



RESEARCH IN PRACTICE

EBM: In Search of Best Evidence (Pt. 3)

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Editor's Note: In the [February issue](#), Drs. Suh and Choi introduced how to navigate PubMed Central as a way to find information about treatment protocols quickly and easily.

Finding Evidence Via PubMed: An Example

Let's say the condition is carpal tunnel syndrome. The condition and the protocol you are looking for (acupuncture) are used as "keywords." They are the words we would type in the search bar to locate full-text published clinical studies on PubMed Central.

The keywords we typed in the search bar were exactly: *acupuncture carpal tunnel syndrome*. When we typed those words, the search results showed 499 items. That is too many. So, we now need to narrow them down further.

We can use shortcuts to narrow down the number of articles we should review. We can do that by using [mesh] and [ti]. MESH stands for Medical Subject Heading, and a MESH term is a categorized theme assigned to every article - i.e., what the article is about. Of course, the article may be about more than one theme, such as acupuncture. Labels are assigned to each article in PMC in order to describe main themes in the article.



Inserting [mesh] to the right of the word *acupuncture* produces themes related to acupuncture. In this case, the action produced mesh terms *acupuncture* and *acupuncture therapy*. That means PMC will collect articles with those mesh terms associated with them.

We have placed quotation marks for the phrase "carpal tunnel syndrome" so that the search engine (PMC) will search for the entire phrase and not for an individual word: *carpal*, *tunnel* or *syndrome*. Since we are looking for articles on acupuncture protocol for carpal tunnel syndrome, inserting "and" serves that purpose. That is, the located items must have both acupuncture *and* carpal tunnel syndrome as the main themes.

Adding [ti] to the right side adds further restrictions: [ti] stands for title, and we have given the command of choosing articles with both acupuncture as well as carpal tunnel syndrome. The search bar now has the following formula: *acupuncture* [mesh] AND "carpal tunnel syndrome" [ti]. The details of this search operation appear in the box to the right of the PMC site as "search details."

Reviewing Search Results: Things to Keep in Mind

Applying these basic methods reduced the number of searched items to just eight, and we can certainly review the items quickly. A few things to keep in mind when reviewing these eight studies:

- We can skip studies that are called systematic reviews, or SRs, since they will not contain acupuncture procedures.
- We can skip quickly to "acupuncture treatment" sections to review acupuncture protocols. If a study does not have an acupuncture treatment section, then it is not useful for our current purpose.
- In addition to acupuncture points, a reliable clinical study should contain a treatment schedule that talks about how long and how often the treatment should be done. It should

also include the size of the needle and depth of needle insertion – essential information we need to improve patient care. Obtaining *de qi* response is also important and should be indicated in the studies to reproduce the result.

Typically, an acupuncture study that follows what is called a STRICTA guideline gives us a good indication that the study contains useful treatment protocols. If we follow the same treatment procedures from the study, we should then be able to reproduce the same result.

STRICTA gives a "checklist of information to include when reporting interventions in a clinical trial of acupuncture," and includes number of needles inserted, locations, depth, response sought, needle retention time, needle type, and so forth. The checklist for 2010 STRICTA is available at <https://www.stricta.info/checklist.html>.

Of the eight studies, we should probably focus on "Rewiring the Primary Somatosensory Cortex in Carpal Tunnel Syndrome With Acupuncture," published in 2017, mainly because the study includes a thorough set of information we need to produce the same result in its method section. Some of the protocols mentioned are 2 HZ electrical stimulation for 20 min. at SJ 5 (or TW 5), PC 7. Additional three points selected from HT 3, PC 3, SI 4, LI 5, and LU 5.

You can find out the best result for yourself by [clicking here](#).

This clinical study is evidence of positive clinical research. That means if we followed the detailed procedures in the article, we should be able to reproduce this same result.

Absence of Evidence IS NOT Evidence of Absence

There is much more to discuss about doing research and finding the best evidence. We have presented only a tiny segment of the process that would be essential for patient care.

An important thought to keep in mind, though, is the famous quote: "Absence of evidence is not evidence of absence." It's a quote popularized by the cosmologist Carl Sagan, but the origin of this quote may go as far back as 1888, which means even back then, they were thinking about finding evidence. What that means for us is negative or unproven results from clinical trials are not evidence of the ineffectiveness of a treatment. The only thing such a trial has shown is an "absence of evidence."

The recent decision by CMS to cover acupuncture for low back pain, but still not consider us to be medical providers, perhaps reflects the reality that we may not have made enough efforts to join forces and integrate with other health care practitioners; that we have not yet become a verified and actively sought-after alternative treatment option. Or at least we, as practitioners, are not yet recognized fully by mainstream.

We could continue to remain skeptical about "scientific" methods and about finding evidence. We could continue to be passive recipients of either adverse or beneficial options. We could continue to have others make decisions for us, as was the case for the latest CMS announcement. But if we do, if we do not change, we may not be able to survive in the long run. Unless we change the way we study and practice our medicine, we may not exist as a separate and distinct, yet fully integrated profession.

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