Editorial

Medline Bias

The Smithsonian Institution's United States National Tick Collection, with over one million tick specimens, makes it, quite understandably, the world's largest. On the other hand, the world's largest medical library, the U.S. National Library of Medicine, (NLM) does not see fit to index the *Journal of Orthomolecular Medicine (JOM)*.

Why? Is it perhaps a matter of available funds? The National Museum of American History is spending $18 million to "clean and conserve" the 1814 "Star Spangled Banner" flag that flew over Fort McHenry. The American government lets the U.S. Forest Service sell the public's forests to private lumber corporations at a $2 billion annual loss to the taxpayer. This is, of course, the same government that gave the U.S. nuclear power industry over $40 billion since 1948.

In a form-letter footer appended to its email correspondence, NLM states that "The goal of the NLM is to collect, organize and make available biomedical literature to advance medical science and improve public health." At its website,[1] The National Library of Medicine describes itself as "the world's largest medical library. The Library collects materials and provides information and research services in all areas of biomedicine and health care."

All areas? That statement is demonstrably untrue. The "world's largest medical library," which claims to provide information in "all areas of biomedicine and health care" does not include the *JOM* in the electronic index known as Medline.

Medline is "the NLM's premier bibliographic database covering the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and the preclinical sciences. Medline contains bibliographic citations and author abstracts from more than 4,800 biomedical journals . . . The database contains over 12 million citations dating back to the mid-1960s."[2]

With Medline, you can access abstracts of millions of medical papers, instantly and at no charge. Over half a million individual citations are added each year. The public loves Medline; nearly 2 million people use it every day.[3] The NLM's Medline is like a "Google" search engine for medical publications. This excellent, free service is brought to you by the US Department of Health and Human Services/National Institutes of Health. In other words, by tax dollars. Generally it is money well spent, until you look for orthomolecular therapy research papers. Then you will discover that you can't find all of them. That is because of selective indexing.

While most medical journals are listed and accessible, the *JOM*, now read in nearly 40 countries, is not.

Just how hard would it really be for the NLM to electronically index one more scientific journal for the public's benefit? Doesn't the government owe the public full disclosure of all new nutritional research that can help people, including what is published in the *JOM*?

Medline, which formerly only went back to 1966, now provides an additional two million citations from medical journals all the way back to 1951. While in itself good news, it also more than suggests that the NLM has the funding, personnel and capability to index the *JOM* without further ado. The availability of "Old Medline," as it is nicknamed, now means that references to hundreds of scientific papers by vitamin discoverer Roger J. Williams, niacin psychiatrist Abram Hoffer, Professor of Oral Medicine Emanuel Cheraskin, and twice Nobel prize-winner Linus Pauling can now be electronically tapped from everywhere they published, for the last 55 years. . . with one conspicuous exception. Every word they ever wrote in the *JOM* remains excluded from indexed cyberspace.

One cannot help but wonder why an author's work is significant if published in one journal, but not even worth mentioning if published in another.

What are the consequences of such exclusion? In a nutshell, it prevents the public from using their computers to learn about all of the scientific research and clinical reports demonstrating the effectiveness of orthomolecular therapy. It also greatly hampers professionals from seeing pro-vitamin studies. Have you ever wondered why so many doctors simply do not know about vitamin therapy? Well, wonder no longer. Practitioners can't easily locate what isn't "collected," electronically indexed, or otherwise "made available" to them. If the vast majority of journals indexed by Medline are pharmaceutical-friendly, while nutritional research is censored, what do you expect?

Our taxes should not be paying for a closed-doors bureaucracy to decide what should or should not be "collected" and "made available" to "improve public health."

NLM's Medline and Old Medline collectively form one of the world's truly splendid research tools. Going back to 1951 is a good idea. Why stop there? What about 37 consecutive years' worth of the *JOM*, as well as the current research it continues to publish even as you read this?

As public libraries should be free to rich and poor alike, so public access to scientific knowledge should not be screened or censored. I believe everyone should have internet access to all health research, not just some of it.

Nothing New Under the Sun

There was once another "Index" that stood for over four hundred years. It was created and perpetuated specifically to control thoughts, ideas, and reading material. It was part of a clandestine power-process that Medline would do well to avoid emulating in any way, shape or form: The Inquisition.

"The Congregation of the Inquisition was initially charged with drawing up a complete list of forbidden books. This list, the first general one, was published in 1559...The last edition of the Index was that of 1948; it was abolished in 1966... During the proceedings against Galileo in 1633, his Dialogue Concerning the Two Chief Systems of the World was placed on the Index, where it remained until 1824."[4]

From Socrates to Orwell to every home computer user on Earth, free-thinking people everywhere rebel at the very idea of thought control. There is little difference between freedom of speech and freedom of literature. But if people cannot find it, they cannot read it. If they cannot easily find it, they can not easily read it. These days, you don't have to burn literature; just make it hard to access.

Selection Bias

While the tax-supported National Library of Medicine does not see fit to index the *JOM*, it does choose to index *Time* magazine.

Believe it or not, there are no fewer than 1,260 indexed articles on Medline just from *Time* magazine. Here: see for yourself what Americans pay their taxes for. Go to Medline (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi) and do your own two-second search for "time magazine news."

That was so much fun I just had to try *Newsweek*. I got 1,136 Medline listings for *Newsweek*.

How do *Time* and *Newsweek* get indexed by Medline? Supposedly, by meeting the standards of the NLM's Journal Technical Review Committee. The standards for inclusion in Medline are quite exacting and are posted at http://www.nlm.nih.gov/pubs/factsheets/jsel.html. According to this document, there are eight "Critical Elements" for Medline indexing:

1) Scope and coverage: "Articles predominantly on core biomedical subjects." (*Time* and *Newsweek*, which cover everything from Michael Moore to Madonna, hardly fit this criterion.

2) Quality of content: "Scientific merit of a journal's content is the primary consideration." (Do *Time* and *Newsweek* truly meet this requirement?)

3) Quality of editorial work: "External peer review." I am unaware that *Time* and *Newsweek* are peer-reviewed, but then again people who let their subscriptions lapse do receive a variety of advertisements and appeal letters signed by different names...

4) Production quality: "Should be printed on acid-free paper." (OK, I concede that *Time* and *Newsweek* do use wonderful, really wonderful paper.)

5) Audience: "MEDLINE and Index Medicus are intended primarily for those in the health professions: researchers, practitioners, educators, administrators, and students." (I've seen *Time* and *Newsweek* in airports, Social Security offices, locker rooms, buses and bars.)

6) Types of content: "Reports of original research. Original clinical observations. Statistical compilations." (*Time* and *Newsweek* contain precious little academic research material. Though I taught biology, nutrition and health science at the university level for nine years, none of my colleagues ever spoke of submitting their original papers to either *Time* or *Newsweek*. I wonder why not?)

7) Foreign language journals; and 8) Geographic coverage: *Time* and *Newsweek* certainly meet those requirements. So do *Cosmopolitan* and *Playboy*.

The National Library of Medicine/ Medline allows for "four broad categories of journals":

1. Research journals
2. Clinical or practice journals
3. Review journals
4. General or all-purpose journals

But neither *Time* nor *Newsweek* are journals at all.

I furthermore submit that both *Time* and *Newsweek* fail to meet the standards set by the International Committee of Medical Journal Editors (ICMJE)[5] or the Council of Science Editors (CSE).[6]

It appears that at the National Library of Medicine's Medline, the rules they apply to others evidently do not apply to themselves. Let's consider the various and sundry topics that Medline has in fact indexed.

What Does Medline Choose to Index?

At Medline, in the "Search PubMed for" box, type in "flatulence" and you will get 1,233 indexed citations. Honestly.

When I did a search at Medline for "pizza," I got 435 responses. Here are some of them:

Pizza and risk of acute myocardial infarction. (*Eur J Clin Nutr.* 2004.)

Does pizza protect against cancer? (*Int J Cancer.* 2003.)

Occupational allergic contact dermatitis from olive oil in pizza making. (*Contact Dermatitis.* 2004.)

This next article is not from a medical journal. I am not making up its milelong title, either:

"My husband subscribes to Harvard Men's Health Watch, but I read it even more than he does. I hope you can help us resolve a disagreement. He wants to have pizza two to three times a week for his prostate, but I don't think it's a healthy food. Who is right?" (*Harvard Men's Health Watch.* 2003.)

I am proud (as well as relieved) to be able to tell you that the *JOM* has not published a single article on pizza. At least so far. Maybe if it did, it would make the cut at Medline.

More Actual Medline Citations

Here are some additional topics and titles that Medline indexes:

A different type of 'glue ear': report of an unusual case of prominent ears. (*Ear Nose Throat J*, 2003) "We report the unusual case of a teenage boy who had repeatedly applied cyanoacrylate adhesive ("superglue") to his postauricular skin in an attempt to pin back his prominent ears."

The Easter bunny in October: is it disguised as a duck? (*Percept Mot Skills,* 1993)

"The ambiguous drawing of a duck/rabbit was shown to 265 subjects on Easter and to 276 subjects in October. The ambiguous

drawing, though perceived as a bird by a majority of subjects in October, was most frequently named a bunny on Easter."

Increasing the portion size of a packaged snack increases energy intake in men and women. (*Appetite*, 2004)

"Results from this study demonstrate that short-term energy intake increases with increasing package size of a snack."

Meals at medical specialty society annual meetings: a preliminary assessment. (*Disab Mgmt,* 2003)

"Little is known about how meals are chosen for medical meetings... Twelve (92%) respondents rated "available budget" as the most important factor... (N)o specific nutritional guidelines could be identified by any planner... (and) soda pop was offered at each break."

How dogs navigate to catch Frisbees. (*Psychol Sci,* 2004) "Using micro-video cameras attached to the heads of 2 dogs, we examined their optical behaviour while catching Frisbees."

A piece of my mind. Reflections while listening to the Glazunov Saxophone Concerto. (*JAMA,* 2003)

A case of inability to belch. (*J Gastroenterol Hepatol,* 2001)

Olfactory responses and field attraction of mosquitoes to volatiles from Limburger cheese and human foot odor. (*J Vector Ecol,* 1998)

The eyebrow frown: a salient social signal. (*Emotion,* 2002)

A study of diurnal variation in wrinkles on the human face. (*Arch Dermatol Res,* 2004)

Wigs, laughter, and subversion: Charles Busch and strategies of drag performance. (*J Homosex,* 2004)

Chin stimulation: a trigger point for provoking acute hiccups. (Respiration, 2004)

Staring at one side of the face increases blood flow on that side of the face. (*Psychophysiology,* 2004)

Thinness and body shape of Playboy centerfolds from 1978 to 1998. (*Int J Obes Relat Metab Disord,* 2001)

Rhinotillexomania: psychiatric disorder or habit? (*J Clin Psychiatry,* 1995)

"Nose picking was characterized according to time involved, level of distress, location, attitudes toward self and others regarding the practice, technique, methods of disposal, reasons, complications, and associated habits and psychiatric disorders... This first population survey of nose picking suggests that it is an almost universal practice in adults but one that should not be considered pathologic for most."

Psychophysiological responding during script-driven imagery in people reporting abduction by space aliens. (*Psychol Sci,* 2004)

Coca-Cola Space Can undergoes successful test by cosmonauts onboard Soviet space station Mir. (*AIAA Stud J,* 1992)

The spermicidal potency of Coca-Cola and Pepsi-Cola. (*Hum Toxicol,* 1987)

Total infarction of the penis caused by entrapment in a plastic bottle. [Article in German] (*Urologe A,* 2004)

An objective evaluation of the waterproofing qualities, ease of insertion and comfort of commonly available earplugs. (*Clin Otolaryngol,* 2004)

"The subjects were also asked to score the difficulty of insertion and comfort of the earplugs on a visual analogue scale. The results show a significant difference in the waterproofing qualities of the various types of earplugs. Cotton wool with petroleum jelly was the most effective ($P < 0.001$). It was also the easiest to insert and the most comfortable for the subject ($P < 0.001$)."

The four 'Vs' for foot care. Vaseline, vegetable shortening, vinegar and Vicks VapoRub. (*Adv Nurse Pract,* 2004)

Kool-Aid colitis. (*N Engl J Med,* 1990)

Effect on tipping of barman drawing a sun on the bottom of customers' checks. (*Psychol Rep,* 2000)

"Previous research has demonstrated that a pleasant drawing (a smiling face) on a restaurant bill increased the number of tips left by clients. A similar experiment was carried out using a drawing of the sun

since it is known that tips increase on sunny days. The experiment was carried out in local bars and involved clients who have ordered an espresso coffee. Analysis showed that the drawing of the sun led clients to leave a tip more frequently than when this drawing is not present. The size of the tip left was also higher. The hypothesis of the creation of a positive frame of mind by this stimulus is discussed." (Publication Types: Clinical Trial; Randomized Controlled Trial)

Espresso kiosks can be profitable addition to hospital food service. (*Health Foodserv Mag,* 2000)

Espresso maker's wrist. (*West J Med,* 1990)

Characterization of particles in cream cheese. (*J Dairy Sci,* 2004) "The size of these particles was determined using a particle size analyzer... Smooth cream cheese with only 5% (wt/wt) added particles was perceived as significantly grittier than the control sample. This experiment also revealed that the perceived grittiness increased with increase in amount and size of particles."

All of the above are duly indexed by the NLM's Medline. They may be instantly accessed, from anywhere in the world, with a few clicks of the mouse.

Virtually every study on Medline represents genuine research, competently conducted by bona fide scientists. The point I wish to make is this: if Medline indexes what might quite fairly be called "unique" studies, it should at the very least also index twice Nobel Prize winner Linus Pauling's eight papers that were published in the *JOM,* four of which appeared in a single year (1991).

Why is this work by Linus Pauling not indexed by the amply taxpayer-funded National Library of Medicine? It is not because the subjects are uninteresting. Nor is it because of Pauling's co-authors, since other papers by the same authors, on the same topics, are indeed listed on Medline. I think it is absurd that the National Library of Medicine, which has indexed no fewer than 117 papers by Linus Pauling, excludes equally valuable work of his simply due to where it first appeared.

Let's Look at the Score

Exactly how is the decision made as to which studies people may or may not see?

I have in front of me the actual judging scoresheet for the *JOM*'s previous appraisals by the NLM/Medline "Literature Selection Technical Review Committee." The Journal was previously reviewed in 1989, 1993, 2000 and again in 2002. Medline uses a point scale of zero to 5, with five being the highest recommendation for indexing, and zero being the lowest.

On February 2, 1989, the *JOM* received a 0.0 rating.

On March 4, 1993, the Journal again received a 0.0 score. This, by the way, was after *JOM* had published no fewer than six papers by Linus Pauling.

One cannot escape the significance of these 1989 and 1993 NLM reviews that found absolutely no value whatsoever to the *JOM*. After all, "0.0" is not merely a low mark. "0.0" represents an absolute dearth of merit. And "zero point zero" states it so flatly as to leave no room for alternate interpretations.

On June 8, 2000, *JOM* received a 1.5 rating. Out of five, not nearly high enough to qualify for indexing. By then, the Journal had been published for 30 consecutive years.

The June 6, 2002, review brought *JOM* a rating of 1. Out of five. In this last evaluation, Medline's review committee specifically indicated that the *JOM* had "little importance to researchers"; "little importance to clinicians"; "little importance to educators"; "little importance to allied health professionals"; "little importance to policy makers"; and, incredibly, "little importance to students."

As a former college instructor, I rebel against the very notion that any committee should decide for students what they may or may not learn about. You cannot

study what you cannot find; you cannot find what is not indexed.

Information censorship is unscientific, immoral and unjust.

Medline's Index and "The" Index

The Roman Catholic Church of centuries past was soundly criticized for creating an Index of books that good people should not be reading. That archaic and highly questionable tradition unfortunately lives on even today, but in mirror-image, secular form. Now there is an official "Index" of permitted scientific publications. And this Index is not located anywhere near the Vatican, but rather in Washington, D.C.

To be fair, the Church has freely admitted it was wrong to censure and censor scientists such as Galileo. On the other hand, to this day, an unelected committee at the U.S. National Library of Medicine still decides for you what you may and may not have access to. This, at the world's largest medical library, smack in the heart of in the Land of the Free and Home of the Brave.

And the process of deciding what the public can access is done in secret.

The Cloistered Committee

The whole idea of a select small group, an elite, an oligarchy, running a public library service, needs to be seriously and repeatedly questioned.

When members of the public inquired about participation in the journal selection process, they received a form letter from Medline that said, in part:

"If the (journal review) meeting were open to the public, word could circulate about a committee recommendation before a final determination was made by the Director, NLM. Public knowledge about a journal reviewed and not recommended could cast unfair doubt on the quality of the journal."

Why such secrecy? Why is an unelected committee making decisions, in private, about what the public has access to on the NLM's tax-funded Medline service?

How many experienced orthomolecular scientists are on the NLM review committee? Is there even one? If not, why not?

How objective, or biased, are NLM Literature Selection Technical Review Committee members whose credentials are primarily non-nutritional?

Is the NLM's Committee "Stacked" Against a "Megavitamin" Journal?

All Literature Selection Technical Review Committee members are appointed by the director of the National Institutes of Health. I have no doubt as to either their intelligence or their dedication. I do question their individual and collective qualifications to review and judge objectively on a journal that specializes in high-dose nutrition therapy. Think about it: Would you have a committee of very well educated, hard working humanities professors decide if *JAMA* and the *NEJM* were worthy of inclusion in Medline?

A look at the reviewers' professional qualifications and affiliations is in order, to try to ascertain which of them have orthomolecular experience or have published any orthomolecular papers. I think we need to keep in mind that these persons are to review and either pass or fail an orthomolecular nutrition journal, which their committee has already, and repeatedly, rejected from Medline. Based on what I saw, with the National Library of Medicine itself as my source, the 15 committee members have some 800 publications of their own listed on Medline. None appeared to me to be on orthomolecular subjects. I therefore think few, if any, of the Literature Selection Technical Review Committee's members appear to be especially favorably oriented towards vitamin therapy. If I have erred in this conclusion, I invite correction from any member of the committee.[7]

The JOM's problem, which appears to be a stacked deck, is really everyone's problem. On-line indexing and availability are all the more important now that, after 125 years of publication, Index Medicus is no

longer available in print.[8] Electronic, online Medline has taken over.

The October, 2004 Review

We now have the results of NLM's latest (October, 2004) review of the *JOM* in a letter dated 11 January, 2005 from Medline executive editor Sheldon Kotzin, whose full title is Chief, Bibliographic Services Division, National Library of Medicine. Mr. Kotzin states: "The Committee recently met and reviewed a number of journal titles including the *Journal of Orthomolecular Medicine.* The indexing priority assigned to the journal by the Committee was not high enough for the title to be indexed by the Library at this time."

Interestingly, Mr. Kotzin's very next sentence is, "Please CANCEL any complimentary subscription being sent to my office." The emphasis is his own.

In one email to a member of the public, Mr. Kotzin wrote: "No one would argue against a well-informed user; however, human and budgetary resources will not allow us to index every one of the 22,000 journals to which we subscribe."

Taking the sum of all evidence, I believe that statement is neither fair nor accurate. Perhaps all this is not surprising. Medline has steadfastly refused to index the *Journal of Orthomolecular Medicine* for three decades. Let it now be said: The emperor has no clothes. The National Library of Medicine/Medline is biased.

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