# Fish Feeding Study (FFS): The impact of fish and fish oil capsule intake on omega-3 fatty acid status, health and cognitive function of Omani school children of 9-10 years old living in Muscat

Submission date	Recruitment status  No longer recruiting	<ul><li>Prospectively registered</li></ul>		
13/07/2012		☐ Protocol		
Registration date	Overall study status	<ul><li>Statistical analysis plan</li></ul>		
10/01/2013	Completed  Condition category	Results		
Last Edited		Individual participant data		
24/11/2014	Nutritional, Metabolic, Endocrine	<ul><li>Record updated in last year</li></ul>		

#### Plain English summary of protocol

Background and study aims

There has been a sharp increase in obesity, type 2 diabetes, and cardio-vascular disease in Omani population. Childhood obesity is a strong precursor for adult obesity which in turn is associated with type 2 diabetes and cardio-vascular disease. Moreover, more children are affected by psychiatric disorder such as attention deficit and hyperactivity disorder. Growing evidence suggests that increased consumption of fish and marine products which are the main source of long-chain omega-3 fatty acids have beneficial effect on obesity, cardio-vascular disease and childrens learning and behaviour. In this study, we aim to (a) assess nutritional status (b) investigate the effect of omega-3 fatty acids either by eating more fish or taking omega-3 oil on the lipid profile, body fat, and cognition and behaviour of Omani children.

#### Who can participate?

Healthy male and female Omani school children of 9-10 years old living in Muscat, Sultanate of Oman.

#### What does the study involve?

Children will be asked either to eat fish meal or take one capsule of omega-3 fish oil four times a week for 16 weeks. Blood samples obtained before and after the dietary intervention will be assessed for the nutritional status, blood lipid profile, and total blood counts. Similarly, body composition, and cognition and behaviour will be assessed in all children.

What are the possible benefits and risks of participating?

Each participant (childrens parent or guardian) will receive a feedback on their overall nutritional and health status.

There is no risk of 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 in collaboration with the Ministries of Agriculture and Fisheries Wealth, Health, and Education, and Sultan Qaboos University, Sultanate of Oman. The recruitment, intervention and part of the assessment will be carried out in Muscat, Sultanate of Oman, and some of the biochemical analysis will be conducted at London Metropolitan University.

When is the study starting and how long is it expected to run for? The study started in September 2012 and will last for two years.

Who is funding the study?

The Ministry of Agriculture and Fisheries Wealth, Sultanate of Oman has provided the funding for the study.

Who is the main contact? Profession Kebreab Ghebremeskel k.ghebremeskel@londonmet.ac.uk

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# **Contact information**

#### Type(s)

Scientific

#### Contact name

Prof Kebreab Ghebremeskel

#### Contact details

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### Additional identifiers

Protocol serial number

v1

# Study information

#### Scientific Title

The impact of fish and fish oil capsule intake on omega-3 fatty acid status, health and cognitive function of Omani school children of 9-10 years old living in Muscat: a randomised open-label trial

#### Acronym

#### **Study objectives**

Additional intake of fish or omega-3 oil capsule does not enhance blood docosahexaenoic acid (DHA) level in healthy Omani school children.

#### Ethics approval required

Old ethics approval format

#### Ethics approval(s)

- 1. Research and Ethical Review and Approve Committee, Ministry of Health, Sultanate of Oman, 19/06/2012, ref: MH/DGP/R%S/PROPOSAL\_APPROVED/8/2012
- 2. NRES Committee North West Haydock, UK, 11/10/2012, REC Reference 12/NW/0760

#### Study design

Randomised open-label trial

#### Primary study design

Interventional

#### Study type(s)

Quality of life

#### Health condition(s) or problem(s) studied

Nutritional status

#### **Interventions**

Fish Meal Group - Fish lunch (100-150g of fish per serving) 4 times a week

Omega-3 Oil Group - One fish oil capsule which contains 200-250 mg long-chain omega-3 fatty acids 4 times a week

Total duration of intervention: 16 weeks

#### Intervention Type

Supplement

#### Primary outcome(s)

Red blood cell docosahexaenoic acid (DHA) level at the end of 16 weeks of dietary intervention

#### Key secondary outcome(s))

- 1. Body fat %
- 2. Full blood counts
- 3. Blood lipid profile
- 4. Behaviour and cognitive functions

Measured at the end of 16 weeks of dietary intervention

#### Completion date

31/08/2014

# **Eligibility**

#### Key inclusion criteria

Male and female children aged 9-10 years who do not have any hereditary or chronic medical condition

#### Participant type(s)

**Patient** 

#### Healthy volunteers allowed

No

#### Age group

Child

#### Lower age limit

9 years

#### Upper age limit

10 years

#### Sex

All

#### Key exclusion criteria

Children with known hereditary or chronic medical condition which requires medication or suffer from fish or shellfish allergy

#### Date of first enrolment

01/09/2012

#### Date of final enrolment

31/08/2014

## Locations

#### Countries of recruitment

United Kingdom

England

Oman

# Study participating centre Lipidomics and Nutrition Research Centre London United Kingdom N7 8DB

# Sponsor information

#### Organisation

London Metropolitan University (UK)

#### **ROR**

https://ror.org/00ae33288

# Funder(s)

#### Funder type

Government

#### Funder Name

Ministry of Agriculture and Fisheries Wealth (Oman) (Ref. No. 1/3/43)

# **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?
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