

# Humans experiencing increased exposure to aluminium and it's predicted to get worse

August 28 2013

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Aluminium - the most abundant metal and third most abundant element of the Earth's crust - has no known biological function and is a recognised environmental toxin. Human exposure to aluminium is implicated in a number of chronic diseases, including bone disease, auto-immune conditions, cancer and neurodegenerative diseases.

In an invited Perspective on Human Exposure to Aluminium, published in the Royal Society of Chemistry journal *Environmental Science: Processes and Impact*, Professor Christopher Exley, Professor of Bioinorganic Chemistry at Keele University, describes the holistic view of living in the Aluminium Age and the implications for the human body burden of aluminium.

Human exposure to aluminium has increased at least 30-fold over the last 50 years and is burgeoning, with currently 11 kg of aluminium metal being cast for every person on Earth each year! The great majority of this aluminium is newly extracted from its ores, as opposed to recycled, and it all has the potential at least to impact upon and accumulate within the human body.

Professor Exley provides a more complete definition of what actually constitutes the body burden of aluminium in humans and most importantly the potential for such to impact upon human health.

Professor Exley recognises that the Aluminium Age is, for now at least, here to stay and that for aluminium to continue to be used effectively

and safely in our everyday lives it is of paramount importance that we recognise both its power for good and its potential to do harm where its applications are not fully understood or its safety has not been adequately tested.

"We cannot continue to be complacent about [human exposure](#) to aluminium. While the genie is out of the bottle, we do still have several wishes remaining and we should strive to use these to live safely and prosperously in the aluminium age," he said.

**More information:** Exley, C. (2013) Human exposure to aluminium, *Environmental Science: Processes and Impacts* [DOI: 10.1039/C3EM00374D](#) [pubs.rsc.org/en/content/article...f/2013/em/c3em00374d](#)

Provided by Keele University

Citation: Humans experiencing increased exposure to aluminium and it's predicted to get worse (2013, August 28) retrieved 7 May 2024 from <https://phys.org/news/2013-08-humans-experiencing-exposure-aluminium-worse.html>

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