Effects of 40 mg cortisol on emotion and cognitive performance under acute stress.

No registrations found.

Ethical review	Positive opinion
Status	Recruiting
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON23086

Source
NTR

Brief title
Cortisol, emotion, and cognition.

Health condition

Stress-induced emotional interference and decrease of cognitive performance

Sponsors and support

Primary sponsor: Leiden University
Source(s) of monetary or material Support: Netherlands Organization for Scientific Research (NWO; #452-12-003)

Intervention

Outcome measures

Primary outcome

Emotional-interference: threat-interference during working memory performance (n-back task with emotional distracters), threat- and positive interference (Pictorial Emotional Stroop

Task, self-report cognitive interference during cognitive performance (CIQ).

Cognitive performance: working memory performance (n-back task), and executive cognitive performance (OSPAN task)

Secondary outcome

Secondary outcomes are: state anxiety and state attentional control

As potential moderators of intervention outcome, cognitive control as assessed with a self-report questionnaire (ACS) and frontal EEG theta/beta ratio, trait anxiety, emotional attentional control (eACS).

Study description

Background summary

Background: Previous evidence suggests that large single doses of exogenous cortisol (hydrocortisone) have acute effects on cognitive processing of emotional stimuli. However, such effects of hydrocortisone on cognitive performance under acute stress have never been tested even though this would be of considerable fundamental and eventually possibly practical importance. This should be investigated by assessing cognitive performance under stress and the influence of hydrocortisone administration.
Study design: A double-blind, placebo-controlled between-subjects experiment.

Study population: Eighty healthy female participants aged between 18 and 25 who will be recruited from Leiden University campus and online advertisements.

Intervention: Participants will receive either a placebo or 40 mg of hydrocortisone as capsules for oral intake, in the afternoon after limited dietary restrictions (no intake of nutrients 1.5 hour prior to drug/placebo administration).

Study objective

In the proposed study we will investigate the effect

Study design

One timepoint: Participants come to the lab, complete the baseline measurements, take the medication (hydrocortisone or placebo), wait for an hour, and then do the rest of the tests.

Intervention

Intervention: single administration of 40 mg hydrocortisone capsule

Control condition: single administration of placebo capsule

Contacts

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Eligibility criteria

Inclusion criteria

- age between 18 and 25.

- females.

- Sufficient knowledge of the Dutch language.

- high trait cognitive test anxiety (CTAS score above the median out of an online local study with over 1000 responses).

Exclusion criteria

- use of prescription medication other oral contraceptives

- Treatment for psychiatric, endocrine or neurological (CNS) medical problems in the past or present.

- Use of corticosteroid medication (oral, nasal, injected) in the 6 months prior to enrollment or dermal corticosteroid medication in the week prior to enrollment.

- Regular smoking (more than 10 cigarettes per week) or any in the 12 hours prior to testing.

- Use of more than three alcoholic units per day.

- Frequent or recent use of cannabis (on average once a week or more frequent in the three months prior to enrollment or single use or more in the week prior to enrollment).

- Use of more than 3 units of alcohol in the last 24 hours, use of alcohol during the last 12 hours, or consumption of any other recreational drug in the last 24 hours prior to testing.

- Intensive physical cardiovascular sports training for more than 1 hour, at least 5 days a week.

- pregnancy

- lactation

- Raynaud syndrome

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	10-11-2017
Enrollment:	80
Type:	Anticipated

Ethics review

Positive opinion

Date:	20-02-2018
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL6829
NTR-old	NTR7066
Other	ABR number: 62072 : LUMC METC file number: NL62072.058.17

Study results