

EXPOSURE TO TOXIC METALS

FROM THE USE OF
CERTAIN, LIGHTWEIGHT
ALUMINIUM POTS



WHAT IS THE PROBLEM?

In recent years there has been a significant increase in the use of aluminium waste to make cooking pots in the informal sector.

A wide range of waste aluminium items, including engine parts, vehicle radiators, lead batteries, computer parts, construction material and electrical appliances, may be melted to craft cooking pots. The metals are melted at relatively low temperatures in rudimentary devices, such as metal drums, often in backyard cottage industries. The pots produced are light in weight, relatively low in cost and need less wood fuel for cooking meals, making them very popular, especially in settings where levels of affordability are low.

Research undertaken at the South African Medical Research Council (SAMRC) has shown that toxic metals such as lead and arsenic may leach from some of the pots into foods, in some instances at very high concentrations. Elevated concentrations of lead and arsenic are associated with a range of **health risks**, including:

- Feeling tired or weak
- Experiencing muscle or joint pain
- Having headaches or stomach cramps
- Loss of appetite
- Cognitive and social impacts including learning difficulties, poor performance at school, reduction in IQ scores
- Elevated levels of aggression, violence or criminal behaviour.
- Metals such as lead and arsenic may also interfere with normal development of the brain, kidneys, heart, nerves, blood cells and other organs.
- At very high levels of exposure, lead is associated with permanent muscular paralysis, coma and death.

Since artisanal, low-cost aluminium cookware may be widely used in some settings, including in homes, schools, street food markets and during celebrations such as weddings and funerals, there is growing concern for the health of all users, but especially for young children who are particularly vulnerable to the health effects of toxic metals, and who may bear the consequences for many years.





WHAT YOU CAN DO TO PROTECT YOURSELF:

- If possible, use anodized aluminium cookware, which has a relatively hard, non-stick surface, making it scratch-resistant, durable and easy to clean. Pots that have been anodized are also less likely to leach metals into foods.
- Cast iron pots are associated with lower rates of leaching metals into foods.
- Do not cook or store foods in aluminium pots for long periods.
- Do not cook or store highly acidic foods, such as those containing tomatoes, pineapples or lemon juice in aluminium pots.
- When washing your pots avoid rough cleaners or scrubbers that could harm the surface or remove its protective layer.
- Check pots often for cracks or chips. Damaged items can absorb germs or harmful substances, so try to mend or replace damaged pots.

For more information, visit the following links:

- <https://www.sciencedirect.com/science/article/pii/S0013935120307556>
- <https://www.mdpi.com/1660-4601/17/20/7522>
- <https://www.okinternational.org/hazardous-cookware>
- <https://www.education.gov.za/Portals/0/Documents/Publications/NSNP%20Equipment%20and%20Utensils%20Guidelines.pdf?ver=2014-03-04-150906-150>

