WHAT IS MULTIPLE CHEMICAL SENSITIVITY ?

❍ Multiple Chemical Sensitivity (MCS) disorders are characterized by multiple symptoms in multiple organ systems that are triggered by exposures to multiple different chemicals and irritants at or below previous tolerated levels. MCS can begin at any age but usually develops first in late-puberty to mid-life and is more common in women than in men. It may be caused by either acute short-term or chronic long-term exposure to one or more chemicals and/or irritants.

❍ The most commonly affected organ systems are the neurological, CNS, immune, respiratory, and musculoskeletal systems. Biochemically, MCS disturbs neurotransmitters, energy metabolism, and porphyrin metabolism (responsible for the production of heme, an essential component of hemoglobin and the liver's detoxification system for foreign chemicals, among other things).

❍ MCS symptoms may include any combination of aching joints and muscles, chronic fatigue, headaches, difficulty concentrating, irritated eyes, nose, ears, throat and/or skin, and hypersensitivity to odors, touch, bright lights, loud sounds, and temperature extremes.

❍ The frequency and/or severity of these symptoms are worsened by subsequent exposures to a wide range of chemicals and irritants (hence the name MCS) from a great variety of sources. MCS can be improved but not cured through reduction and environmental control of such exposures. It is further improved by medical treatment of endocrine, nutritional, and other complicating medical problems.

❍ Synonyms for MCS and some of the distinctly recognized medical conditions associated with MCS are listed below. Those also listed in the International Classification of Diseases (ICD-9CM) are marked with an asterisk.

Acquired Intolerance to Solvents (AIS)
Allergic Toxemia
Carbon Monoxide Poisoning*
Cerebral Allergy
Chemical Hypersensitivity
Chemical-Induced Immune Dysfunction
Disorders of Porphyrin Metabolism *
Ecological Illness
Environmental Illness (EI)
Environmental Irritant Syndrome
Environmentally Induced Illness
Environmental Hypersensitivity Disorder
Gulf War Syndrome
Immune System Dysregulation
Intrinsic Asthma *
Mastocytosis*
Multiple Chemical Hypersensitivity
Multiple Chemical Reactivity
Sick Building Syndrome
Total Allergy Syndrome
Toxic Carpet Syndrome
Toxic Encephalopathy *
Toxic Response Syndrome
20th Century Disease

❍ Several peer-reviewed studies in the US of college students, the elderly, and the general population show that at least 15% to 30% complain of chemical sensitivity sufficient to induce illness after exposure to common chemical exposures. Only a small percentage of MCS sufferers are severely disabled by their symptoms, but—like canaries in a coal mine—their illness serves as a stark warning to the rest of us about the dangers posed by chemical exposures in our environment.

❍ MCS can be caused (or "initiated") and aggravated (or "triggered") by:

- ⊙ pesticides in food, water, and air
- ⊙ gasoline, natural gas, and other fuels
- ⊙ a variety of chemical exposures common in the workplace, including emissions from carpeting, glues, photocopiers, computers, carbonless copy paper, cleaning fluids and solvents
- ⊙ construction and renovation materials
- ⊙ petrochemical dyes and fragrances

❍ Prevention of MCS depends on early recognition of the warning signs so that prompt action can be taken to eliminate or at least control suspect exposures. Clinical and survey evidence suggest that most patients improve as they learn to avoid more toxic exposures. Warning signs to look out for include repeatedly experiencing any of the symptoms listed above in response to different chemical exposures, such as pumping gas, smelling perfume, or using household cleaning products.

❍ For more infor, contact MCS Referral & Resources at (410) 889-6666 or adonnay@mcsrr.org

Multiple Chemical Sensitivity

facts from MCS Referral & Resources, www.mcsrr.org

What is Reported About MCS in Medical and Scientific Journals?

- **1869: Drug, alcohol, food and chemical sensitivities are all described by Dr. G.M. Beard as symptoms of Neurasthenia in *Boston Medical & Surgical J* (3:217-221)**
- **1952: The first peer-reviewed report of chemical sensitivity, by Dr. T. Randolph, appears in *J Clin Lab Med* (40:931-2)**
- **1963: The first double-blind "challenge" study of chemical sensitivity in humans, by Kailin et al, appears in *Med Ann DC* (32:1-8)**
- **Since 1952, over 500 medical articles and book chapters have been published on MCS (not counting any from Clinical Ecology journals)**
- **More than 1/2 of all articles on MCS were published since 1992; most medical society positions are older and on Clinical Ecology, not MCS, making them outdated & irrelevant**
- **More than 1/2 the medical articles published before 1992, since 1992 and overall support a physical or organic basis for MCS, while less than 1/4 support a psychiatric, psychogenic or iatrogenic basis.**

Multiple Findings & Theories

1. CNS Dysfunction:
   - hypoperfusion (SPECT)
   - abn. alpha wave (qEEG)
1. Circulatory Dysfunction
2. Endocrine Dysfunction
3. Immune Dysfunction
4. Mast Cell Dysfunction
5. Porphyrin Dysfunction
6. Oxygen Uptake Deficiency

1. Limbic Kindling
2. TILT: Toxicant-Induced Loss of Tolerance
3. Total Load (Systemic)
4. Behavioral Conditioning
5. Psychogenic: from child abuse, chemophobia, etc
6. MD's "Belief System"
7. Carbon Monoxide Poisoning

Multiple Overlapping Disorders:

- **16% to 34% of adults in 10 prev. studies report symptoms of chemical sensitivity and 4% experience these symptoms daily**
  (CA Dept of Health 1995, Bell et al 1993, Meggs et al 1996)
- **6% of Californians & 2% of New Mexicans report they have been given MCS diagnosis by a physician or other health professional**
  (BRFS: CA Dept of Health 1995 & 96, NM Dept of Health 1997)
- **85% with MCS* have some Disorders of Porphyrin Metabolism** (Ziem & McTamney 1997)
- **67% to 88% with MCS* have Chronic Fatigue Syndrome & vice versa** (Buchwald 1994, Donnay 1998) ** clinic population only: may not be representative of all adults*
- **50% to 55% with MCS* have Fibromyalgia Syndrome & vice versa** (Clauw 1995, Donnay 1998)
  ** clinic population only: may not be representative of all adults*
- **50% with MCS have IgE-mediated Allergies (mold, pollen, etc) & vice versa** (Meggs et al 1996)

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Who Recognizes MCS as a Medical Disorder or Disability? (8/98)

25	**U.S. Federal Government Agencies, Commissions, Institutes & Departments**
28	**U.S. State Government Agencies, Commissions, Legislatures & Departments**
14	**U.S. Local Government Agencies, Commissions, Councils & Departments**
8	**U.S. Federal Court Decisions**
21	**U.S. State Court Decisions**
14	**U.S. Workers' Compensation Board Decisions**
4	**Canadian Federal Government Agencies**
6	**Canadian Provincial Government Agencies**

Source: Donnay A. 1998. Recognition of MCS. Baltimore: MCS R&R

Who No Longer Opposes Recognition of MCS

1. **American Medical Association**, which had adopted a position paper critical of Clinical Ecology in 1991, issued a report on "Indoor Air Pollution" in 1994--with the

2. **American Lung Association**, and the

3. **US Environmental Protection Agency**, and the

4. **US Consumer Product Safety Commission** –saying "***the current consensus is that in cases of claimed or suspected MCS, complaints should not be dismissed as psychogenic..."*** (US GPO, #1994-523-217/81322, page 20)

5. **American College of Physicians**, which adopted a position paper critical of Clinical Ecology in 1989, said in 1996 that it "does not have a position statement on MCS" (ACP Vice President of Public Policy, 12/9/96)

6. **California Medical Association**, which adopted a medical practice opinion critical of Clinical Ecology in 1986, "withdrew" this in 1990 (CMA Legal Counsel 4/9/1990)

Who Still Opposes Recognition of MCS

1. **American Academy of Allergy & Immunology** (now AAAAI), based ONLY on position adopted in 1986
2. **American College of Occupational & Environmental Medicine**, based on 1991 position paper, revised 1993
3. **Environmental Sensitivities Research Institute** (ESRI) since its founding by Dr. Gots in 1995. "Non-profit" with $10,000 annual membership fee. Board includes reps **DowElanco, Procter & Gamble, RISE,** and the **Cosmetic, Toiletry & Fragrance Association**. Chaired in 1998 by John DiFazio, senior regulatory counsel of the **Chemical Specialities Manufacturers Association.**