

# Toxins in herbal medicines 'can harm our health'

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People who take unregulated complementary medicines are at a higher risk of being contaminated by heavy metals, a medical scientist has warned.

Research from the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE) reveals that certain complementary medicines, especially Ayurvedic treatments – an Indian traditional medicine – may contain high levels of arsenic, cadmium, mercury and lead.

All of these heavy metals are toxic to humans, and long-term exposure to them has been linked to cancer, diabetes, blindness and organ damage, Dr Shankar Bolan of CRC CARE will tell the CleanUp 2015 conference in Melbourne today.

"Complementary medicines, including self-prescribed vitamins, herbal remedies and mineral supplements are commonly used worldwide," says Dr Bolan. "They may have health benefits, but scientists are increasingly finding traces of heavy metals in them.

"Some of these heavy metals are accumulated by herbal plants as they grow in contaminated soil. Some are added into the medicine directly. One example is the addition of arsenic, mercury and lead into the Ayurvedic medicine 'Rasayan Shastra' due to a belief that these metals can improve your health or potency."

While Australia has strict regulations to stop these medicines from being sold, people are still buying them through the internet or from overseas, Dr Bolan explains.

In the study, he developed a technique that can quickly determine the levels of heavy metals in these medicines, as well as their bioavailability – the portion available to affect human health. "These complementary medicines we take are not completely broken down by our body. The amount that stays and accumulates to affect the body over time is what we need to watch out for."

After analysing six herbal and six Ayurvedic medicines, Dr Bolan found that the Ayurvedic medicines contained higher levels of arsenic, cadmium, mercury and lead than the herbal ones. "The bioavailability of these heavy metals was also higher in Ayurvedic medicines," he says.

"This suggests that medicines that have heavy metals added to them may be more toxic to humans, compared to those that are made from contaminated plants."

"We also tested what happens in the 'worst case scenario' – taking the maximum daily dose as instructed on the packages," Dr Bolan says. "For [herbal medicines](#), the amount of [heavy metals](#) absorbed by the body is still within the safe threshold as determined by the World Health Organisation.

"However, taking the maximum dose for some Ayurvedic medicines is likely to result in levels of mercury, lead and cadmium that exceed the safe threshold."

The good news is these complementary medicines are generally very well regulated in Australia, Dr Bolan says. "It's those that 'escape the net' that we need to be concerned with, and they are easily bought from

websites or over the counter overseas.

"The message is: be careful when taking complementary medicines – especially Ayurvedic and [herbal remedies](#). Stick to the ones that have been approved and are sold within Australia, or check with your doctor before you take them."

Dr Bolan's presentation "Sources, speciation and bioavailability of heavy metal(loid)s in [complementary medicines](#)" is on Monday 14 September at 9.30am in Crown Conference Centre Meeting Room 13.

**More information:** CleanUp 2015, the 6th International Contaminated Site Remediation Conference, is being held at the Crown Conference Centre, Melbourne, from September 13-16, 2015. The program is here: [www.crccare.com/cleanup-confer ... 2015/program/program](http://www.crccare.com/cleanup-confer...2015/program/program)

Provided by CRC Care

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