

# Non-heme iron as ferrous sulfate does not interact with heme iron absorption in humans

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The absorption of heme iron has been described as distinctly different from that of non-heme iron. Moreover, whether heme and non-heme iron compete for absorption has not been well established. Our objective was to investigate the potential competition between heme and non-heme iron as ferrous sulfate for absorption, when both iron forms are ingested on an empty stomach. Twenty-six healthy nonpregnant women were selected to participate in two iron absorption studies using iron radioactive tracers. We obtained the dose-response curve for absorption of 0.5, 10, 20, and 50 mg heme iron doses, as concentrated red blood cells. Then, we evaluated the absorption of the same doses, but additionally we added non-heme iron, as ferrous sulfate, at constant heme/non-heme iron molar ratio (1:1). Finally, we compare the two curves by a two-way ANOVA. Iron sources were administered on an empty stomach. One factor analysis showed that heme iron absorption was diminished just by increasing total heme i