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TEST PATIENT

GUa d'Y'HYghBUa Y
 Sex : :
 DUHY Collected : 00-00-0000
 111 H9GH ROAD TEST SUBURB
 @AB =8: 00000000 UR#:0000000

TEST PHYSICIAN

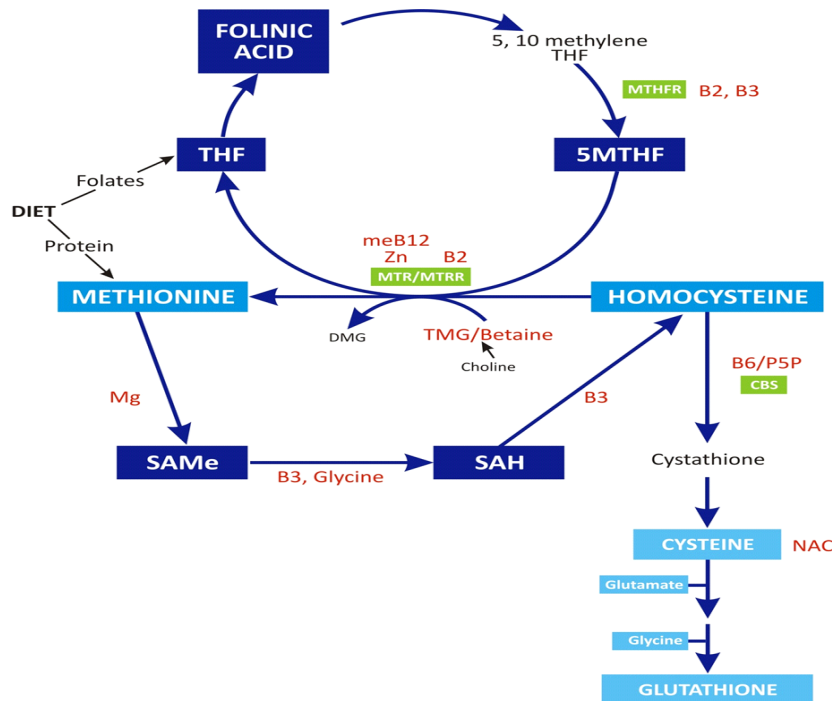
DR JOHN DOE
 111 CLINIC STF 99H
 7@B=7'GI 6I F 6'J =7'' \$\$\$

BIOCHEMISTRY

BLOOD - SERUM	Result	Range	Units	
Activated Vitamin B12	>128.0 *H	23.0 - 100.0	pmol/L	
SERUM FOLATE	29	6 - 45	nmol/L	
BLOOD - PLASMA				
HOMOCYSTEINE	13.0	6.0 - 15.0	umol/L	

INTEGRATIVE MEDICINE

BLOOD - PLASMA	Result	Range	Units
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(*) Result outside normal reference range

(H) Result is above upper limit of reference rang

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Folate Metabolism Pathway

The Folate Metabolism Pathway is required for the formation of Methyl groups that are utilised in the Methionine Metabolism Pathway for methylation purposes. It is also the regulator of the Methionine Metabolism Pathway. Folates are naturally occurring vitamins and are found in numerous foods. In contrast Folic Acid, is a synthetic form of folate.

Methyl groups are acquired from either Trimethylglycine (TMG) or 5methyltetrahydrofolate (5MTHF). The former reaction however only occurs in the kidney and liver, whereas the latter reaction occurs in most cells of the body. Hence, the latter reaction is the preferential pathway.

5MTHF is the most abundant folate form in plasma and as such is the most important form for the methylation process. 5MTHF is converted to THF via the MTR enzyme and the MTHFR enzyme. In the process a Methyl group is donated to homocysteine to form methionine.

The effectiveness of this process is influenced by the genetic polymorphism of the MTHFR enzyme. MTHFR mutations don't allow efficient processing of folic acid to a readily utilisable form (5MTHF).

FOLINIC ACID (5-formyl THF), is an active and reduced form of folate. In the body, folinic acid may be converted into any of the other active forms of folate. Supplying the body with folinic acid bypasses many of the required metabolic steps, and it is rapidly converted to 5MTHF.

TETRAHYDROFOLATE (THF) is the basic, reduced form of folate from which other forms of reduced folate are made.

LOW 5-methyl TETRAHYDROFOLATE LEVEL:
 Due to low folate intake or malabsorption syndromes.
 Possible SNPs in MTHFR: C677T > A1298C.
 Consider supplementation - 200-800mg daily with 5-MTHF.

Before supplementing, investigate and reduce Oxidative Stress and Inflammation levels. Once supplemented, as soon as the patient responds positively, CEASE supplementation. Over supplementation will overstimulate and cause negative feedback inhibition. Resume supplementation only when the adverse symptoms represent.

Tetrahydrofolate	0.9	0.6 - 6.8	nmol/L	
Folinic Acid	22.0	9.0 - 35.5	nmol/L	
5-Methyl Tetrahydrofolate	5.9*L	6.6 - 39.9	nmol/L	

Research Use Only:

These analyses have been performed using test kits that are for Research Use Only, as per the assay manufacturer's guidelines. The analytical performance characteristics of these tests have been determined by this laboratory. The test results should not be used for diagnosis without confirmation by other medically established means.

Tests ordered: HOMO,FOL,IMPEI,ActB12,5MTHF,THF,Folinic,RUO,CFee

(*) Result outside normal reference range

(L) Result is below lower limit of reference range