



AFS Response to Bashash, et al. IQ Study of Subjects in Mexico

The 2017 Mexican study of [Bashash](#), et al. adds to the scientific knowledge that we have on fluoride from other countries. However, to draw direct comparisons with community water fluoridation is ill-advised and cannot be immediately done with any degree of certainty. The study of pregnant Mexican women and the IQ of their children had several key uncontrolled confounders which the authors clearly note could have affected urinary fluoride concentration. These include the lack of information about iodine in salt, lack of data on fluoride content in water, the lack of information on other environmental neurotoxicants such as arsenic, and diet..

According to Dr. Martinez-Mier, one of the study's coauthors:

“There have been very few studies to date derived from population-based samples that measured prenatal fluoride levels among women. The amount of fluoride exposure in women in this study resulted in an average level in urine of 0.90 mg/L, which is somewhat higher than, but within the general range of, urinary fluoride levels seen in the general populations of healthy, non-pregnant women in Canada and the U.S. However, we don't know much about how pregnancy may influence urinary fluoride levels, so making a comparison of those values to our study's results is very difficult.”

Senior study author Howard Hu was quoted in a recent CNN report:

“What the new research means for pregnant women in the United States is up in the air. (Coauthor Howard) Hu cautioned that this was just one study. ‘It needs to be reproduced in other populations by other scientists,’ he said.”

In addition, it must be remembered that this is but one study. Any conclusions must be taken in comparison with other quality studies which have concluded there to be no adverse neurotoxic effects from optimally fluoridated water. For example, the *American Journal of Public Health* (AJPH) published [a study](#) in 2015 that is much more analogous to the United States. This study was conducted in New Zealand, which (like the U.S.) has an abundance of local water fluoridation programs and a well-developed public health infrastructure. In the AJPH study, researchers tested the IQs and other cognitive skills of children in two cohorts — one in fluoridated areas, and the other cohort in non-fluoridated areas. Tests were performed every two years, starting at age 5 and concluding at age 13. Participants were also tested at age 38. The AJPH study found no link whatsoever between fluoridation and intelligence. This study is but one of several in recent years which has concluded fluoridated water to not be associated with neurological detriment.

We welcome additional quality research in this area to increase understanding. Based on the research we now have, we see no compelling reason to believe women in the U.S. should fear or avoid fluoridated water or fluoridated toothpaste. Neither does the American Congress of Obstetricians and Gynecologists (ACOG). Two days after the Mexican study was released, ACOG posted a message on Twitter reaffirming its support for [guidelines](#) recommending fluoridated water and fluoridated toothpaste for pregnant women.