

Omega 3 fatty acid treatment in patients with epilepsy

Submission date	Recruitment status	<input checked="" type="checkbox"/> Prospectively registered
13/05/2014	No longer recruiting	<input type="checkbox"/> Protocol
Registration date	Overall study status	<input type="checkbox"/> Statistical analysis plan
20/08/2014	Completed	<input checked="" type="checkbox"/> Results
Last Edited	Condition category	<input type="checkbox"/> Individual participant data
10/05/2021	Nervous System Diseases	

Plain English summary of protocol

Background and study aims

Eating foods rich in omega 3 fatty acids, EPA and DHA is considered to be very good for us. There is a lot of evidence to suggest they help prevent a number of diseases, including cardiovascular (for example heart) disease and neurological (for example brain) disease as well as maintain the normal functioning of both the heart and the brain. It is also thought that they may help in reducing drug-induced toxicity and boosting how well a drug works against a disease. It is possible that omega 3 fatty acids will help patients with epilepsy by reducing the number of seizures that they have and by making those that they do have, less severe. It is also thought that they may prevent the cardiac arrhythmia (irregular beating of the heart) and sudden unexpected death that can happen after a seizure and help control the psychological effects of the disease. As there is evidence that seizures may result in inflammation, epileptic patients may also benefit from the anti-inflammatory effects of omega 3 fatty acids. Here, we will investigate how omega 3 fatty acids may help to prevent patients with difficult to treat epilepsy for which there is no known cause (refractory idiopathic epilepsy) from having seizures and reduce the possibility of dying from them.

Who can participate?

Patients with refractory idiopathic epilepsy, aged 17 to 50 years.

What does the study involve?

Patients are randomly allocated into one of two groups. Those in group 1 are asked to take an omega 3 supplement contains 1.5g DHA and 390mg EPA for one year. Those in group 2 take a placebo (dummy pill). Blood samples are collected from all participants at the start and end of the trial for analysis. Clinical history, neurological and psychological/psychiatric assessments are also carried out at the start and end of the trial.

What are the possible benefits and risks of participating?

Each participant will receive a close monitoring throughout the study duration. There is no risk to participating.

Where is the study run from?

The study has been set up by the Lipidomics and Nutrition Research Centre, Faculty of Life

Sciences and Computing, London Metropolitan University (UK) in collaboration with the University of Khartoum Hospital, Khartoum (Sudan).

When is study starting and how long is it expected to run for?
September 2014 to February 2017

Who is funding the study?
Lipidomics and Nutrition Research Centre, London (UK)
University of Khartoum Hospital (Sudan)
Efamol Limited (UK)

Who is the main contact?
Professor Kebreab Ghebremeskel,
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Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

Protocol serial number
EPILOEMGA3 v1

Study information

Scientific Title
Omega 3 fatty acid supplementation to prevent seizure in patients with refractory epilepsy

Acronym
EPILOMEGA3

Study objectives
1. Core null hypothesis: Patients with refractory epilepsy do not have abnormal plasma and blood cell fatty acids; Supplementation with the long-chain polyunsaturated omega 3 fatty acids,

EPA and DHA, will not prevent seizures in patients with refractory epilepsy.

2. Subsidiary null hypothesis: Refractory epileptics supplemented with EPA and DHA will not have enhanced mental performance, cognition and memory.

3. Nested null hypotheses: Treatment of refractory epileptic patients with EPA and DHA will not improve behavioural and psychiatric disorders; modulate clinical markers of cardiac arrhythmias; down-regulate inflammatory markers.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Research Ethics Committee of the Faculty of Medicine, University of Khartoum, Sudan, 26/11/2012

Study design

Double-blind placebo-controlled randomised intervention trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Epilepsy

Interventions

1. Active supplement (contains 1.5g DHA and 390mg EPA)

2. Placebo (1.9g of saturated and monounsaturated fatty acid blend)

Intervention Type

Supplement

Primary outcome(s)

Complete elimination or reduction in the frequency seizures

Key secondary outcome(s)

1. Improvements of cognition, memory, and manifestations of behavioural and psychiatric disorders 2. Modulation of clinical markers of cardiac arrhythmias; down regulation of inflammatory markers

Completion date

28/02/2017

Eligibility

Key inclusion criteria

Patients with refractory idiopathic epilepsy, aged 17 to 50 years

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Total final enrolment

99

Key exclusion criteria

1. Age under 17 and over 50 years
2. Other diseases in addition to epilepsy
3. Structural lesions
4. Pregnancy
5. Responsive to AED
6. Less than two seizures a month

Date of first enrolment

01/09/2014

Date of final enrolment

28/02/2017

Locations

Countries of recruitment

United Kingdom

England

Sudan

Study participating centre

London Metropolitan University

London

United Kingdom

N7 8DB

Sponsor information

Organisation

Faculty of Life Sciences and Computing, London Metropolitan University (UK)

ROR

<https://ror.org/00ae33288>

Funder(s)

Funder type

University/education

Funder Name

Lipidomics and Nutrition Research Centre, London Metropolitan University, London (UK)

Funder Name

University of Khartoum Hospital (Sudan)

Funder Name

Efamol Limited (UK)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		01/10/2018	10/05/2021	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes