

Orange Juice Can Aid Absorption of Iron

Vitamin C can improve levels of Nonheme Ferrous Fumarate or Ferrous Sulfate in the body

Individuals are often told to consume only filtered water when taking medicine, as opposed to juices or carbonated soft drinks. However, new study findings suggest that iron may be more effective when taken in combination with orange juice.¹

Iron contributes to the process of making red blood cells and is often provided via consumption of red meat, eggs, beans, sesame, peanuts, and dark green vegetables. For individuals who need more iron, supplementation can allow the body to receive more iron than is obtained in the typical diet.¹ Ferrous fumarate is a common and inexpensive form of a food iron supplement, and ferrous sulfate offers another option, although it is more expensive.²

The study authors noted that iron takes 2 forms: heme iron and nonheme iron. Heme iron is from animals, whereas nonheme iron comes from plants. The body typically absorbs only 15% to 35% of heme iron and 2% to 20% of nonheme iron. The presence of specific nutrients contributes to the rate at which nonheme iron is absorbed.¹

The amount of iron needed every day depends on age, sex, and dietary needs. For instance, vegetarians who do not consume meat, poultry, or seafood need nearly twice as much iron because the body does not absorb nonheme iron as well. Recommended daily amounts range from 0.27 mg for infants from birth to 6 months of age to 27 mg daily for pregnant women.³

Vitamin C can improve absorption of iron in the body and is commonly found in fruit juices—specifically orange juice, according to study authors, so the absorption of nonheme iron may improve when taken with orange juice. Additionally, when nonheme iron and vitamin C are digested together, they form a compound that can be easily absorbed. A deficiency of vitamin C may be associated with a deficiency in iron because of reduced absorption.¹

Researchers studied 21 children aged 4 to 7 years in a randomized crossover design trial that evaluated iron absorption with orange juice compared with apple juice.² The children were randomly assigned to receive a small meal with muffins that contained 4 mg iron (ferrous fumarate) with orange juice or apple juice. The results showed that iron absorption increased among children who consumed the muffin with orange juice compared with children who ate the muffin with apple juice ($5.5\% \pm 0.7\%$ to $8.2\% \pm 1.2\%$, respectively; $P < .001$). The absorption showed positive impacts after controlling for height, weight, and age of the children in the orange juice group, demonstrating a 2-fold increase in iron absorption in children older than 6 years.²

Taking iron tablets with orange juice could provide similar positive results.¹ However, individuals should avoid taking iron supplements with tea, coffee, milk, alcohol, calcium, or calcium-rich foods because doing so can delay iron absorption—the opposite impact of consuming it with orange juice.¹

References

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News Source: <https://www.pharmacytimes.com/view/orange-juice-can-aid-absorption-of-iron>