Learning & Memory in Children Prenatally Exposed to Alcohol

Research has shown that children and adults prenatally exposed to alcohol have specific difficulties in learning and memory. These learning and memory problems have been shown for both verbal (e.g., remembering a list of words or important details in a story) and non-verbal tasks (e.g., remembering where an object was located on a page, remembering in what order buttons were pressed). Children prenatally exposed to alcohol have difficulties immediately repeating back information and recalling information after a delay. Although prenatal alcohol exposure is negatively associated with a child’s IQ, research shows that it is not just lower IQ scores that explain the learning and memory problems. Even those with average IQ scores show at least mild memory impairments. In addition, although children with Fetal Alcohol Syndrome (FAS) showed the largest deficits, even prenatally exposed children without the full FAS syndrome had problems on memory-related tasks. Some research has suggested that these problems stem from difficulties with encoding, or the process of learning new information, more so than retrieval, or the process of recalling what has already been learned. In other words, they have trouble “getting the information in,” but once it’s in, it generally “stays put.” Children prenatally exposed to alcohol showed slower learning slopes, meaning for example that they memorize words from a word list at a slower rate, compared to non-exposed children. However, when information was repeated as many times as needed for them to learn it, they were able to retain the information even after a delay. Children and adults affected by prenatal alcohol exposure don’t seem to use strategies as frequently as others do, to help them memorize new information. For example, they are less likely to categorize similar words from a word list.
together (e.g., remember all the animals, then all the furniture items, them all the food items, etc.).

Taken together, these findings suggest that those prenatally exposed to alcohol are likely to have problems with learning and memory but that, with intervention and support, learning is possible. Keep the following things in mind when working with or caring for a child who has been prenatally exposed to alcohol:

• They will need greater repetitions in order to learn new information! Keep at it.
• Because of their slower learning rates, they will not only need more repetition but will often need more time to learn new skills as well.
• Teach important skills “to mastery” (i.e., keep repeating until they’ve learned it and can demonstrate that learning consistently, instead of moving on to the next skill after a set period of time).
• Break large pieces of information into smaller chunks.
• Teach information using both verbal and visual means whenever you can. Help them translate back & forth from one to the other. For example, describe concepts such as “more” and “less” in simple words, but also draw pictures or better yet use objects to demonstrate these concepts.
• Try to show or teach new things in a variety of contexts (e.g., at different points throughout the day, in different places).
• Teach them strategies for how to learn new information or memorize facts. Some children learn to do this on their own but others need to be taught these skills explicitly.
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The Maternal Substance Abuse and Child Development Project is funded in part by the Georgia Department of Behavioral Health & Developmental Disabilities (DBHDD).