

Hi!

My name is Magdalena, and I work at the university library at Karolinska institutet.

In this screencast, I will show an example of how to use known key articles on my topic to construct a good search.

My question is: Does compression garment improve recovery after long distance running events?

I have three concepts in my search:

- Compression Clothing
- Recovery
- Long distance running events

I have pasted the abstract and MeSH terms of my three key articles in a document. The first step is to read the abstracts and MeSH terms, and note the terms used for my three concepts.

In my example, I've highlighted the terms for compression garments in yellow, the terms for recovery in blue and I've finally used green for long distance running

In the first abstract Compression stockings is the term used for compression garments. The recovery is expressed as muscle damage and muscle fiber damage. Marathon and long distance running are the terms used for the long-distance running events

The MeSH term used for the compression clothing is Stockings, Compression, recovery is expressed with several different MeSH terms: leg injuries, muscle fatigue, Muscle, Skeletal with the subheading injuries, myalgia and running with the subheading injuries. Long distance running events is expressed with the broader term Running

I go on to the next key article. Here, the first concept is expressed as compression garments. Recovery is expressed as muscle damage, the same term as in the first abstract, but also recovery and muscle soreness. The last concept is called marathon run.

Among the MeSH terms are myalgia and running, terms that I already got from the first article, but compression garment is expressed by the broad term Clothing and Recovery of function is another MeSH term for the concept of recovery.

In the abstract for my last key article compression socks is the term for compression clothing. Recovery is expressed simply with recovery and marathon running and distance running are new variants for long distance running events. The relevant MeSH terms for this article are the same as for the previous two.

With this list of terms I can go on and construct the search. I start with a search based on MeSH terms in PubMed that could look like this

(Compression stockings OR Clothing)

AND

(Recovery of Function myalgia OR OR OR Skeletal Muscle Fatigue Muscle / OR Injuries Leg Injuries)

AND

Running

I have used the Boolean OR between the different terms for the same concepts and AND between the three concepts compression clothing, recovery and running.

You can either search for these terms both as free text in the title, abstract, and MeSH terms if you want a broader search, or specifically just as MeSH terms for a narrower search.

One of the articles is not indexed with the term Stockings, Compression. Instead the MeSH term is Clothing, which of course is a much broader concept: Using this term in the search will possibly retrieve references about completely different types of clothes. One option could be to omit this term, especially if you choose to also search free text and add further synonyms. Here you need to balance the work to go through the additional references that the extra term generates against the possibility to find more relevant articles. In this case, the total number of hits is so small that it probably is worth the effort to be generous with extra terms.

A free text search, for example, in Web of Science, based on these three articles could look like this

(compression stocking* OR compression garment* OR compression sock*)

AND

(muscle* damage* OR muscle* sore* OR muscle fatigue OR recovery OR myalgia OR injur*)

AND

(marathon OR run*)

I have included both terms that I found in the title and abstracts, and terms from the MeSH vocabulary in this search. Some of the terms occur in several versions, for example long distance running and distance running. As these phrases contain the word stem run *, which I have included in my search, there is no need to add them to my search.

I also have used truncation, then the asterisk at the end of many of the words. This way, I will find different variations of a word, for example, both stocking and stockings.

Another possibility is to put quotation marks around two or more words. This way, I would only search for the words next to each other, as a phrase. However, it may be good to first try without quotation marks, like in my example. Then there is the chance that you will find more variants, for example both muscle soreness and sore muscles?

You can add synonyms from title and abstracts to a PubMed search too. This would give you a more exhaustive search. If you do, be careful not to use truncation signs or quotation marks in the MeSH terms. Truncation or quotation marks will enable the inclusion of narrower terms in the search, the explode function. This means you might end up with fewer references.

Once you've done your search and review the titles and abstracts, you can continue to keep an eye open for relevant terms that could improve your search even further.

Good luck!