



# Arsenic

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It's well established that carcinogens are linked to increased risk levels in several types of cancers, cause endocrine and immune system dysfunctions as well as a range of cognitive disorders (such as learning disabilities, memory problems and poor concentration). We typically associate exposure to carcinogens with our polluted environment, but you may be surprised by one common source - your food.

One of the most well established toxins can be found in water, rice, chicken feed, and seaweed - arsenic. According to the U.S. Environmental Protection Agency "Chronic inorganic arsenic exposure is known to be associated with adverse health effects on several systems of the body, but is most known for causing specific types of skin lesions (sores, hyperpigmentation, and other lesions) and increased risks of cancer of the lung and skin."<sup>1</sup>

In November 2012, Consumer Reports tested many popular foods eaten by both adults and children and returned with troubling results. In virtually every product tested, they found measurable amounts of total arsenic in its two forms, inorganic and organic. Significant levels of inorganic arsenic, (a carcinogen) were found in almost every product category along with organic arsenic (less toxic but still a concern for your health).<sup>2</sup> You can find the chart which lists the amounts of arsenic found in foods at:

[www.consumerreports.org/cro/magazine/2012/11/arsenic-in-your-food/index.htm#chart](http://www.consumerreports.org/cro/magazine/2012/11/arsenic-in-your-food/index.htm#chart)

Surprisingly, no federal limits exist regulating arsenic levels in most foods. This is easily seen in the Consumer Reports' study which shows that a single serving of some rice could give an adult almost one and a half times the inorganic arsenic he or she would get from a whole day's consumption of water (about 1 liter).<sup>2</sup> The report's findings also demonstrate that total and inorganic arsenic levels are always higher in brown rice than for white.

There have been long term studies showing arsenic contaminated water causes lung and bladder cancer along with other diseases, but there are no long-term studies on the effects from arsenic contaminated foods. Although the USA Rice Federation says it's working with the FDA and the EPA to examine and assess arsenic levels in food, Allan Smith, M.D., Ph.D., a professor of epidemiology at the University of California, Berkeley says, "We should not be arguing to wait for years until we have results of epidemiologic studies at lower arsenic intake, such as from rice consumption, to take action."<sup>2</sup>

Another popular food that contains more arsenic than rice is conventionally raised chicken. According to a study published by the Institute for Agriculture and Trade Policy, fifty-five percent of commercial chicken purchased from the supermarket contains detectable arsenic, mostly in raw chicken breasts, thighs, and livers.<sup>3</sup> Even the FDA admitted that chicken sold in U.S. supermarkets contains arsenic.

## **Do you get sick more than once a year?**

*A comprehensive blood analysis includes many markers which can determine how severe an illness may be, if there are problematic conditions developing and what exactly the body needs to fight off those infections.*

*Underlying causes of inflammation, infection, and environmental exposures can also be recognized with a complete metabolic analysis.*

*Dosages for supplements vary according to age, weight and severity of illness.*

*Getting tested lends objective guidance to developing a lifestyle program and supplement recommendations unique to each individual.*

## References:

1. U.S. Agency for Toxic Substances and Diseases Registry (ATSDR). 2005. "Toxicological Profile for Arsenic." <http://www.atsdr.cdc.gov/toxprofiles/tp2.pdf>.

2. Arsenic in your foods. Consumer Reports Magazine. November 2012. <http://www.consumerreports.org/cro/magazine/2012/11/arsenic-in-your-food/index.htm#chart>.

3. Wallinga, Avid M.D. *Playing Chicken: Avoiding Arsenic in Your Meat*. The Institute for Agriculture and Trade Policy April 2006

4. <http://grist.org/food-safety/2011-06-08-fda-admits-supermarket-chickens-test-positive-for-arsenic/>

5. Raab, Andrea, Baskaran, Christina, et.al. *Cooking rice in a high water to rice ratio reduces inorganic arsenic content*. *J. Environ. Monit.*, 2009,11, 41-44. 20 Nov 2008

Federal Law requires that we warn you of the following:

1. Your individual health status and any required health care treatments can only be properly addressed by a professional healthcare provider of your choice.

2. The information provided in this newsletter has not been evaluated by the FDA.

Pfizer, the very same company that makes vaccines, has been putting arsenic in their manufactured chicken feed, known as Roxarsone, for years. The agriculture industry used Roxarsone to be sure the chickens grew faster and to control intestinal diseases.

As of September 2013, Pfizer announced that it would "voluntarily" withdraw Roxarsone from the market.<sup>4</sup> Carbarosone and Arsanilic Acid, two other arsenical drugs, were withdrawn from the market along with Roxarsone. However, a fourth drug, Nitarosone, is still allowed to be used in the feed supply. This compound is another feed additive known to increase growth, weight, and prevent avian disease and is made by the same companies that made other arsenicals. There is limited data on the safety and effects of Nitarosone used in turkeys.

The best method for preventing the adverse health effects of arsenic is to limit your exposure to this toxic element. **Follow these guidelines to limit arsenic exposure found in foods:**

1. Limit rice consumption.
  - Try alternative grains like quinoa, barley, grits/polenta, or bulgur wheat.
2. Rinse and boil rice in a lot of water.
  - Use high volume water to prep and cook rice to lower total and inorganic arsenic levels by 35% and 45% compared to raw, uncooked rice.<sup>5</sup>
3. Vary your diet.
  - Look for alternatives to rice-based *processed* foods. Many gluten free products and recipes typically will use rice flour for cooking and baking. Substitute rice with quinoa, almond meal, almond flour or coconut flour.
4. Limit products that list rice syrup as a sweetener.
5. Get your tap water tested. Opt for reverse osmosis filtered water.
6. Instead of rice cereal as the first solid food for babies, try soft fruits and vegetables like sweet potatoes, squash, bananas and avocados.
7. Get tested.
  - Know what levels of toxic elements you are being exposed to and how well your body is eliminating them by getting a tissue mineral analysis and comprehensive blood panel. It's important to know whether your body is eliminating these elements at an optimal rate.

Everyone's exposure values depend in part on what levels of pollutants they are exposed to at home and work as well as by what they eat and drink. The damage these toxic elements can do is influenced by your nutritional status and how well you excrete those toxic elements.

Testing methods to monitor elimination of toxic elements and their detrimental effects on your body can be done by your experienced nutrition-oriented health professional. Knowing what supplements to take to enhance your body's elimination process and overall wellbeing can also be determined with proper testing. Call us today to get started!