

PROSPERO International prospective register of systematic reviews

Review title and timescale

- 1 **Review title**
Give the working title of the review. This must be in English. Ideally it should state succinctly the interventions or exposures being reviewed and the associated health or social problem being addressed in the review.
Systematic review: food timing and hormonal circadian rhythm in obesity related metabolic disorders
- 2 **Original language title**
For reviews in languages other than English, this field should be used to enter the title in the language of the review. This will be displayed together with the English language title.
Revisión Sistemática: Horario de alimentación y Ritmo circadiano hormonal en alteraciones metabólicas relacionadas a la obesidad
- 3 **Anticipated or actual start date**
Give the date when the systematic review commenced, or is expected to commence.
09/11/2015
- 4 **Anticipated completion date**
Give the date by which the review is expected to be completed.
15/08/2017
- 5 **Stage of review at time of this submission**
Indicate the stage of progress of the review by ticking the relevant boxes. Reviews that have progressed beyond the point of completing data extraction at the time of initial registration are not eligible for inclusion in PROSPERO. This field should be updated when any amendments are made to a published record.

The review has not yet started

Review stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	Yes	Yes
Risk of bias (quality) assessment	Yes	Yes
Data analysis	Yes	Yes

Provide any other relevant information about the stage of the review here.

Final Protocol finished

Review team details

- 6 **Named contact**
The named contact acts as the guarantor for the accuracy of the information presented in the register record.
Miss Bohorquez Medina
- 7 **Named contact email**
Enter the electronic mail address of the named contact.
bohorquez.m.andrea@gmail.com
- 8 **Named contact address**
Enter the full postal address for the named contact.
Lima 33. Calle Padre Luis Tezza 153.
- 9 **Named contact phone number**
Enter the telephone number for the named contact, including international dialing code.
+51954714287
- 10 **Organisational affiliation of the review**

Full title of the organisational affiliations for this review, and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

Universidad San Ignacio de Loyola

Website address:

<http://www.epg.usil.edu.pe/2015/>

11 Review team members and their organisational affiliations

Give the title, first name and last name of all members of the team working directly on the review. Give the organisational affiliations of each member of the review team.

Title	First name	Last name	Affiliation
Miss	Andrea	Bohorquez Medina	PhD student

12 Funding sources/sponsors

Give details of the individuals, organizations, groups or other legal entities who take responsibility for initiating, managing, sponsoring and/or financing the review. Any unique identification numbers assigned to the review by the individuals or bodies listed should be included.

This review is not sponsored or financed by any institution, it's a self review, part of my doctoral thesis.

13 Conflicts of interest

List any conditions that could lead to actual or perceived undue influence on judgements concerning the main topic investigated in the review.

Are there any actual or potential conflicts of interest?

None known

14 Collaborators

Give the name, affiliation and role of any individuals or organisations who are working on the review but who are not listed as review team members.

Title	First name	Last name	Organisation details
Professor	Felipe	Ignacio Cconchoy	Professor at San Ignacio de Loyola University
Miss	Sofia	Bohórquez Medina	Phd Student

Review methods

15 Review question(s)

State the question(s) to be addressed / review objectives. Please complete a separate box for each question.

What is the relationship between food timing and hormonal circadian rhythm?

How is food timing related to overweight and obesity among humans?

Is there a schedule to eat that prevents metabolic disorders related to obesity?

Does meal timing affects glucose and lipid metabolism?

16 Searches

Give details of the sources to be searched, and any restrictions (e.g. language or publication period). The full search strategy is not required, but may be supplied as a link or attachment.

Databases with accessed through institution : HINARI, PubMed, EBSCO, PROQUEST, EMBASE, Google Scholar, Science Direct, Scopus Inclusion of prospective cohort, cross-sectional and clinical trial studies, because it's recently researched there aren't many clinical trial Publication period: For Review purposes, not limited. But mostly of the papers were published between 2000 -- 2015 MeSH: "Food timing" "Meal timing" "Scheduled feeding" "tiime restricted feeding"AND "obesity" "metabolic disorders" "diabetes mellitus" "insuline resistance" "lipid disorders" "metabolic syndrome" and it's variations in Spanish and Portuguese Language of publication: Spanish, English and Portuguese

17 URL to search strategy

If you have one, give the link to your search strategy here. Alternatively you can e-mail this to PROSPERO and we

will store and link to it.

https://www.crd.york.ac.uk/PROSPEROFILES/32455_STRATEGY_20170715.pdf

I give permission for this file to be made publicly available

Yes

- 18 Condition or domain being studied
Give a short description of the disease, condition or healthcare domain being studied. This could include health and wellbeing outcomes.
Primarily this review is focused on a new approach to treat and prevent obesity and related metabolic diseases by using food intake timing. We believe, that if food schedule affects weight, such as night eating it's related to weight gain, insulin resistance, and type 2 diabetes, changing time of food intake can be helpful to reverse it. As far as we know hormones have circadian modulation throughout the day, now we know that can be disrupted by food entrainments. If we find the relationship, we hope to develop new approaches to treat obesity, not only through caloric restriction. As a nutritionist we expect to create strategies to treat and prevent obesity and its complication.
- 19 Participants/population
Give summary criteria for the participants or populations being studied by the review. The preferred format includes details of both inclusion and exclusion criteria.
Participants: Both male and females No young children or teenagers Exclude other diseases such as renal failure, liver and thyroid disorders People with a calorie restriction diet prior to the study
- 20 Intervention(s), exposure(s)
Give full and clear descriptions of the nature of the interventions or the exposures to be reviewed
Intervention: Schedule feeding: Day time or Night Time Time restricted feeding: hours a day to eat Diet distribution through the day (More intake at mornings) Night fasting
- 21 Comparator(s)/control
Where relevant, give details of the alternatives against which the main subject/topic of the review will be compared (e.g. another intervention or a non-exposed control group).
Control group: Ad libitum eating Only Day phase eating
- 22 Types of study to be included
Give details of the study designs to be included in the review. If there are no restrictions on the types of study design eligible for inclusion, this should be stated.
We have no restriction on the type of study, as there is little literature and published research, but we will focus on: clinical trial studies, randomized, crossover, double blind
- 23 Context
Give summary details of the setting and other relevant characteristics which help define the inclusion or exclusion criteria.
In order to assess if the time of food intake could change obesity related metabolic disorders dependent on the time of the day. We rechecked all human interventions in which the eating time is assessed and lead to changes in weight, lipid disorders, glucose and insulin levels, that could be related to the growing prevalence of insulin resistance and diabetes.
- 24 Primary outcome(s)
Give the most important outcomes.
After intervention- Only active phase eating: Improve weight loss, insulin resistance Lower risk of diabetes mellitus 2 lower total cholesterol and LDL

Give information on timing and effect measures, as appropriate.
Intervention time: more than one week, cause it's been known that circadian disruption by eating at different hours takes at least 4 days. The measure of the intervention would be through: Weight changes, BMI, waist circumference Fasting blood glucose, Hb1Ac insulin, Triacylglycerids, total cholesterol, LDL, HDL Ghrelin
- 25 Secondary outcomes
List any additional outcomes that will be addressed. If there are no secondary outcomes enter None.
Postprandial response to food intake at different times.

Give information on timing and effect measures, as appropriate.

Postprandial: Insulin, Glucose, both trough (AUC) area under the curve, Postprandial HOMA, glucagon like peptide 1 (GLP-1)

- 26 Data extraction (selection and coding)
Give the procedure for selecting studies for the review and extracting data, including the number of researchers involved and how discrepancies will be resolved. List the data to be extracted.
There are two researchers and a professor to help solve the discrepancies in the selection of studies. After the database search, each researcher will select the studies to be included, after that it will take both to decide, if there are discrepancies, the professor will vote for one of the studies. Data will be collected in a format to specify: author, country, population, method, intervention, time, results.
- 27 Risk of bias (quality) assessment
State whether and how risk of bias will be assessed, how the quality of individual studies will be assessed, and whether and how this will influence the planned synthesis.
The risk of bias of: Random sequence generation. Allocation concealment. Blinding of participants and personnel Blinding of outcome assessment Incomplete outcome data Selective reporting. will be assessed according to the Validity and Inter-rater Reliability Testing of Quality Assessment Instruments Report of the Agency for health care research and quality published in PubMed.
- 28 Strategy for data synthesis
Give the planned general approach to be used, for example whether the data to be used will be aggregate or at the level of individual participants, and whether a quantitative or narrative (descriptive) synthesis is planned. Where appropriate a brief outline of analytic approach should be given.
As the topic of research it's recently studied, we have incorporated all type of studies, that way the analysis of the data is primarily descriptive. We will make data extraction to make tables of comparison between them, so we could have the main concept for intervention with scheduled feeding.
- 29 Analysis of subgroups or subsets
Give any planned exploration of subgroups or subsets within the review. 'None planned' is a valid response if no subgroup analyses are planned.
Subgroup analysis: Shift Workers (night workers) Night eating syndrome Sleep restriction all related to phase shifts and circadian disruption

Review general information

- 30 Type and method of review
Select the type of review and the review method from the drop down list.
Intervention, Systematic review

Nursing
- 31 Language
Select the language(s) in which the review is being written and will be made available, from the drop down list. Use the control key to select more than one language.
Spanish

Will a summary/abstract be made available in English?
Yes
- 32 Country
Select the country in which the review is being carried out from the drop down list. For multi-national collaborations select all the countries involved. Use the control key to select more than one country.
Peru
- 33 Other registration details
Give the name of any organisation where the systematic review title or protocol is registered together with any unique identification number assigned. If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here.
- 34 Reference and/or URL for published protocol
Give the citation for the published protocol, if there is one.

Andrea Bohorquez Medina. Systematic review: food timing and hormonal circadian rhythm in obesity related metabolic disorders. PROSPERO 2015:CRD42015032455 Available from http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42015032455

Give the link to the published protocol, if there is one. This may be to an external site or to a protocol deposited with CRD in pdf format.

http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42015032455

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Yes

35 Dissemination plans

Give brief details of plans for communicating essential messages from the review to the appropriate audiences.

We plan to publish, so it will be available for nutritionist and health care professionals to give new approaches to the treatment of obesity and it's complications. After that we plan on doing a large clinical trial with obese people to prove the results of the study.

Do you intend to publish the review on completion?

Yes

36 Keywords

Give words or phrases that best describe the review. (One word per box, create a new box for each term)

Food Timing

Circadian Rhythm

Metabolic disorders

Obesity

Meal Timing

37 Details of any existing review of the same topic by the same authors

Give details of earlier versions of the systematic review if an update of an existing review is being registered, including full bibliographic reference if possible.

None other reviews have been published before by us.

38 Current review status

Review status should be updated when the review is completed and when it is published.

Completed but not published

20/10/2017

39 Any additional information

Provide any further information the review team consider relevant to the registration of the review.

This review part of a thesis leading to a doctoral degree

40 Details of final report/publication(s)

This field should be left empty until details of the completed review are available.

Give the full citation for the final report or publication of the systematic review.

Give the URL where available.