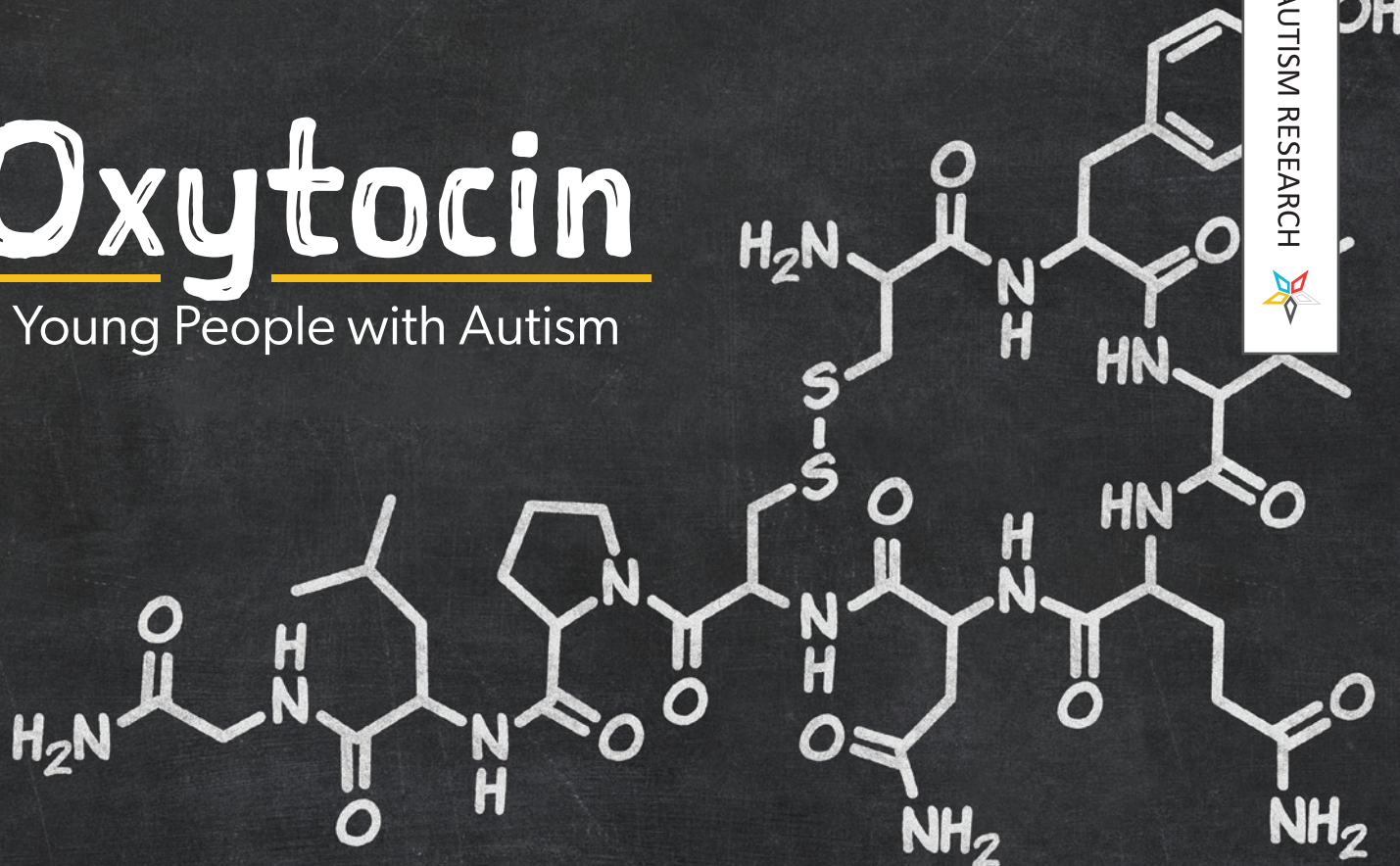


Oxytocin

in Young People with Autism

AUTISM RESEARCH



This article is a review of the following research: Sikich, L., Kolevzon, A., King, B. H., McDougale, C. J., Sanders, K. B., Kim, S. J., Spanos, M., Chandrasekhar, T., Trelles, M., Rockhill, C. M., Palumbo, M. L., Witters Cundiff, A., Montgomery, A., Siper, P., Minjarez, M., Nowinski, L. A., Marler, S., Shuffrey, L. C., Alderman, C., Weissman, J., ... Veenstra-VanderWeele, J. (2021). Intranasal Oxytocin in Children and Adolescents with Autism Spectrum Disorder. *The New England Journal of Medicine*, 385(16), 1462–1473.

Oxytocin is a naturally occurring hormone that is produced in the part of the brain known as the hypothalamus. It is an important hormone for romantic bonding, for initiating labor and delivery of infants, and for stimulating breastfeeding. Research has also linked the production of oxytocin to positive relationship memories, social bonding, empathy, generosity, and trust.¹

Given its role in forging these connections, researchers believed that oxytocin could benefit autistic individuals since social communication and interaction are some of their core challenges. Previous research had also shown that many children with autism have reduced oxytocin levels.² To date, the oxytocin studies in autistic individuals have been inconclusive. Some small studies showed improvements in social functioning, social cognition and social attention.³ Other studies showed no benefit at all.⁴

Despite the inconsistent results from such research, many individuals with autism have been prescribed oxytocin by their physician in hopes that it could improve their social function. It is worth noting, however, that many parents question the safety and efficacy of oxytocin for their autistic child.

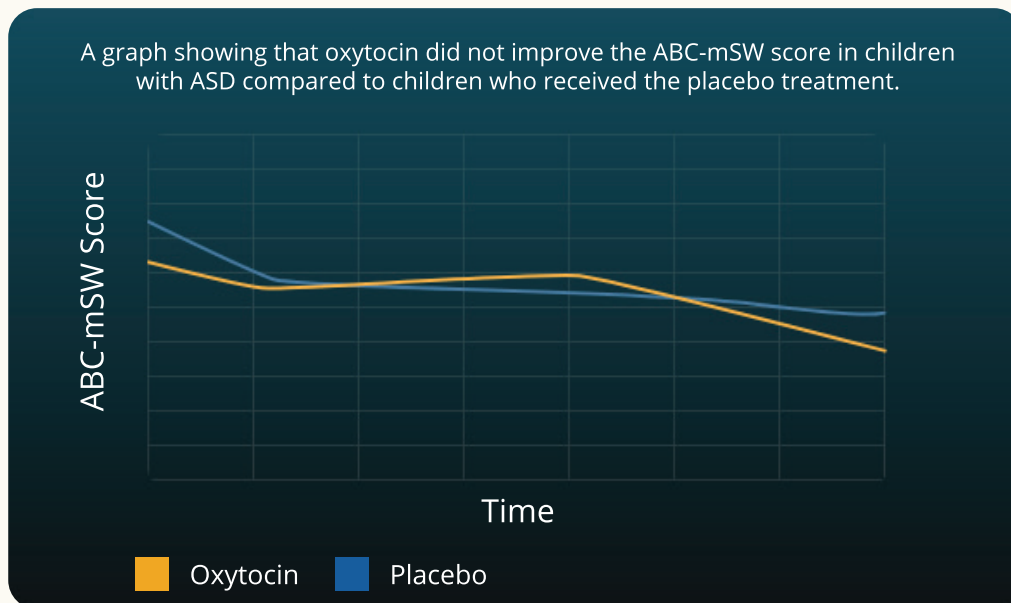
A research team, led by Dr. Linmarie Sikich, wished to investigate the previous research inconsistencies and to determine if oxytocin would improve an autistic child's social abilities.

Study

A total of 290 children with autism spectrum disorder (ASD) between the ages of 3 and 17 years old participated in the study. Half of the children were given oxytocin, and the other half were given a placebo. The study lasted 24 weeks, and the children were monitored closely throughout the study. They underwent a physical, neurological and cognitive profile examination. They also had their pulse, blood pressure, height, weight, urine, blood chemical levels, liver enzyme levels and prolactin levels checked. In addition, parents filled out a questionnaire known as the Aberrant Behavior Checklist modified Social Withdrawal subscale (ABC-mSW) to measure their child's irritability, social withdrawals, and other social behaviors.

Results

- The results showed that oxytocin did not improve social interaction or other measures of social function in children and teens with autism.
- While oxytocin proved to be a safe drug, a small percentage of the participants did experience a few side effects, including increased energy, increased thirst and inattention.



Conclusions

This study shows that oxytocin does not improve social function in children or teens with autism. Fortunately, no serious side effects were experienced by those taking the synthetic hormone. Since this study was larger than previous studies, it likely gives a more accurate indication of oxytocin's true effects.

Even though some effects were seen in previous studies done with mice, it's important to conduct tests with human participants. Other factors could also have come into play in the results from this study. For example, the results might have been different if participants were to pair oxytocin with regular therapy. Only further research can provide answers in this regard. In the meantime, parents should note that the latest research shows no significant social improvements when oxytocin is given to a child with autism.

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