

# Examining the effectiveness of oxytocin in improving treatment for anorexia nervosa

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		<input type="checkbox"/> Protocol
<b>Registration date</b> 06/08/2015	<b>Overall study status</b> Stopped	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
<b>Last Edited</b> 18/11/2015	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Anorexia nervosa (AN) is a major social and public health problem with the highest death rate and treatment costs of any psychiatric disorder. Effective nutritional rehabilitation programs exist but are costly and protracted, and patients struggle to engage and persevere. There is an urgent need for a safe, inexpensive, easily administered treatment to help nutritional rehabilitation programs work better and encourage patients to comply with them. The purpose of this study is to investigate a novel pharmacotherapy, intra-nasal oxytocin (IN-OT) and its effects on patients with anorexia nervosa participating in a nutritional rehabilitation program. Oxytocin (OT) has shown promise in treating some forms of mental illness through its prosocial and anxiolytic (anxiety lowering) effects.

### Who can participate?

Adult women diagnosed with AN and fluent in English, recruited in Sydney (Australia) and London (UK).

### What does the study involve?

All inpatients at both clinics are given the study information sheet and provided with an opportunity to ask any questions they might have about the study. If a patient decides to take part in the trial they are provided with further information, screened for eligibility and asked to sign a consent form. The participant is then randomised into either the oxytocin (intervention) or placebo (control) group. Each participant is asked to participate in an initial assessment at the start of the study to assess how severe their eating disorder is, and their neuropsychological (brain) functioning. They are then asked to take part in two embedded single dose studies at the beginning and at the end of the trial. The single dose studies involve each participant giving themselves 18 IU of oxytocin or placebo before eating an afternoon snack and completing a questionnaire measuring anxiety. This same procedure is repeated at the end of the trial (57th dose). After the first embedded single dose study the main trial begins, during which participants are asked to self-administer intra-nasal oxytocin (18 IU) or placebo twice a day (at 10am and 3pm) under the supervision of a medically trained member of the research team. Participants are monitored throughout the trial for adverse reactions by a medically trained

member of the research team as well as by clinic staff. After the trial has finished participants are followed up at regular intervals (1, 6 and 12 months) to assess outcome and service use (e.g. eating disorder related visits to the GP).

What are the possible benefits and risks of participating?  
Not provided at time of registration

Where is the study run from?  
Bethlem Royal Hospital (London) and Biden Institute (Australia)

When is the study starting and how long is it expected to run for?  
May 2015 to July 2017

Who is funding the study?  
National Health and Medical Research Council (Australia)

Who is the main contact?  
Professor Janet Treasure  
janet.treasure@kcl.ac.uk

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr Janet Treasure

**ORCID ID**  
<https://orcid.org/0000-0003-0871-4596>

**Contact details**  
Section of Eating Disorders  
Institute of Psychiatry, Psychology and Neuroscience  
King's College  
London  
United Kingdom  
SE5 8AF

## Additional identifiers

**Protocol serial number**  
N/A

## Study information

**Scientific Title**  
A randomised controlled trial to examine the effectiveness of oxytocin to improve treatment for anorexia nervosa

## **Study objectives**

**Primary Aim.** To assess the efficacy of repeated dosing with intra-nasal oxytocin (IN-OT) versus placebo in treating core eating disorder psychopathology and in improving response to nutritional rehabilitation across 28 days of inpatient treatment.

**Hypothesis 1:** Patients treated with daily IN-OT (36 IU per day) will show greater improvements in core eating disorder psychopathology and disordered eating behaviours with greater gains in BMI across inpatient treatment.

**Secondary Aims:** To assess the efficacy of the first and final daily dose of IN-OT in reducing food related anxiety in response to a high -energy snack.

**Hypothesis 2:** Oxytocin (OT) treated patients will display lower levels of pre snack anxiety, show reduced levels of salivary cortisol and alpha--amylase in anticipation of a high energy snack compared to patients who received placebo after the initial dose and after repeated dosing with IN-OT.

**Aim 3:** To assess the effects of repeated dosing with IN-OT on motivation and cognition during inpatient nutritional rehabilitation treatment for AN.

**Hypothesis 3:** Patients receiving repeated treatment with IN-OT will display improved motivation to change and reduced cognitive rigidity relative to placebo after 28 days of inpatient treatment.

**Aim 4:** To assess the long-term impact of chronic (4 weeks) IN-OT treatment on 1, 6 and 12 month outcomes.

**Hypothesis 4:** IN-OT- treated patients will show continued gains, less service utilisation (days in hospital, medical and emergency presentations) and improved functional outcomes at 1, 6 and 12 months compared to those in the placebo group.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Not provided at time of registration

## **Study design**

A randomized double blind placebo-controlled trial

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Anorexia nervosa.

## **Interventions**

This project will use a randomized double blind placebo-controlled design to compare the effects of repeated twice daily-dosing of intra-nasal oxytocin as an adjunct to inpatient nutritional rehabilitation treatment. Both oxytocin and placebo arms will receive standard inpatient treatment. The average minimum inpatient treatment stay of 4 weeks (28 days) will be

used as the intervention period to ensure compliance with dosing and to minimise drop-outs. Participants will 36 IU of oxytocin delivered in two daily (18IU each) doses intra-nasally for the entire 4 weeks. Embedded within the overall design, will be a Single Dose Study whereby the effects of the first and final dose (57th dose) of oxytocin on anxiety and stress related to feeding, and disordered eating behaviour, will be specifically evaluated.

### **Intervention Type**

Biological/Vaccine

### **Primary outcome(s)**

Core eating disorder psychopathology and BMI will be measured using the Eating Disorder Examination semi-structured interview and height and weight measurements at pre (week 0) and post (week 4) intervention, as well as at 1, 6 and 12 months follow-up.

### **Key secondary outcome(s)**

1. Motivation to change assessed using the Anorexia Nervosa Stages of Change Questionnaire (ANSOCQ) at pre (week 0) and post (week 4) intervention
2. Cognitive rigidity will be assessed using the Cognitive Flexibility Scale (CFS) and the Wisconsin Card
3. Sorting Test (WCST) at pre (week 0) and post (week 4) intervention
4. Service utilisation will be assessed in a follow-up interview at 1, 6 and 12 months follow-up
5. Functional outcomes will be assessed using the Morgan-Russell Average Outcome Scale (MRAOS) at 1, 6 and 12 months follow-up
6. Pre and post snack VAS anxiety scores, and salivary cortisol, alpha-amylase and OT will be assessed in the two embedded single-dose studies on day 1 (week 0) and day 28 (week 4)

### **Completion date**

01/07/2017

### **Reason abandoned (if study stopped)**

Lack of funding/sponsorship

## **Eligibility**

### **Key inclusion criteria**

1. Female and fluent in English
2. Diagnosis of eating disorders (anorexia nervosa)

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Sex**

Female

## **Key exclusion criteria**

1. Non-proficiency in the English language (as needed for neuropsychological tests)
2. IQ <80 (National Adult Reading Test; NART)
3. Currently pregnant
4. Current manic episode or psychosis
5. Current alcohol, substance abuse or dependence
6. Acute suicidality
7. Significant medical or neurological disorders not relating to their primary diagnosis of AN
8. Conditions such as major septal deviation or other nasal conditions
9. Patients being treated under the Mental Health Act or under compulsory treatment orders
10. Patients previously given OT or those with planned stays in hospital of less than 4 weeks
11. Patients with an ECG of less than 40 beats per minute to avoid the potential hypotensive effects of OT

## **Date of first enrolment**

01/07/2015

## **Date of final enrolment**

01/07/2017

## **Locations**

### **Countries of recruitment**

United Kingdom

England

Australia

### **Study participating centre**

#### **Bethlem Royal Hospital**

Monks Orchard Road

Beckenham

London

United Kingdom

BR3 3BX

### **Study participating centre**

#### **Biden Institute**

Charles Perkins Centre

University of Sydney

Sydney

Australia

NSW 2006

# Sponsor information

## Organisation

King's College London

## ROR

<https://ror.org/0220mzb33>

# Funder(s)

## Funder type

Government

## Funder Name

National Health and Medical Research Council

## Alternative Name(s)

National Health and Medical Research Council, Australian Government, NHMRC National Health and Medical Research Council, NHMRC

## Funding Body Type

Government organisation

## Funding Body Subtype

National government

## Location

Australia

# Results and Publications

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Available on request