KASHI CLINICAL LABORATORIES

Nutritional Deficiency

Genetic Analysis Report

PATIENT
PFirst PLast
DOB: 01/01/72

ORDERING PROVIDER
Example Organization

LABORATORY INFORMATION

Lab ID:	N8C9841
Collection Date:	01/11/10
Test Date:	01/21/10
Report Date:	01/22/10

GENE MARKER	NORMAL	TEST RESULT	COMMENT
GC-Globulin	TC/TC	TC/TC	The gc-globulin gene product is responsible for transporting vitamin D to tissues. Your genotype is not known to be associated with an increased risk of vitamin D deficiency.
CYP2R1	A/A	G/A	This gene generates an enzyme that is involved in producing the active form of vitamin D. Your genotype suggests you may have an increased risk of lower serum vitamin D levels.
NADSYN1/DHCR7	T/T	T/T	This gene generates an enzyme that is involved in producing the active form of vitamin D. Your genotype is associated with normal enzyme activity and vitamin D levels.
VDR-Bsm1	G/G	G/G	This gene generates a vitamin D receptor essential to calcium absorption and calcium phosphate balance. Your genotype is not associated with an increased risk of abnormal bone formation and osteoporosis.
TMPRSS6	C/C	C/T	This gene plays a part in the absorption of iron. Your genotype may be associated with an increased risk for iron deficiency.
BCMO1	T/T	T/G	This gene generates an enzyme that is involved in producing the active form of vitamin A. Your genotype may be associated with an increased risk for vitamin A deficiency.
FUT2	A/A	A/A	This gene product has an effect on the absorption of vitamin B12. Your genotype may be associated with higher serum B12 levels.
MTHFR C677T / A1298C	CC/AA	CT/AC	This gene generates an enzyme that is involved in processing folate and regulating homocysteine both of which are involved in cardiovascular health. Your genotype is not associated with risk for either folate deficiency or increased homocysteine levels.

NUTRITIONAL DEFICIENCY TREATMENT CONSIDERATIONS

- If you have one of the risk alleles for vitamin D deficiency (gc-globulin, DHCR7/NADSYN, CYP2R1 and/or VDR-Bsm-1), consider regular vitamin D testing and increased frequency of vitamin D supplementation or exposure to sunlight.
- CYP2R1: you may benefit from prescription calcitriol in combination with calcitriol (1,25 dihydroxy-vitamin D) testing. Talk to your doctor to see if this is right for you.
- VDR-Bsm-1: you should consider a DEXA scan if over the age of 60. In addition, supplementation with vitamin D3/K2 and lifestyle changes to support optimal bone mass density will be beneficial.
- BCMO1: you may benefit from supplementation with the active form of vitamin A, retinyl palmitate. Food sources of retinyl palmitate include cod liver oil, liver, egg yolks and fish.
- FUT2: you may benefit from B-12 injections, sublingual B12 supplementation or liposomal B12 for increased B12 absorption.
- TMPRSS6: alone or in combination with two FUT2 risk alleles, can increase risk of anemia. A diet rich in iron with optimal gastrointestinal absorption may be beneficial or supplementation may be required. Blood testing for iron levels should be performed before supplementing with iron.
- MTHFR: you should consider a diet high in raw leafy greens and animal protein to provide a balance of B vitamins and folate to support appropriate methylation. Supplementation with methylated folate (5-MTHF) may be needed for symptom relief.

Reported and Reviewed By:

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