

Stopping or continuing blood thinners after stroke at young age without a known cause: STOP trial

Submission date 11/07/2024	Recruitment status Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 17/09/2024	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 17/01/2025	Condition category Circulatory System	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

In the Netherlands, 100,000 patients live with the long-term consequences of a TIA or ischaemic stroke at a young age (18-49 years old). The majority of these patients will use lifelong blood thinners (for example clopidogrel). This treatment strategy is based on studies among people with stroke due to atherosclerosis, who were on average 65 years of age. It is unknown whether lifelong use of blood thinners is effective for young people with TIA or ischaemic stroke as it is in elderly people, particularly in patients without a known cause for their stroke (cryptogenic stroke). Yet, young patients are exposed to blood thinners for decades with an increased risk of serious bleeding. It has never been established whether the benefits of blood thinners outweigh the risks for young patients, particularly in patients without atherosclerosis. The STOP trial aims to investigate whether blood thinners can safely be stopped three or more years after a TIA or ischemic stroke without a known cause at a young age.

Who can participate?

Patients who had a TIA or ischaemic stroke at the age of 18-49 years, for which the treating neurologist did not find a cause. The TIA or ischaemic stroke should have taken place at least 3 years before inclusion and participation in the study and patients should not have experienced a recurrent stroke or myocardial infarction afterwards.

What does the study involve?

Patients are randomly allocated to two groups: group 1 stops taking blood thinners, and group 2 continues taking blood thinners. Patients are requested to fill in a questionnaire each year. The study will run for 5 years.

What are the possible benefits and risks of participating?

Patients who stop using blood thinners have a lower risk of serious bleeding complications. In addition, stopping antiplatelet therapy provides convenience for patients who don't have to take daily antiplatelet medication.

Patients who continue to use blood thinners have a risk of serious bleeding (for example bleeding from the gut or even bleeding in the brain). We expect that the risk of a recurrent stroke or myocardial infarction is similar for patients who stop or continue blood thinners. However, there might be a very small increased risk of a recurrent stroke or myocardial infarction among patients who stop blood thinners.

Where is the study run from?

The Radboud University Medical Center Nijmegen, the Netherlands

When is the study starting and how long is it expected to run for?

Recruitment is planned to start in october 2024 and run for two years

Who is funding the study?

The Netherlands Organisation for Health Research and Development

Who is the main contact?

Prof. Frank-Erik de Leeuw, FrankErik.deLeeuw@radboudumc.nl

Contact information

Type(s)

Public, Scientific, Principal investigator

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Additional identifiers

Clinical Trials Information System (CTIS)

2024-513092-40-00

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

114180, ZonMw Subsidy decision on file number: 10140252210002

Study information

Scientific Title

Stopping or continuing platelet inhibitors after cryptogenic stroke at young age: STOP trial

Acronym

STOP trial

Study objectives

Discontinuation of antiplatelet drugs is non-inferior to continuation of antiplatelet drugs, three or more years after a cryptogenic stroke at young age

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 14/11/2024, METC Oost Nederland (Geert Grooteplein Zuid 10, Nijmegen, 6500 HB, Netherlands; +31243613154; metcoost-en-cmo@radboudumc.nl), ref: None provided

Study design

Multicenter randomized non-inferiority trial

Primary study design

Interventional

Study type(s)

Treatment, Safety

Health condition(s) or problem(s) studied

Patients with cryptogenic stroke at the age of 18-49 years

Interventions

Discontinuation of antiplatelet therapy.

The intervention is the discontinuation of oral daily antiplatelet therapy (clopidogrel 75mg once daily or acetylsalicylic acid 80mg once daily, with or without dipyridamole 200mg twice daily).

The comparator is the continuation of antiplatelet therapy according to standard care. There is no specific trial drug manufacturer. Patients will be randomly allocated 1:1 by an external web-based system to the intervention or comparator arm.

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Clopidogrel, acetylsalicylic acid, dipyridamole

Primary outcome(s)

Primary efficacy outcome:

1. A composite endpoint of major vascular events, defined as TIA with imaging confirmation, stroke, myocardial infarction, or death from vascular causes measured using a digital

questionnaire or telephone follow-up and verified with medical records with annual follow-up for five years

Primary safety outcome:

2. Major bleeding, according to the International Society for Thrombosis and Haemostasis criteria, measured using a digital questionnaire or telephone follow-up and verified with medical records with annual follow-up for five years

Key secondary outcome(s)

The following secondary outcome measures are assessed using digital questionnaires or telephone follow-up with annual follow-up for five years:

1. Disability measured using the modified Ranking Scale
2. Quality of life measured using EQ-5D-5L
3. All cause mortality

Completion date

01/11/2032

Eligibility

Key inclusion criteria

1. First ever ischaemic stroke, or TIA with evidence of ischaemia on imaging, 3-10 years before study participation
2. Age 18-49 years old at the time of TIA/ischaemic stroke
3. Cryptogenic aetiology, defined as no other aetiology after standard work-up according to national and international guidelines for young stroke (imaging of the brain (CT-scan or MRI-scan) and cervical arteries (CTA, MRA or carotid ultrasound), routine blood tests (complete blood count, erythrocyte sedimentation rate, CRP, antiphospholipid antibodies, ECG, at least 24 hours cardiac rhythm monitoring and transthoracic/transesophageal echocardiography).

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Upper age limit

65 years

Sex

All

Key exclusion criteria

1. History of MI, coronary revascularisation or documented peripheral arterial disease
2. Other indication for antiplatelet therapy

3. Indication for oral anticoagulants or low molecular weight heparin
4. Recurrent ischaemic event at any time after the index event
5. Any stenosis of intracranial or cervical artery at time of stroke
6. Two or more risk factors for atherosclerotic disease prior to the index event, according to the following definitions:
 - 6.1. Arterial hypertension (treated or known blood pressure before stroke >140/90 mm Hg)
 - 6.2. Diabetes mellitus (treated or known blood fasting glucose >7 mmol/l)
 - 6.3. Current smoking (or smoking stopped within the last 6 months)
 - 6.4. Hypercholesterolaemia (treated or known low-density lipoprotein before the stroke >160 mg/dl or 4, mmol/l)
7. Any condition that prevents long-term follow-up

Date of first enrolment

23/12/2024

Date of final enrolment

01/10/2026

Locations

Countries of recruitment

Netherlands

Study participating centre

Radboud University Medical Center

Geert Grooteplein Zuid 10

Nijmegen

Netherlands

6500 HB

Sponsor information

Organisation

Radboud University Nijmegen Medical Centre

ROR

<https://ror.org/05wg1m734>

Funder(s)

Funder type

Research organisation

Funder Name

ZonMw

Alternative Name(s)

Netherlands Organisation for Health Research and Development

Funding Body Type

Private sector organisation

Funding Body Subtype

Other non-profit organizations

Location

Netherlands

Results and Publications

Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes