# Evaluation of the effect of nut consumption on energy balance, metabolic, inflammatory response and oxidation

<b>Recruitment status</b> No longer recruiting	Prospectively registered	
	[_] Protocol	
<b>Overall study status</b> Completed	[] Statistical analysis plan	
	[X] Results	
<b>Condition category</b> Nutritional, Metabolic, Endocrine	Individual participant data	
	No longer recruiting Overall study status Completed Condition category	

# Plain English summary of protocol

Not provided at time of registration

# **Contact information**

**Type(s)** Scientific

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# **Contact details**

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# Additional identifiers

EudraCT/CTIS number

**IRAS number** 

ClinicalTrials.gov number

Secondary identifying numbers AGL2005-03605

# Study information

Scientific Title

Acronym EFINUT

**Study objectives** Regular nut consumption improves cardiovascular risk factors in metabolic syndrome patients without adverse effects on energy balance and insulin sensitivity

**Ethics approval required** Old ethics approval format

**Ethics approval(s)** Approved by Sant Joan Hospital Ethical Committee, reference number: EFINUT-05-01-27/1proj2

**Study design** Randomised controlled clinical trial

**Primary study design** Interventional

**Secondary study design** Randomised controlled trial

**Study setting(s)** Not specified

**Study type(s)** Treatment

Participant information sheet

Health condition(s) or problem(s) studied

Metabolic syndrome

## Interventions

Participants are randomly assigned into two equal groups: 1. Control group: low-fat diet according to American Heart Association guidelines 2. Nut group: low-fat diet according to American Heart Association guidelines with an added 30 g /day of nuts

Intervention Type Other

**Phase** Not Specified

### Primary outcome measure

Peripheral inflammatory markers

### Secondary outcome measures

- 1. Stress oxidative markers
- 2. Endothelial function
- 3. Insulin sensitivity
- 4. Energy balance

# Overall study start date

08/01/2006

Completion date 31/12/2007

# Eligibility

**Key inclusion criteria** Patients with metabolic syndrome aged between 18 and 65 years

**Participant type(s)** Patient

**Age group** Adult

**Lower age limit** 18 Years

**Sex** Both

**Target number of participants** 50; male and female

### Key exclusion criteria

- 1. Nut allergy
- 2. Type 2 diabetes
- 3. Body mass index (BMI) >33 kg/m^2
- 4. Secondary obesity
- 5. Inflammatory or infectious disease
- 6. Anti-inflammatory or antibiotic drugs
- 7. Alcoholism or drug abuse
- 8. Recent hypocaloric diet

Date of first enrolment 08/01/2006

Date of final enrolment 31/12/2007

# Locations

**Countries of recruitment** Spain

**Study participating centre C/Sant Llorenç 21** Reus Spain 43201

# Sponsor information

### Organisation

Ministry of Education and Science (Ministerio de Educacion y Ciencia) (Spain)

## Sponsor details

Paseo de la Castellana 160 Pta 12 Madrid Spain 28071 +34 (0)91 349 40 00 dtcv@mec.es

## Sponsor type

Government

Website http://www.mec.es

# Funder(s)

**Funder type** Government

**Funder Name** Ministry of Education and Science (Ministerio de Educacion y Ciencia)

Alternative Name(s) Ministry of Education and Science, MEC **Funding Body Type** Government organisation

Funding Body Subtype Local government

**Location** Portugal

Funder Name International Nut Council

# **Results and Publications**

# Publication and dissemination plan

Not provided at time of registration

Intention to publish date

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	results	01/06/2010		Yes	No