

## What is Multiple Chemical Sensitivity?

Multiple Chemical Sensitivity (MCS) is a term used to describe a class of conditions that some individuals develop after they are exposed to certain chemicals. MCS is more likely to be a class of diseases than a single entity.

The variety of symptoms individuals experience depends upon the type and intensity of the chemical exposure.

Symptoms can range from those that produce only mild discomfort, such as a headache to more severe reactions, such as severe fatigue, body pains, breathing problems, mood changes, or confusion.

Although some foods, molds, and natural allergens have been implicated in the development of MCS, chemical exposure is suspected to be the leading cause of the disorder.

One of the notable features of MCS is that adverse responses to chemicals can occur at exposure levels that most people tolerate and that may have been previously tolerated by the affected person.

## How do I know if I have MCS?

Exposure to a variety of substances can prompt symptoms in a number of people in the general population. However, such reactions do not necessarily mean that you have MCS. People who suffer from MCS experience a variety of adverse symptoms.

## Common symptoms include but are not limited to:

- Headaches
- Fatigue or general malaise
- Confusion or Disorientation Problems concentrating
- Short-term memory problems
- Dizziness
- Fainting spells
- Flu-like symptoms
- Depression and irritability
- Chest tightness, shortness of breath or other breathing symptoms
- Muscle and joint pain and weakness
- Palpitations
- Increased sensitivity to odor
- Rashes
- Loose stools or other gastro-intestinal symptoms

It is not normal to regularly experience these kinds of symptoms. If you suffer from these health problems on a regular basis you should talk with your doctor; you may want to ask for a referral to a doctor who specializes in occupational and/or environmental medicine. You may want to consider asking in advance if the environmental/occupational physician has experience in working with MCS patients.

## Who gets MCS?

Although people of all ages, races, and economic backgrounds may develop MCS, those identified as most at risk for developing MCS include people who:

- Work in occupations that expose them to industrial chemicals
- Work in buildings with serious indoor air quality problems
- Are exposed to hazardous waste, pesticides, and other environmental contamination
- Are exposed to chemicals from remodeling activities in their home or office

## What causes MCS?

Although many chemicals, as well as certain foods, molds and natural allergens, have been implicated in the development of MCS there is no one universally accepted mechanism to explain what causes the condition to develop. An individual may develop MCS after one substantial chemical exposure or after several lower-level exposures to substances such as pesticides, solvents, or cleaning solutions. It has been suggested that this initiation or "induction" stage is followed by "triggering" of symptoms by everyday, levels of chemicals and certain foods that they had previously tolerated.

## Is MCS related to poor indoor air quality?

It is generally accepted that indoor air quality is likely to play a major role in both the development (induction) and chronic reoccurrence (triggering) of MCS symptoms. New carpeting that has not sufficiently off-gassed prior to occupancy has been implicated in MCS, as have remodeling activities. The chemicals associated with or released by fragrances, tobacco smoke, copiers, glues, newspapers, and leather also have been reported to act as triggering agents.

## Substances reported to act as Initiators and Triggers of MCS.

### Suspected Initiators

- Some industrial solvents
- Volatile organic compounds (VOCs)
- Office/building renovations
- Anesthesia
- Diesel exhaust
- New carpeting
- Pesticides

## Suspected Triggers

- Nail polish/remover
- Fragrances
- Tobacco smoke
- Insecticides
- Dry-cleaned clothing
- Alcohol
- Hair care products
- Markers
- Off-gassing of paints
- Caffeinated products
- Latex
- Some cleaning agents
- Gasoline
- Off-gassing of office products

Although a variety of chemicals and chemical combinations may serve as initiators and/or triggers of MCS, certain substances have been reported to play a more significant role than others. This is especially true with regard to pesticides and the onset (initiation) of MCS. Substances that trigger MCS symptoms vary from person to person. These are only partial lists.

## How is MCS discovered in a patient?

Because research on MCS remains at an early stage and MCS is probably a class of diseases, rather than a single entity, there is no single 'test' or combination of tests that can be used to diagnose MCS. However, there is a way for a physician to determine whether a person may be suffering from MCS, namely, by taking a thorough medical, occupational and exposure history, performing a physical examination, assessing the degree to which symptoms continue to come and go in response to typical exposures, and by going through a thorough differential diagnosis process to exclude other known diagnoses that could fully explain symptoms being experienced. It is important to note that a physician's diagnosis of asthma, depression, or fatigue does not rule out MCS, since a wide variety of conditions like these may co-exist with MCS.

## Can any physician discover and treat MCS?

While many healthcare providers may see patients with these types of symptoms, some physicians who focus on occupational/environmental medicine – and have had experience with MCS patients -- are in the best position to recognize and treat individuals with MCS. If you suspect that you suffer from MCS you may want to take this brochure or other related information with you when you see your doctor.

## What can an individual with MCS do to reduce the likelihood of a symptomatic response?

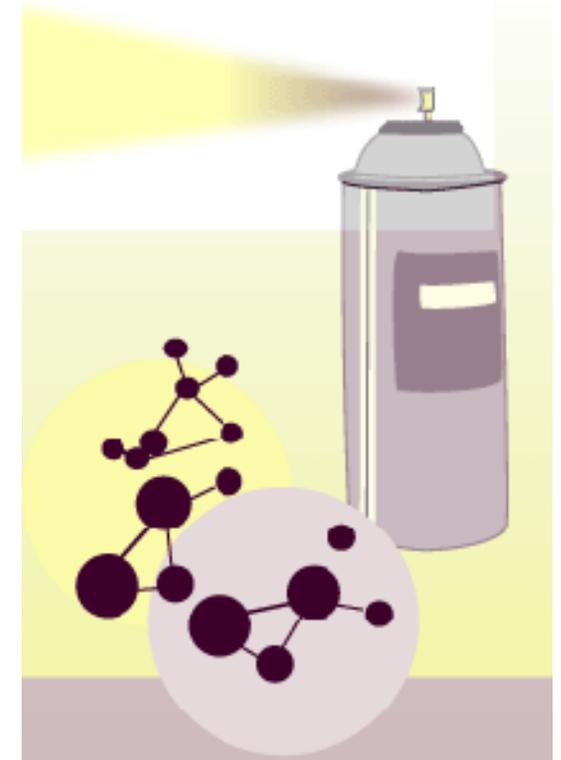
People with MCS report that avoiding exposures to chemicals, foods, and drugs that trigger symptoms is an important first step. Since pollutants in confined spaces (e.g., indoors) are thought to be a major source of both initiating and triggering exposures, maintaining optimal indoor air quality is important. In addition, affected individuals have reported that a variety of treatment options including nutritional supplements and other therapies were helpful to varying degrees. Treatment options should be discussed with a physician who is knowledgeable about MCS to decide which may be appropriate.

You may want to bring this brochure with you when you consult a health care provider.

## Who can I contact if I want more information?

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# What You Should Know About Multiple Chemical Sensitivity



**Bureau of Environmental Health**  
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