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Heart Outcomes Prevention Evaluation-3 (HOPE-3) trial

Submission date	Recruitment status	[ ] Prospectively registered
07/10/2008	No longer recruiting	[ ] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
12/11/2008	Completed	[X] Results
Last Edited	**Condition category**	[ ] Individual participant data
25/03/2019	Circulatory System	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

ClinicalTrials.gov (NCT)
NCT00468923

Protocol serial number
IR2-91038

Study information

Scientific Title
Heart Outcomes Prevention Evaluation-3 (HOPE-3) trial: a large simple randomised trial of combined cholesterol modification and blood pressure lowering in middle aged people at average risk

Acronym
HOPE-3

Study objectives
In individuals at moderate risk and without known atherothrombotic cardiovascular disease (CVD):
1. To evaluate the effects of lipid modification (low density lipoprotein [LDL] cholesterol lowering and high density lipoprotein [HDL] cholesterol raising) with rosuvastatin 10 mg daily on major cardiovascular (CV) events
2. To evaluate the effects of blood pressure lowering with combined candesartan 16 mg /hydrochlorothiazide (HCT) 12.5 mg daily on major CV events
3. To evaluate the impact of combined lipid modification with rosuvastatin 10 mg/day and blood pressure lowering with candesartan 16 mg/HCT 12.5 mg daily on major CV events

Ethics approval required
Old ethics approval format

Ethics approval(s)
Research Ethics Board of McMaster University gave approval on the 16th April 2007 (ref: 06-434)

Study design
Interventional randomised controlled trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Cardiovascular disease/stroke

Interventions
Experimental group:
Rosuvastatin 10 mg, once a day
Candesartan 16 mg/hydrochlorothiazide (HCT) 12.5 mg, once a day

Control group:
Matching placebo 10 mg, once a day
Matching placebo 16 mg/HCT 12.5 mg, once a day

An average of at least 5 years of follow-up for both study arms.

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Intervention Type
Drug

Phase
Not Specified

Drug/device/biological/vaccine name(s)
Rosuvastatin, candesartan/hydrochlorothiazide

Primary outcome(s)
The composite of CV death, non-fatal myocardial infarction (MI) and non-fatal stroke, measured at 6 weeks, 6 months and then every 6 months until study end.

Key secondary outcome(s))
1. The composite of CV death, non-fatal MI, non-fatal stroke, resuscitated cardiac arrest, coronary revascularisation with objective evidence of ischaemia and heart failure measured at 6 weeks, 6 months, and then every 6 months until study end
2. Total mortality measured at 6 weeks, 6 months, and then every 6 months until study end

Completion date
31/05/2013

Eligibility

Key inclusion criteria
1. Women aged greater than or equal to 60 years with at least two additional risk factors and, women aged greater than or equal to 65 years and men greater than or equal to 55 years with at least one additional risk factor
2. Suggested CV risk factors for trial eligibility:
2.1. Waist/hip ratio greater than 0.90 in men and greater than 0.85 in women
2.2. History of current or recent smoking (regular tobacco use within 5 years)
2.3. Low HDL cholesterol (for example, HDL cholesterol less than 1.0 mmol/L [40 mg/dl] in men and less than 1.3 mmol/L [50 mg/dl] in women)
2.4. Dysglycaemia (impaired fasting glucose [IFG], impaired glucose tolerance [IGT] or uncomplicated diabetes treated by diet only)
2.5. Renal dysfunction:
2.5.1. Microalbuminuria
2.5.2. Estimated glomerular filtration rate (eGFR) less than 60 ml/min/1.73 m^2 or serum creatinine greater than 124 µmol/L (1.4 mg/dL) (unless participant has proteinuria or blood pressure above 130/80 mmHg)
2.6. Family history of premature coronary heart disease (CHD) in first degree relatives (age less than 55 years in men or less than 65 years in women)
3. Provision of informed consent

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. Documented clinically manifest atherothrombotic CVD
2. Clear indication for statin and/or angiotensin-receptor blocker (ARB) or angiotensin converting enzyme (ACE) inhibitor and/or thiazide diuretic therapy, as determined by the subject's own local physician
3. Clear contraindication for statin and/or ARB or ACE inhibitor and/or thiazide diuretic therapy, as determined by the subject's own local physician
4. Symptomatic hypotension
5. Chronic liver disease (i.e. cirrhosis or persistent hepatitis) or abnormal liver function, i.e. alanine aminotransferase (ALT) or aspartate aminotransferase (AST) greater than 3 x upper limit of normal (ULN)
6. Inflammatory muscle disease (such as dermatomyositis or polymyositis) or creatine kinase (CK) greater than 3 x ULN
7. Moderate renal dysfunction (serum creatinine greater than 180 µmol/L [2.0 mg/dl] or eGFR less than 45 ml/min/1.73 m^2)
8. Mild renal dysfunction (eGFR less than 60 ml/min/1.73 m^2) and proteinuria or blood pressure above 130/80 mmHg
9. Concurrent treatment with cyclosporin or a condition likely to result in organ transplantation and the need for cyclosporin
10. Concurrent treatment with a statin or a fibrate (subjects on cholesterol-lowering diets or drugs other than statins or fibrates can still be included)
11. Concurrent treatment with an angiotensin receptor blocker, ACE inhibitor, or a thiazide diuretic
12. Other serious medical illness likely to interfere with study participation or with the ability to complete the trial
13. Significant psychiatric illness, senility, dementia, alcohol or substance abuse, which could impair the ability to provide informed consent and to adhere to the trial procedures
14. Concurrent use of an experimental pharmacological agent

Date of first enrolment
01/05/2007

Date of final enrolment
31/05/2013

Locations

Countries of recruitment

Argentina

Australia

Brazil

Canada

Chile

China

Colombia

Czech Republic

Hungary

India

Korea, South

Malaysia

Netherlands

Philippines

Russian Federation

Slovakia

South Africa

Sweden

Ukraine

Study participating centre
Population Health Research Institute
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Sponsor information

Organisation

Hamilton Health Sciences Corporation (Canada)

ROR
https://ror.org/02dqdxm48

Funder(s)

Funder type
Research organisation

Funder Name
Canadian Institutes of Health Research (CIHR) (Canada) - http://www.cihr-irsc.gc.ca (ref: IR2-91038)

Funder Name
AstraZeneca (Canada)

Alternative Name(s)
AstraZeneca PLC, Pearl Therapeutics, AZ

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/03/2016		Yes	No
Results article	results	26/05/2016		Yes	No
Results article	results	26/05/2016		Yes	No

Results article	results	26/05/2016		Yes	No
Results article	results	26/03/2019		Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes