Effects of Toxic Exposure to Molds and Mycotoxins in Building-Related Illnesses

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Abstract

The authors studied 100 patients who had been exposed to toxic molds in their homes. The predominant molds identified were Alternaria, Cladosporium, Aspergillus, Penicillium, Stachybotrys, Curvularia, Basidiomycetes, Myxomycetes, smuts, Epicoccus, Fusarium, Bipolaris, and Rhizopus. A variety of tests were performed on all, or on subgroups of, these patients. Sensitivities and exposures were confirmed in all patients by intradermal skin testing for individual molds (44–98% positive), and by measurement of serum antibodies. Abnormalities in T and B cells, and subsets, were found in more than 80% of the patients. The findings of trichothecone toxin and breakdown products in the urine, serum antibodies to molds, and positive intradermal skin tests confirmed mycotoxin exposure. Respiratory signs (e.g., rhinorrhea, sinus tenderness, wheezing) were found in 64% of all patients. and physical signs
and symptoms of neurological dysfunction (e.g., inability to stand on the toes or to walk a straight line with eyes closed, as well as short-term memory loss) were identified in 70% of all patients. Objective abnormal autonomic nervous system tests were positive in all 100 patients tested. Brain scans, conducted using triple-head single photon emission computed tomography, were abnormal in 26 (86%) of 30 (subgroup of the 100) patients tested. Objective neuropsychological evaluations of 46 of the patients who exhibited symptoms of neurological impairment showed typical abnormalities in short-term memory, executive function/judgment, concentration, and hand/eye coordination.

**Keywords:** immunological, mold, mycotoxin, neurological