

# Clinical Psychiatry News

Commentary

## AMA's stance on choline, prenatal vitamins could bring 'staggering' results

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For quite some time now, I've been urging my colleagues to follow the science on the powerful impact of choline on the brain.

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In May 2017, based on studies using genetically altered mice that show the developmental changes of Down syndrome and Alzheimer's disease at 6 months, [I raised the question](#) of whether prenatal choline could lead to the prevention of Alzheimer's.



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Prior to that, in December 2016, I coauthored an article about our findings revealing the content of choline in the 25 top prenatal vitamins ([J Fam Med Dis Prev. 2016;2\[6\]:1-3](#)). None of them contained the 450-mg daily recommended dose of choline advised by the Institute of Medicine in 1998. In fact, only two contain 50 mg; six others contained less than 30 mg; and the other 17 had no choline whatsoever. In that same article, we highlighted the work by researchers at the University of Colorado at Denver, Aurora, proposing that a form of choline may prevent the development of autism, ADHD, and schizophrenia by an epigenetic mechanism involving a nicotinic acetylcholine receptor ([Am J Psychiatry. 2016 May 1;173\[5\]:509-16](#)). In our article, we suggested that we advocate for a position that the prenatal vitamin manufacturers include at least the daily-recommended dose of choline (450 mg/day) that pregnant women need according to the [findings](#) of the Institute of Medicine's Standing Committee on the Scientific Evaluation of Dietary Reference Intakes and its Panel on Folate, Other B Vitamins, and Choline, published in 1998.

Thanks to the leadership of [Niva Lubin-Johnson, MD](#), now president-elect of the National Medical Association, while on the minority affairs section of the American Medical Association, the AMA's delegates passed a [resolution](#) to support an increase in choline in prenatal vitamins.

If the prenatal vitamin companies take the AMA's resolution to heart and put more choline in their prenatal vitamins or if physicians in the United States pay attention to the AMA's action and recommend pregnant women ensure they get adequate choline in their diets, the benefit to Americans' public health could be staggering. Currently, it is known that choline deficiency – usually brought about by fetal alcohol exposure – is a public health problem, and choline deficiency is the leading preventable cause of intellectual disability. Public health efforts aimed at preventing intellectual disabilities from fetal alcohol

exposure are designed to warn women about the risks of drinking during pregnancy; while this effort is commendable, it does not solve a very common problem – namely, women’s engaging in social drinking before they realize they are pregnant. ([Psychiatric Serv. 2015 66\[5\]:539-42](#)).

The late [Julius B. Richmond, MD](#), former director of the Institute for Juvenile Research, [surgeon general](#) under former President Jimmy Carter, and one of the [founders](#) of Head Start under former President Lyndon B. Johnson, used to say that, in order to institutionalize a public policy, you need a solid scientific basis for the policy, a mechanism to actualize the policy, and the “political will” to do so. The AMA’s recommendation has the Institute of Medicine’s science behind it, so putting choline in prenatal vitamins or having physicians recommend that pregnant women get adequate doses of choline should be pretty easy to actualize. The political will to do this extremely important, biotechnical preventive intervention should be a no-brainer.

Should this AMA recommendation gain the traction it deserves, the American people might see a substantial decrease in the prevalence of premature and low-birth-weight infants, intellectual disability, ADHD, speech and language difficulties, epilepsy, heart defects, schizophrenia, Alzheimer’s disease, depression, school failure, juvenile delinquency, violence, and suicide – all of which seem to be tied to choline deficiency.



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