Phytase enzymes present an alternative to iron supplements, because they have been shown to improve iron absorption by means of catalysing the degradation of a potent iron absorption inhibitor: phytic acid. Phytic acid is a hexaphosphate of inositol and is particularly prevalent in cereal grains, where it serves as a storage molecule for phosphorous. Phytic acid is also associated with minerals. The minerals are bound by chelation to the negatively charged phosphate groups in phytic acid. Phytases catalyse the dephosphorylation of phytic acid, thus releasing bound minerals to make them available for absorption. This article presents research on phytase catalysis in gastric conditions and considers potential benefits and drawbacks for using phytases as a food supplement.