

## **WHY SYMPTOMS ARE A POOR INDICATOR OF DISEASE IN CHEMICAL OR MOLD EXPOSURE CLAIMS: THE MISLEADING NATURE OF SYMPTOM QUESTIONNAIRES**

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Symptom reporting by people in schools, office buildings and homes, who believe that their facilities are contaminated, produces physical complaints of dubious medical relevance. Reports of symptoms simply tell us that people are describing complaints, but they do not establish that an agent in the building (other than stress, fear, or worry) is the cause.

When a routine patient presents to the physician with a set of symptoms, those lead to a search for the internal disorder, that is, for a diagnosis. This process of exploring symptoms, developing a list of possible causes and conducting a medical workup is known as “differential diagnosis.” For example, a patient with headaches may have a brain tumor, migraines, neck strain, a hemorrhage, stress, or other underlying disorders. A more comprehensive history, a CT scan MRI, EEG, other studies may rule in or rule out one or more of these diagnoses. But symptoms alone, with no physical findings or objective explanations, have limited diagnostic value. They neither establish disease, nor a cause of the symptoms. This is particularly true when environmental threats are perceived, or litigation is at work.

Numerous studies and vast bodies of scientific literature (see references below) have demonstrated that symptoms are a poor indicator of actual physical illness when people believe that their health is threatened; that environmental dangers (i.e., mold, mold toxins, chemicals) are affecting them; or when they are litigating alleged health effects. This is so, not because of malingering or faking (although occasionally that may be occurring), but because of normal human nature. People convert worry and fear to symptoms. We know from pharmaceutical research, for example, that patients given placebo medications (inactive agents) report side effects. This has been called the “Nocebo” effect: discomfort, as opposed to the beneficial Placebo effect. We know that people who believed that they had drunk contaminated water developed symptoms, even though later the water was found to be not-contaminated. We know that people who were afraid of fluoridation of water developed symptoms, well-before fluoride was added to the water. We know that people who were afraid of pesticide spraying in southern California developed symptoms in response to helicopters passing overhead, long after spraying had ceased. Finally, we know that people who believe that their building is causing illnesses, feel ill, even when they have no physical disease.

Symptom questionnaires are routinely used in investigations of “indoor environmental” issues. They are often more misleading than enlightening, however, for the reasons enumerated above.

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