



Occupational exposures and MND in New Zealand

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This is the first NZ population-based-control-study to investigate the associations between MND and occupational and environmental risk factors in New Zealand. 321 MND patients and 605 population controls enrolled in the study between 2013 – 2016.

Data was gathered on demographic details, residential history, lifestyle factors, occupational history and occupational exposures and agricultural contact. Participants provided details of all jobs held for 6 months or longer, types of exposures and duration.

The study examined associations from occupational exposure to electric shock and MND. It also examined associations for people who were ever exposed to 11 different occupational exposure categories. The duration of these exposures and risk of MND was also examined. The categories included: Dust, fibres, environmental tobacco smoke, other smoke or fume, gas, fumigants, oils and solvents, acids/alkalis, pesticides, other chemical products, animal, or animal products.

Results by occupations

Elevated risks were observed for:

- Agricultural (particularly horticulture and fruit growers, such as field crop and vegetable growers, fruit growers, gardeners, and nursery growers and crop and livestock producers)
- Construction (builders and electricians)

Results by occupational exposures

Elevated risks were observed for:

- Having ever worked with a job with potential for electric shocks
- Exposed to fumigants.
- Exposed to pesticides, in particular insecticides and fungicides.
- Exposure to textile fibre, disinfectant, and cleaning products for women only.

Grace is currently looking at lifestyle in relation to smoking and alcohol; physical activities; head and spinal injury; emotional trauma and their associations with MND.