

Nasally administered oxytocin increases emotion perception in autism

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A recent study has demonstrated that intranasal oxytocin can influence how individuals with autism perceive emotion in others. This is an important first step for a potential pharmacological treatment of autism.

Autism is characterized by difficulties in social functioning. Individuals with [autism](#) are generally less sensitive to social information, which can influence their interactions with others as they may overlook social cues. Research has shown that the neuropeptide [oxytocin](#), known to be involved in childbirth and mother-child bonding, also has the potential to improve [social information processing](#) in youth with autism.

In a recent study published in the journal *Translational Psychiatry*, 17 adult men with autism were given a low dose of intranasal oxytocin, a higher dose of intranasal oxytocin, or a placebo

over three separate visits. A novel nasal spray device developed by OptiNose AS, which is designed to improve nose-to-brain molecule delivery, was used to deliver the treatment. After each spray administration, the participants were asked about the emotional intensity of a series of facial images.

Consistent with past research in healthy adults, the researchers found evidence for social effects after the lower dose, and not the higher dose that is often used in treatment trials. Specifically, compared to placebo spray, study participants rated faces as happier after the low dose oxytocin spray.

"These results suggest that intranasal oxytocin can influence how individuals with autism perceive emotion in others," says professor Ole A. Andreassen, senior author of the study and a professor at the Norwegian Centre for Mental Disorders Research (NORMENT) at the University of Oslo.

"Current behavioral treatment options addressing social dysfunction in autism are extremely resource intensive, so this research is an important first step for a potential pharmacological treatment."

First author Daniel S. Quintana explains: "Here we used a novel nasal [spray](#) device, and tested two doses of oxytocin. These results provide a better understanding of how to administer oxytocin efficiently, and which dose may be more effective. This will aid future clinical studies of this promising [treatment](#) for social dysfunction."

Provided by University of Oslo

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