

## **Gut Oxalate Intake and Processing in Human Subjects**

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Oxalate in the gut is derived primarily from the diet with a small, as of yet poorly defined amount contributed by intestinal secretions. The main dietary sources determined in studies of the dietary habits of health professionals are irregularly consumed, high oxalate foods, such as spinach, and more commonly ingested foods of moderate oxalate content, such as potatoes, bread, and cereals. In most foods, the bulk of the oxalate consumed is in the ionic form with the remainder in crystalline form. We have observed that over 95 percent of the oxalate excreted in the feces of human subjects is in the crystalline form. This observation indicates that in individuals where very little of the ingested oxalate is absorbed or degraded, there is a transition from ionic to crystalline forms in the gut. Colonization of the gut with *Oxalobacter formigenes* substantially decreases the oxalate excreted in feces and the concentration of oxalate in fecal water. Despite the concentration of fecal water oxalate being five times higher in non-colonized subjects compared to colonized subjects, a much greater absorption of dietary oxalate does not appear to occur. To fully understand the dynamic changes in the forms of oxalate in the gut and their relationship to oxalate absorption, more studies are required.

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