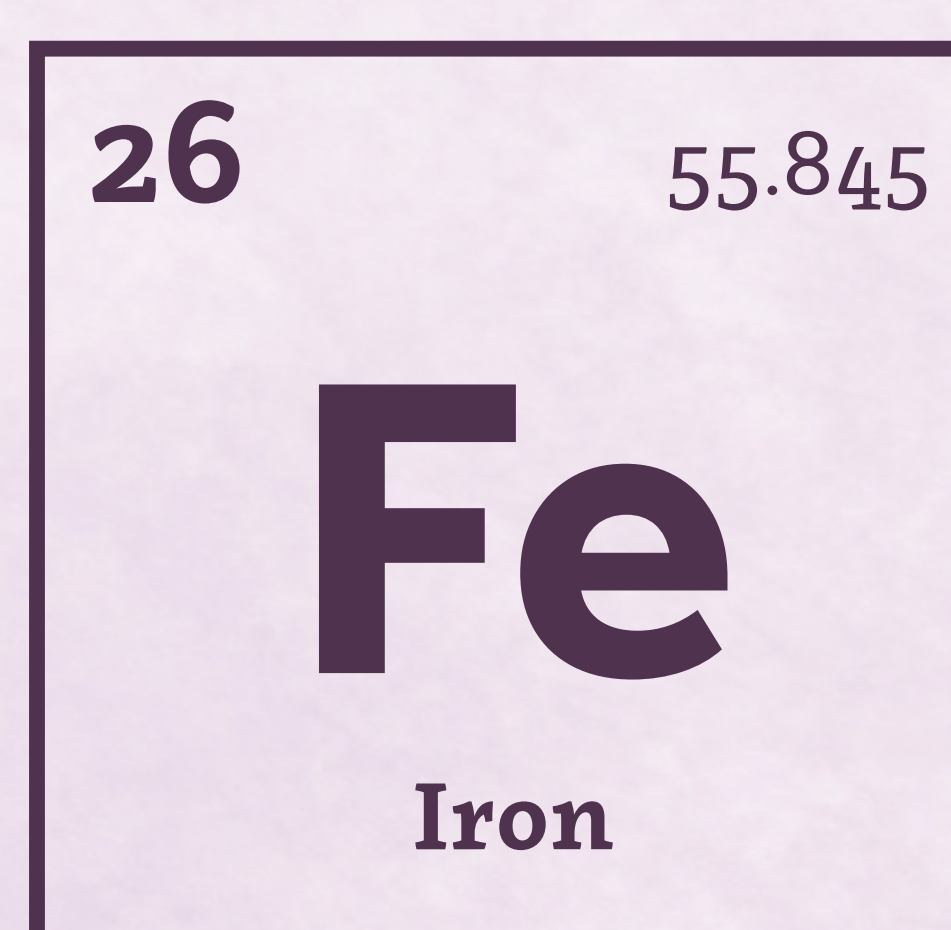


Nutrient: Iron

What is iron?

Iron is an important mineral that helps maintain energy generation. It is a major component of hemoglobin, a type of protein in red blood cells that carries oxygen from your lungs to all parts of the body. Iron is also part of myoglobin, a protein that carries and stores oxygen specifically in muscle tissues. Iron is in the many enzyme reactions that generate cellular energy in the mitochondria, and in synthesizing brain neurotransmitters. It supports growth in children, and a healthy brain function at all ages.



The daily requirement for iron is 8.7mg for adult men, 14.8mg for women ages 19-49 and 8.7mg for women over 50

Foods that naturally contain iron

- Red meats
- White beans
- Beef liver
- Lentils
- Spinach
- Tofu
- Dark chocolate
- Kidney beans



Iron and Fetal Development



Iron consumption during pregnancy directly impacts development of the fetal brain. Iron also prevents anemia, low birth weight and premature delivery.

Iron is required to build a healthy brain, so infants who don't get enough iron during pregnancy and lactation might have lasting problems with:



Attention



Language



Impaired associative learning



Reduced growth

“The parallels between alcohol exposure and iron deficiency are striking. Both cause similar growth reductions and behavioral deficits in the child.”

Susan Smith, PhD
Deputy Director for Science and Professor of Nutrition, UNC Nutrition Research Institute

Iron and alcohol exposure during pregnancy

The findings below are from the Smith Lab at the UNC Nutrition Research Institute.

Alcohol consumption during pregnancy causes fetal alcohol spectrum disorders (FASD).

Children with FASD suffer from many issues, such as abnormal facial features, difficulty in self-regulating, and memory problems; these latter persist throughout life. However, some mothers who consume alcohol do not have children with FASD, while other mothers who drink very little alcohol do have children with FASD.

WHAT MAY CAUSE THIS DISCREPANCY? ONE POSSIBILITY IS NUTRITION.

Recent research suggests that sufficient iron consumption during pregnancy is protective against some alcohol-induced problems.



Mother never consumed alcohol

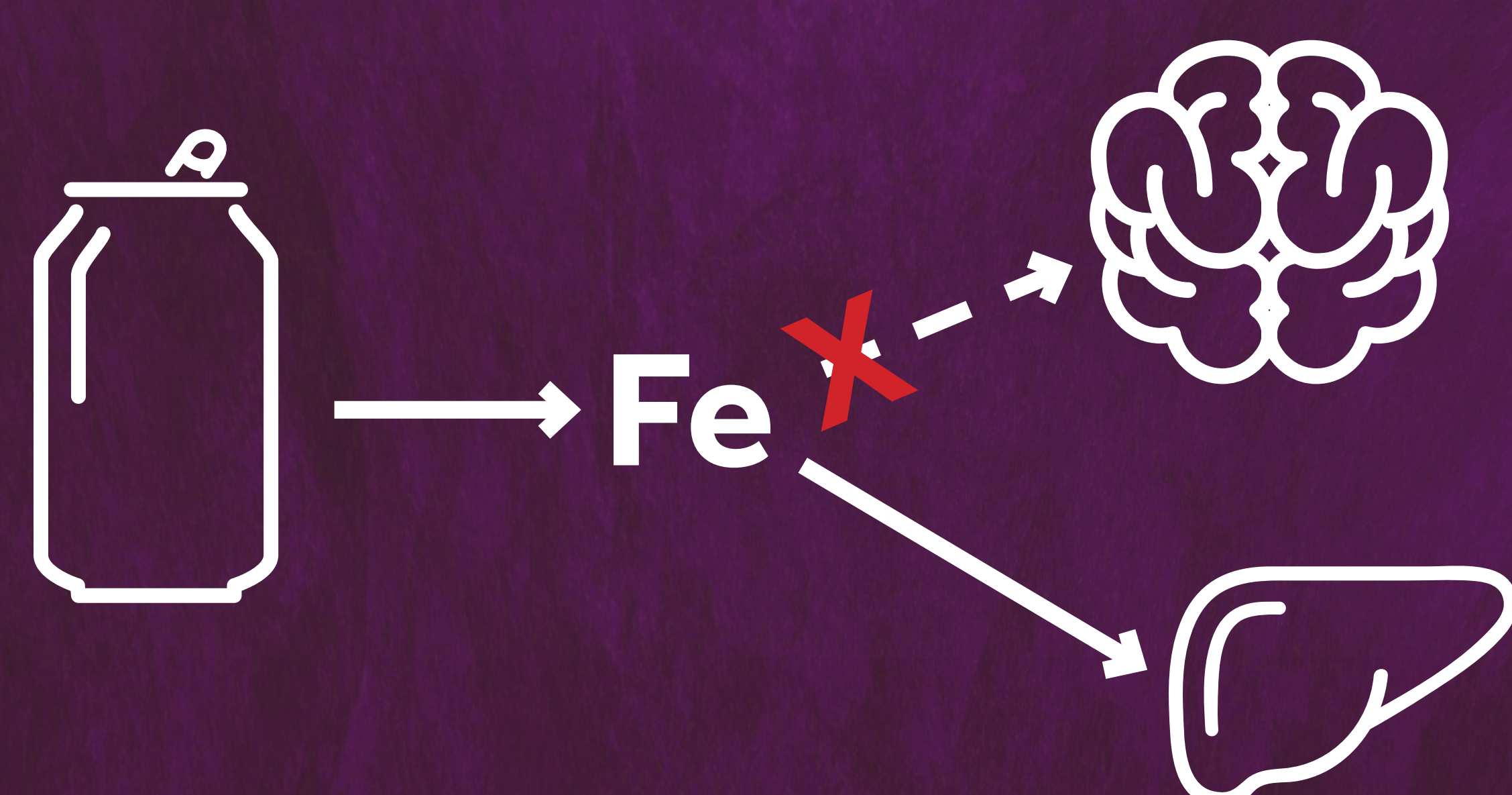


Mother consumed alcohol, but had sufficient iron levels



Mother consumed alcohol, and had insufficient iron levels

Positive Cognitive Function Development



IRON DEFICIENCY WORSENS THE IMPACT OF ALCOHOL

Researchers found that alcohol diverts iron from the brain and causes it to be stored in the liver. This means that there is less iron in the brain for essential cognitive functions.

Susan Smith, PhD, is Deputy Director for Science and Professor of Nutrition at the UNC Nutrition Research Institute and the UNC Gillings School of Public Health.