Intro to creating a literature search

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Define your research question

**PICOT** – used to identify evidence-based research on your topic

- **Patient / Population / Problem**
- **Intervention**
- **Comparison**
- **Outcome**
- **Time**
Define your research question

PICOT – used to identify evidence-based research on your topic

Patient / Population / Problem - obesity
Intervention – anti-obesity medications
Comparison – placebo and/or ‘gold-standard’
Outcome – change in weight
Time – N/A (optional)
Define your scope

1) What type of studies do you wish to include?
2) How wide of a net do you want to cast?
3) Do you have specific seminal articles to use as examples?

**Scope**: RCTs and systematic reviews and meta-analyses from the past 5 years
Search for individual components of your research question

1) Obesity
2) Anti-obesity medications
3) RCTs, Systematic Reviews, Meta-Analyses
4) Remove irrelevant study types
5) Adults, not children
6) Past 5 years
Search for individual components of your research question

1) Obesity – **start with key terms for the topic**
   a) Obesity
   b) Overweight
   c) Weight
   d) Weight change
   e) Weight reduction
Search for individual components of your research question

   a) Obesity
   b) Overweight
   c) Weight
   d) Weight change
   e) Weight reduction
Search for individual components of your research question

1) Obesity
   a) Obesity
   b) Overweight
   c) Weight
   d) Weight change
   e) Weight reduction

[Image: Screenshot of PubMed search for obesity with MeSH terms]

National Library of Medicine
National Center for Biotechnology Information

MeSH
MeSH - obesity

Search results
Items: 1 to 20 of 34

- Obesity
  1. A status with BODY WEIGHT that is grossly above the recommended standards, usually due to accumulation of excess FATS in the body. The standards may vary with age, sex, genetic or cultural background. In the BODY MASS INDEX, a BMI greater than 30.0 kg/m^2 is considered obese, and a BMI greater than 40.0 kg/m^2 is considered morbidly obese (MORBID OBESITY).

- Pediatric Obesity
  2. BODY MASS INDEX in children (ages 2-12) and in adolescents (ages 13-18) that is grossly above the recommended cut-off for a specific age and sex. For infants less than 2 years of age, obesity is determined based on standard weight-for-length percentile measures.
  Year introduced: 2014

- Obesity, Abdominal
  3. A condition of having excess fat in the abdomen. Abdominal obesity is typically defined as waist circumferences of 40 inches or more in men and 35 inches or more in women. Abdominal obesity raises the risk of developing disorders, such as DIABETES, HYPERTENSION; and METABOLIC SYNDROME.
  Year introduced: 2010

- Anti-Obesity Agents
  4. Agents that increase energy expenditure and weight loss by neural and metabolic regulation.
  Year introduced: 1997
Search for individual components of your research question

1) Obesity
   (https://www.ncbi.nlm.nih.gov/mesh/)
   a) Obesity
   b) Overweight
   c) Weight
   d) Weight change
   e) Weight reduction
Search for individual components of your research question:

1) Obesity
   a) Obesity
   b) Overweight
   c) Weight
   d) Weight change
   e) Weight reduction

(MeSH terms on PubMed: https://www.ncbi.nlm.nih.gov/mesh/)
Search for individual components of your research question

1) Obesity
   a) Obesity
   b) Overweight
   c) Weight
   d) Weight change
   e) Weight reduction


4/27/2023
Search for individual components of your research question

1) Obesity – search for MESH terms on PubMed
   (https://www.ncbi.nlm.nih.gov/mesh/)
   a) Obesity – "Obesity"[Mesh]
   b) Overweight – "Overweight"[Mesh]
   c) Weight – "Body Weight"[Mesh]
   d) Weight change - "Body Weight Changes"[Mesh] OR "Body-Weight Trajectory"[Mesh] OR "Weight Gain"[Mesh]
   e) Weight reduction – "Weight Loss"[Mesh]
Search for individual components of your research question

1) Obesity – expand your search to include terms of interest that appear in the title or abstract [tiab] (link with OR)
   a) Obesity – "Obesity"[Mesh] OR “obes*”[tiab]
   b) Overweight – "Overweight"[Mesh] OR “overweigh*”[tiab]
   c) Weight – "Body Weight"[Mesh] OR “weigh*”[tiab]
   e) Weight reduction – "Weight Loss"[Mesh] OR “weight loss*”[tiab] OR “weight red*”[tiab]
Search for individual components of your research question

1) Obesity – expand your search to include terms of interest that appear in the title or abstract [tiab] (link with OR)
   a) Obesity – "Obesity"[Mesh] OR “obes*”[tiab]
   b) Overweight – "Overweight"[Mesh] OR “overweigh*”[tiab]
   c) Weight – "Body Weight"[Mesh] OR “weigh*”[tiab]
   e) Weight reduction – "Weight Loss"[Mesh] OR “weight loss*”[tiab] OR “weight red*”[tiab]

LINK ALL TOGETHER WITH OR!
Search for individual components of your research question

1) Obesity – link all of the concepts together with OR
Search for individual components of your research question

Repeat these steps for the remaining concepts that are important for your search.

1) Obesity
2) Anti-obesity medications
3) RCTs, Systematic Reviews, Meta-Analyses
4) Remove irrelevant study types
5) Adults, not children
6) Past 5 years
Search for individual components of your research question

Repeat these steps for the remaining concepts that are important for your search.


4) **Remove irrelevant study types**: NOT ("Clinical Trial Protocol”[Publication Type] OR "Comment”[Publication Type] OR “Letter”[Publication Type] OR “Case Reports”[Publication Type])

5) **Adults, not children**: NOT ((“child*”[Title] OR “pediatric*”[Title]) NOT “adult”[Title])

6) **Past 5 years**: AND (2018/01/01:2023/12/31[Date - Publication])

*Reference for RCT search in PubMed- https://work.cochrane.org/pubmed
Search for individual components of your research question:


2) **Anti-obesity medications**: AND ("Anti-Obesity Agents"[MeSH Terms] OR "Anti-Obesity Agents"[Pharmacological Action] OR "antiobesity drug*"[Title/Abstract] OR "anti obesity med*"[Title/Abstract] OR "antiobesity agent*"[Title/Abstract] OR "antiobesity drug*"[Title/Abstract] OR "antiobesity med*"[Title/Abstract] OR "antiobesity agent*"[Title/Abstract])


4) **Remove irrelevant study types**: NOT ("Clinical Trial Protocol"[Publication Type] OR "Comment"[Publication Type] OR "Letter"[Publication Type] OR "Case Reports"[Publication Type])

5) **Adults, not children**: NOT (("child*"[Title] OR "pediatric*"[Title]) NOT "adult"[Title])

6) **Past 5 years**: AND (2018/01/01:3000/12/31[Date-Publication])

*PubMed® comprises more than 35 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full text content from PubMed Central and publisher web sites.*
Search for each individual concept on PubMed.gov (using ADVANCED):


4) Remove irrelevant study types: NOT ("Clinical Trial Protocol"[Publication Type] OR "Comment"[Publication Type] OR "Letter"[Publication Type] OR "Case Reports"[Publication Type])

5) Adults, not children: NOT (("child*"[Title] OR "pediatric*"[Title]) NOT "adult"[Title])

6) Past 5 years: AND (2018/01/01:3000/12/31[Date Publication])
individual components of your research question

1) Obesity:

2) Anti-obesity medications:

3) RCTs, Systematic Reviews, Meta-analysis:

4) Remove irrelevant study types:
   - NOT ("Clinical Trial Protocol"[Publication Type] OR "Comment"[Publication Type] OR "Letter"[Publication Type] OR "Case Reports"[Publication Type] OR "Animal"[Publication Type])

5) Adults, not children:
   - NOT (("child*"[Title] OR "pediatric*"[Title]) NOT "adult"[Title])

6) Past 5 years:
   - 2018/01/01:3000/12/31[Date - Publication]
Individual components of question

1) Obesity:

2) Anti-obesity medications:

3) RCTs, Systematic Reviews, Meta-analysis:

4) Remove irrelevant study types:
   NOT ("Clinical Trial Protocol"[Publication Type] OR "Comment"[Publication Type] OR "Letter"[Publication Type] OR "Case Reports"[Publication Type])

5) Adults, not children:
   NOT (("child*"[Title] OR "pediatric*"[Title]) NOT "adult"[Title])

6) Past 5 years:
   (2018/01/01:2020/12/31[Date - Publication])
Individual components of question:

1. **Obesity**

2. **Anti-obesity medications**

3. **RCTs, Systematic Reviews, Meta-analysis**

4. **Remove irrelevant study types**
   - NOT ("Clinical Trial Protocol"[Publication Type] OR "Comment"[Publication Type] OR "Letter"[Publication Type] OR "Core Reports"[Publication Type] OR "Case Reports"[Publication Type] OR "Case Reports"[Publication Type])

5. **Adults, not children**
   - NOT (("child*"[Title] OR "pediatric*"[Title]) NOT "adult"[Title])

6. **Past 5 years**
   - AND (2018/01/01:3000/12/31[Date - Publication])
Search for individual components of your research question

Search for each individual concept on PubMed.gov (using ADVANCED) and then add the appropriate linkage terms


4) **Remove irrelevant study types**: NOT (“Clinical Trial Protocol”[Publication Type] OR “Comment”[Publication Type] OR “Letter”[Publication Type] OR “Case Reports”[Publication Type] 3,822,348 results

5) **Adults, not children**: NOT (“child*”[Title] OR “pediatric*”[Title]) NOT “adult”[Title]) 1,018,171 results

6) **Past 5 years**: AND (2018/01/01:3000/12/31[Date - Publication]) 7,591,360 results

*Reference for RCT search in PubMed- https://work.cochrane.org/pubmed
Search for individual components of your research question

Search for each individual concept on PubMed.gov (using ADVANCED) and then add the appropriate linkage terms

1) **Full search**: ((("Obesity"[MeSH Terms] OR "obes*"[Title/Abstract] OR "Overweight"[MeSH Terms] OR "overweight*"[Title/Abstract] OR "Body Weight"[MeSH Terms] OR "Body Weight Changes"[MeSH Terms] OR "weight change*"[Title/Abstract] OR "Body-Weight Trajectory"[MeSH Terms] OR "Weight Gain"[MeSH Terms] OR "weight gain*"[Title/Abstract] OR "Weight Loss"[MeSH Terms] OR "weight loss*"[Title/Abstract] OR "weight red*"[Title/Abstract]) AND ("Anti-Obesity Agents"[MeSH Terms] OR "Anti-Obesity Agents"[Pharmacological Action] OR "anti obesity drug*"[Title/Abstract] OR "anti obesity med*"[Title/Abstract] OR "anti obesity agent*"[Title/Abstract] OR "antiobesity drug*"[Title/Abstract] OR "antiobesity med*"[Title/Abstract] OR "antiobesity agent*"[Title/Abstract] OR "antiobesity drug*"[Title/Abstract] OR "antiobesity med*"[Title/Abstract]) AND ("randomized controlled trial"[Publication Type] OR "controlled clinical trial"[Publication Type])) NOT ("animals"[MeSH Terms] NOT "humans"[MeSH Terms]) OR "systematic review"[Filter] OR "meta analysis"[Publication Type]) NOT ("Clinical Trial Protocol"[Publication Type] OR "Comment"[Publication Type] OR "Letter"[Publication Type] OR "Case Reports"[Publication Type]) NOT ("child*"[Title] OR "pediatric*"[Title]) NOT ("adult"[Title]) AND 2018/01/01:3000/12/31[Date - Publication]

TOTAL RESULTS: 839 publications
Library services:
https://browse.welch.jhmi.edu/searching/searching-services
Thank you

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