The PureGenomics® Gastrointestinal Health Protocol®

Developed with Nathan Morris, M.D.⁺

Gene	SNP	Alleles	What it means	Diet & Lifestyle Recommendations	Pure Encapsulations® Products‡
DAO	rs10156191	TT (+/+) CT (-/+) CC (-/-)	Associated with reduced activity of diamine oxidase (DAO), an enzyme that breaks down dietary histamine.	TT (+/+) or CT (-/+) • Use additional assessment to confirm the need for a low-histamine diet and/or supplements. Low-histamine diets limit the intake of meats, fermented and canned foods, poultry, fish, tomatoes, chocolate, tomatoes, spinach, eggplant, avocado, and nuts. Ensure adequate intake of micronutrients needed for healthy histamine metabolism, including vitamin B ₆ , B ₁₂ , vitamin C and zinc. CC (-/-) • No Recommendations	TT (+/+) or CT (-/+) • Quercetin, G.I. Integrity [†] or G.I. Fortify [‡] , PureGenomics® Multivitamin CC (-/-) • No Recommendations
FUT2	rs601338	AA (+/+) GA (-/+) GG (-/-)	Associated with altered intestinal microbiota composition.	AA (+/+) or GA (-/+) Include soluble fiber, yogurt, kefir and/or fermented foods in your diet. If you are sensitive to these foods, your healthcare provider may recommend supplements. GG (-/-) No Recommendations	AA (+/+) or GA (-/+) • Probiotic-5 or PureGG 25B ●, Poly-Prebiotic powder ● GG (-/-) • No Recommendations
MCM6	rs4988235	GG (+/+) AG (-/+) AA (-/-)	Genetic predisposition to lactose intolerance.	 GG (+/+) or AG (-/+) If you are lactose intolerant, eliminate dairy foods or opt for lactose-free options. Make sure that you obtain adequate calcium from other sources. AA (-/-) No Recommendations 	GG (+/+) or AG (-/+) • Gluten/Dairy Digest, Calcium (citrate) AA (-/-) • No Recommendations
GATA3	rs4143094	TT (+/+) GT (-/+) GG (-/-)	Enhanced colon health benefits with low processed meat intake.	TT (+/+) or GT (-/+) • To help maintain colon health, focus on reducing intake of processed meats, which include deli meats, sausage, ham and cured bacon. Ensure adequate dietary fiber and vegetable intake. GG (-/-) • No Recommendations	No Recommendations
TLR4	rs4986790	GG (+/+) AG (-/+) AA (-/-)	Associated with altered microbial composition in the stomach.	No Recommendations. Further assessment is recommended (see page 2).	No Recommendations

Please note that these SNPs are markers of genetic predisposition supported by a limited, yet evolving body of evidence. Due to the many factors that modify their effects on physiology, a positive result does not necessarily mean that any or all of the recommended supplements are needed. Consider additional methods, such as those listed under Assessment Recommendations (refer to page 2), to determine the need

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The PureGenomics® Gastrointestinal Health Protocol‡ (Cont.)

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Gene and SNP	Assessment Recommendations
DAO (rs10156191)	Serum DAO Zonulin level (serum) or lactulose/mannitol (urine) Symptoms following consumption of histamine-rich foods
FUT2 (rs601338)	Stool microbial analysis Examples: GI Effects® Comprehensive Stool Profile (Genova Diagnostics®) Microbiology Analysis (Genova Diagnostics®) Microbiology or Bacteriology Profile (Doctor's Data) Organic acids
MCM6 (rs4988235)	Acute G.I. symptoms following consumption of milk and other dairy foods Rule out dairy allergy
GATA3 (rs4143094)	Self-reported processed meat intake
TLR4 (rs4986790)	PCR testing (stool) Urea breath test Optional Tests: Microbial stool profile, such as GI Effects® Comprehensive Stool Profile (Genova Diagnostics®)

⁺Dr. Morris is a retained advisor to Pure Encapsulations.

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PureGenomics* nutritional information is not intended for use in the diagnosis, cure, mitigation, treatment or prevention of disease.

The information contained herein is for informational purposes only and does not establish a doctor-patient relationship.