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Aluminum

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✦ Aluminum ✦

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What is aluminum?

Aluminum is a metal such as iron, tin, and copper, which is found abundantly in nature. All metals occur in soil in varying concentrations and forms. They are called mineral elements and move from the soil by different ways into plant and animal tissues.

Where is aluminum found?

Everywhere. It is about 8 percent of the earth's surface and the only elements in greater quantities are oxygen and silicon. It occurs in nearly all rocks and soil, in vegetation, in water, in the air and the human body. All vegetation contains some aluminum, and some plants, such as the tea bush, accumulate fairly large amounts. The amount of aluminum in natural water varies; most mineral waters or acid springs contain higher concentrations.

How is aluminum used?

Aluminum was first used commercially for cookware. It has some properties which make it especially useful for cookware. It is lightweight, nontoxic and is easily formed into shapes. It conducts heat evenly and quickly, bringing liquids rapidly to a boil.

Aluminum is also well suited for processing and storing food since it is splinter-proof, can be cleaned with steam, is resistant to fatty acids, which is an advantage in handling meats, fats and oils, and causes no discoloration or change in the flavor of food. In the food industry, aluminum is used in food processing machinery such as vats and piping.

It is used in processing of sugars, beer, flour, gelatin, dairy products, meats and frozen foods. Many frozen and partially prepared foods are kept from spoilage and rancidity by aluminum foil. The firmness and color of fruits is preserved by alum, an aluminum compound, and baking powders contain aluminum products. Aluminum is also used in pharmaceutical industry and medicine. Some antacids contain aluminum.

Is the dark stain on aluminum pans dangerous?

The dark stain which can form on the inside of aluminum utensils has no effect on food. It is easily removed by boiling an acid product in the utensil.

What effect does aluminum have on health?

A great deal of scientific study has been done over the years to identify the effect of aluminum on health. There is no known function or requirement in the human body. The amount of aluminum in the body is very low and is controlled by absorption from the intestinal tract. Increased aluminum consumption does not increase the amount absorbed. Although aluminum is

carried in the air, little, if any, is absorbed through the lungs. Typical meals analyzed for aluminum contained an average of 17 milligrams per day with a range of 10–100 milligrams.

Can you get too much aluminum?

In experimental animals fed large doses of aluminum, no toxic effects were shown. There is very little aluminum absorbed from the intestine no matter the amount consumed. No toxic symptoms have been shown in humans.

Is aluminum linked to Alzheimer's disease?

In recent years, Alzheimer's disease has been studies but no cause has been identified. One study reported larger than average amounts of aluminum in the brain tissue of some Alzheimer's patients. It is not known how the aluminum may get into the brain. There is no evidence that foods cooked in aluminum pans or stored in aluminum containers can cause abnormally high levels of aluminum in the brain or that aluminum intake should be controlled.

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