be identified based on neurobehavior shortly after birth, then intervention services can be targeted to that group.

Dr. Lester acknowledged that prevention is hard to sell, especially in today's economy. However, he said, "The amount of money it takes to do the intervention compared to the amount of money spent later on for these kids for special education is pocket change."

More information: To view the abstract, go to www.abstracts2view.com/pas/view.php?nu=PAS11L1_79

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