Thanks for posting your MAP results. I will offer some comments on it. However, please note that when only a MAP is available, there are some uncertainties in the analysis that cannot be resolved from this test alone. Testing costs money, of course, and that limits what can be done in many cases. So we have to work with what we have.

I don't know how long ago this test was run, so I will interpret the results as of the time the urine sample was collected, whenever that was. If it was long ago, things may have changed since then.

The first section of your results indicate that you did have intestinal bacterial dysbiosis, some malabsorption, and yeast infection. To get a more detailed understanding of what is going on in your digestive system, you would need to run a comprehensive stool test.

In the energy section of the report, your glycolysis (carbohydrate metabolism) appeared to be functioning normally, but you were not burning carbohydrates at as high a rate as normal, as indicated by the elevated BHBA. This appears to correspond with your report that you were on a low-carb diet at the time. The elevated BHBA indicates that your energy metabolism was in ketosis, in response to the low availability of carbohydrates. Coupled with this were the somewhat elevated levels of adipic and suberic acids. Ketosis is caused by elevated mobilization of fatty acids and their conversion to acetyl-CoA faster than the Krebs cycle can accept it. The elevated adipic and suberic acids indicate that some of the fatty acids were being pushed into omega oxidation. This could have been due to low carnitine or low B2, or both, but your B2 does not appear to have been extremely low. Low carnitine could be caused by low lysine (an amino acids panel would be needed to determine this) or a methylation deficit, or both.

Looking at the Krebs cycle (Energy Metabolism section), citric acid was a little low-normal, but not too bad. The slight drop from there to cis-aconitic acid suggests that glutathione was somewhat depleted, and this corresponds also to the low-normal pyroglutamic acid in the Toxin section, as well as the high-normal urine lipid peroxides on the next page. Isocitric acid and AKG look good. Succinic is low-normal, suggesting that amino acids were not being burned at as high a rate as normal. This could have been due to low levels of amino acids (we can't know that without an amino acids panel), or to low P5P activity, which depends on adequate levels of B6 and B2. There are indicators (later) that both these were somewhat low. Malic acid was high. This could have been due to low B3 or low coenzyme Q10, or both. Low coenzyme Q10 would be consistent with the elevated HMG and a methylation deficit.

Under Neurotransmitter Metabolites, the low-normal VMA and MPG suggest an abnormality in norepinephrine or epinephrine, or both. It's not possible to get more specific without more data, but it might have been due to low vitamin C or low copper. Low vitamin C would be consistent with low glutathione. The high-normal kynurenic and quinolinic acids suggest deficient P5P activity, which could be due to low B6 or B2 or both. This would be consistent with low B3 production from tryptophan via the kynurenine pathway. The elevated xanthurenic acid in the next section would be consistent with low B6 or B2 or both.

In the Vitamin Markers section, the values are elevated pretty much across the board, and this suggests general deficiencies in the B-complex vitamins. The high-normal FIGLU and MMA suggest a partial methylation cycle block and depletion of folates. A partial methylation cycle block would be consistent with the indications of low carnitine, low coenzyme Q10, and low glutathione. Note that FIGLU and MMA can be somewhat masked by low amino acids and/or P5P deficiency.

Under Toxin & Detox Markers, the first two indicate exposure to styrene and MTBE and dyfunction of the detox system, which would be consistent with a partial methylation cycle block and low glutathione. The low-normal orotic acid suggests that the urea cycle was not being pushed very hard, and that in turn would suggest that amino acids were not being burned at a high rate, which would also be consistent with the low-normal succinic acid, discussed earlier. Pyroglutamic acid was also discussed earlier.

Under Tyrosine Metabolites, the elevated values are consistent with intestinal bacterial dysbiosis and malabsorption, and since tyrosine is used to make dopamine, norepinephrine and epinephrine, this may be associated with the low-normal VMA and MPG discussed above, though it is not possible to be sure without more data.

I hope this is helpful.

Best regards,

Rich
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