

Sucralfate Causes Malabsorption of L-Thyroxine

Following their experience with a hypothyroid woman in whom the dose requirement for L-thyroxine increased substantially after sucralfate, a nonabsorbed aluminum salt of sucrose sulfate prescribed for treatment of dyspepsia, Sherman and colleagues studied the effect of this agent on absorption of L-thyroxine. In healthy adult volunteers, 80% of an ingested dose of 1,000 µg of L-thyroxine was absorbed. When L-thyroxine and sucralfate were administered simultaneously, only 23% of ingested L-thyroxine was absorbed, and the rate of absorption slowed. When L-thyroxine was administered 8 hours after a dose of sucralfate, 78% of administered L-thyroxine was absorbed. Thus, the authors concluded that sucralfate impairs the absorption of L-thyroxine, probably by intraluminal binding of the hormone.

Sherman SI, et al. *Am J Med* 1994;96:531-535.

Editor's comment: Several medications inhibit intestinal absorption of L-thyroxine, including ferrous sulfate, aluminum hydroxide, and colestipol, as well as sucralfate, an agent that is utilized for duodenal ulcers, gastritis, reflux esophagitis, and dyspepsia. Sucralfate also impairs absorption of tetracycline, phenytoin, and digoxin. Although in children and adolescents poor compliance with medication intake is the most common cause of erratic dose requirements for L-thyroxine and other medications, it is important to remember when confronted with this problem that one drug may adversely affect the absorption, serum protein binding, excretion, or pharmacokinetics of another agent.

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