GLUTAMINE FORTÉ
L-GLUTAMINE WITH BIOAVAILABLE THERACURMIN®

Glutamine Forté delivers a therapeutic level of L-glutamine (5,000 mg (5 g) per serving) in combination with Theracurmin, a novel, water-dispersible form of turmeric with dramatically enhanced curcumin bioavailability. Theracurmin is over 27 times more bioavailable than standard curcumin. It complements the actions of glutamine by providing optimal support of the body’s antioxidant pathways and cytokine response.*

L-Glutamine is a conditionally essential amino acid and an important fuel for enterocytes. The benefits of oral supplementation have been extensively studied. L-glutamine has been shown to:

- Restore gut barrier function*
- Promote healthy intestinal permeability*
- Support a healthy immune system*
- Support healthy tissue repair mechanisms*

A Great-Tasting, Hypoallergenic Drink Mix

Because daily recommendations for L-glutamine can reach up to 30 grams daily in certain conditions, Glutamine Forté is formulated with a great-tasting, mild citrus flavor. Its convenient powdered drink mix format allows for flexible dosing and customized patient care. The product can be mixed in cold water or juice, or even in foods, such as yogurt or applesauce, for improved compliance.

Theracurmin® is a registered trademark of Theravales.
GLUTAMINE FORTE

Background
Maintaining intestinal permeability has global effects throughout the body, with impact on the immune system, the cardiovascular system, the regulation of cytokine and chemotactic mediators, as well as local intestinal functions. Supporting gut integrity may therefore have wide-ranging health benefits. Both glutamine and curcumin have been shown to inhibit oxidation and modulate other cellular processes that influence intestinal cell health and cellular tight junctions.*

Glutamine in Intestinal Physiology
Glutamine is the most abundant amino acid in the human body. It is a conditionally essential amino acid, meaning that it is required in increased amounts under certain conditions, e.g., metabolic stress, to support healthy intestinal function. In many cell types, including enterocytes, glutamine acts as a primary fuel for mitochondria and is essential to the maintenance of mitochondrial membrane and optimal intestinal motility.**

Experimental studies suggest that glutamine supports a healthy cytokine and chemotactic response in colonic cells* and is vital to basic intestinal cellular integrity and function.** Under times of stress, the body’s need for glutamine increases. Glutamine is a precursor to glutathione, the most important intracellular antioxidant.***

Glutamine has been shown to support healthy enterocyte synthesis, proliferation, and integrity.*** It exerts influence over numerous signaling pathways governing healthy cellular growth.** Animal studies suggest that oral glutamine supplementation increases quantities of desirable mucosal proteins and ileocecal immunoglobulins and supports mucosal microvilli height, and controls passage of macromolecules, supporting suggestion of enterocyte and gap-junction integrity.*** Glutamine supports optimal structural integrity of the enterocytes and their barriers,** controlling passage of luminal molecules into the systemic circulation, and maintaining healthy intestinal permeability.**

Clinical Use of Glutamine
Increased intestinal permeability occurs in many patient populations and glutamine supplementation has been shown to support healthy blood and tissue levels of glutamine and to optimize intestinal and digestive health function in diverse groups of patients.*** Glutamine supplementation has also been shown to support healthy intestinal permeability related to changes in liver function.** It stimulates glucagon-like peptide, which plays a role in insulin release** and helps maintain optimal glucose metabolism.**

Theracurmin®
Many studies have suggested beneficial effects of curcumin in supporting health of intestinal cells, particularly in the colon.*** Curcumin significantly improves survival and colonic morphology, dampens local cytokine and chemokine production, and reduces mucosal neutrophil infiltration.***

However, to work optimally curcumin needs to act both systemically and locally. Standard curcumin is poorly absorbed and has limited water solubility.*** Theracurmin is a novel turmeric preparation with dramatically enhanced absorption and bioavailability. Finely milled curcumin is made into a colloidal with glycerin and a natural vegetable gum called gum guaio, which mainly consists of polysaccharides obtained from the sap of ghatti trees (Anogeissus latifolia). Composed of natural ingredients, Theracurmin is very stable against light and heat, has unmatched dispersion and stability in water, is 27 times more bioavailable in humans than standard curcumin, and many times more bioavailable than any other commercially available curcumin supplement.*

How to Use
Supplementation of glutamine at doses substantially above ordinary daily requirements may support health of the enterocytes in many clinical scenarios.*** Each serving provides 5 grams of glutamine and can be taken 3 to 6 times per day. Oral glutamine is considered safe at amounts ranging health benefits. Both glutamine and curcumin have been shown to inhibit oxidation and modulate other cellular processes that influence intestinal cell health and cellular tight junctions.*

References