

Case study

Multiple chemical sensitivities

A 40-year-old desktop publisher presented with a history of cough, wheeze, dyspnoea (but no change in effort tolerance), sore throat, a 'crawling' chest sensation, chest pain, palpitations, headaches, nausea, unpleasant taste and tongue numbness, dizziness and a decline in concentration. She had initially experienced these symptoms within weeks after being exposed to high concentrations of organic solvents at work. Subsequently, the same symptoms were triggered by lower concentrations of a different set of solvents in a new job, as well as by air conditioning and contact with dogs and perfumes. She was well between exposure events.

She had no fever, weight loss, nasal, eye or skin symptoms and no history of allergic ailments. Examination was unremarkable, with normal spirometry and no work-related changes on serial peak flow monitoring at work and home.

Her initial presentation was consistent with acute solvent toxicity,¹ but the subsequent course was not. Symptoms recurred at lower levels of a different set of chemical substances and there was 'generalisation' to domestic and environmental exposures. A diagnosis of multiple chemical sensitivities (MCS) following an episode of acute solvent toxicity was made.

MCS is a poorly understood condition with a number of theories as to its nature, characterised by multi-organ symptoms frequently commencing after a 'toxic' exposure. These symptoms then occur predictably in response to low concentrations of common workplace, environmental or domestic agents.^{2,3} Objective impairment is absent. Atopy is not a strong risk factor.²

Management is supportive and long-term and over-investigation needs to be avoided. The aim should be to assist the patient to avoid triggering situations while remaining at work. Unfortunately, significant work incapacity as well as psychological sequelae may occur.^{3,4}

1. Gerr F, Letz R. Organic chemicals solvents. In: Rom W (ed): *Environmental and Occupational Medicine*, 2nd ed. Boston/Toronto/London: Little, Brown and Company, 1992: 843-860.
2. Cullen M. Multiple chemical sensitivities. In: Stellman JM, Osinsky D, Markkanen P (eds.): *Encyclopaedia of Occupational Health & Safety*, 4th ed. Geneva: International Labour Office, 1998.
3. Magill M, Suruda A. Multiple chemical sensitivity syndrome. *American Academy of Family Physicians* 1998; 58(3):721-728. (<http://www.aafp.org/afp/980901ap/magill.html>) Accessed 26 May 2008.
4. Caress S, Steinemann A. A review of a two-phase population study of multiple chemical sensitivities. *Environmental Health Perspectives* 2003; 111 (12): 1490-1497.

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Single suture

Shower heads breed bacteria

Run your shower for a minute or two before you expose your face to the water – this is the advice of Normal Pace, a microbiologist who recently published in the *Proceedings of the National Academy of Sciences*. Pace and his team from the University of Colorado, Boulder, analysed shower head from 45 sites in the USA.

They found significant loads of non-tuberculous mycobacteria (NTM), particularly *Mycobacterium avium*, at levels 100 times as high as those found in drinking water. *M. avium* is responsible for a type of pulmonary disease that is more prevalent than TB in developed countries, and cases of the disease have risen in parallel with people taking showers rather than bathing. However, the main danger is to those who are immunocompromised or to pregnant women. Pace suggests not using plastic shower heads and throwing away shower heads that appear to have crusty deposits on them.

Feazel LM, et al. *PNAS* 2009;106:16393-16399.