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Multiple chemical sensitivity or multi-organ dysesthesia

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Although the concept of enhanced nonspecific reaction to environmental chemicals was developed in the 1950s,¹ it was not until 1987 that Cullen² published a review espousing the now popular label "The Syndrome of Multiple Chemical Sensitivities." Cullen defined this syndrome as "an acquired disorder characterized by recurrent symptoms, referable to multiple organ systems, occurring in response to demonstrable exposure to many chemically unrelated compounds at doses far below those established in the general population to cause harmful effects. No single widely accepted test of physiologic function can be shown to correlate with these symptoms."²

Although the multiple chemical sensitivity (MCS) syndrome has attracted much interest and attention from physicians, government officials, patients, and the media, there is inadequate evidence to define a specific cause or pathophysiologic mechanism to account for the symptoms of which these patients complain. Committees established by organizations representing both allergists and the medical community at large have

Abbreviation used:

MCS: Multiple chemical sensitivity

labeled the diagnosis of MCS and the related proposed discipline of "clinical ecology" as "unproved and experimental"³ and inadequately supported by scientific literature.^{4, 5} The American Medical Association Council on Scientific Affairs has stated that MCS should not be considered a recognized syndrome.⁶

There are many physicians and investigators on both sides of the MCS issue who agree that there is a group of patients who are first seen with complaints of multiple symptoms on exposure to a variety of environmental compounds. The disagreement between the broad base of the traditional medical community and the proponents of the MCS syndrome is the result of continued uncertainty, based on the lack of reproducible and well-documented studies, that this condition is indeed the result of organic chemical sensitization, rather than a psychologic illness or misdiagnosed disease. This disagreement is of more than academic interest. Considerable morbidity is associated with this diagnosis, along with the expense of care, lost wages, and litigation. Death may result when a physician incorrectly characterizes a serious physical disease as a "reaction" to an environmental chemical.⁷ Evaluation and treatment of these patients and interaction be-

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tween physicians would be enhanced by adoption of a more descriptive term that avoided etiologic labels.

This is similar to the problems encountered when the acquired immunodeficiency syndrome first evolved in the early 1980s. Because of its more frequent occurrence in the homosexual community, misleading and even derogatory terms such as "gay plague" were applied. It was only after a more neutral and accurate descriptive term, *acquired immunodeficiency syndrome*, came into accepted usage that investigators were able to begin to define the infectious origin of this condition.

Multi-organ dysesthesia is suggested as an alternative diagnostic label. Dysesthesia is defined as "a condition in which disagreeable sensation is produced by ordinary stimuli."⁸ This is consistent with a condition most frequently associated with nomeasurable organ system dysfunction and without demonstrable evidence of true chemical-induced abnormality (i.e., "chemical sensitivity").

Multi-organ dysesthesia does not preclude some patients having a chemical exposure-related physiologic basis for their syndrome, whereas others could have a psychologic or even an infectious basis for this syndrome. Such usage is comparable to that of the term *adult respiratory distress syndrome*. This condition of respiratory insufficiency and noncardiogenic pulmonary edema can be induced by a broad variety of stimuli, ranging from infection, to acid aspiration, pulmonary emboli, or multisystem trauma.

The adoption of the label multiorgan dysesthesia is proposed for patients who complain of multiple symptoms on chemical exposure, at doses that are low and thought to be nontoxic by conventional criteria, and who are without evidence of associated organ system dysfunction. By removing the automatic link to a specific cause, chemical sensitivity, physicians will be free to explore various pathophysiologic mechanisms, limited only by generally accepted principles of scientific evidence.

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