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Recommendation to set a maximum level for arsenic in apple juice and rice products marketed to infants and young children

Ontario Dietitians in Public Health (ODPH), Dietitians of Canada (DC), and the Canadian Paediatric Society (CPS) encourage Health Canada to align with the European Union in setting a maximum level for inorganic arsenic for commercial rice products marketed to infants and young children. We also encourage you to adopt your proposed regulation to reduce the maximum level of allowable arsenic in apple juice.

The European Commission has set a limit of 100 parts per billion (ppb) for rice and rice products (1), and the U.S. Food and Drug Administration has proposed the same limit for infant rice cereals (2). Health Canada recently announced a consultation process in 2019 to investigate the need to set maximum levels of arsenic in Canada (3). ODPH, DC, and CPS support this action, and recommend that Health Canada:

- Set a maximum level of 100 ppb for commercial rice products intended for children one year of age or older but less than four years of age to align with Europe and the United States.
- Adopt the proposed maximum level for arsenic of 15 ppb for apple juice in the List of Contaminants and Other Adulterating Substances in Foods into regulation (proposed in 2014 [4])

The International Agency for Research on Cancer (IARC) classifies arsenic as a class 1 carcinogen (5), as research studies have found that high-dose inorganic arsenic exposure is associated with cancer-related outcomes such as skin, bladder, kidney, and lung cancer as well as non-cancer health effects such as pulmonary disease, adverse pregnancy outcomes, neurodevelopmental toxicity, immune effects, skin lesions, cardiovascular diseases, abnormal glucose metabolism, and diabetes (6, 7). The FDA draft risk assessment report recently concluded that there are “likely causal” associations between inorganic arsenic exposure from rice and rice products on adverse pregnancy outcomes and neurodevelopmental effects in young children. (2)

Children under three years may be exposed to high levels of dietary inorganic arsenic, estimated to be two to three times that of adults (6). Commonly consumed commercial rice products marketed for infants and young children include rice-based infant cereals, biscuits, wafers, crackers, rusks, and puffs. Young children aged one to three years are also the highest consumers of fruit juice in Canada; the Canadian Community Health Survey found that around 60% of one to three year olds had consumed fruit juice the day before the interview (8). Therefore, the consumption of commercial rice products and apple juice by young children can contribute to their inorganic arsenic exposure.

Canada’s National Infant Feeding statement (9) recommends the consumption of iron-fortified infant cereals as a first food because it is a good source of dietary iron. Parents may prefer offering iron-fortified rice cereal to infants because rice is not a common food allergen. Unfortunately, the Canadian Food Inspection Agency has found that the amount of inorganic arsenic in infant rice cereals can range from 59-208 ppb (10), indicating that some infant rice cereals in the Canadian marketplace exceed the 100 ppb maximum level of inorganic arsenic as regulated or proposed by the European Union and the United States.

It would be prudent for Health Canada to implement inorganic arsenic restrictions to foods commonly consumed during infancy and early childhood due to the following concerns:

- Some infant rice cereals in Canada exceed international maximum levels of inorganic arsenic.
- The long-term effects of low-dose exposure for infants is currently a topic under academic investigation.
- An estimate of the current amount of inorganic arsenic in the Canadian food supply remains unknown.

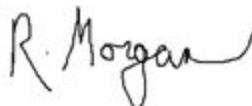
There is a need for Canadian regulatory oversight and enforcement to protect the health of our youngest Canadians against dietary inorganic arsenic exposure.

Thank you for considering our feedback. We welcome the opportunity to discuss these recommendations and look forward to the consultations for arsenic and commercial rice products.

Sincerely,



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ODPH is the independent and official voice of Registered Dietitians working in Ontario's public health system. ODPH members apply evidence-informed nutrition information to enable healthy eating at every stage of life; advocate for and provide support to the creation of food policies and healthier eating environments; and implement and evaluate nutrition programs to improve the health of Ontario residents.

Dietitians of Canada (DC) is a professional association with strong roots connecting more than 5000 unique and diverse members across all areas of food, nutrition and health. DC proudly represents dietitians, fostering growth and passion in the profession through advocacy, engagement and professional development. After more than 80 years, DC remains an innovative organization with strong member leadership and common purpose: to advance the health of Canadians through food and nutrition.

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