ISRCTN24439243 https://doi.org/10.1186/ISRCTN24439243

# A nutritional intervention study for the evaluation of health benefits of hake consumption in a high cardiovascular risk population

**Submission date**
29/03/2010

**Recruitment status**
No longer recruiting

**Registration date**
30/04/2010

**Overall study status**
Completed

**Last Edited**
30/04/2010

**Condition category**
Nutritional, Metabolic, Endocrine

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

**Plain English summary of protocol**
Not provided at time of registration

## Contact information

**Type(s)**
Scientific

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## Additional identifiers

**Protocol serial number**
33UT08011

## Study information

**Scientific Title**

The evaluation of health benefits of hake consumption in a high cardiovascular risk population: a randomised cross-over open nutritional interventional study

## Study objectives
The following main hypothesis is raised: Frequent hake intake improves the individual components of the metabolic syndrome (blood pressure, lipid profile and body weight) in patients with high cardiovascular risk, and therefore yield the specific health claims for hake labelling.

## Ethics approval required
Old ethics approval format

## Ethics approval(s)
Reference Review Board of the Comite Etico de Investigacion Clinica de Galicia approved on the 27th July 2008. An amendment was approved on the 31st March 2009.

## Study design
Randomised cross-over open trial

## Primary study design
Interventional

## Study type(s)
Treatment

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

## Interventions
Control period:
Patients are put under basic alimentary roles of a balanced diet, except for the total absence of fish intake. This will last for 8 weeks.

Intervention period:
Patients are put under basic alimentary roles of a balanced diet, but in this case they take 7 servings of white fish a week.

During the study period, all subjects will follow medical advice as well as prescribed medications by the responsible medical team attending the patients, except for the interventions described above. All the education and information given to the patients will aim to only modify fish intake, which will always be Pescanova Hake, or total absence of fish intake. For the rest of items of the diet, following the general principles of a balanced diet, patients will be told to feel free to chose foods according to their preferences as to avoid biases which could affect a short-term study.

This is a randomised cross-over open trial, with an intervention period of 8 weeks and a control one of 8 weeks. The total duration of the trial is 16 weeks.

## Intervention Type
Other

### Phase
Not Applicable

### Primary outcome(s)
Serum triglyceride concentrations, measured at the inclusion time and at the end of each intervention period (3 measurements altogether)

### Key secondary outcome(s))
Measured at the inclusion time and at the end of each intervention period (3 measurements altogether):
1. Other components of the metabolic syndrome as defined by the ATP III
2. Anthropometric variables: height, weight, waist and hip circumferences
3. Biochemical markers and chronic inflammation markers
4. Adherence and feasibility of the nutritional intervention
5. Erythrocyte membrane omega-3 concentrations
6. Insulin resistance (Homeostatic Model Assessment [HOMA])

### Completion date
01/03/2011

## Eligibility

### Key inclusion criteria
1. Aged between 18 and 75 years, either sex
2. Recruited in outpatients clinics of the participant centres
3. Voluntarily agree with the study protocol and give written informed consent
4. Thorough clinical history and informative meeting has been performed
5. Metabolic syndrome (primary intervention). The presence of metabolic syndrome according to 2004 ATP-III (Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation and Treatment of High Blood Cholesterol in Adults) criteria will be evaluated. According to the latter, for the diagnosis of the metabolic syndrome, three or more of the following criteria have to be present:
5.1. Central obesity: waist circumference greater than 102 cm in men and greater than 88 cm in women
5.2. Hypertriglyceridemia: triglycerides greater than or equal to 150 mg/dL (greater than or equal to 1.7 mmol/L) or on treatment
5.3. High density lipoprotein (HDL) less than 40 mg/dL (less than 1.1 mmol/L) in men or less than 50 mg/dL (1.3 mmol/L) in women
5.4. Hypertension: systolic blood pressure greater than or equal to 130 mmHg and/or diastolic greater than or equal to 85 mmHg, or on treatment
5.5. Fasting blood glucose greater than or equal to 100 mg/dL (greater than or equal to 5.6 mmol /L) or any other carbohydrate metabolism disorder (including diabetes and glucose intolerance)

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group

Adult

### Lower age limit
18 years

### Sex
All

### Key exclusion criteria
Those who presented any of the following after a thorough clinical history:
1. Previous allergy to fish or Anisakis infection
2. Morbid obesity (body mass index [BMI] greater than 40)
3. Chronic renal failure
4. Creatinine clearance (CrCl) greater than 30
5. Chronic psychopathology
6. Malignancy
7. Refuse to participate
8. Fibrates treatment

### Date of first enrolment
25/02/2009

### Date of final enrolment
01/03/2011

## Locations

### Countries of recruitment
Spain

### Study participating centre
**C/Choupana S/N**
Santiago De Compostela
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## Sponsor information

### Organisation
Pescanova S.A. (Spain)

## Funder(s)

**Funder type**
Industry

**Funder Name**
Pescanova S.A. (Spain)

**Funder Name**
Biomedical Research Center in Red-Physiopathology of Obesity and Nutrition (CIBERobn) (Spain)

# 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 |