# LETTERS TO THE EDITOR

## INTEGRATING FAITH AND ILLNESS INTO PRACTICE

To the Editor:

I read with interest the article entitled "Prayer in Office Practice: On the Threshold of Integration" (*Magaletta PR, Duckro PN, Staten SF. J Fam Pract 1997; 44:254-56*) in the March issue of the *Journal*. I would like to offer one approach to integrating the issue of faith and illness into daily practice. I regularly explore the impact of my patients' faith experience on their health, particularly during times of illness and adjustment. I introduce the subject by asking, "Do you belong to any particular church or subscribe to a particular faith?" If they respond affirmatively, I ask what impact their illness has had on their faith and whether their faith experience has been helpful in coping with their illness. I also ask if they have spoken to anyone about this, particularly their minister, and what effect that has had.

If they report that they currently have no particular allegiance to any faith, I ask about their past experiences. Past faith experiences are often, in part, the foundation of their current beliefs, which they rely on to cope with difficulties. On occasion, an unsettled conflict about their past religious experience is uncovered. When this occurs, it is helpful to refer patients to their spiritual advisor for resolution of the conflict. This may open the door to spiritual support through their difficult times.

As for the faith experience of the physician, once the subject has been broached, patients often inquire of the physician's experience. When they find it to be common with theirs, it often gives them comfort. Patients often find comfort in knowing that their physician prays about his or her work and for the patients. Occasionally, patients have requested that I pray for them and, less often, with them.

If we share different experiences, then a comment that reflects the physician's understanding of some common ground usually is helpful. If the physician is totally unfamiliar with the patient's faith experience, then a request that the patient explain the basic tenets of that faith will usually foster a helpful understanding. Finally, asking if the patient would like to be remembered in the physician's daily prayer avoids the pitfall of the patient who does not want this and also conveys a clear message of the physician's respect for the patient and the patient's autonomy.

Given the increasing awareness of the impact of the faith experience on illness and health, a working approach to addressing this aspect of our patients' life experiences is needed. I have outlined an approach that has been successful in my practice. More work needs to be done to identify methods with proven benefits that physicians can comfortably apply to their practices.

*Andre F. Lijoi, MD*
*York, Pennsylvania*

## MANGANESE TOXICITY

To the Editor:

The reported side effects of manganese toxicity include languor, sleepiness, irritability, emotional disturbances, spastic gait, clumsiness of movement, and paralysis, and can resemble parkinsonism.[1] The patient often presents with an affective psychiatric disorder. Later, neurologic toxicity presents as parkinsonism or other extrapyramidal movement disorders.[2] Prior cases of chronic toxicity have occurred by inhalation,[3,4] or parenteral nutrition,[5,6] but rarely by ingestion.

A 67-year-old, 128-lb woman was seen by her family physician because of a nervous condition she had been experiencing for the past year or two. A previous workup showed no organic causes. She was referred to a psychiatrist, who noted a blunted, constricted affect, no variation in mood, and a dull and somewhat demented appearance.

The patient described her condition quite accurately, and had some insight and good judgment. She reported a 2-year history of taking 4 capsules a day of Tri-Boron Plus (manufactured by Twin Laboratories, Inc, Ronkonkoma, NY) purchased from a health food store. She had not revealed this information to any previous physicians.

The psychiatrist's opinion was a possible vitamin/mineral toxicosis, and the patient was advised to stop taking the Tri-Boron Plus. Her psychiatric symptoms improved somewhat over many months. The manganese serum level was 1.1 (normal 0.4 to 0.8) 1 month after initial presentation and 0.5 a year later. Other mineral levels were not elevated.

The 1996 edition of *Casarett & Doull's Toxicology* states that "daily manganese intake ranges from 2 to 9 mg. Gastroinestinal aborption is less than 5 percent."[7] The 10th edition of the National Research Council's *Recommended Daily Allowances* noted that studies from 1982 to 1986 indicated that the mean daily dietary manganese intake was 2.7 and 2.2

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mg for adult men and women, respectively.[8] The Council concluded that "A provisional daily dietary manganese intake for adults of 2.0 to 5.0 mg is recommended." Our patient was ingesting 4 capsules a day, for a daily dose of 5 mg in addition to her expected dietary intake of 2.2 mg/d, for a total daily dose of about 7.2 mg/d for 2 years.

Brody[9] points out that "the absorption of dietary manganese by humans is low, about 6.0%, and can range from 1% to 16%." Because of this poor gastrointestinal absorption, manganese toxicity by ingestion is not common. The only reported ingestion cases are from a sample (n=77) selected in a Greek village where the drinking water contained 2 mg of manganese per liter[10]; a sample (n=25) from a Japanese village where contaminated well water contained 14 to 28 mg of manganese per liter[11]; one person who took 5 Chinese herbal pills (Chien Pu Wan) daily for a daily dosage of 70 µg of manganese[12]; and one case believed due to "large doses of vitamins and minerals for 4 to 5 years," but without quantitative data.[13]

The National Research Council reports "...only one recorded case of a possible manganese deficiency in a human—a male subject in a vitamin K deficiency study who was fed a purified diet from which manganese was inadvertently omitted."[8] Hence, it is difficult to see a benefit from adding extra manganese to supplement a normal diet, much less in quantities that exceed the average American's daily intake twofold.

This case reminds us to obtain a history of herbal or health food store remedies patients may be taking, and to inquire about a patient's environment where unknown inhalation or ingestion may be occurring. Attention to excessive manganese intake is particularly important in patients presenting with psychiatric or psychological symptoms.

*Joseph L. Breault, MD, MPHTM*
*Department of Family Medicine*
*Ochsner Clinic and Alton Ochsner Medical Foundation*
*Hillary Campbell, MSPH*
*Tulane School of Medicine*
*New Orleans, Louisiana*

**REFERENCES**

1. Goyer RA. Metal toxicology. 1st ed. London, Ontario: Academic Press, Inc, 1995:221.
2. Blanc PD. Manganese. In: Olson KR, ed. 2nd ed. Poisoning & drug overdose. Norwalk, Conn: Appleton & Lange, 1994:208.
3. Wennberg A, Iregren A, Struwe G, et al. Manganese exposure in steel smelters; a health hazard to the nervous system. Scand J Work Environ-Health 1991; 17:255-62.
4. Meco G, Bonifati V, Vanacore N, Fabrizio E. Parkinsonism after chronic exposure to the fungicide maneb (manganese ethylene-bis-dilithiocarbamate). Scand J Work Environ Health 1994; 20:301-5.
5. Ejima A, Imamura T, Nakamura S, et al. Manganese intoxication during total parenteral nutrition [letter]. Lancet 1992; 339:426.
6. Fredstom S, Rogosheske J, Gupta P, Burns LJ. Extrapyramidal symptoms in a BMT recipient with hyperintense basal ganglia and elevated manganese. Bone Marrow Transplant 1995; 15:989-92.
7. Klaasen CD, ed. Casarett & Doull's toxicology: the basic science of poisons. 5th ed. New York, NY: McGraw-Hill, 1996:717-18.
8. National Research Council. Recommended daily allowances. 10th ed. Washington, DC: National Academy Press, 1989:230-3.
9. Brody T. Nutritional biochemistry. 1st ed. Berkeley, Calif: Academic Press, 1994:580.
10. Kondakis XG, Makris N, Leotsinidis M, et al. Possible health effects of high manganese concentration in drinking water. Arch Environ Health 1989; 44:175-8.
11. HSDB. Hazardous substances data bank. National Library of Medicine [CD-ROM version], Bethesda, Md. Denver, Colo: Micromedex Inc, 1991.
12. de Krom MC, Borea AM, Hardy EL. Manganese poisoning due to use of Chien Pu Wan tablets. Ned Tijdschr Geneeskd 1994; 138:2010-2.
13. Banta RG, Markesbery WR. Elevated manganese levels associated with dementia and extrapyramidal signs. Neurology 1977; 27:213-16.

## Opportunities for Conducting Research in Your Practice

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The Ambulatory Sentinel Practice Network (ASPN) is looking for Family Physicians to participate in a study of consultation and referral.

This study will examine the influence of managed care on the referral process in primary care. The goal of this study is to improve our understanding of the processes and outcomes of consultation and referral in primary care. This project will be the largest and most comprehensive study of consultation and referral ever conducted in the United States. Results of the study will be used to inform public and private health care policy that is rapidly reshaping the health care system.

This will be a prospective cohort study conducted in primary care practices with varying levels of managed care penetration. Baseline data will be collected for both referred and nonreferred patients during 15 consecutive practice days. Follow-up measurements will be obtained from a select group of referred patients and their referring physicians 3 months after index visits. The analysis of data from this study will be focused on comprehensively describing the referral process and analyzing whether managed care affects the frequency, content, and outcomes of referral.

You are invited to join your colleagues throughout the United States and Canada in their efforts to describe the important aspects of family practice. In addition to participation in this study, membership in ASPN provides additional opportunities for practicing family physicians to participate in conceiving, designing, and implementing practice-relevant research If you would like more information about this study, or membership in ASPN, please call ASPN at 1-800-854-8283.