Statistical Analysis: General descriptive variables were expressed as means ± standard deviation. Since gender and ethnicity could potentially affect both iron metabolism and glucose homeostasis, the data were analyzed separately by gender and ethnic groups. Continuous variables were compared using two-tail Student t-test between two groups or Analysis of Variance for more than two groups. Continuous data were expressed as means with 95% confidence intervals. Analysis of variance was used to examine the influence of covariates (age and body mass index, BMI) on continuous variables between two groups. Least square regression analysis was used to investigate the relationship between two continuous variables. The influence of covariates (age, body mass index, alcohol consumption, and mineral/iron intake) was also accounted for least square regression analysis. To further assess the association of serum ferritin concentration with estimated beta function and insulin sensitivity indices as well as the association of liver aminotransferases and c-reactive protein with serum ferritin concentration and estimated insulin sensitivity indices, we also examine the trend across the quintile of serum ferritin concentration, liver aminotransferases and c-reactive protein. The comparisons were also adjusted for age, body mass index, alcohol consumption, and mineral/iron intake. All the analyses were conducted in SYSTAT 11, Systat Software, Inc., Point Richmond, California, USA. A P value less than 0.05 was considered significant.

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