

GASTROINTESTINAL HEALTH

Glutathione

Counteracts oxidative stress in the intestinal mucosa (gut wall); Recycles antioxidants such as vitamins C & E.^{1,2,3}

Selenium

Cofactor to glutathione peroxidase (GPx), which protects intestinal wall from inflammatory damage; Lower GPx activity due to selenium deficiency is very common in people with gut inflammation.^{3,4,5}

Glutamine

Preferred fuel for enterocytes (small intestine cells), which use the most glutamine in the entire body; Keeps the junctions between intestinal epithelial cells tight so foreign proteins cannot enter bloodstream.^{6,7,8}

Zinc

Decreases intestinal permeability; Maintains integrity of intestinal wall, especially when inflammatory chemicals (TNF α) compromise epithelial lining; Works with vitamin A in regenerating cells that line the gut.^{9,10,11}

Vitamin A

Regulates growth of epithelial cells, including those that line the gastrointestinal (GI) tract; Reduces inflammatory proteins in the gut.^{12,13}

Lipoic Acid

Suppresses damaging chemicals (cytokines) in GI tract that cause an inflammatory immune response; Preserves glutathione levels and recycles vitamin C.^{35,36}

Vitamin C

An inflamed gut uses up the antioxidant vitamin C faster than a healthy gut; Promotes tissue healing in GI tract; Reduces gastrointestinal inflammation.^{14,15}

Magnesium

Deficiency affects the amount of good bacteria found in the gut; May help prevent stomach ulcers; Insufficient levels are very common in people with irritable bowel; Antacids induce magnesium deficiency.^{32,33,34}

Vitamin D

Keeps gut flora healthy by protecting good bacteria; Activates adaptive immunity that originates in GI tract; Promotes gut barrier integrity; Deficiency linked to inflammatory bowel disease flare-ups.^{16,17,18}

Choline

Maintains the barrier function of gastric epithelium (helps prevent stomach ulcers) via its role in building cell membranes and acting as a surfactant in the GI tract.^{30,31}

Vitamin K

Synthesized by intestinal bacteria; Deficiency common in chronic GI disorders; Bone demineralization that occurs with inflammatory bowel diseases (Crohn's, etc) is caused by vitamin K deficiency since it is a required cofactor for bone formation.^{19,20}

Folate

Deficiency alters genes in a way that makes colon cells more likely to become cancerous.^{28,29}

Vitamin B6

Deficiency is strongly linked with a higher risk of developing colon cancer.^{26,27}

Carnitine

May be therapeutically beneficial in people with colitis (inflammation of colon) due to its role in fatty acid metabolism, which is often impaired in GI disorders.^{23,24,25}

Vitamin B12

Improves gastrointestinal complaints in some patients with dyspepsia (indigestion); Antacids deplete B12.^{21,22}

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Additional nutrients affect gastrointestinal health. This list is non-exhaustive.

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