

SPECIAL Aluminium in the food sector



Imprint

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Foreword

Dear Readers,

Aluminium is the most commonly occurring material on earth. It is ingested by humans through various channels. Intake is not only via food and consumer products containing aluminium, such as tableware and food packaging, but also through drinking water, cosmetic products such as aluminium-containing antiperspirants and pharmaceutical products. The European Food Safety Authority (EFSA) has derived a tolerable weekly intake of 1 milligram aluminium per kilogramme bodyweight for oral intake with food, but this value can be exceeded in some cases. For this reason, aluminium intake should be minimised and people should seek to avoid every additional intake of the substance.


In a research project in 2017, the BfR examined the transfer of aluminium from uncoated menu trays to food. It was ascertained here that significant quantities of aluminium ions are released from these menu trays and transfer to foods while keeping them warm.

The BfR took this as an opportunity to conduct a representative survey on the subject of aluminium in packaging materials and containers with food contact in order to record the attitudes, risk perception and knowledge of the general public. You will find the results of this survey in this special issue of the BfR Consumer Monitor.



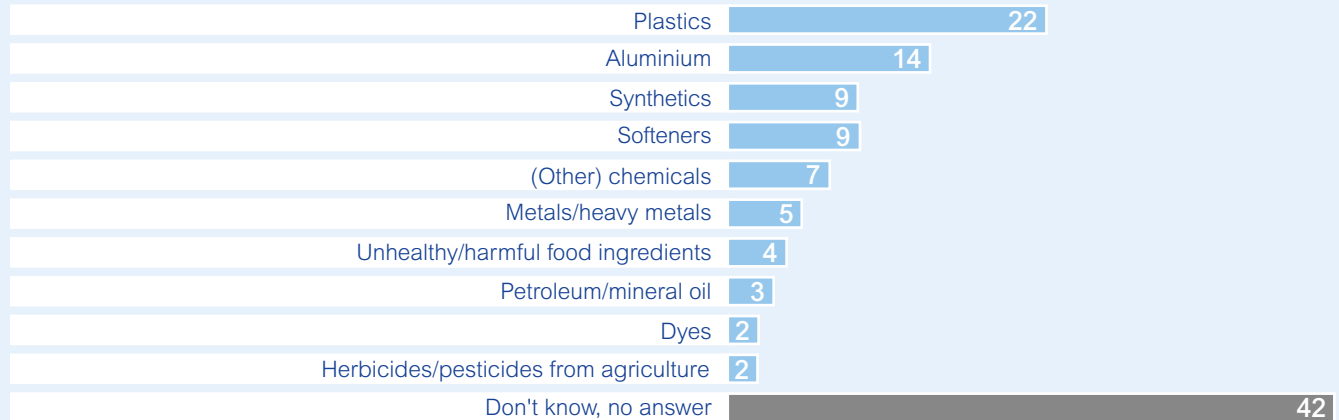
Professor Dr. Dr. Andreas Hensel

President German Federal Institute for Risk Assessment (BfR)



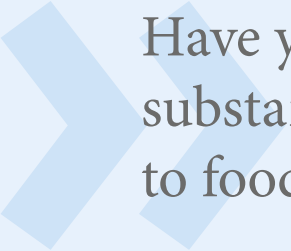
Several substances can transfer from food packaging materials or food containers to the foods they contain. Which substances do you think could be among them?

Transfer of substances to foods



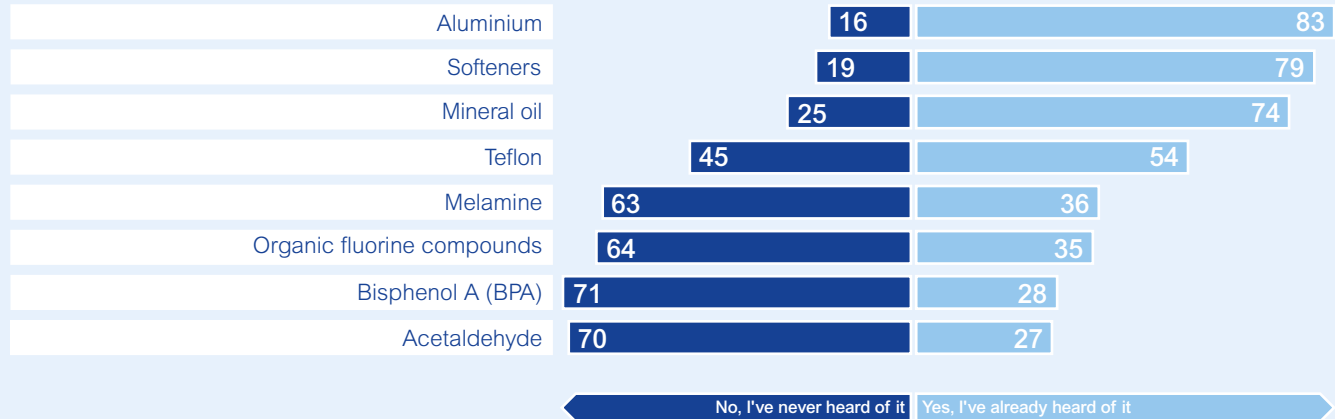
Shown: The ten most common spontaneously mentioned substances
(multiple answers possible)

Basis: 1,001; Figures given as percentages




Have you already heard of the following substances in connection with their transfer to foods or not?

Awareness of the transfer of various substances to foods



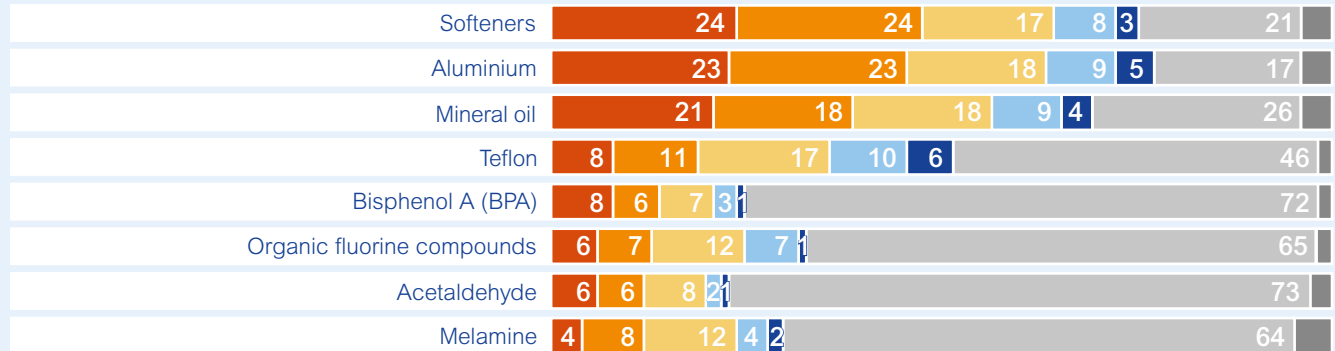
Basis: 1,001; Figures given as percentages; Total less than 100% due to: Don't know, no answer



To what extent do you consider the transfer of the following substances from packaging or containers to foods as a health risk?

Please use a scale of 1 to 5 for your answer, with 1 representing “no health risk” and 5 representing “very great health risk”. You can graduate your opinion with the values in between.

Health risk from transfers of various substances to foods



■ (5) Very great health risk
 ■ (4)
 ■ (3)
 ■ (2)
 ■ (1) No health risk
 ■ Never heard of the substance

■ Don't know, no answer

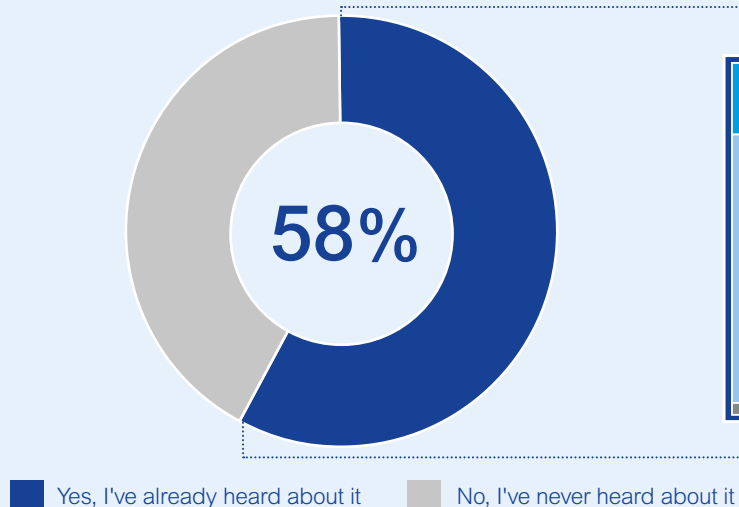
Basis: 1,001; Figures given as percentages

Have you heard in the past that aluminium can transfer to food from packaging or containers or have you not heard about it yet?

If yes:

When did you first hear about it?

Knowledge of aluminium transfer to food



Time of awareness

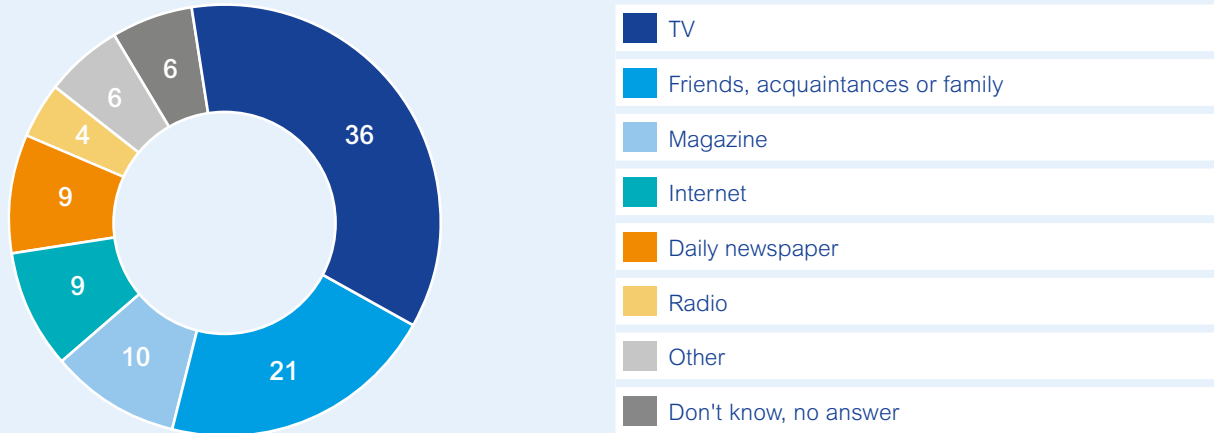


Basis: 1,001 respondents or 577 respondents who have heard about the transfer of aluminium from packaging or containers to food



And where did you first hear about it?

Source of first awareness of aluminium transfer to food



Basis: 577 respondents who have heard of the transfer of aluminium from packaging materials or containers to food; Figures given as percentages

Have you taken any general measures to lower your aluminium intake?

If yes:

Can you name one or more examples?


Measures to lower aluminium intake



46%
have taken
measures

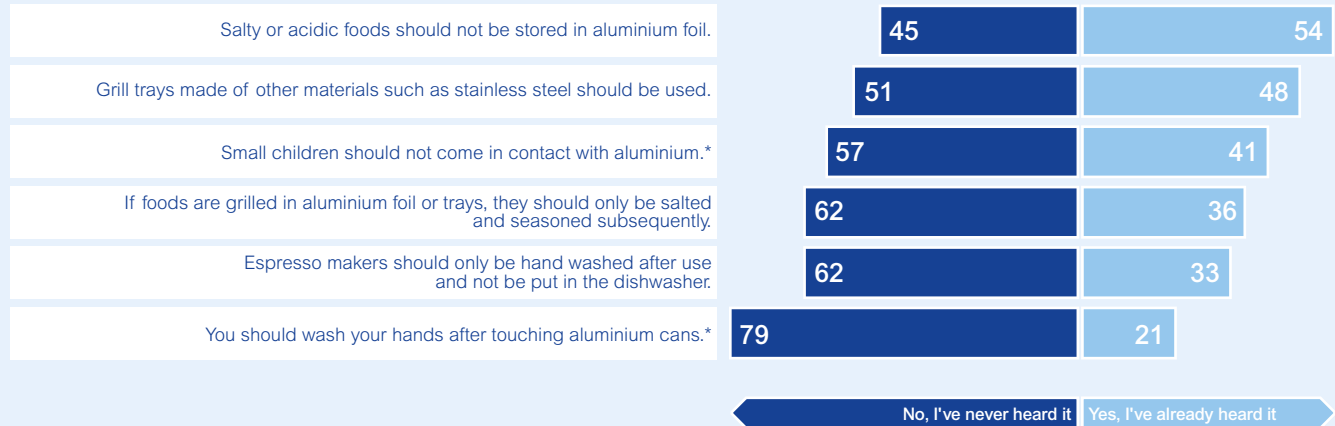
Shown: The ten most common spontaneously mentioned measures (multiple answers possible)

Basis: 1,001 respondents or 464 respondents who have taken measures; Figures given as percentages




Have you already heard the following statements
or have you never heard them?

Awareness of statements on handling aluminium



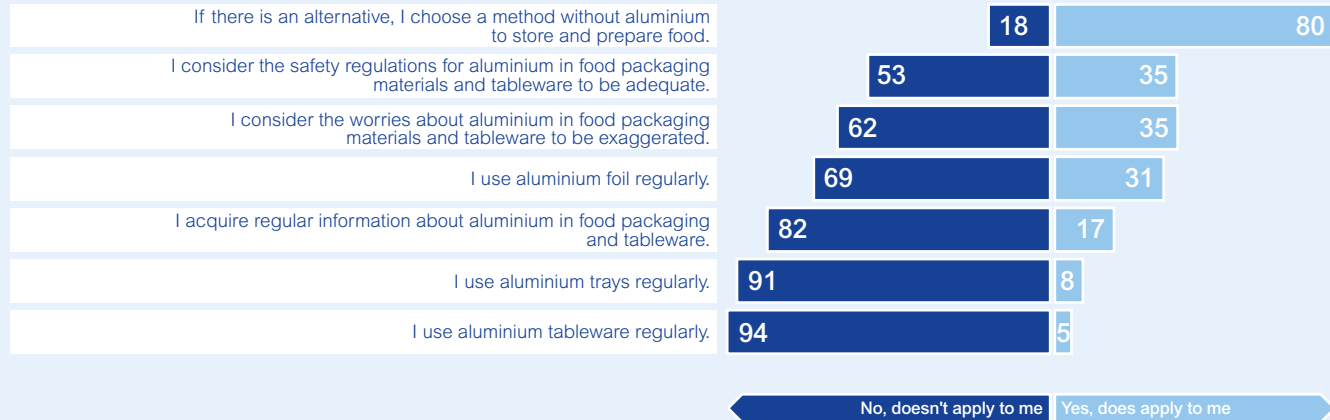
Basis: 1,001; Figures given as percentages; Total less than 100% due to: Don't know, no answer;

*Comparative statements that are not based on official recommendations



Which of the following statements apply to you and which of them don't?

Own dealings with aluminium



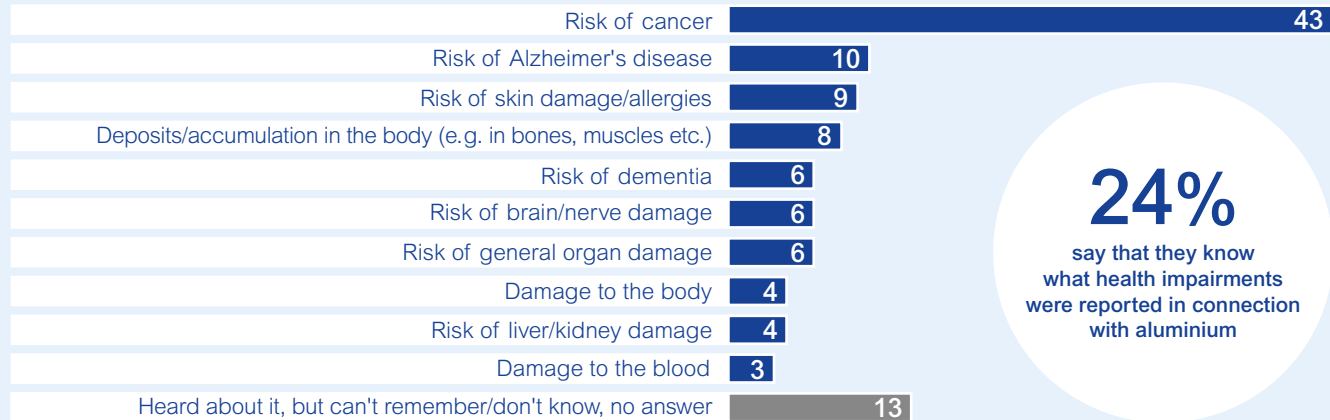
Basis: 1,001; Figures given as percentages; Total less than 100% due to: Don't know, no answer

Do you know what health impairments were reported in connection with aluminium?

If yes:

And what were they?


Knowledge of health impairments through aluminium



24%
say that they know
what health impairments
were reported in connection
with aluminium

Shown: The ten most common spontaneously mentioned measures (multiple answers possible)

Basis: 1,001 respondents or 236 respondents who say they know what health impairments were reported in connection with aluminium; Figures given as percentages



In which products apart from food do you suspect aluminium?

Products with aluminium apart from food



Shown: The ten most common spontaneously mentioned products
(multiple answers possible)

Basis: 1,001; Figures given as percentages

How were the data collected?

Date of the survey:	7 to 9 December 2017
Random sample:	1,001
Presentation of results:	All figures in percent, rounding differences possible
Population:	German-speaking population aged 14 years and over in private households in the Federal Republic of Germany
Sampling:	Samples drawn at random from land line and mobile telephone numbers which can also include telephone numbers not listed in directories (in line with standards set by the Association of German Market Research Institutes – ADM)
Method:	Telephone interview (CATI omnibus survey, Dual Frame)
Conducted by:	KANTAR EMNID

Aluminium in the food sector

Aluminium is a light metal which occurs naturally and frequently on Earth. Aluminium and its compounds are contained in many foods and consumer products. Under certain conditions, aluminium ions can transfer from food packaging materials or tableware to food, as it is soluble under the influence of acid or salt. For this reason, packaging and containers for foods, such as beverage cans, yoghurt cup lids and aluminium containers for fruit juices, are coated on the inside to prevent the transfer of aluminium ions to the food or drink. Aluminium foil and uncoated aluminium trays are therefore not intended or suited for keeping and heating acidic or salty foods, or for keeping them warm.

When ingested with food, the acute toxicity of aluminium is low, but the health risks caused by the chronic intake of aluminium have not yet been sufficiently researched. The BfR therefore recommends that coated tableware and coated containers made of aluminium or that alternative materials be used when preparing and storing acidic or salty foods.

About the BfR

Do nanoparticles promote the occurrence of allergies? Does apple juice contain too much aluminium? The German Federal Institute for Risk Assessment, or BfR for short, is responsible for answering questions on all aspects of the health assessment of foods and feeds, consumer products and chemicals. For 15 years now, its work has made a decisive contribution towards ensuring that food, products and the use of chemicals have become safer in Germany. The Institute's main tasks comprise the assessment of existing health risks and identification of new ones, the development of recommendations to limit risks and the transparent communication of this process. This work results in the scientific advice given to political decision-makers. To help with the strategic alignment of its risk communication, the BfR conducts its own research in the field of risk perception. The Institute is independent in its scientific assessments, research and communication. The BfR belongs to the portfolio of the Federal Ministry of Food and Agriculture (BMEL).

i More information at: www.bfr.bund.de/en

Aluminium:

> A-Z Index > Aluminium

Bisphenol A (BPA):

> A-Z Index > Bisphenol A

Mineral oil:

> A-Z Index > Mineral oil

Teflon:

> FAQ > Cookware and roastware with a non-stick coating



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