

FDA Looks for Answers on Arsenic in Rice

The Food and Drug Administration (FDA) monitors hundreds of foods and beverages that make up the average American diet. The agency looks for anything that could be harmful to consumers, including industrial chemicals, heavy metals, pesticides and radiation contamination.

Those dietary staples include rice and rice products, foods that FDA has identified as containing inorganic arsenic, which can be toxic.

The agency has analyzed about 200 samples of rice and rice products and is collecting nearly 1,000 more. Since rice is processed into many products, these samples include baby and toddler cereals and food, breakfast cereal and rice cakes.

Arsenic levels can vary greatly from sample to sample, even within the same product. FDA's testing of the initial samples found these average levels of inorganic arsenic in micrograms (one millionth of a gram):

- Rice (other than Basmati rice): 6.7 per 1 cup (cooked)
- Rice cakes: 5.4 per 2 cakes
- Rice beverages: 3.8 per 240 ml (some samples not tested for inorganic arsenic)
- Rice cereals: 3.5 per 1 cup
- Basmati rice: 3.5 per 1 cup cooked

Based on data and scientific literature available now, FDA is not recommending that consumers change their consumption of rice and rice products, but advocates a balanced



diet with a wide variety of grains. Data collection is the critical first step in assessing long-term health risks and minimizing those risks.

"We understand that consumers are concerned about arsenic being in rice. FDA is committed to ensuring that we understand the extent to which contaminants such as arsenic are present in our foods, what risks they may pose, whether these risks can be minimized, and to sharing what we know," says FDA Commissioner Margaret A. Hamburg, M.D.

Once FDA has completed its analysis of about 1,200 rice products, the agency will conduct a comprehensive risk assessment, consulting with scientists from other federal agencies and outside the government to determine how much risk is associated with long-term consumption of rice and whether it

might be necessary for people to adjust their rice consumption.

How Did This Happen?

Arsenic is a chemical element distributed in the Earth's crust. It is released from volcanoes and from the erosion of mineral deposits and is found throughout the environment—in water, air and soil. For that reason, it is inevitably found in some foods and beverages.

Human activities also add arsenic to the environment. They include burning coal, oil, gasoline and wood, mining, and the use of arsenic compounds as pesticides, herbicides and wood preservatives.

"Arsenic is a contaminant," says Suzanne Fitzpatrick, a senior science policy analyst at FDA. "We're doing the best we can to inform consumers and help them to make

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choices that will reduce their risk from this and other contaminants found in nature.”

While most crops don’t readily take up much arsenic from the ground, rice is different. FDA has been monitoring arsenic levels in rice for more than 20 years. Its analysis thus far does not show any evidence of a change in arsenic levels. The change is that researchers are better able to measure whether those levels represent more or less toxic forms of arsenic.

Rice comes from all over the world and is grown very differently in region to region, which may greatly vary the levels of arsenic within the same kind of product. The larger sample that FDA is taking will cover the wide variety of rice types, geographical regions where rice is grown, and the range of foods that contain rice as an ingredient—including rice crackers, rice water, infant formula, crispy rice marshmallow treats, rice wine, and

breakfast and granola bars. This will ensure that the assessment of risk is as accurate as possible.

FDA expects to complete the additional collection and analysis of samples by the end of the year. Researchers are paying particular attention to rice and rice products consumed by children, as well as consumers like Asian-Americans and those with celiac disease who may consume higher levels of rice.


The Next Steps

FDA’s risk assessment may eventually lead to the setting of arsenic “action levels” for rice products. This means that if the agency finds more than a certain amount of arsenic in a product, it can use that level as a benchmark in deciding whether to prevent the product from entering the country or remove it from the market.


The agency is working with other government agencies, academia and industry to find ways to reduce arse-

nic levels in rice and rice products, such as changes in agricultural or other practices.

So what should a person who loves rice do in the meantime?

“Our advice right now is that consumers should continue to eat a balanced diet that includes a wide variety of grains – not only for good nutrition but also to minimize any potential consequences from consuming any one particular food,” says Hamburg. 

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