When looking for **best evidence**, you must be able to *know it when you see it*. Below are types of literature that contain best evidence. After a while, you will become familiar enough with each of these so you will recognize them right away and will easily know how to **appraise** and **apply** what you have found. You will learn how to find these types of Evidence-Based Medicine (EBM) resources in the medical literature.

**Systematic Reviews** – Considered to be the strongest evidence available. **Systematic Reviews** are articles that contain **explicit rules** for selecting the studies to be included in the review. These rules guide the authors as to what findings they can and cannot include in the review, thereby lessening the probability that bias will influence the conclusions. A structured format is used for consistent presentation of information and data. **WHERE TO FIND**: Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effects (DARE), PubMed, using the “Clinical Queries - Systematic Reviews” filter

**MetaAnalysis** – A sub-class of the Systematic Review. **Meta-Analysis** combines and summarizes the numerical data in a Systematic Review when the results are statistically similar. They are often presented graphically in a forest plot. **WHERE TO FIND**: Certain Systematic Reviews (from Cochrane or MEDLINE) where pooled results are statistically similar.
Critically Appraised Evidence Syntheses – An article, most often from a dedicated database, that will review ALL evidence on a certain topic. WHERE TO FIND: DynaMed

Critically Appraised Article Summaries – A summary review, often in structured abstract style, that focuses on evidence from a journal article in the primary literature. WHERE TO FIND: ACP Journal Club

Randomized Controlled Trials – A clinical trial that uses at least one control group and one placebo/comparison group. Some RCT’s are better than others. When reviewing an RCT, look at the population studied and how it compares to your patient. Also look at the number of participants in the study. A study with 1,000 participants will probably produce a better outcome than a study with only 10 participants. WHERE TO FIND: PubMed, using the “Clinical Queries - Clinical Studies” filter. Or, use PubMed limits - “Type of Article” – Randomized Controlled Trial.

Cohort Studies – Prospective or retrospective studies looking at a disease-free population over a period of time to assess potential exposures and outcomes. A classic example is the Framingham Heart Study, begun in 1948, that has effectively proven many of the things we know about the causes of heart disease today. WHERE TO FIND: In PubMed/MEDLINE – use a search term followed by AND cohort studies

Case-Control Studies - Studies of people WITH a disease compared to people WITHOUT a disease. These populations are then studied against particular exposures. Many of the etiological studies that determined the dangers of smoking were Case-Control studies, e.g., lung cancer patients who have smoked and who have not smoked versus patients without lung cancer that have smoked and who have not smoked. WHERE TO FIND: In PubMed/MEDLINE – use a search term followed by AND case-control studies

Case Reports – A clinical presentation of a small set of patients often describing unusual patient presentations or observed adverse reactions to treatments. They are considered weak in evidence as they do NOT constitute a large study population but ARE important as a tool to communicate unique findings. WHERE TO FIND: PubMed/MEDLINE – use a search term followed by AND case report

Review Articles - Like systematic reviews, review articles will explore the body of medical literature over a certain time frame (i.e., ten years) and will present summary findings. Unlike systematic reviews, review articles often include the author’s recommendations which can lead to bias. WHERE TO FIND: PubMed/MEDLINE, Medscape Reference, UpToDate
After you PICO a case, you are then ready to begin a search for evidence, looking for examples of the types of literature listed above. Use the resources on these next few pages in the order they appear below. The top resources have less overall material in them than do the ones below. However, if you find something in one of the top resources, you are looking at the strongest evidence available. Use this list as you might a ladder. Start on the top rung and if you don't find something there, move down a rung and try again.

**Cochrane Database of Systematic Reviews** - A collection of structured systematic reviews and protocols (which are systematic reviews in process). They are usually lengthy but very detailed and rich with information. Often include meta-analysis in the form of visual “forest plots”

- **ACCESS** – from the Evidence-Based Information Resources tab of the EBM Subject Guide; or search the word Cochrane in the top right search box on the library homepage
- **STRENGTH** – Least amount of bias=highest level of evidence
- **WEAKNESS** – a very small portion of the medical literature. Only approximately 5,000 reviews published to date.
- **SEARCH TIP** – Search by title, abstract or keywords; browse by topic or by Cochrane Review Group; use the Advanced Search and restrict by “product” (e.g., Cochrane Reviews and/or DARE) with checkbox selections

**DynaMed** – Evidence-Based clinical review summaries. DynaMed monitors the medical literature for best evidence and creates daily updates to its knowledge base. Bullet-point summaries point to best diagnostic, therapeutic and prognostic evidence.

- **ACCESS** – from the Evidence-Based Information Resources tab of the EBM Subject Guide; or via the library home page (from “Tools & Resources” list at bottom)
- **STRENGTH** – Best evidence-based syntheses available
- **WEAKNESS** – entries in short bullet-point format. Good for assessing quick evidence but less helpful for broader overview.
- **SEARCH TIP** – keyword search; or browse by subject category or alphabetically
DARE (Database of Abstracts of Reviews of Effects) – Abstracts of non-Cochrane systematic reviews.

- **ACCESS** – via the Cochrane Library from the Evidence-Based Information Resources tab of the EBM Subject Guide
- **STRENGTH** – Systematic Reviews can be found in sources besides Cochrane. DARE is a great way to find other strong evidence in the literature
- **WEAKNESS** – systematic evidence is NOT updated as in Cochrane or DynaMed.
- **SEARCH TIP** – Use the Advanced Search and restrict by “product” to DARE with checkbox selection. Use the boxes on the page to search by title, abstract or keyword, etc.

ACP Journal Club – Abstracts of articles containing strong evidence from within the primary literature.

- **ACCESS** – from the Evidence-Based Information Resources tab of the EBM Subject Guide; or from the library homepage, click on “Online Resources” (top left), choose the “E-Journals Only” tab, and type ACP Journal Club in the search
- **STRENGTH** – an easy way to find good evidence from within the primary medical literature
- **WEAKNESS** – material is NOT updated – always check the date when the abstracted article was initially published. And, not ALL good primary evidence-based literature is included.
- **SEARCH TIP** – Click on “Search Within this Publication” on the right (EBSCO product). In the search box type AND and add your search terms

PubMed Clinical Queries – PubMed/MEDLINE search feature that filters results in order to display only articles backed by good evidence.

- **ACCESS** – from the Evidence-Based Information Resources tab of the EBM Subject Guide; or via the library home page. Click on Clinical Queries under “PubMed Tools.” By entering PubMed this way, you will get access to the library’s full text subscriptions.
- **STRENGTH** – MEDLINE is simply the most powerful biomedical database on earth
- **WEAKNESS** – MEDLINE is enormous – over 21 million citations to date. Unless you search carefully, you can become quickly overwhelmed.
- **SEARCH TIP** – Start with two or three terms. Separate your terms using the AND or OR operators (AND to narrow, OR to broaden). Let PubMed’s powerful “mapping” feature go to work for you; or if you get a large number of seemingly irrelevant hits, you can try typing the field tag [tiab] after one or more of your search terms. This will give you results where your search terms appear in either or both of the title and abstract of articles. Remember to then choose your evidence Category based on the type of question you are asking (diagnostic, therapeutic, etc.), and consider choosing a Scope of “Narrow” instead of “Broad.”
**National Guideline Clearinghouse** – Collection of guidelines from the federal government (National Institutes of Health) and professional medical societies.

- **ACCESS** – [www.guidelines.gov](http://www.guidelines.gov) (or from the Evidence-Based Information Resources tab of the EBM Subject Guide)
- **STRENGTH** – comprehensive guidelines from mostly non-profit entities.
- **WEAKNESS** – Many but not ALL include graded evidence. Also consider bias inherent in, for example, recommendations from an internal medicine society (possibly non-invasive) versus those from a surgical society (possibly invasive) both of which may be backed up with their own evidence-based outcome data.
- **SEARCH TIP** – Use the Advanced Search feature to make choices (particularly the “Guideline Category”) to focus your search.

**TRIP** - An EBM search engine that searches across multiple Evidence-Based information sites. While not all findings are full-text, TRIP includes many unique resources such as "Bandolier" and guidelines not found through National Guideline Clearinghouse.

- **ACCESS** – [www.tripdatabase.com](http://www.tripdatabase.com) (or from the Evidence-Based Information Resources tab of the EBM Subject Guide)
- **STRENGTH** – Searches across multiple Evidence-Based resources. Good way to get a broad view of the evidence available on a topic.
- **WEAKNESS** – Includes “annoying” ads. First few results often on target but can lose relevancy quickly.
- **SEARCH TIP** – Use “Advanced Search” for title or phrase searching.

**Background Materials** – If you have come this far down the list, you have probably not discovered good evidence on your topic. Don’t be surprised, as there are still many areas in medicine, especially in rare or complex cases, where good evidence just does not exist. Background sources such as Medscape Reference, UpToDate, the 5-Minute Clinical Consult, Harrison’s Online, other eBooks and good-old printed text books can be excellent. When using them, just keep in the back of your mind the question of who is writing the material, what biases they might be bringing to the material and how your patient is either like or unlike the population being observed in the book.