

*Consumer Abstract*

The Institute of Medicine recommends that women consume 27 mg of iron per day during pregnancy and 18 mg of iron per day when not pregnant or nursing. However, it is recommended that women consume only 9 mg of iron per day when nursing because it is assumed that they will not have regular periods for at least 6 months after giving birth. Therefore, nursing women do not generally need to take an iron supplement. However, many women are advised to continue taking a daily prenatal vitamin (usually containing  $\geq 30$  mg of iron) after giving birth and national survey data show that nursing mothers take about 30 mg of iron from supplements daily. For women with low iron stores during pregnancy or who lost large amounts of blood during childbirth, consuming iron supplements after child birth may prove beneficial; however, for women without these risk factors, consumption of iron supplements could pose some risk. In the body, excessive iron promotes oxidation, or the combination of molecules with oxygen, which has been linked to cardiovascular disease and some types of cancer. The purpose of this project is to better understand the consequences of consuming iron supplements after child birth and to identify safe ways to make sure that nursing women consume enough iron. Women will be recruited within two weeks after childbirth and will be randomly assigned to consume a multivitamin containing 30 mg of iron or a multivitamin without iron, either between or with meals, for three months. Blood samples will be collected and analyzed to determine iron status and oxidative stress. The results of this study will help improve guidelines for consumption of iron supplements after childbirth.