



ALUMINIUM USED IN COOKING & STORING FOOD

KEY POINTS

- Aluminium has been used safely for cooking and storing food for many decades.
- Aluminium is used for wrapping and storing foods and medicines as it preserves quality, by keeping out light, air and micro-organisms that can cause food spoilage.
- Systematic reviews of high quality studies show that only minimal amounts of aluminium get into food from cookware and foil and almost all of the aluminium that is taken in by the body is eliminated, without being absorbed.

ALUMINIUM USED IN COOKWARE AND FOILS

Cooking utensils such as pots, pans and menu trays are often made of aluminium because it is lightweight and conducts heat well. Aluminium is energy-efficient for heating and cooling, and since it is light it is a preferred material for packaging.

Aluminium foil is widely used for packaging as well as wrapping and storing food as it is light and flexible. It also keeps out micro-organisms, air and light to better preserve the contents and extend their shelf-life.

The amount of aluminium that migrates into foods from aluminium pots, foil and cans is negligible. Higher amounts result from cooking or storing of highly acidic (such as tomatoes or citrus) or salty foods for a long time in aluminium cookware or foil, but it is easy for the consumer who wishes to do so to reduce these amounts.

ALUMINIUM IN THE BODY, FROM FOODS AND FOOD CONTACT MATERIALS

Very little of the aluminium that we ingest from foods and food contact materials is absorbed by the body.

Reliable scientific studies show that only a small amount of the total amount of aluminium that is taken in through food and water is absorbed by the digestive tract. Most is quickly filtered out by the kidneys and eliminated from the body. The amount of aluminium that the average person takes in from food each day is only a small fraction of the safe levels recommended by international health institutions.

For example, although the recommended safe limit for an adult weighing 80 kilos (175 pounds) is approximately 23 milligrams a day, the average adult actually takes in much less – about 2 to 10 milligrams. Only a very small portion of this comes from cookware and foil used in food preparation.

THE SAFETY OF ALUMINIUM IN THE BODY

Because so little of the aluminium that most people ingest is absorbed, very little aluminium accumulates in tissues and organs in the body.

Aluminium is not considered to be a carcinogen (a cancer-causing agent), and is not believed to cause Alzheimer's Disease because, contrary to some myths, aluminium does not cause the changes in the brain that are associated with that disease.

Patients with kidney failure are at higher risk from aluminium, because their bodies can't eliminate the aluminium they take in; however normal exposures to aluminium do not put healthy people at risk.

MINIMIZING EXPOSURES TO ALUMINIUM IN FOODS FROM COOKWARE AND FOILS

People who would like to further minimize the already small amount of aluminium that they get from food contact materials can limit their use with acidic and salty foods. They can do this by avoiding heating, cooking or storing highly acidic or salty foods in aluminium cookware for long periods.

In Europe, a new *Council of Europe* Resolution on metals and alloys in contact with food will place labelling requirements on manufacturers of aluminium food contact materials, such as foil, for information purposes. In compliance with this Resolution, packages of aluminium foil will carry instructions on limiting the use of the product with acidic or salty foods.

ADDITIONAL RESOURCES

ALUMINIUM FOOD CONTACT SAFETY INFO AND ADVICE

Government of Canada

www.canada.ca/en/health-canada/services/household-products/safe-use-cookware.html#al

Real Simple

www.realsimple.com/food-recipes/tools-products/aluminum-foil-safe

Martha Stewart

www.marthastewart.com/272550/healthy-aluminum-tips

GENERAL SAFETY OF EXPOSURES TO ALUMINIUM

Agency for Toxic Substances and Disease Registry

www.atsdr.cdc.gov/toxguides/toxguide-22.pdf

Chemical and Veterinary Investigations Office (CVUA), Stuttgart

www.cvuas.de/pub/beitrag.asp?subid=1&Thema_ID=3&ID=2012&lang=EN&Pdf=No

Lidsky, T. (2014). "Is the Aluminum Hypothesis dead?". J Occup Environ Med. 2014 May; 56(5 Suppl): S73-9.

www.ncbi.nlm.nih.gov/pmc/articles/PMC4131942/

BLOGS

Snopes: *Does Cooking with Aluminum Foil Put You at Risk for Alzheimer's?*

www.snopes.com/cooking-with-aluminum-foil-puts-you-at-risk-for-alzheimers/

Reference: *How Does Aluminum Foil Keep Things Cold?*

www.reference.com/food/aluminum-foil-keep-things-cold-61c3ba510bce2170

The Guardian: *GRRLSIENTIST - Aluminium*

www.theguardian.com/science/punctuated-equilibrium/2011/may/20/1

TECHNICAL INFORMATION

UK Food Standards Agency (2013). "Survey of aluminium and other elements in packaged food"

admin.food.gov.uk/sites/default/files/multimedia/pdfs/fsis-aluminium-packaged-food.pdf

European Food Safety Authority (2008). "Safety of aluminium from dietary intake - Scientific Opinion of the Panel on Food Additives, Flavourings, Processing Aids and Food Contact Materials (AFC)"

www.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2008.754/abstract

Council of Europe (2002). "Guidelines on Metals and Alloys Used as Food Contact Materials".

www.mast.is/Uploads/document/guidelines_metals_alloys_used_as_food_contact_materials.pdf

International Programme on Chemical Safety (1997). "Environmental Health Criteria 194: Aluminium".

www.inchem.org/documents/ehc/ehc/ehc194.htm#PartNumber:1

Soni, M. et al. (2001). "Safety evaluation of dietary aluminum". Regul Toxicol Pharmacol. 2001 Feb; 33(1): 66-79.

www.ncbi.nlm.nih.gov/pubmed/11259180

ALZHEIMER'S DISEASE

Alzheimer's Society

www.alzheimers.org.uk/download/downloads/id/1770/factsheet_risk_factors_for_dementia.pdf

WebMD

5 Myths About Alzheimer's Disease

www.webmd.com/alzheimers/features/5-alzheimers-disease-myths?

Controversial Alzheimer's Disease Risk Factors

www.webmd.com/alzheimers/guide/controversial-claims-risk-factors