

# Péter's picks & pans



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This month, the picks include the MEDLINEplus service, which offers excellent information sources (with the exception of one component) through an unusually pure and pleasant interface, and the free online version of the 2nd edition of the Webster's New World Medical Dictionary published earlier this year by Wiley, which features clear and substantial definitions with many hotlinks to related entries. The pan is a subset of X-Plain Tutorials (licensed by the National Library of Medicine), which stands out from the otherwise good-quality medical sources like a sore thumb and may cause X-pain via its repetitive, often dysfunctional, and sometimes anatomically incorrect illustrations, making it a contraindicated resource.

MEDLINEplus

Webster's New World  
Medical Dictionary

X-Plain Tutorials



the picks

## MEDLINEPLUS

I don't know why the National Library of Medicine (NLM), which can be quite picky when it comes to using MEDLINE variants in product names, chose MEDLINEplus as the name for this excellent information service [http://medlineplus.gov]. MEDLINE is only a small component, rightly relegated to the "Other Resources" section. There is a strong and welcome slant toward providing information for the general public, although medical practitioners can also benefit from many of the top-notch sources. My gut feeling is that PubHealth would be a better name.

It is a very comprehensive system, culled from a variety of highly respected information sources (for the one notable exception, see the Pan below), presented in an especially easy-to-navigate format. The purity of the interface is remarkable amidst the many gory medical Web sites where you can't easily tell advertisements from the authentic information,

because ads for cure-all vitamins, invitations to try anti-snoring devices, and animated quizzes about your ideal weight pop up, regardless of your research topic. The experience of searching MEDLINEplus about a disease or treatment versus other medical portals is like watching a PBS documentary versus a segment of *Hannity and Colmes* on the FOX network.

The sources include documents from NLM, Food and Drug Administration (FDA), a variety of medical associations, several institutes of the National Institutes of Health (NIH), and many respected medical schools, hospitals, and

The screenshot shows the MEDLINEplus search results for the term "statin". The page header includes the MEDLINEplus logo and navigation links. The search results are organized into two columns. The left column lists various health topics and medical encyclopedias. The right column displays the search results for "Cholesterol", including links to articles from the American Heart Association and the Mayo Foundation. The results list includes titles such as "Statins: Intra-Procedure Reduce Cardiovascular Events and Deaths. Printable for Patients with Information" and "Statin Drugs: Potential Side Effects?".

Results list  
from a  
MEDLINEplus  
search.

clinics, as well as general medical ready-reference sources from commercial publishers. There are about 400 pre-defined topics under the "Health Topics" section for those who prefer browsing for information. You can also search the collection, but be forewarned that some components are not included in the search, and the search capabilities are limited.

Unquestionably the best, excellently written, and superbly illustrated, the A.D.A.M. Medical Encyclopedia is the ideal ready-reference source about diseases, injuries, symptoms, and medical procedures. Drug information in MEDLINEplus comes mostly from the MedMaster Patient Drug Information database and Thomson MICROMEDEX. News items originate with Reuters Health and, to a lesser extent, from UPI.

The Merriam-Webster Medical Dictionary is the source for short definitions of medical terms in MEDLINEplus. Indeed, it is a little too laconic for me, reminding me of harried physicians in a HMO with too many patients on a Friday afternoon. It is a good dictionary, but my other "Pick" is better.

The "Directory" section of MEDLINEplus is an excellent collection of directories for doctors, nurses, and other healthcare professionals, hospitals, and clinics in many kinds of specializations (from allergists to podiatrists). These are compilations by societies, associations, colleges, and commercial publishers, such as the Sports Medicine Clinics Directory published by McGraw-Hill.

The "Other Resources" section includes information about medical libraries and organizations, which might as well be in the "Directory" subcategory, and a collection of more than 20 medical and health-related databases of the NIH, other federal agencies, and nongovernmental publishers (like Merck, Inc.). Most of these are indexing and abstracting databases (including MEDLINE, TOXNET, CHID), catalogs and directories (NLM LocatorPlus, DIRLINE), and other factographic databases (Envirofacts Data Warehouse, U.S. Pharmacopeia). There are also full-text files, like the NIH Consensus Statements archive about controversial medical issues, which also features video files of the discussions of experts.

Unfortunately, the search engine never brings up results for your query from these excellent and well-searchable "Other Resources," nor does it surface information from the dictionary. In this regard MEDLINEplus acts more like a links collection than a search engine executing searches one by one. The search software is not on par with the content, nor the interface, not only for this reason, but also because of its inability to handle exact phrases, Boolean operators, or even truncation. In spite of weaknesses in its search capabilities, this is an outstanding resource.

#### WEBSTER'S NEW WORLD MEDICAL DICTIONARY

In the college dictionaries category, Houghton Mifflin's American Heritage Dictionary has been the most widely licensed database by third parties, while Merriam-Webster's Collegiate Dictionary definitely took a back seat. In the medical dictionary category, however, Merriam-Webster's Medical Dictionary has been the most licensed source. It is a good quality dictionary, but has too succinct defi-

**Nerve compression:** "Pinching" a nerve by putting too much pressure on it. For example, the sciatic nerve may be painfully compressed by a ruptured disc in the lower spine causing sciatica.

In nerve compression there is pressure on a nerve root or a peripheral nerve leading to ischemia (not enough oxygen due to poor blood supply). The response includes edema (swelling) above and below the pressure point. If the pressure continues, fibrosis tends to develop.

Aside from sciatica, the syndromes due to nerve compression include the carpal tunnel syndrome due to pressure on the median nerve in the carpal tunnel near the wrist, compression of the ulnar nerve at the elbow, and a condition called meralgia paresthetica due to compression of the lateral cutaneous nerve of the thigh.

2 entries found for **meralgia**

To select an entry, click on it. (Click 'Go' if nothing happens.)

meralgia  
meralgia paresthetica

Main Entry: **meralgia pares-theti-ca**

Variant(s): or British **meralgia paraes-theti-ca**

/-ˈpær-əs-ˈθet-ɪ-kəl/

Function: noun

: an abnormal condition characterized by pain and paresthesia in the outer surface of the thigh

Comparative results for meralgia paresthetica from two medical dictionaries.

nitions with too many difficult words used in the definitions.

I prefer Webster's New World Medical Dictionary [www.medterms.com]. Its 2003 2nd edition was made available earlier this year as the MedTerms database. True, it has definitions for far fewer words than Merriam-Webster, but in a dictionary where the full text is searchable, the number of main entries should not be as important as they are made out to be. The definition

Search The Dictionary | statins

**Statins:** A class of drugs that lower cholesterol. There are currently at least 6 statin drugs on the market in the U.S., including:

- Lovastatin (brand name: Mevacor),
- Simvastatin (brand name: Zocor),
- Pravastatin (brand name: Pravachol),
- Fluvastatin (brand name: Lescol),
- Atorvastatin (brand name: Lipitor), and
- Cerivastatin (brand name: Baycol) Note: Baycol was withdrawn from the market in August 8, 2001.

The major effect of the statins is to lower LDL-cholesterol levels; and they lower LDL-cholesterol more than other types of drugs. Statins inhibit an enzyme, HMG-CoA reductase, that controls the rate of cholesterol production in the body. These drugs lower cholesterol by slowing down the production of cholesterol and by increasing the liver's ability to remove the LDL-cholesterol already in the blood.

The large reductions in total and LDL-cholesterol produced by these drugs in research studies resulted in large reductions in heart attacks and heart disease deaths. Thanks to their track record in these studies, and their ability to lower LDL-cholesterol, statins have become the drugs most often prescribed when a person with heart disease needs a cholesterol-lowering medicine.

Studies using statins have reported 20 to 60% lower LDL-cholesterol levels in patients on these drugs. Statins also produce a modest increase in HDL-cholesterol and reduce elevated triglyceride levels.

The statins are usually given in a single dose at the evening meal or at bedtime. It is important that these medications be given in the evening to take advantage of the fact that the body makes more cholesterol at night than during the day.

Results from the statins start to be seen after several weeks, with a maximum effect in 4 to 6 weeks. The statins are generally well tolerated by most patients, and serious side effects are rare. A few patients will experience an upset stomach, gas, constipation, and abdominal pain or cramps. These symptoms usually are mild to moderate in severity and generally go away as your body adjusts. Rarely a patient will develop abnormalities in blood tests of the liver. Also rare is the side effect of muscle problems. The symptoms are muscle soreness, pain, and weakness.

Statins may also strengthen bone tissue. Thus, people over 50 taking statins (to lower cholesterol) had fewer hip fractures, as was reported in the Journal of the American Medical Association (JAMA) in 2000.

Typical encyclopedic entry in MedTerms for statins.

of another term may provide the answer to your question and can also provide links to components of a compound query term. MedTerms is much better in both regards, helping users who could be intimidated by the unknown terms in the body of the Merriam-Webster's definitions and irritated by the lack of hotlinks therein.

For example, *meralgia* is not an entry in MedTerms, let alone *meralgia paresthetica*. However, the query returns an entry on nerve compression that in turn specifically mentions *meralgia paresthetica* in the definition. It also provides clear context, as opposed to the definition of *meralgia* in Merriam-Webster's Medical Dictionary ("pain especially of a neuralgic kind in the thigh"), and *meralgia paresthetica* ("an abnormal condition characterized by pain and paresthesia in the outer surface of the thigh"). To decode this requires typing in the word *paresthesia*, which is a main entry but is not linked to from within the definition. Here is a situation in which human editors, or even smart software covering both dictionaries, could create hotlinks to adjectival variants of Latin nouns so common in compound medical terms.

While MedTerms did not find any result for some of my test words when its competitor could return definitions (lumbago and folliculitis are examples), for most of my test searches it yielded very clear, and often encyclopedic, definitions. For example, Merriam-Webster had a fair definition for statins, but MedTerms had a far better, far more informative entry, showing its characteristic appealing bedside manners.



the pan

#### X-PLAIN TUTORIALS

The only weak component among the good and excellent resources of MEDLINEplus is the dreadful set of X-Plain Tutorials. This collection of 500 animated tutorials by the Patient Education Institute has an appropri-



▲ *Illustration promoting undesirable hand and eye coordination and impossible posture.*

► *Illustrations for medical check-up and penicillin shot preparation.*

ate name, because it is meant to explain medical concepts and procedures in plain language for functionally and technically illiterate people, using high technology on the Web. About a third of these tutorials are licensed for MEDLINEplus.

By design, the narratives of each slide must be illustrated (a rather hopeless task), and provided with an audio rendition that, luckily, is not a mandatory listening experience. The text and the illustrations are extremely redundant, even if you subscribe to the concept of repetition as a teaching/learning device, although hardly in this manner. The same drawings are used over and over in different contexts. They remind me of children's drawings created to illustrate happy families celebrating the birthday of Great Leaders in totalitarian states during the 1950s.

I don't know if it is a good idea at all, but I am positive that this is not a good implementation. It requires Flash software to be downloaded and installed—not the most appealing prospect for the primary target audience. If used at a kiosk in a neighborhood clinic, I wonder how many users would like to go through the 12- to 15-minute slide shows about, say, sexually transmitted diseases, while kids are running around playing hide-and-seek and neighbors sneaking a peek when

Auntie Claire checks out the details of the Pap smear procedures. Some of the illustrations are anatomically inauthentic, sometimes impossible, and can even promote undesirable hand and eye coordination or bad posture.

Other illustrations are dysfunctional or pathetic. I think that the illustration for the medical check-up looks more like a choking maneuver, and the nurse preparing for a penicillin shot suggests she's adjusting herself for the perfect hara-kiri stab.

Audio rendering may enhance understanding by the functionally illiterate, not to mention the circle of rubbernecking and eavesdropping bystanders, although many terms would sound like Albanian to most of listeners. Providing headsets could create some privacy, but I am afraid many patients would lose their patience and walk out with the headsets as rewards. Others may find X-Plain becomes X-Pain when progressing through the slide shows that trigger a high blood pressure incident by the time they get to see the doctor. It is definitely contraindicated by yours truly.

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