Keywords versus Controlled Vocabulary

Library website: http://lib.uconn.edu

All databases can do keywords searching
Some databases used controlled vocabulary.

What’s a keyword?

Keyword searching means that when you type a word, the database finds that exact word EXACTLY as you typed it.

If you type obesity, the database will not find articles that say obese

The database will also not find any synonyms for the term nor will it find iterations.

Obesity, therefore, also misses overweight, waist circumference, BMI, body mass, etc.

Furthermore, it is VERY IMPORTANT to understand that research is very specific. If a researcher studies the impact of carbohydrate consumption on subcutaneous adipose tissue, this article is certainly falls into the general category of research on overweight individuals; however, the researcher will not necessarily include the words related to the broad category. Furthermore, if the source of carbohydrates is sugar-sweetened beverages, they may never use the word carbohydrate(s) in the part of the article we’re able to search—the bibliographic information, including article title and abstract.

Need proof? See below:


Sugar-sweetened beverage consumption is associated with abdominal fat partitioning in healthy adults.

Ma J, Sloan M, Fox CS, Hoffmann U, Smith CE, Saltzman E, Rogers GT, Jacques PF, McKeown NM.

Abstract

Abdominal adiposity, particularly visceral adipose tissue (VAT), is independently linked to the pathogenesis of diabetes and cardiovascular diseases. Emerging evidence suggests that greater intake of sugar-sweetened beverages (SSBs) may be associated with abnormal fat accumulation in VAT. We examined whether habitual SSB consumption and diet soda intakes are differentially associated with deposition of body fat. We conducted a cross-sectional analysis using previously collected data in 2596 middle-aged adults (1306 men and 1290 women) from the Framingham Heart Study Offspring and Third Generation cohorts. VAT and abdominal subcutaneous adipose tissue (SAT) were measured using multidetector computed tomography. Habitual intake of SSBs and diet soda was assessed by a validated food frequency questionnaire. We observed that SSB consumption was positively associated with VAT after adjustment for SAT and other potential
confounders (P-trend < 0.001). We observed an inverse association between SSB consumption and SAT (P-trend = 0.04) that persisted after additional adjustment for VAT (P-trend < 0.001). Higher SSB consumption was positively associated with the VAT-to-SAT ratio (P-trend < 0.001). No significant association was found between diet soda consumption and either VAT or the VAT-to-SAT ratio, but diet soda was positively associated with SAT (P-trend < 0.001). Daily consumers of SSBs had a 10% higher absolute VAT volume and a 15% greater VAT-to-SAT ratio compared with nonconsumers, whereas consumption of diet soda was not associated with either volume or distribution of VAT.

What is controlled vocabulary?

Several databases, including PubMed, CINAHL, and PsycInfo, realize that the primary challenge of searching is that authors use different words to describe the same topic. These databases have developed lists of approved subject headings (aka controlled vocabulary.) In PubMed, the approved subject headings are known as medical subject headings (or MeSH for short), in CINAHL, they are CINAHL subject headings and PsycInfo calls them PsycInfo Subject Headings.

What are subject headings? These are specific keywords that are applied to each citation by the database producers. How it works is this…the database producers identify all concepts (they try anyway) related to a particular field (PubMed’s field is medicine and health; CINAHL is nursing and allied health; and PsycInfo is psychology.) Only one subject heading is approved for a concept, regardless of how many different words authors might use.

What does this mean for you? If you find the subject heading for your topic, you shouldn’t have to worry about the variety of words the authors use to describe the topic. The problem is that the application of subject headings is unreliable. We use them in searching, because they will help you find articles you normally would not have, but they miss articles.

If you look at the previously shown citation, you can see that the PubMed subject headings (known as MeSH) would have helped us in our searching. A good search identifies the subject headings for each concept and incorporate them into the search:


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Ma J¹, Sloan M², Fox CS³, Hoffmann U⁴, Smith CE⁵, Saltzman E⁶, Rogers GT¹, Jacques PF¹, McKeown NM⁷.

Abstract

Abdominal adiposity, particularly visceral adipose tissue (VAT), is independently linked to the pathogenesis of diabetes and cardiovascular diseases. Emerging evidence suggests that greater intake of sugar-sweetened beverages (SSBs) may be associated with abnormal fat accumulation in VAT. We examined whether habitual SSB consumption and diet soda intakes are differentially associated with deposition of body fat. We conducted a cross-sectional analysis using previously collected data in 2596 middle-aged adults (1306 men and 1290 women) from the Framingham Heart Study Offspring and Third Generation cohorts. VAT and abdominal subcutaneous adipose
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MeSH Terms

- Beverages*
- Body Mass Index
- Carbohydrates/administration & dosage*
- Carbonated Beverages
- Cross-Sectional Studies
- Energy Intake
- Female
- Humans
- Intra-Abdominal Fat/metabolism*
- Male
- Middle Aged
- Nutritive Sweeteners/administration & dosage*
- Questionnaires

Learning to use MeSH requires some homework. Want to learn how? Watch this video:

https://www.youtube.com/watch?v=uyF8uQY9wys