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16 HARKER STREET  
BURWOOD VIC 3125

Dr.SAMPLE REPORT  
TEST HEALTH CENTRE  
123 TEST STREET  
BURWOOD VIC 3125

LAB ID : 3814207  
UR NO :  
Collection Date : 09-May-2022  
Received Date:09-May-2022



3814207

### BIOCHEMISTRY

BLOOD - SERUM	Result	Range	Units	
<b>Activated Vitamin B12</b>	<b>61.0</b>	23.0 - 100.0	pmol/L	
<b>SERUM FOLATE</b>	<b>22</b>	6 - 45	nmol/L	

#### General Chemistry Comment

##### ELEVATED HOMOCYSTEINE LEVEL:

May be due to high protein/Paleo diet. High methionine foods can falsely elevate Homocysteine. Also consider B12 deficiency, renal failure or medication such as Metformin.

Also possible SNPs in CBS, MTHFR, MTR, MTRR genes.

Consider reducing methionine intake, TMG (trimethylglycine) up to 6g daily plus NAC (N-acetylcysteine 600mg twice daily), along with B6 and B12.

Improve renal function. If due to prescription medications, consider changing medication or reducing dose where possible.

Homocysteine is elevated in B12, B6 and folate deficiency as well as renal impairment. A fasting specimen is required as homocysteine is affected by diet.

In the Methylation process, Homocysteine levels may be lowered by one of the following;

1. Conversion to Methionine to SAME (via TMG or methylB12)
2. Conversion to Cystathionine to Glutathione (via Vit B6)
3. Conversion to Tetrahydrofolate to 5MTHF (via VitB2, VitB6)

#### Serum Folate Comment:

High/Normal Folate levels do not necessarily reflect adequate levels of 5 MTHF (the most readily useable form of folate in the body).

If the serum Folate level is low, look at the Homocysteine level which will be elevated, whilst MMA levels will be normal.

#### Further assessments to consider:

Folate Metabolism Profile (THF, Folinic Acid, 5-MTHF), MTHFR gene status.

BLOOD - PLASMA

<b>HOMOCYSTEINE</b>	<b>15.0 *H</b>	5.0 - 12.0	umol/L	
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### INTEGRATIVE MEDICINE

BLOOD - PLASMA	Result	Range	Units	
<b>S-Adenosyl Methionine</b>	<b>68.0 *L</b>	86.0 - 145.0	nmol/L	
<b>S-Adenosyl Homocysteine</b>	<b>39.0 *H</b>	10.0 - 22.0	nmol/L	
<b>SAM/SAH Ratio</b>	<b>1.7 *L</b>	> 4.0	RATIO	

(\*) Result outside normal reference range

(H) Result is above upper limit of reference rang (L) Result is below lower limit of reference range



### Methylation Comments

#### LOW S-ADENOSYL METHIONINE (SAME) LEVEL:

SAMe level may be low due to the following;

Inadequate Methionine (the chief substrate for methylation) either through;

1. Inadequate dietary intake (Poor Diet, Vegetarian/Vegan Diet, GIT dysfunction, Hypochlorhydria)

Improve dietary methionine intake (cheeses, dairy, poultry, meats, nuts) combined with magnesium,

Vit B6, folate, Betaine (TMG) and Vit B12 support.

Supplementation with Methionine (Must also include magnesium, Vit B6, folate, Betaine (TMG) and

Vit B12 support).

2. Inadequate Homocysteine metabolism

Possible causes: Use of Niacin (depletes methyl groups), Antacids (depletes Vit B12)

Assess Active B12 and Red Cell Folate levels

3. Inadequate Magnesium (chief cofactor for SAMe synthesis)

4. Inhibition of enzymic activity or

5. genetic/chemical influences.

Consider SAMe supplementation - 200-400mg daily, taken on an empty stomach (capsules should be foil packed to retain potency). Also Methionine, Magnesium, B3 and increase protein intake.

#### PRECAUTION:

Prior to considering SAMe or Methionine supplementation, ensure concurrently SAH levels are not elevated.

If SAH is elevated, consider firstly improving SAH clearance/metabolism (via

Homocysteine) towards Methionine (Methionine Synthesis pathway) or Cysteine/Glutathione (Transulphuration pathway).

Consider TMG (trimethylglycine) or Betaine to lower SAH.

Thereafter consider the use of SAMe or Methionine supplementation.

#### ELEVATED S-ADENOSYL HOMOCYSTEINE (SAH) LEVEL:

Elevated SAH levels suggest inadequate homocysteine metabolism to methionine. Check Homocysteine levels.

As SAH is a strong inhibitor of the methylation process, its levels need to be regulated.

May be due to NAD cofactor deficiency (B3) or commonly SNPs in AHCY.

Consider TMG (trimethylglycine) or Betaine to lower SAH.

#### LOW METHYLATION INDEX:

Balancing the SAMe/SAH ratio is important to facilitate optimal enzymic activities in the methylation process.

A reduction in this ratio, below the reference range, is reflective of a decrease in methylation activity.



# SAMPLE REPORT

09-May-1990 Female

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**Research Use Only:**

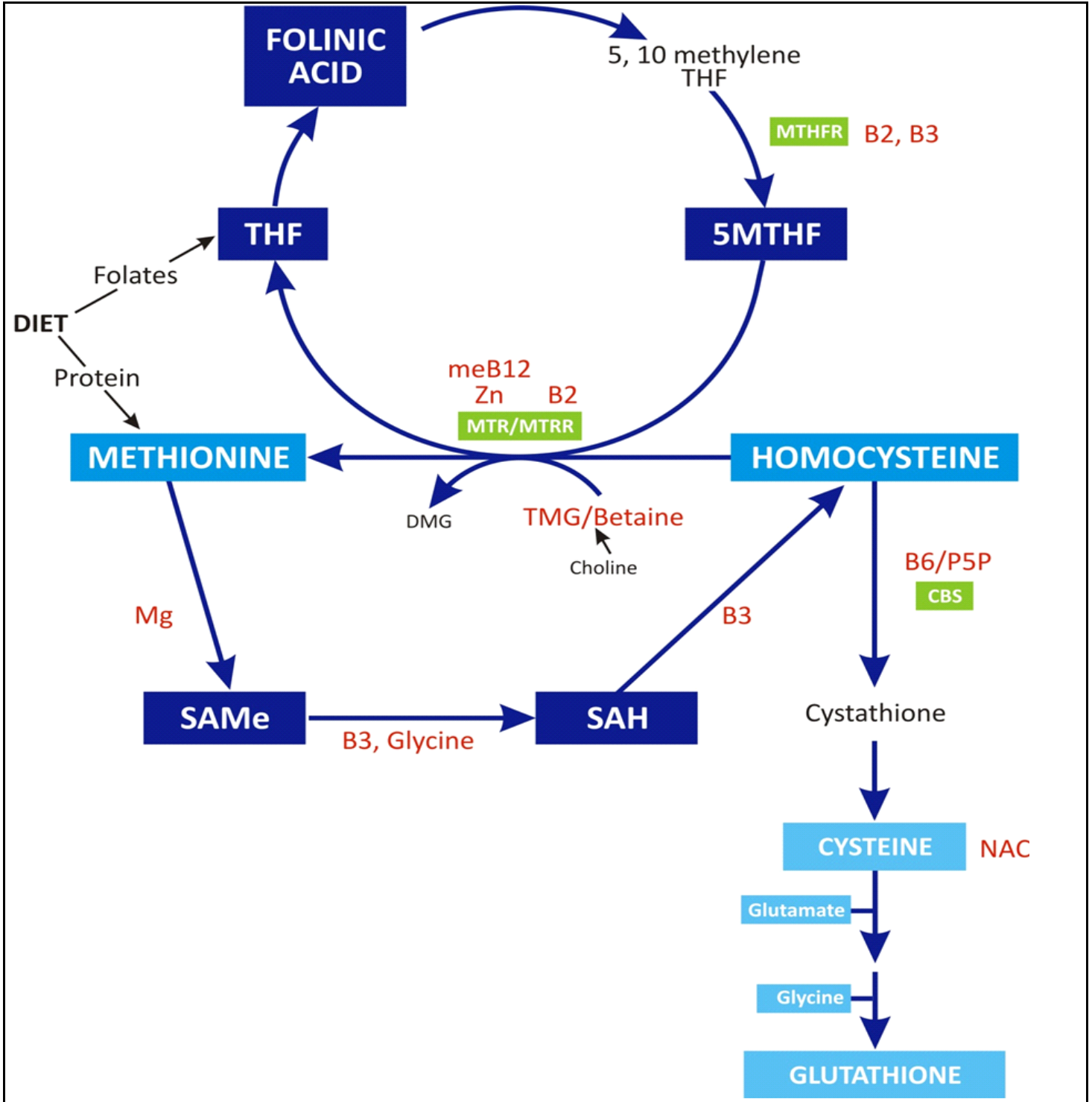
These analyses have been performed using test kits that are for Research Use Only, as per the assay manufacturer's guidelines. The analytical performance characteristics of these tests have been determined by this laboratory. The test results should not be used for diagnosis without confirmation by other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

**Methionine** 13.8 \*L 15.0 - 32.0 umol/L 

Tests ordered: HOMO,FOL,MethAA,IMPEI,CFee,ActB12,SAMe,SAHe,SAM/SAH,RUO  
(\* ) Result outside normal reference range (H) Result is above upper limit of reference rang (L) Result is below lower limit of reference range



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