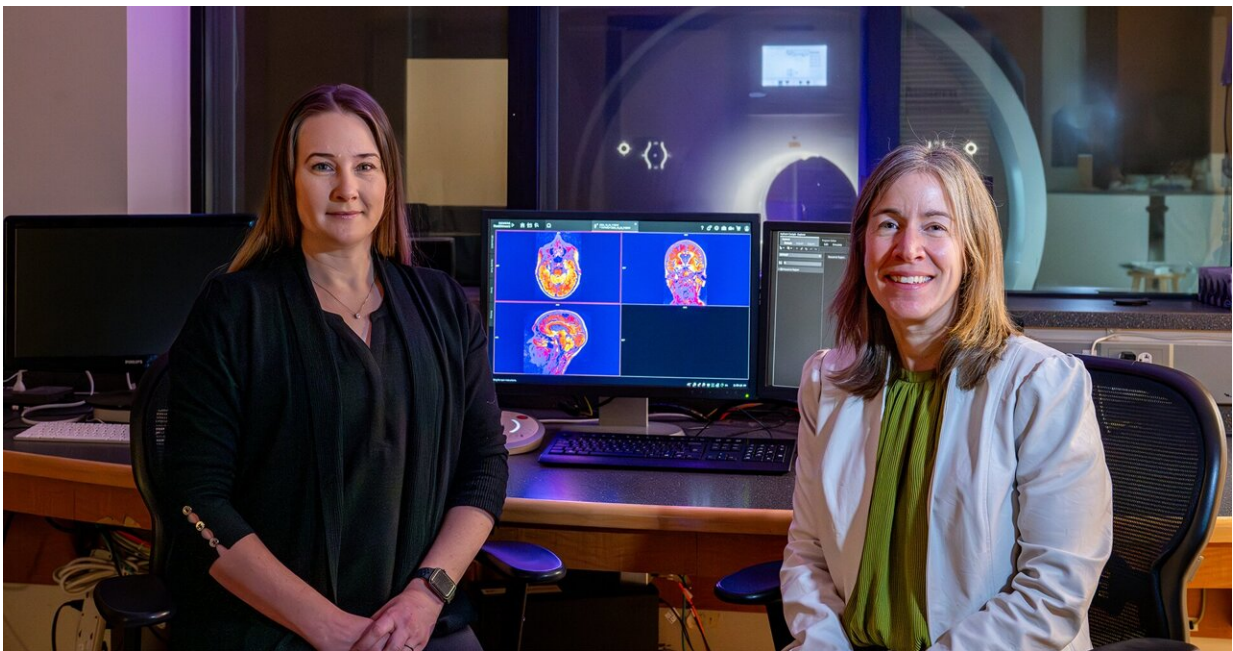


Intranasal oxytocin shows promise for treating core symptom of frontotemporal dementia

January 23 2025, by Cynthia Fazio



Schulich Medicine & Dentistry research operations lead Kristy Coleman and professor Dr. Elizabeth Finger (L to R) found intermittent dosing of oxytocin can help improve apathy in frontotemporal dementia patients. Credit: Megan Morris/Schulich Medicine & Dentistry

A new study led by Western researchers found frequent treatment with intranasal oxytocin—a hormone in the brain associated with

empathy—offers promise for addressing a key symptom among patients with frontotemporal dementia (FTD): Apathy.

It's a common issue among those with FTD, which affects the frontal and temporal lobes of the brain, impacting language, behavior and decision making. Patients with FTD lose interest in hobbies and passions that previously brought them joy and, most devastatingly, become apathetic toward family, friends, even grandchildren and pets.

Until now, there have been no cures or proven treatments for prevalent symptoms of FTD, including [apathy](#).

The condition is one of the most common forms of early onset neurodegenerative dementia—striking people between the ages of 40 and 65 and gaining attention in recent years with the high-profile diagnoses of Bruce Willis and Wendy Williams.

The study was recently [published](#) in *The Lancet Neurology*. The results represent the largest trial of an effective FTD [treatment](#).

"FTD tends to present itself through changes in behavior, such as becoming disinhibited or impulsive, developing new compulsive behaviors, changes in eating habits and some forms present with changes in language as well.

"Apathy is one of the core symptoms of FTD, and often the first to develop," said Dr. Elizabeth Finger, a professor at Schulich School of Medicine & Dentistry and scientist at St. Joseph's Health Care London's Lawson Research Institute who led the study.

When the researchers spoke with care partners involved in this research, some mentioned they noticed changes in behaviors following the trial, such as the patient calling family members when they had not previously

thought to or proactively making coffee for their spouse.

"Even small things like this make a huge difference. If you're in a marriage with somebody who maybe doesn't display interest in you or your well-being, to have those little glimmers is significant," says Kristy Coleman, lead study author and research operations lead at Schulich Medicine & Dentistry and Lawson.

The study was a phase 2a/b randomized, adaptive, placebo-controlled crossover, multi-center clinical trial. The research was conducted across 11 sites in Canada and the U.S., from 2018 to 2023, and 74 patients completed the trial.

Patients were given two daily treatments of oxytocin through [nasal spray](#), every third day for six weeks by their care partners. Their apathy levels were measured by the Neuropsychiatric Inventory (NPI)—a questionnaire that assesses 12 neuropsychiatric symptoms for severity, frequency and care partner distress.

Field 'needs more study'

"Symptomatic treatment in [frontotemporal dementia](#) is a field that needs more study. Unfortunately, there isn't much out there in terms of evidence-based symptom management for any FTD symptoms, including apathy," said Coleman.

At the end of the study, researchers analyzed whether every third day dosing improved apathy, as rated by the patient care partners. Comparing the apathy NPI scores at the end of the oxytocin treatments with those of the patients receiving placebo treatments, there was a significant improvement in apathy when using oxytocin.

"It is a robust effect, but it is in the range of mild improvement. It's not

night and day, but enough that it was detectable by the care partners," Finger said.

This research is a culmination of over 15 years of work. Finger became motivated to find a way to help FTD patients and their care partners following a presentation at a long-term care home where she spoke with caregivers who emphasized the urgent need for a treatment to help manage symptoms.

"This is an exciting step forward in having specific treatments for neuropsychiatric symptoms of FTD," said Finger.

More information: Kristy K L Coleman et al, Intranasal oxytocin for apathy in people with frontotemporal dementia (FOXY): a multicentre, randomised, double-blind, placebo-controlled, adaptive, crossover, phase 2a/2b superiority trial, *The Lancet Neurology* (2025). [DOI: 10.1016/S1474-4422\(24\)00456-3](https://doi.org/10.1016/S1474-4422(24)00456-3)

Provided by University of Western Ontario

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