

# **Where's the Beef?**

## **Evidence-Based Aquatic Therapy**

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Some of us remember the fast food commercial from the 1980's that coined the catch phrase: "Where's the Beef". The patron, of an older adult background, wanted to know where the meat or the important 'stuff' was in her burger. This particular commercial was implying that other fast food restaurants didn't have substance to their burgers.

This catch phrase also applies to aquatic therapy. "Where's the Evidence" isn't as catchy, but essentially, it's the same idea. Patrons, third party payers, and physicians are all asking: "Where's the Beef" as it relates to aquatic therapy. Where's the proof that what we do actually works? Where's the evidence that shows you are doing what you say or think you are doing? Every professional that is providing an intervention (treatment, exercise session) in the hopes of making a positive change in their health status needs to be able to look critically at the published literature available so they have the answer to the question when asked.

### **What's the "Beef"?**

The 'beef' in this case, is your question. You should have a pretty specific idea of what you want to look for or answer. For example: Is there evidence to support the use of aquatic therapy in the treatment of patients with fibromyalgia? You can search for water temperature, water depth, any given diagnosis, general health benefits, just about any question you might have. The goal is to find scientific literature (published research) to

support what you want to do. Anecdotally, we can say “water helps everyone” – it’s much harder to prove. Research is designed to investigate specific items and rule out the possibility that chance affected the results – perhaps it was just chance the person got better after being in the water.

### **Where do I find the “Beef”?**

The Internet is now the easiest way to find published research, with most of the information readily available and free. While ‘Google’ is a common location for anyone to find just about anything in the world, the contents/websites can be posted by anyone, anywhere. To look at the scientific literature, PUBMED is a better place to start. The journals that are indexed (or listed) on PUBMED are all peer-reviewed publications. Simply put, an unknown peer, or colleague, has reviewed the work and has deemed it appropriate for the journal in which it is published. This provides some validity, or value, to the contents of the article.

#### Step 1: Set limits and enter keywords

Let’s go through a search: I’d like to find information supporting aquatic therapy with clients with fibromyalgia. I log onto the internet and go to: [www.pubmed.com](http://www.pubmed.com), which automatically brings you to <http://www.ncbi.nlm.nih.gov/pubmed/> - the official site.

Just as with Google, Pub Med will search for anything and everything that contains your search words, so you want to be careful. (For example, just putting aquatic will lead you to microbiology-type organisms, probably not what you were looking for). To help narrow the search, along the top bar there is a “limits” tab – this allows you to put limits

on the search. You can limit the search by age, gender, language written, type of study, etc. For this search, “human”, “all adults 19+” and “English” will hopefully limit the results. Keywords: fibromyalgia AND hydrotherapy. (AND/OR in all caps will force the search to include both terms in the results.) How do you pick keywords? Trial and error, mostly but pick what seems the most obvious first – that’s why this is a search.

### Step 2: View the results

The information for 11 articles results from the search. (Just a note, forgetting to capitalize AND resulted in 326 articles). Start by reviewing the title of the article; select those which sound most like what you are interested in. Narrowing the list down to 6 (several articles were about ‘water baths’, shoulder impingement, and other non-relevant items), you now want to view the abstract. The abstract is the author’s brief summary of the research, or content of the article, which will include number of subjects, what intervention was performed, what outcomes were measured, and the conclusion. This will allow you to narrow your search even further.

You may notice that there is a tab for “all” (the main tab), and a tab for “reviews” – this feature finds articles that are a review of the literature – someone has already taken the time to look at a number of studies, compared them, and written the results – this can be a big time saver, so don’t forget to check under this tab.

### Step 3: Try other key words.

“Fibromyalgia” AND aquatic = no hits

“Fibromyalgia” AND “pool” AND “therapy” = 10 hits (compare this list to the first list and see if any are different)

“Fibromyalgia” AND “pool” = 13 hits

“Fibromyalgia” and “therapy” = 945

#### Step 4: Get the articles

As tempting as it may be, reading just the abstract isn't enough. The author has only provided brief information; detailed information can only be found in the full text document. In the past, this whole process would have involved a trip to the library, microfiche, and lots of copying. Luckily, many full text articles are available online free. If the article isn't free, see if your local library or university library either has, or can get the article for you, for free.

#### **What do I do with the “Beef”?**

Now that you have some information regarding your question, you need to read the articles. Some details you are looking for in the article include: is the population similar to the population being treated? Does the study make sense? Are there any major flaws? Be critical – this is your opportunity to evaluate what you have read and see if it applies to your client(s). Does the literature support ‘xyz’? In this case of fibromyalgia, yes, the literature appears to support the use of the pool for treatment. However, with critical analysis, very few of the studies specified what “aquatic therapy” entailed – was it walking? Was it waist deep? What pool temperature? The qualified answer to the question “does the literature support the use of aquatic therapy for individuals with fibromyalgia is “yes”, but more specific research needs to be done that better describes the treatment techniques that work the best (e.g. Ai Chi vs. Watsu vs. BackHab vs. aerobic vs. anaerobic, etc).

## **You've found the "Beef"**

Yes, this whole process takes some time – with practice it gets faster and easier (and addicting). Improving your knowledge and your ability to care for your clients is a wonderful thing, the time is not wasted. Having research to back up your answer to questions creates the impression that you are a well-educated provider that is looking out for the client's best interest with concrete proof that what you are doing will help them. If you find there aren't any answers for your questions, perhaps it needs investigating – contact your professional organization(s) and see what resources are available to take a look into those areas. Good luck and have fun searching the Internet!