

The flight from science and reason

At a recent meeting of the New York Academy of Sciences, more than 200 scientists, doctors, philosophers, and educators from around the country expressed concern about what they see as a trend toward the "flight from science and reason." They were concerned about the attack on science by those critics who claim that because nothing in science is certain, any belief system has as equal a claim to the knowledge base as does scientific research.

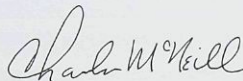
Indeed, some clinicians seem to resist, feel comfortable with, or be threatened by the scientific literature. They seem to be more comfortable with the status quo, and they rather adamantly resist change. Unfortunately, a long delay in the transfer of scientific knowledge can be detrimental to treatment outcome and ultimately to our patients' health.

An editorial in the May issue of the *Journal of the American Dental Association* by Dr Lawrence Meskin pointed out that of the 100,000-plus subscribers to Medline, the primary bibliographic database for medical and dental information, only 852 subscribers were dentists (less than 1%). Dr Meskin states, "This low enrollment is perplexing considering that of the 3,500 or so journals in the Medline database, over 400 (12%) are dental or dental related." He points out that practitioners generally do not know how to access new clinically relevant research findings.

For example, most dentists are probably unaware of a recent scientific review article that was published in the April 15 issue of *Spine* and that has important implications regarding TMD management. A team of 25 independent experts from major medical centers in Canada, France, Sweden, and the United States conducted a 4-year study on cervical whiplash. The team reported findings from more than 10,000 scientific articles published on whiplash in the past 15 years and concluded that there was little scientific evidence

to justify most existing therapies. The leader of the team, Dr Walter O. Spitzer, chairman of the Department of Epidemiology at McGill University in Montreal, stated that "about 90% of whiplash syndromes are self-limiting, heal on their own in days or a few weeks, do not need radiographs, and require very little treatment." Further, they found no generally accepted uniform approach for the management of whiplash and that standard therapies are often ineffective and sometimes may even be harmful. The report's sharpest criticisms were directed, however, at the quality of the publications on whiplash. It was determined that fewer than 3% of the articles met even minimal scientific standards.

As health providers, we have the professional obligation to assimilate new knowledge that can benefit our patients. Status quo is not acceptable for health professionals who are trusted with patient care. To be unaware, to ignore, or to resent research findings that question clinical beliefs is unacceptable professional demeanor. We must continually challenge our thoughts, beliefs, and practices to improve the diagnostic process and treatment outcome for our patients. It is our professional responsibility to reassess and question our knowledge base and, when new scientific information is forthcoming, be willing to make the appropriate changes. Likewise, as academicians, researchers, and clinicians, authors must scrutinize their data accumulation process, stand up to an internal review process, and be involved with the peer review process.



Charles McNeill, DDS
Editor