Study Summary

How does prenatal opioid exposure affect child outcomes?
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Who sponsored this study?
This research was supported by the Environmental influences on Child Health Outcomes (ECHO) program, Office of The Director, National Institutes of Health.

Why was this study needed?
We have very little information about how a mother’s use of opioids during pregnancy (prenatal opioid exposure) can affect child development. The information we have thus far is limited by not having many people to study and not being able to study other factors that may have an effect on child development, such as poverty. For this study, we reviewed what information we know so far and also made suggestions for how to improve knowledge of prenatal opioid exposure.

Who was involved?
This publication was a review of information that had already been published. After review, we came together as a group and decided what should be done next to answer the question, “how does prenatal opioid exposure affect the child?”

What happened during the study?
We reviewed over 50 studies to try to come up with some answers about how being exposed to opioids during pregnancy affects a child over short and long periods of time. We then discussed the limitations of the study and developed a list of what can be done in the future to fix these limitations. We concluded by describing how ECHO can help provide more information about this research topic.

What were the study results?
We were not able to learn what the short and long-term results of prenatal opioid exposure were because of the limitations with the existing information. Our best working hypothesis is that the effects of prenatal opioid exposure at birth and in infancy are small and subtle, but that the effects may grow as children age and have more demands on their attention at home and at school.

Impact
We are still trying hard to learn about the short and long-term developmental effects of prenatal opioid exposure. We think that the effects of prenatal opioid exposure at birth and in infancy are subtle, and that they could be also be caused by the effects of other things such as poverty and early life stress. The
effects in childhood may be stronger, but they could also be due to long-term stress exposure. More high-quality research is needed to answer the question, “how does prenatal opioid exposure affect the child?”

What happens next?

We will use the ECHO data that are already collected to test how prenatal opioid exposure affects knowledge/understanding, behavior, and attention span in middle childhood. We will consider other possible factors such as poverty. We will also look at whether newborns who have Neonatal Abstinence Syndrome/Neonatal Opioid Withdrawal Syndrome (NAS/NOWS) have worse effects compared to newborns exposed to opioids who do not have NAS/NOWS.

Where can I learn more?

You can go to NIDA’s website to learn more about opioid use and prenatal opioid exposure: [https://www.drugabuse.gov/drugs-abuse/opioids](https://www.drugabuse.gov/drugs-abuse/opioids)

You can also go to the website for the Harvard Center on the Developing Child to understand how to reduce the negative effects of early life stress exposure: [https://developingchild.harvard.edu/](https://developingchild.harvard.edu/)

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