

Table S1 Amino acids metabolites in serum.

Amino acids	Quartile	Quartile Range	Number
Tryptophan	1	1015821.54-1555040.97	28
	2	1555370.88-1701256.07	28
	3	1704298.84-1937437.56	28
	4	1945755.37-2492319.05	28
Phenylalanine	1	1044964.46-1516708.76	28
	2	1519993.60-1649420.82	28
	3	1659818.85-1908125.28	28
	4	1929946.22-3489918.62	28
Leucine	1	379957.04-556314.46	28
	2	558744.08-688759.83	28
	3	689470.83-806033.16	28
	4	821492.90-1356991.53	28
Phenylalanylphenylalanine	1	608200.15-1291853.09	27
	2	1303597.59-1632678.66	29
	3	1638204.36-2234283.97	28
	4	2235250.29-5011775.70	28

Table S2 Variance inflation factor of amino acids in different models[‡].

Amino acids	Model 1	Model 2	Model 3	Model 4
Tryptophan	1.04	1.04	1.04	1.04
Phenylalanine	4.56		1.50	1.04
Leucine	4.21	1.39		
Phenylalanylphenylalanine	1.49	1.38	1.48	

[‡]Model 1: Tryptophan, Phenylalanine, Leucine and Phenylalanyl Phenylalanine;

Model 2: Tryptophan, Leucine and Phenylalanyl Phenylalanine;

Model 3: Tryptophan, Phenylalanine and Phenylalanylphenylalanine;

Model 4: Tryptophan and Phenylalanine.