Oxytocin promises hope in Prader-Willi syndrome

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Prader-Willi syndrome is a rare genetic disorder which affects one child in 25,000. Children born with this syndrome have a range of complex neurological and developmental problems which continue into adult life. These can manifest as cognitive and behavioral difficulties, weight gain, problems in controlling their temper and attendant difficulties in socialization. New research published in BioMed Central's open access journal *Orphanet Journal of Rare Diseases,* demonstrates that the hormone oxytocin is able to positively affect patients by improving trust, mood, and reducing disruptive behavior.

Oxytocin is a key hormone in building social interactions and empathy. It has been shown that taking oxytocin can improve the ability of both healthy and autistic people to read faces and recognize emotion in others. Since Prader-Willi syndrome shares some characteristics with autism, and is also associated with a reduction in the number of oxytocin producing neurons, researchers from France enrolled people at a dedicated centre on a trial testing the use of the hormone.

Patients involved in the trial often stayed at the centre for one month visits where they took part in daily occupational and physical activities. They also received medical care and psychological support if it was needed. During one of their usual visits the patients received a single dose of either oxytocin, or placebo, and their eating and behavior monitored for two days prior to the treatment, and two days after.

Professor Tauber from Centre de Référence du Syndrome de Prader-

Willi, France, said, "Two days after administration of oxytocin, we noticed that our patients had increased trust, decreased sadness and showed less disruptive behavior. Despite the small size of our trial, a single dose of oxytocin had a significant, late acting, effect on our patients. This is really encouraging news for the continued management of people with Prader-Willi syndrome."

More information: Oxytocin may be useful to increase trust in others and decrease disruptive behaviours in patients with Prader-Willi syndrome: a randomised placebo-controlled trial in 24 patients, Maithé Tauber, Carine Mantoulan, Pierre Copet, Joseba Jauregui, Genevieve Demeer, Gwenaëlle Diene, Bernadette Rogé, Virginie Laurier, Virginie Ehlinger, Catherine Arnaud, Catherine Molinas and Denise Thuilleaux, *Orphanet Journal of Rare Diseases* (in press)

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