GENESTRA BRANDS®

HMF Travel

PROBIOTIC FORMULA

Probiotics to support gastrointestinal health when travelling

- Shelf-stable formula
- 35 billion CFU per day
- Helps to reduce the risk of occasional diarrhoea*
- Includes *Saccharomyces boulardii* plus four proprietary probiotic strains
- Potency guaranteed through expiration

HMF Travel combines five probiotic strains from *Lactobacillus, Bifidobacterium* and *Saccharomyces* genera to promote a favourable gut flora and support gastrointestinal health. The intestinal microflora composition can be altered by a variety of factors, including diet, stress, travel and antibiotic use.[1] Specifically, unfamiliar food or liquids, jet-lag and altered body rhythms can all affect the gut flora during travel.[1] Clinical trials have found that the probiotic yeast *Saccharomyces boulardii* supports gastrointestinal health and helps reduce the risk of antibiotic-associated diarrhoea.[1-2] HMF Travel also contains proprietary, human-sourced, research-driven strains demonstrated to adhere better to the gut lining, more efficiently colonize the intestinal environment, and naturally resist pH and bile acid, without the need for enteric coating.[3] As some probiotic supplements require constant refrigeration to ensure the stability of the microorganisms, they may be unsuitable for travelers that do not have easy access to refrigeration.[1] HMF Travel is a shelf-stable probiotic supplement offered in a convenient capsule format that can easily be taken anywhere to support gastrointestinal health.

EACH CAPSULE CONTAINS:

Probiotic Consortium	17.5 billion CFU
Lactobacillus acidophilus (CUL-60 & CUL-21)	9.375 billion CFU
Saccharomyces boulardii (CNCM-I-1079)	5 billion CFU
Bifidobacterium bifidum (CUL-20) & *Bifidobacterium animalis* subsp. *lactis* (CUL-34)	3.125 billion CFU

Non-Medicinal Ingredients: Hypromellose, cellulose, silica, magnesium stearate

Recommended Adult Dose: Take two capsules daily or as recommended by your healthcare practitioner. If you are on antibiotics or antifungals, take at least two to three hours before or after.

Product Size: 30 vegetable capsules **Product Code:** 10198

NPN 80067278

NON GMO DAIRY FREE GLUTEN FREE VEGAN NOFOS

*Antibiotic-associated diarrhoea

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Scientific Rationale:

The human intestinal tract contains more than 400 bacterial species, and its composition can be altered by elements of diet and lifestyle, including travel.[1] These travel-related factors can include stress, jet-lag and altered body rhythms.[2] However, the primary cause of an imbalanced microflora during travel is bacterial pathogens, which are often found in certain food or liquids – particularly raw/uncooked meat or seafood, unpeeled fruits or vegetables, and tap water.[2] Research has shown that changes to the normal intestinal microflora occur more often in individuals travelling to certain areas, such as North Africa, Latin America, the Middle East and Southeast Asia.[2] A disruption in the normal balance of this microflora can impair gastrointestinal health, negatively affecting travel plans and resulting in itinerary changes, trip cancellations or delays.[2]

Probiotics are live microorganisms that support gastrointestinal health and contribute to a healthy microflora composition.[1] Studies have shown that they support the growth of beneficial bacteria in the intestines, while limiting the proliferation of pathogenic bacteria.[1] They prevent pathogenic bacteria from colonizing the gastrointestinal tract by reducing the pH and stimulating the production of antimicrobial peptides in the intestine.[3] In addition to decreasing bacterial survival, probiotics strengthen the epithelial barrier.[3] They mediate the integrity of tight junctions and increase mucin release, which in turn regulates permeability and prevents pathogens from adhering to cells.[3,4] This course of action decreases the movement of bacteria from the intestines into circulation.[5]

HMF Travel is formulated using Saccharomyces boulardii, plus GENESTRA BRAND's proprietary Lactobacillus and Bifidobacterium probiotic consortium – microorganisms that have been used in a wide body of clinical research.[6-10] Saccharomyces boulardii is a non-pathogenic yeast that colonizes that intestine within three to four days and is cleared from the colon within a week after ingestion ends.[2] Studies involving tourists have found that daily supplementation with Saccharomyces boulardii, beginning a few days prior to the start of the trip (to ensure probiotic colonization in the gastrointestinal tract), supports gastrointestinal health for the duration of the trip.[2]

One clinical trial involved Austrian tourists travelling to hot climates.[11] Participants were randomly assigned to one of three groups: placebo, 250 mg of Saccharomyces boulardii (5 x 10^9 viable cells daily) or 500 mg of Saccharomyces boulardii (10 x 10^9 viable cells daily).[11] They consumed the supplements five days prior to the start of their trip and continued supplementation for the trip duration (three weeks on average).[11] Each participant completed a questionnaire concerning previous travel history, present destination, duration of stay, accommodation, and dietary habits during the trip. Participants also described their bowel habits, including frequency and consistency of stool, as well as the presence of abdominal discomfort over the course of the trip.[11] When compared to the placebo, both doses of Saccharomyces boulardii significantly promoted gastrointestinal health during travel, and its effects were more pronounced in certain areas, including North and West Africa, East African Islands, and Southeast Asia.[11]

Similar beneficial effects of Saccharomyces boulardii were observed in a trial involving tourists travelling to North Africa, the Middle East and Asia.[12] Participants consumed a placebo, or a low (250 mg daily) or high (1 g daily) dose of Saccharomyces boulardii five days before their trip began, and continued supplementation for the entire length of the trip (three weeks on average).[12] Each participant completed a questionnaire concerning previous travel history, present destination, duration of stay, accommodation, and dietary habits during the trip.[12] Participants also described their bowel habits, including frequency and consistency of stool, as well as the presence of abdominal discomfort over the course of the trip.[12] Saccharomyces boulardii significantly and dose-dependently promoted gastrointestinal health during travel when compared to the placebo, and its effects were more pronounced in certain areas, including North Africa.[12]

Scientists have suggested that a wide variety of bacterial strains present in the intestines may be the key to gastrointestinal health.[13] As a result, a clinical trial evaluated the effects of a multi-probiotic supplement on gastrointestinal health among tourists.[13] Danish participants travelling to Egypt were randomly assigned to a placebo or probiotic group.[13] Each probiotic capsule provided a total of 3 x 10^9 CFU from a mixture of four probiotic strains, including Lactobacillus acidophilus and Bifidobaterium bifidum.[13] The supplements were taken three times daily, beginning two days before travelling and ending on the final travel day.[13] Participants completed a diary documenting the number of bowel movements each day, the characteristics of the stools and the presence of abdominal discomfort. When compared to the placebo, the probiotic mixture significantly promoted gastrointestinal health during the course of the trip.[13]

Saccharomyces boulardii has also been extensively researched for its ability to support a healthy microflora composition after antibiotic therapy, decreasing the risk of antibiotic-associated diarrhoea.[14] Like travel, antibiotics can alter the intestinal microflora, resulting in the proliferation of pathogens unaffected by antibiotics.[15] Saccharomyces boulardii restores the normal microflora in patients who experience diarrhoea by promoting the growth and differentiation of intestinal cells, re-establishing the normal production of short chain fatty acids (a major source of energy for colon cells), neutralizing factors that allow pathogens to adhere to and obtain nutrients from host cells, and breaking down toxin-A, a contributor to diarrhoea.[14]

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