GENESTRA BRANDS®

HMF Fit For School Powder

Children's immune support formula‡

- Helps to support upper respiratory tract health in children‡
- Provides 12.5 billion CFU of live microorganisms that temporarily modify gut flora‡
- Includes 50 mg of vitamin C and 25 mcg (1,000 IU) of vitamin D per serving
- Convenient powder format free of artificial colors or flavors

HMF Fit For School Powder includes a combination of research-driven probiotic strains and vitamin C that supports children's upper respiratory tract health and immune function. In a recent clinical trial, 57 schoolchildren were randomized to receive either a placebo tablet or HMF Fit For School Powder's probiotic formula plus 50 mg of vitamin C daily for six months. Children in the probiotic plus vitamin C group had significant improvement in upper respiratory tract health, including a significant decrease in the number of days with minor symptoms and a 30% decrease in school absenteeism incidence rate. Each heaped scoop also includes 25 mcg (1,000 IU) of vitamin D for additional immune support and to promote vitamin D status for healthy bone development.‡

Supplement Facts
Serving Size 1 Heaped Scoop (1 g)
Servings per Container about 30

	Amount Per Serving	% DV
Vitamin C (as ascorbic acid)	50 mg	56%
Vitamin D (as cholecalciferol)	25 mcg (1000 IU)	125%
Probiotic Consortium	12.5 billion CFU	*
Lactobacillus acidophilus (CUL-60 & CUL-21)		
Bifidobacterium animalis subsp. *lactis* (CUL-34) & *Bifidobacterium bifidum* (CUL-20)		

* Daily Value (DV) not established

Other Ingredients: Potato maltodextrin

Recommended Dose
Children (1 year and older): In a glass, add 1 heaped scoop to water or juice and dissolve completely before administration to children. Take once daily or as recommended by your health professional.

Size
Net Weight 1 oz (30 g)

Product Code
10388

GMO Non GMO · Gluten Free · Soy Free · Dairy Free · FOS No FOS · Vegetarian

Tried, tested and true.

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‡These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

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Scientific Rationale:

Several clinical trials have observed an association between probiotic supplementation and upper respiratory immune health.[1-2] A recent meta-analysis of 23 randomized, double-blind, placebo-controlled trials found that probiotic supplementation – particularly with *Lactobacillus* and *Bifidobacterium* strains – helps to support upper respiratory immune function in children.[3‡]

One randomized, double-blind, placebo-controlled study evaluated the effect of HMF probiotics and vitamin C on immune health in young schoolchildren (Figure 1).[4] Fifty-seven children (aged 3-6) attending preschool were randomized to consume one chewable placebo or probiotic/vitamin C tablet (the same probiotic consortium and vitamin C level present in HMF Fit For School Powder) daily for six months.[4] Upper respiratory tract health was monitored through weekly diaries completed by guardians and during at least three physician's appointments.[4] When compared to the placebo, the HMF/vitamin C combination significantly promoted upper respiratory tract health and immune function.[4] This research was used to develop HMF Fit For School Powder, which also includes vitamin D for additional immune support.[4‡]

Vitamin D supplementation has been shown to have beneficial effects on the function of a variety of immune cells, including dendritic cells, macrophages, and T cells.[5] Adequate vitamin D status has also been associated with proper upper respiratory immune function.[6,7] In a recent controlled clinical trial involving children, daily supplementation with 1,000 IU of vitamin D for three months was shown to significantly increase plasma vitamin D levels and modulate cytokine production.[8] Following supplementation, levels of the cytokines IL-2, IL-4, IL-6, and IFN-γ were all significantly modified.[8‡]

Vitamin D is also well-recognized for its beneficial effects on bone health.[9] It helps absorb and use calcium, an important structural component of bones and teeth.[9] Vitamin D is especially critical for proper bone development in children and adolescents, with adequate intake required for optimal bone growth, mineralization and density.[10-12] Clinical research has reported that vitamin D supplementation supports bone mineral density in deficient youth, as well as bone strength in young, healthy children.[10,12] Vitamin D also plays an important role in achieving peak bone mass, which occurs between the ages of 18 and 23 and has a major impact on bone health in later life.[10‡]

Children may be at an increased risk of vitamin D insufficiency due to inadequate sun exposure, limited consumption of vitamin D-containing foods, and low intake of vitamin D supplements.[13] Specifically, vitamin D production from the skin is limited in the winter months due to America's latitude, while the use of sunscreen and long sleeve clothing reduce its production in the summer.[11,13] Additionally, the few foods that naturally contain vitamin D (fatty fish, egg yolk, nuts and some mushrooms) may not be commonly consumed by children, and dietary restrictions may further limit the consumption of dairy products fortified with vitamin D.[10,13‡]

In an analysis of 380 infants and toddlers, approximately 12% and 40% of those sampled had deficient or suboptimal vitamin D levels, respectively.[14] As vitamin D deficiency was strongly associated with breastfed infants who did not take supplements, the study authors stressed the importance of vitamin D supplementation when breastfeeding.[14] Similarly, other researchers have reported that vitamin D supplementation can help individuals achieve adequate vitamin D status, closing the gap between intake levels and recommended values.[13‡]

The ProChild Study[4]

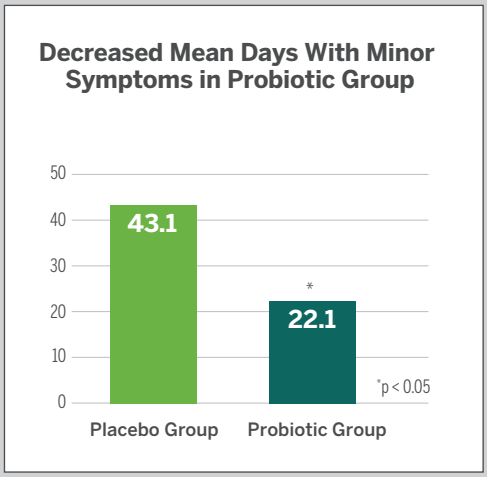

Figure 1: In this study, HMF Fit For School's probiotic strains, in combination with vitamin C, effectively maintained immune function in preschool children. Compared with the placebo group, the children in the probiotic group had a significant decrease in the number of days with minor symptoms and a 30% decrease in school absenteeism incidence rate.[‡]

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