



NICNAS Information Sheet

Multiple Chemical Sensitivity Review Final Report

December 2010

The Office of Chemical Safety and Environmental Health (OCSEH) and the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) have prepared a final report on Multiple Chemical Sensitivity (MCS) entitled: 'A Scientific Review of Multiple Chemical Sensitivity: Identifying Key Research Needs'.

What is MCS?

Multiple Chemical Sensitivity (MCS) describes a complex condition involving a broad array of symptoms attributed to exposure to extremely low levels of a wide variety of environmental chemicals. The symptoms experienced by individuals are diverse and reported symptoms can, in some cases, be debilitating. The pathogenic mechanisms involved in MCS have not been established. Diagnostic methods and treatments have yet to be agreed by the medical profession.

Background to the report

Given the uncertainty in relation to the mechanisms, diagnosis and treatment of MCS, a number of studies and enquiries on MCS have occurred, including in Australia. A consistent finding of such investigations has been the need for further research on MCS to enhance the understanding, prevention and management of MCS. However, these calls for further research have not specified priority areas for the research community. OCSEH and NICNAS have compiled this scientific report on MCS because of significant gaps in understanding MCS, together with community concerns over the presence of chemicals in the environment.

Report findings

The report findings point to the following specific priorities for further scientific and clinical research on MCS.

- **Targeted research into mode (s) of action**
The report identifies several biologically plausible hypotheses worthy of further scientific investigation to explain the underlying mechanism(s) (modes of action) for MCS. Elucidating the biological basis for MCS will provide directions for clinical diagnosis and improve treatment options for MCS.
- **Clinical research needs**
A review of current clinical diagnosis and management of MCS in Australia highlighted differences with criteria used for the diagnosis of MCS as well as methods to treat MCS. A number of primary clinical research needs were evident, such as standardising diagnostic criteria, determining prevalence for both medically diagnosed and self-reported cases, using challenge testing and longitudinal studies to explore initiation/triggering and modes of action, and determining and documenting effective treatment/management protocols.

- **Longitudinal study**
The report identified a need to look more closely at the natural history of people with MCS. A longitudinal clinical and sociological study should assist in identifying key elements of MCS, such as how MCS is initiated/triggered and how sensitivities vary over time. Such a study should examine eliciting agents/events, diagnostic experiences, clinical course and impacts of treatment/management strategies.
- **Education/training**
The report noted that the development of a clinical education program should be investigated. Such a program should be based on evidence currently available, utilise any findings from clinical research in Australia (such as a longitudinal investigation), and consider practical guidance on approaches to MCS clinical management from the review of clinical diagnosis and management of MCS in Australia.

The final report is now available from the NICNAS website at www.nicnas.gov.au/Current_Issues/MCS.asp

Consultation process

An initial draft report on MCS was released by NICNAS/OCSEH for a 3 month public comment period in November 2008. This followed a face-to-face meeting between NICNAS, OCSEH and representatives from MCS interest groups in Canberra in October 2008. This draft report attracted a large number of submissions, and these are available from the NICNAS website at:

www.nicnas.gov.au/Current_Issues/MCS.asp.

Following consideration of all submissions and significant revisions to the report, NICNAS released a revised draft report on MCS for another six week period of public comment in February 2010.

Submissions to this final consultation phase are available also from the NICNAS website at:

www.nicnas.gov.au/Current_Issues/MCS.asp).

All submissions from public consultations, as well as comments from the face-to-face meeting with MCS interest groups in 2008, have been considered for this technical report on key research needs in MCS.

Documents describing the summary of revisions following the comments periods are also available from the NICNAS website. The Summary of Revisions following the consultation in February 2010 is available at: www.nicnas.gov.au/Current_Issues/MCS/MCS_Summary_Of_Revisions_Nov_2010_PDF.pdf