

A National Survey of Iron and Folate Status in Pregnant Women in Switzerland

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Women often do not meet the increased iron and folate needs of pregnancy. Maternal iron-deficiency anemia is associated with poor maternal and infant outcomes, including preterm delivery and low birth weight. Poor folate status increases risk for maternal anemia, spontaneous abortion, and congenital defects. Because of this, supplemental iron and folate are often recommended during pregnancy. There are few data on iron and folate status in pregnant women in Switzerland. We measured iron and folate status in a national sample of Swiss pregnant women, estimated the prevalence of anemia, and determined if supplement use is associated with iron and/or folate status in this group.

A 3-stage probability to size cluster sampling method was used to obtain a representative national sample of pregnant women (n=381) in the 2nd and 3rd trimester. We measured hemoglobin, hematocrit, mean corpuscular volume and serum folate and ferritin concentrations. Serum transferrin receptor concentration was determined in anemic subjects. The use of iron and folate supplements was evaluated by a questionnaire.

Mean hemoglobin (SD) in the sample was 123 g/L (1.0). The prevalence of anemia was 6%. Of the 21 anemic women 11 were iron deficient giving an iron-deficiency anemia prevalence of 3%. Nineteen percent of women had low serum ferritin concentrations (<12 µg/L) and 4% had low serum folate concentrations (<2.5 µg/L). Supplements containing iron were taken by 65% of women, and 63% were taking folate-containing supplements. Women in the 2nd and 3rd trimester taking folate-containing supplements had significantly higher serum folate concentrations compared to those not taking a folate supplement (p<0.001). In the 3rd trimester, women taking iron-containing supplements had significantly higher serum ferritin concentrations compared to those not taking an iron-containing supplement (p<0.01).

Our findings indicate that iron and folate status appear to be adequate in the majority of pregnant women in Switzerland, and that use of iron and folate supplements may have a positive impact on status.