Plasma Methylation

- *Looks at BOTH methylation and transulphation (both affecting homocysteine)*
- *Genetic SNPs, Toxins, Organisms, Nutrient Deficiencies / Imbalances, etc. can all alter these pathways*

DOCTOR'S DATA INC

LAB #: B000000-0000-0
PATIENT: Sample Patient
ID: PATIENT-S-00000
SEX: Female
AGE: 49

Note: Presented as optimum range (narrowed) - all way to left does NOT mean 'none' - (see Number).

Elevated SAH is most sensitive indicator of methylation impairment

Methylation Profile; plasma

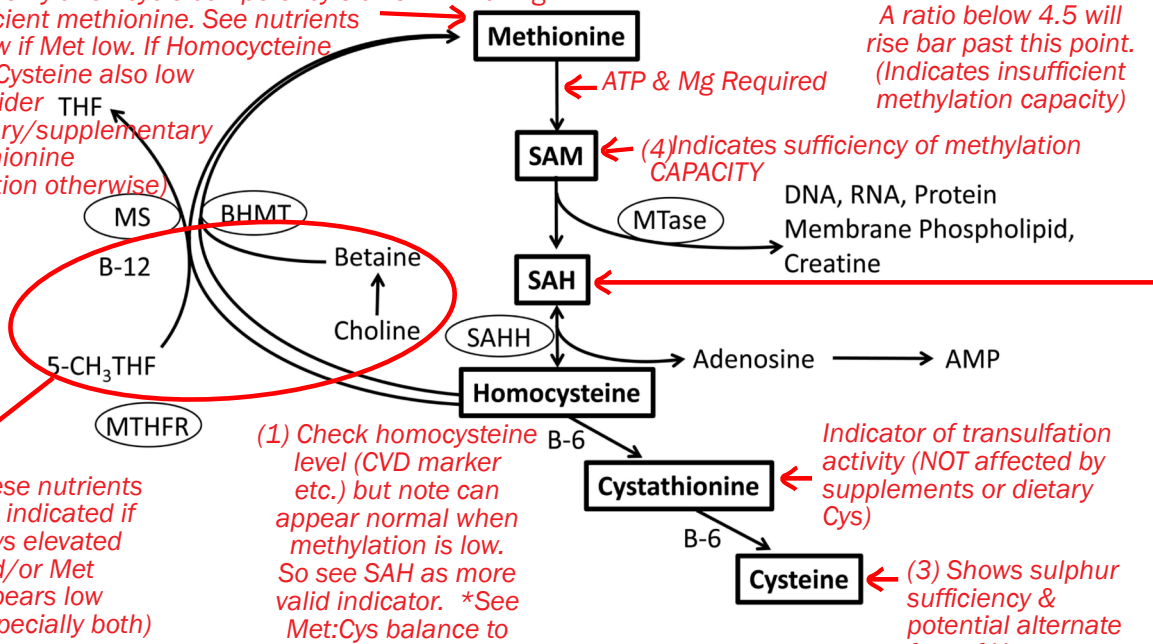
PRIMARY & INTERMEDIATE METABOLITES				PERCENTILE 2.5th 16th 50th 84th 97.5th
		RESULT/UNIT	REFERENCE INTERVAL	
(2)	Methionine	1.4 µmol/dL	1.6 - 3.6	
(3)	Cysteine	28 µmol/dL	20 - 38	
(4)	S-adenosylmethionine (SAM)	76 nmol/L	86 - 145	
(5)	S-adenosylhomocysteine (SAH)	18.6 nmol/L	10 - 22	
				68th 95th
(1)	Homocysteine	4.7 µmol/L	< 11	
(3)	Cystathionine	0.01 µmol/L	< 0.05	

Will sometimes reveal methylation insufficiencies where SAM does not

METHYLATION INDEX			PERCENTILE 68th 95th
*(Methylation capacity vs. need vs ability to balance both)	RESULT	REFERENCE INTERVAL	
SAM : SAH	4.1	> 4	

A ratio below 4.5 will rise bar past this point. (Indicates insufficient methylation capacity)

(2) Methylation cycle competency starts with having sufficient methionine. See nutrients below if Met low. If Homocyteine and Cysteine also low consider dietary/supplementary methionine (caution otherwise)



Indicates current methylation ACTIVITY - will accumulate if can't clear Hcys (see SAM:SAH) will obstruct almost all Methyl Reactors (inc. this cycle itself, MTHR, MTR & SAM. Production).

NOT subject to false negatives like Hcys is (use as more accurate / sensitive marker of CV/ cognitive risk than Hcys!)

** These nutrients are indicated if Hcys elevated and/or Met appears low (especially both)*

*(1) Check homocysteine level (CVD marker etc.) but note can appear normal when methylation is low. So see SAH as more valid indicator. *See Met:Cys balance to evaluate balance of a methylation with sulphation.*

Indicator of transulfation activity (NOT affected by supplements or dietary Cys)

(3) Shows sulphur sufficiency & potential alternate fate of Hcys

- Indicates B6 sufficiency & genetic behaviour (CBS) but can be increased by diet/ supplements