

# Creatine kinase and platelets

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To assess whether the inhibitory effect of CK on platelet aggregation can be reversed in vitro.

<b>Ethical review</b>	Approved WMO
<b>Status</b>	Recruitment stopped
<b>Health condition type</b>	Coagulopathies and bleeding diatheses (excl thrombocytopenic)
<b>Study type</b>	Observational invasive

## Summary

### ID

NL-OMON43085

### Source

ToetsingOnline

### Brief title

Creatine kinase and platelets

### Condition

- Coagulopathies and bleeding diatheses (excl thrombocytopenic)

### Synonym

bleeding

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Academisch Medisch Centrum

**Source(s) of monetary or material Support:** Ministerie van OC&W

### Intervention

**Keyword:** creatine kinase, platelets

## Outcome measures

### Primary outcome

Inhibition of the effect of creatine kinase on platelets in vitro

### Secondary outcome

not applicable

## Study description

### Background summary

We have previously shown that creatine kinase, the enzyme that utilizes ADP and phosphocreatine to rapidly regenerate ATP, inhibits platelet aggregation in vitro (Horjus 2014). This mechanism may lead to higher bleeding risk in persons with high activity of creatine kinase. Now, we want to assess whether this effect of CK can be reversed in vitro.

### Study objective

To assess whether the inhibitory effect of CK on platelet aggregation can be reversed in vitro.

### Study design

This is an observational study in vitro using human venous blood. The in vitro study will be conducted at the Department of Clinical Chemistry, AMC, Amsterdam. We will assess, after informed consent, in venous blood in vitro, CK, creatinine, glucose, ASAT, ALAT, thrombocyte count, coagulation tests (aPTT, PT). In addition, we will assess whether the inhibitory effect of CK on platelet aggregation can be reversed in vitro.

Volunteers will come to the hospital after an overnight fast. After signing of the informed consent and a short health questionnaire, 50 ml of venous blood will be drawn. Volunteers receive the results of the blood test the next working day by telephone. If we find any abnormality, the family doctor will be informed as well.

### Study burden and risks

There is no benefit for the participant, while the risk is considered to be

negligible

## Contacts

### Public

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### Scientific

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Adults (18-64 years)

Elderly (65 years and older)

### Inclusion criteria

Healthy volunteers 18-60 years old not using any medication

### Exclusion criteria

A potential subject who meets any of the following criteria will be excluded from participation in this study: any known disease as assessed by history taking or the obligatory use of (prescription) drugs.

## Study design

### Design

**Study type:** Observational invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Basic science

### Recruitment

NL

Recruitment status: Recruitment stopped

Start date (anticipated): 23-06-2016

Enrollment: 6

Type: Actual

## Ethics review

Approved WMO

Date: 23-05-2016

Application type: First submission

Review commission: METC Amsterdam UMC

## 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

CCMO

### ID

NL57523.018.16