

ACCESSING INFORMATION FROM THE INTERNET

There is a huge amount of information that can be obtained by searching online. The internet contained literally millions of pages of data, but it is important to remember that it may not all be accurate. Some information, for example, can be published online for commercial purposes, i.e. it is biased towards organisations who have a vested interest by virtue of their products, while other information may be published without peer review or other external scrutiny.

Despite this, the internet provides infinite resources to help practitioners learn and enhance their professional practices. These may include limited access to international peer reviewed journals (for example, *Spine* published its abstracts online) or open access (for example, access to *Chiropractic and Manual Therapies* is open and articles are available free of charge). It is also possible to search for materials using search vehicles such as PubMed. In order to ensure that the information that you source is accurate, it is important that respected sources of information are used.

Selecting a Search Engine

Most of us are familiar with Google as our default search engine, but there are others. Examples of alternative search engines are www.metacrawler.com, www.lycos.com and www.uk.yahoo.com. Terms typed into the search box produce a list of 'hits', some of which may be relevant to what you are looking for, while other items may be irrelevant. Sometimes there is an option to limit hits to UK sites only or to include the entire world wide web.

PubMed

PubMed is one of the most popular databases for accessing medical or health information. It can be accessed at <http://www.ncbi.nlm.nih.gov/pubmed>.

Considerations when accessing PubMed may be summarised in 5 steps:

1. Identification of what you are looking for;
2. Identifying keywords;
3. Selecting synonyms or variant words;
4. Combining synonyms or variant words;
5. Checking spelling.

What do you want to find?

When searching for practice-related research there are four components that may be helpful:

P Population or Patient: Who are the patients about whom you need further information?

I Intervention or Indicator: What is the osteopathic treatment plan, allopathic management, diagnostic test, pharmaceutical management, surgical procedure or dietary change you are interested in?

C Comparator or Control: What is the alternative treatment strategy, technique or other procedure that you will be comparing your intervention to?

O Outcome: What effect will the intervention being considered have on the patient?

A search can now be made using each component: It is helpful to consider synonyms for

each of the components considered e.g. (Patient OR synonym 1 OR synonym 2) AND (Intervention OR synonym 1 OR synonym 2) AND (Control OR synonym 1 OR synonym 2) AND (Outcome OR synonym 1 or synonym 2).

Example:

Question: "In older adults who have had one episode of acute neck pain of unknown cause, compared with other older people who have had no episodes of neck pain, what is the increased risk of further episodes?"

Patient/population: older adults OR old people OR seniors.

Intervention/indicator: one episode of acute neck pain.

Comparator/control: no acute neck pain.

Outcome: further episodes of acute neck pain.

Research questions can include a variety of factors, such as interventions, aetiology, risk factors, frequency, diagnosis, prognosis and prediction. In each case the PICO method can be used to formulate a suitable question.

Identifying Keywords

When conducting a search, break down the question or topic into key concepts.

Example I. When looking at premanipulative testing of the cervical spine and the potential for vertebrobasilar insufficiency (VBI) keywords could be: VBI test, cervical spine rotation, vertebral artery blood flow and manipulation.

Example II. When looking at cervical range of movement and the relation to cervicogenic headache, keywords could be cervical mobility, cervical spine, cervicogenic headache, manual examination, flexion, extension and rotation.

Example III. When comparing spinal manipulation and epidurals in the treatment of sciatica, keywords could be: manipulation, lumbar spine, drug therapy, sciatica, epidural and pain.