

# Metals in local groceries may impact kids health

November 28 2014, by Rob Payne

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However, Dr Callan cautions that limited data exists for dietary exposure to manganese and health effects, and recommends parents follow a few simple rules to reduce worry. Credit: Nathalie Fortin

A survey of metal concentrations in 253 food and beverages commonly eaten by Western Australians has turned up mixed results.

While researchers from Edith Cowan University found metal levels for most foods to be within guidelines for safe exposure, children may be getting higher than recommended levels of cadmium, nickel and manganese.

Dr Anna Callan says more research is needed into an issue which has received little attention in Australia.

"At the moment we have limited information on dietary exposure to metals and the potential health effects of dietary exposure to metals in children, so it is difficult to say [how concerned we should be by our findings]," she says.

"For some of the metals we examined there is limited data worldwide on children's dietary exposure, so it is difficult to compare.

"But we know that for many persistent chemicals in the environment, including metals, diet forms the major exposure pathway for people who don't smoke or who aren't occupationally-exposed."

Cadmium intake in WA children aged eight years exceeded the European Food Safety Authority guideline, while nickel and manganese intake was higher in young children than reported in international studies.

## **Kidney dysfunction linked to metals intake**

Exposure to cadmium at low (i.e. dietary) levels has been found to be associated with health effects such as decreased bone density and [kidney dysfunction](#).

Nickel exposure at eight micrograms per kilo of body weight per day, which was the level found in WA seven-year-olds, has been linked to eczema aggravation in susceptible individuals.

Manganese exposure has been associated with a range of neurological effects, including hyperactivity.

However, Dr Callan cautions that limited data exists for dietary exposure to manganese and [health effects](#), and recommends parents follow a few simple rules to reduce worry.

"A healthy, balanced and varied diet is important for everyone, and especially children," Dr Callan says.

"Eating a variety of foods will help to minimise the risks of metals exposure.

"And practicing good hygiene, such as washing your hands before eating and washing fruit and vegetables to remove traces of soil, may also reduce exposure."

For the study, researchers purchased food and beverages from leading supermarket chains, selecting items based on a survey of local children's typical diets.

They analysed each sample for 13 metals: aluminium, arsenic, cadmium, cobalt, copper, mercury, lead, manganese, nickel, selenium, tin, uranium and zinc.

Diets were then modelled for girls and boys aged eight, 12, 13 and 16 years to assess how much [metal](#) exposure each group might face.

Provided by Science Network WA

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