**Neonatal Abstinence Syndrome (NAS)**

Neonatal Abstinence Syndrome (NAS) is the term used to describe the withdrawal symptoms a baby may experience after being born to a mother who is taking certain medications or drugs. While NAS may occur with a variety of drugs or medications, the term is primarily used to describe neonatal (newborn) withdrawal from opiates. Opiates are medications/drugs such as heroin, oxycodone, Percocet, Lortab, or medications used to treat opiate addiction like methadone or buprenorphine (Suboxone/Subutex).

There is tremendous variation in NAS among newborns, ranging from mild symptoms requiring no treatment, to the death of the infant. These variations are due to a number of factors ranging from the medications/drugs the mother is taking, to unidentified genetic factors in the infant. Studies have shown that the most dangerous drug for causing severe NAS is heroin, with a 10% mortality if untreated, while the safest appears to be buprenorphine, with the lowest risk of NAS, and the mildest symptoms. This means that children born to mothers on buprenorphine are less likely to have NAS, or if NAS is present, are less likely to require treatment.

Many providers believe that trying to taper the mother off of her medications before delivery will eliminate NAS in the infant at birth, or that a lower dose of buprenorphine during pregnancy will result in milder NAS symptoms. While this may seem to be a good idea, scientific evidence has clearly and repeatedly proven that this is a very dangerous course to pursue. Not only does tapering during pregnancy potentially increase the risk of preterm delivery or stillbirth, but studies also show that there is a strong correlation between maternal relapse and attempts to taper or “detox” during pregnancy. On the other hand, there is no correlation between the dose of buprenorphine the mother is receiving during the pregnancy and the severity of NAS in the infant at birth. What is important is to adequately treat the mother's withdrawal symptoms during the entire pregnancy to prevent any of the previously mentioned complications.

After the baby is born, the treatment of NAS will depend on the severity of symptoms, as well as the protocol followed at the hospital where the child is born. Sometimes only comfort measures are required. If the symptoms are more severe, the child may be placed on medication, like morphine, to minimize the symptoms. The baby will gradually be tapered until the child no longer exhibits NAS symptoms. This treatment is entirely safe for the baby, and ensures that the baby goes home with the mother in the best possible health.

While tapering buprenorphine during pregnancy does not decrease NAS, there are other things the mother can do to decrease the likelihood of NAS after birth. One of the most important is smoking cessation. Not only does smoking increase the risk of NAS, but it also contributes to low birth weight and increased risk of complications in the neonatal period. Alcohol is another very dangerous drug in pregnancy, again causing increased NAS as well as the risk of Fetal Alcohol Syndrome, which results in mental retardation and behavioral problems in the child. Another group of medications that can exacerbate NAS are the benzodiazepines. This class of drugs includes medications like Xanax, Ativan, Valium and Klonopin. These drugs not only can cause increased NAS symptoms, but also can lead to birth defects if taken early in the pregnancy. Some other medications, such as certain antidepressants, are also associated with NAS and birth defects. Discuss all of the medications you may be taking with your doctor if you become pregnant, or are considering having a child.

In summary, NAS is an expected potential side effect with some types of drugs or medications. In mothers receiving Medication Assisted Treatment (MAT) with buprenorphine, NAS is usually mild, as long as the mother does not smoke, or take any other addictive drugs. If you have additional questions regarding NAS and your baby, you are encouraged to ask your doctor at your next visit

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