

A healthy outlook for the barbecue season: aluminium foil and trays offer protection against carcinogenic substances

No worries when barbecuing with aluminium

A balmy summer's evening, chilled drinks, mouth-watering aromas, delicious culinary treats. The invitations to the BBQ party are out, and everyone's licking their chops in anticipation. To make sure that the big sizzle over the hot coals will be a hot and tasty experience for their guests, hobby and professional BBQ aficionados often reach out for aluminium foil or trays. Since opinions are frequently divided about the use of the metal in cooking, some BBQ parties can be the scene of heated debate. Is grilling with aluminium utensils a health risk? Or does grilling on aluminium trays or foil have a protective effect, ensuring that fat doesn't drip into the hot coals, where it can burn and release carcinogenic substances into the food?

Both questions are justified – but people shouldn't allow the great BBQ experience to be spoiled by worrying too much. True, grilling pre-seasoned meat and vegetables or fish drizzled with lemon juice can result in aluminium ions migrating from aluminium trays or foil into the food on the grid. On the other hand, however, the use of aluminium trays or foil helps prevent fat from dripping into the hot coals, where it can burn and release carcinogenic substances. The decisive aspect, therefore, is to make sure that the trays are used in the proper way.

To help prevent "German angst" from spoiling your BBQ experience, here are a few tips on how to use aluminium trays and foil properly to prepare your food in a healthy and safe way:

1. Practical helpers: BBQ trays protect against PAHs

Aluminium grilling trays and foil protect the consumer against hazardous substances that may occur during the grilling process, since the health risks involved when grilling directly on the grid are many times greater than when cooking the food on a tray. So-called polycyclic aromatic hydrocarbons (PAHs), many of which may cause cancer, occur in all situations in which meat fat or oil used in the marinade drips into the hot coals or onto the heating coil of the electric grill. BBQ dishes or foil made of aluminium act as a barrier here, preventing the grilled food from absorbing these hazardous substances. These practical drip-catching aids are also ideally suited for preparing vegetables and meat spits.

2. Spices are the aluminium tray's worst enemy

Please don't leave acid- or salt-containing food (e.g. strongly salted or marinated meat or fish drizzled with lemon juice) to stand in uncoated grilling trays, also don't wrap it in household aluminium foil.

Always season your grilled food only after it comes off the grill and onto your plate. This ensures that you get the maximum protection from your BBQ helpers.

3. Don't panic – there's no danger

So aluminium is in principle ideally suited for grilling: it offers protection against high temperatures, the food doesn't burn so quickly and doesn't stick to the grid. Food that's wrapped in aluminium foil, e.g. fish and vegetables, stays tender and succulent, and has a more intense flavour. When the instructions mentioned above are heeded, there's no risk of an excessive uptake of aluminium ions with the food. Another general point that's worth bearing in mind is that only about four percent of our overall uptake of aluminium comes from uncoated aluminium utensils like grilling trays, aluminium foil, or meal trays: by far the greater part of the uptake originates from untreated food and cosmetic articles (see www.allesueberalu.de/Alufolie.html).

4. When the party's over: aluminium foil and barbecue trays belong in the Yellow Bin

Using aluminium foil and grilling trays also helps reduce waste. After use, the aluminium from which the trays and foil are made can be recycled many times over, without any forfeit of the material's quality and with a low energy investment. This is why such items should be disposed of via the "Yellow Bin" after their use. The recycling of aluminium consumes only about five per cent of the energy needed to make aluminium from bauxite. In 2018, the recycling rate for grilling trays and (foil-similar) aluminium packaging materials in Germany in general achieved a record high of 90.4% (see <https://davr.de/index.php/zahlen-und-statistiken.html>).

5. Cooking "au point"

Thanks to the excellent heat-conduction properties of aluminium, the food is cooked evenly throughout, in other words aluminium distributes the cooking heat homogeneously. The grilled food doesn't burn too quickly.

Information for consumers on aluminium and health by the GDA, EAFA, and manufacturers

The Gesamtverband der Aluminiumindustrie e. V. (GDA, the German Association of Aluminium Manufacturers), the manufacturers of uncoated aluminium utensils such as meal trays, grilling trays, and household foil, and the European Aluminium Foil Association (EAFA) have already implemented a great number of measures to protect against the improper use of these products and to enhance the consumers' awareness. The GDA, for example, has published a special brochure on aluminium and health on its website (www.aluinfo.de), launching a consumer platform

called *alles über Alu* (www.allesueberalu.de) that deals inter alia with health-relevant issues and gives consumers practical tips and guidance. The contents are also provided in English on the EAFA homepage (www.alufoil.org).

Photos:

“GDA-EAFA_Barbecuing-with-aluminium-trays”,

“GDA-EAFA_Barbecuing-with-aluminium-foil”

Description: Grilling with aluminium trays and foil entirely safe when used properly.

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Contact partners:

Arne Regenbrecht

Gesamtverband der Aluminiumindustrie e. V. (GDA)

T + 49 211 4796-442

arne.regenbrecht@aluinfo.de

Patrick Altenstrasser

European Aluminium Foil Association (EAFA) | Part of AMS Europe e. V.

T +49 211 387 326-04

altenstrasser@alufoil.org