



Age Diagnostic Labs

1341 West Fullerton Ave #123
Chicago, IL 60614
1-773-528-8500

TEST PATIENT






























Date of Birth : 04/02/1956
Sex : M
Lab id : **2006085**
Collected : 12/08/2005

INTEGRATIVE MEDICINE

12/08/2005

BLOOD - LI HEPAR

AMINO ACIDS, Plasma

	<u>Result</u>	<u>Range</u>		
Arginine	83.0	80.0 - 116	umol/L	
Histidine	106	40.0 - 200	umol/L	
Isoleucine	58.0	52.0 - 106	umol/L	
Leucine	96.0	93.0 - 165	umol/L	
Lysine	135	130 - 220	umol/L	
Methionine	26.0 *I	27.0 - 39.0	umol/L	
Phenylalanine	53.0	50.0 - 77.0	umol/L	
Threonine	163	104 - 206	umol/L	
Tryptophane	66.0	50.0 - 73.0	umol/L	
Valine	206	138 - 286	umol/L	
GABA	3.8	2.0 - 8.0	umol/L	
Glycine	166 *I	187 - 293	umol/L	
Serine	103	82.0 - 138	umol/L	
Taurine	170 *h	37.0 - 157	umol/L	
Tyrosine	75.0 *h	50.0 - 72.0	umol/L	
Asparagine	44.0	31.0 - 67.0	umol/L	
Aspartate	28.0	11.0 - 40.0	umol/L	
Citrulline	30.0	19.0 - 38.0	umol/L	
Glutamate	52.0	23.0 - 73.0	umol/L	
Glutamine	1025	700 - 1200	umol/L	
Ornithine	71.0	55.0 - 88.0	umol/L	
Cysteine	13.9 *h	4.0 - 12.0	umol/L	
Alanine	506 *h	180 - 480	umol/L	
Hydroxylysine	4.2	2.0 - 5.0	umol/L	
Hydroxyproline	10.5	10.0 - 18.0	umol/L	
1 Methyl Histidine	2.6	1.0 - 9.0	umol/L	
3 Methyl Histidine	5.8	5.0 - 9.0	umol/L	
Proline	164	133 - 241	umol/L	
Total Branched Chain AAs	489	424 - 557	umol/L	

(*) Outside reference range.

(h) Above reference range.

(l) Below reference range.



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Integrative Medicine Comments

Low or low normal essential amino acids (dietary peptides) such as leucine, isoleucine and valine are suggestive of incomplete digestive proteolysis or leaky gut.

Rule out pancreatic dysfunction, zinc deficiency, intestinal permeability and supplement with appropriate amino acids.

Low serum taurine or glycine (but high levels of these in urine) are suggestive of fat maldigestion as these are needed for bile production.

Rule out deficiency of fat soluble nutrients.

Elevated or low methionine, cysteine or taurine suggestive of impaired methylation, sulphation and amino acid conjugation. Suspect impaired hepatic (liver) detoxification.

Consider supplementation with amino acids, Vit B6, B12, folic acid or betane. Consider Liver Detox Profile.

Suspect neurological/behavioural problems if elevated OR low tryptophan, taurine, phenylalanine, tyrosine, as these are all neurotransmitter precursors.

Consider vitamin B6 and Zinc.

Suspect adrenal hyperactivity when elevated alanine (increased conversion from pyruvate); low arginine, tryptophan, tyrosine (upregulation of arginase and oxygenase enzymes).

Consider Adrenal stress profile to assess cortisol and DHEA levels. If patient also has severe fatigue, check Aldosterone levels as well.



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Methionine Low - possible poor-quality protein diet. Adverse effects on sulfur metabolism. Improve dietary methionine intake or supplement.

Glycine Low - possible generalized tissue loss, glycine being part of the nitrogen pool and important in gluconeogenesis. Supplement glycine.
Treatment: Glycine 1000mg TID.

Taurine High - may be due to excessive inflammation in the body or to supplementation of other amino acids.
Treatment: Vit E 800IU; Vit C 1g TID; b-carotene 25,000 IU; CoQ10 30mg; Lipoate.

Tyrosine High - inadequate utilization of tyrosine. Supplement the cofactors needed here including iron, copper, vitamin B6, and ascorbate.
Treatment: Cu 3mg, Iron 30mg, Vit C 1g TID, B6 100mg BID.

Cysteine High - excessive dietary intake or impaired cysteine metabolism. Converted to cysteine (reduced cysteine) via a B2 and copper-dependent step. Cysteine is a major component of tissue antioxidant mechanisms.
Treatment: B2 50mg.

Alanine High - possible inadequate cellular energy substrates. Check for hypoglycemia or for exercise prior to blood draw. Chronic use of alanine for energy can lead to muscle wasting. Supplement the branched-chain amino acids.
Treatment: B6 100mg.

Bill Anton

Tests ordered: AA,IMCOM

FINAL REPORT on 13 Jan 2006

Page: 3 Final Report

2006085

The Pathologists and Staff thank you for referring this patient

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