Prebiotics increase heme iron bioavailability and do not affect non-heme iron bioavailability in humans

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Resumen

The aim of this study was to establish the effect of a prebiotic mix on heme and non-heme iron (Fe) bioavailability in humans. To this purpose, twenty-four healthy women were randomized into one of two study groups. One group ate one yogurt per day for 12 days with a prebiotic mix (prebiotic group) and the other group received the same yogurt but without the prebiotic mix (control group). Before and after the intake period, the subjects participated in Fe absorption studies. These studies used Fe-55 and Fe-59 radioactive isotopes as markers of heme Fe and non-heme Fe, respectively, and Fe absorption was measured by the incorporation of radioactive Fe into erythrocytes. The results showed that there were no significant differences in heme and non-heme Fe bioavailability in the control group. Heme Fe bioavailability of the prebiotic group increased significantly by 56% post-prebiotic intake. There were no significant differences in non-heme Fe bioavailability in this group. We concluded that daily consumption of a prebiotic mix increases heme Fe bioavailability and does not affect non-heme iron bioavailability.

Palabras clave

KeyWords Plus: PROXIMAL COLON; ABSORPTION; DEFICIENCY; CALCIUM; ANEMIA; YOUNG; RATS; MEN; FRUCTOOLIGOSACCHARIDES; EXPRESSION

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