

## Amino Acid Profile

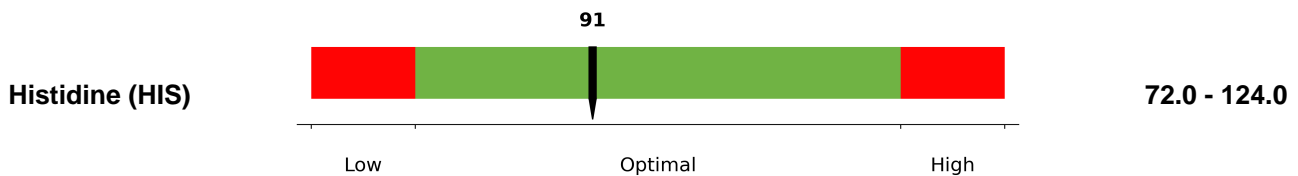
Name: : Muhammad Subhan Aksa  
Lab Number : R2406010906a  
Age : 37 years

Ref. Number  
KBY-2406010031

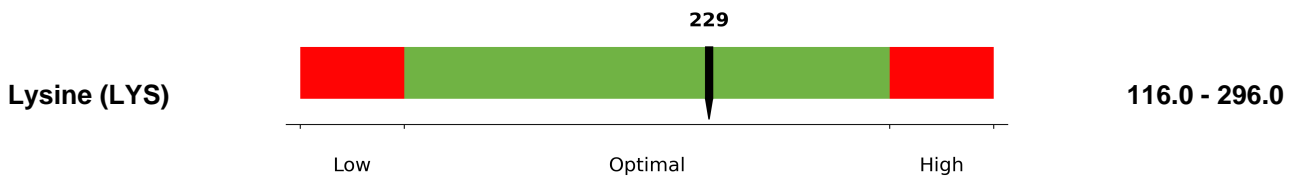
Essential	Result (μmol/L)	Reference Range
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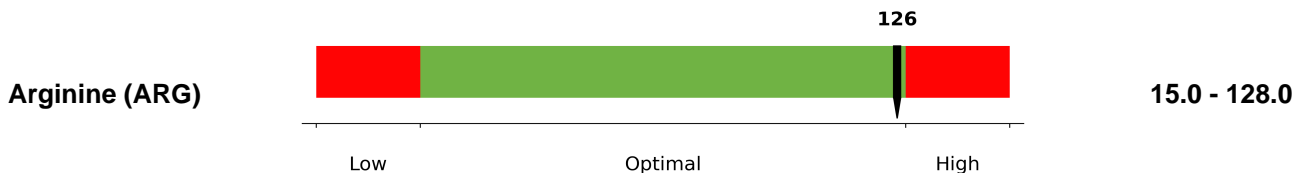
Your Threonine level looks optimal, keep going with balance protein intake. Multi vitamin and mineral supplementation should be beneficial for your health.



Your Histidine level looks optimal, keep going with balance protein intake. Always monitor another amino acids level to maintain protein adequacy.



Your Lysine level looks optimal, keep going with balance protein intake. Always check your triglyceride level to make sure your health. Vitamin and mineral supplementation should be beneficial to maintain Lysine metabolism in your body.

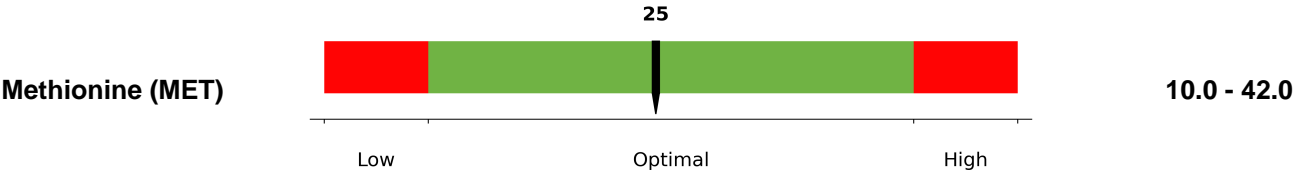


Your Arginine level looks optimal, keep going with balance protein intake. Arginine adequacy have a good concequency for your cardiovascular health. Mineral supplementation should be beneficial to maintain your Arginine level and urea metabolism.

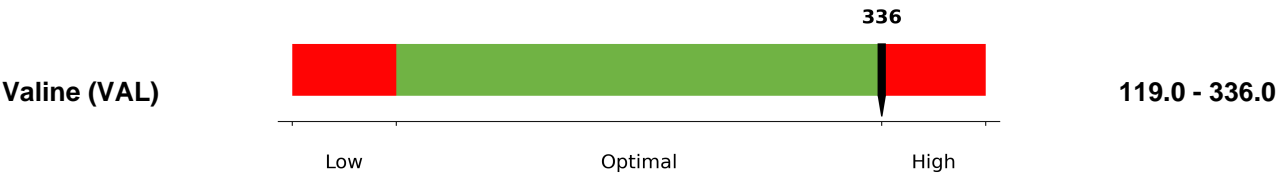
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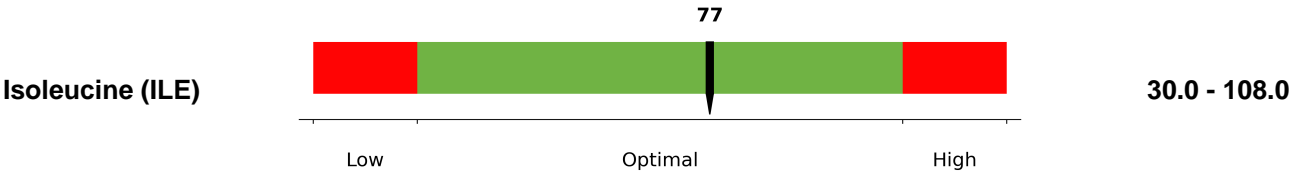
Essential	Result (μmol/L)	Reference Range
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Your Methionine level seems optimal, keep going with balance protein intake. Multi Vitamin and mineral supplementation should be beneficial to maintain your health.



Your Valine level seems optimal, keep going with balance protein intake. Multi vitamin and mineral supplementation should be beneficial.



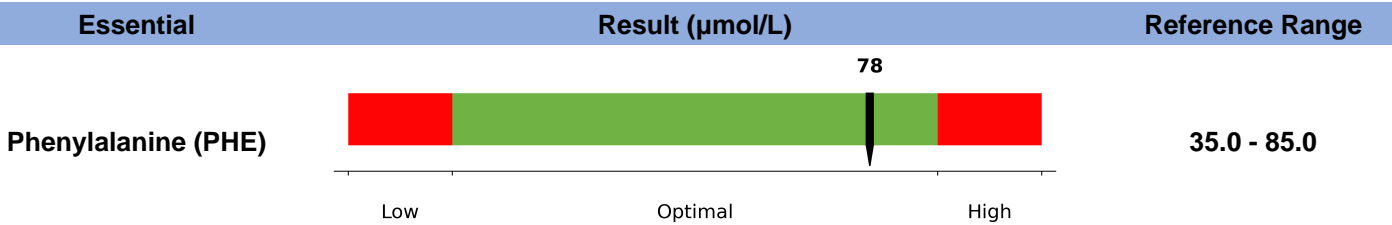
Your Isoleucine level seems optimal, keep going with balance protein intake. Multi vitamin and mineral supplementation should be beneficial.



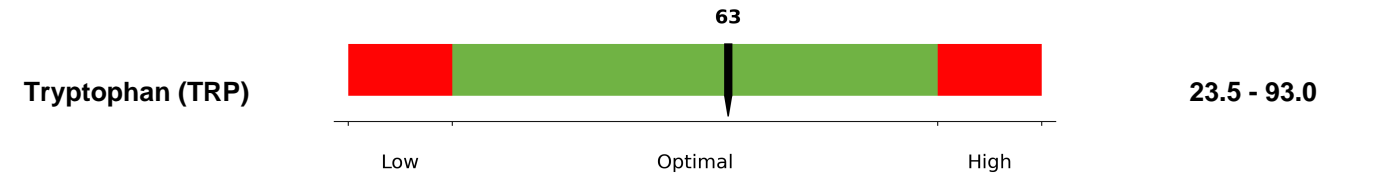
Your Leucine level seems optimal, keep going with balance protein intake. Vitamin and mineral supplementation should be beneficial.

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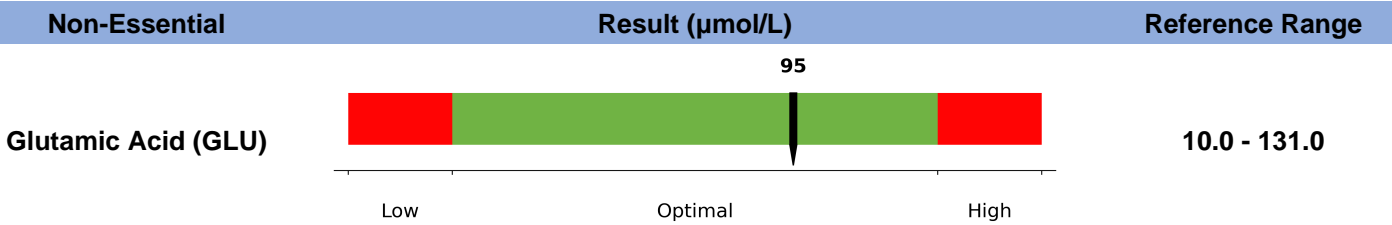
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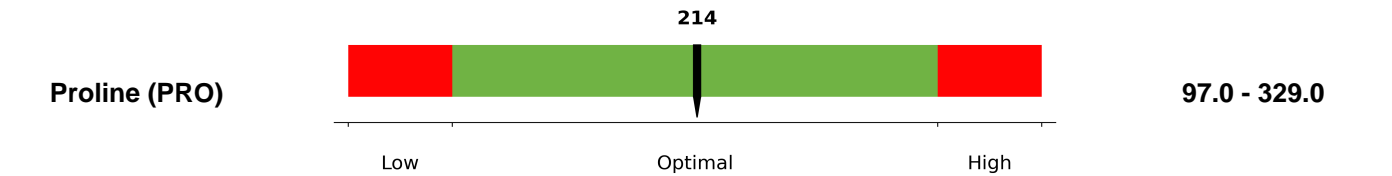
Your Phenylalanine seems optimal, keep going with balance protein intake. Multi vitamin and mineral supplementation should be beneficial.



Your Tryptophan level seems optimal, keep going with balance protein intake. Multi vitamin and mineral supplementation should be beneficial.



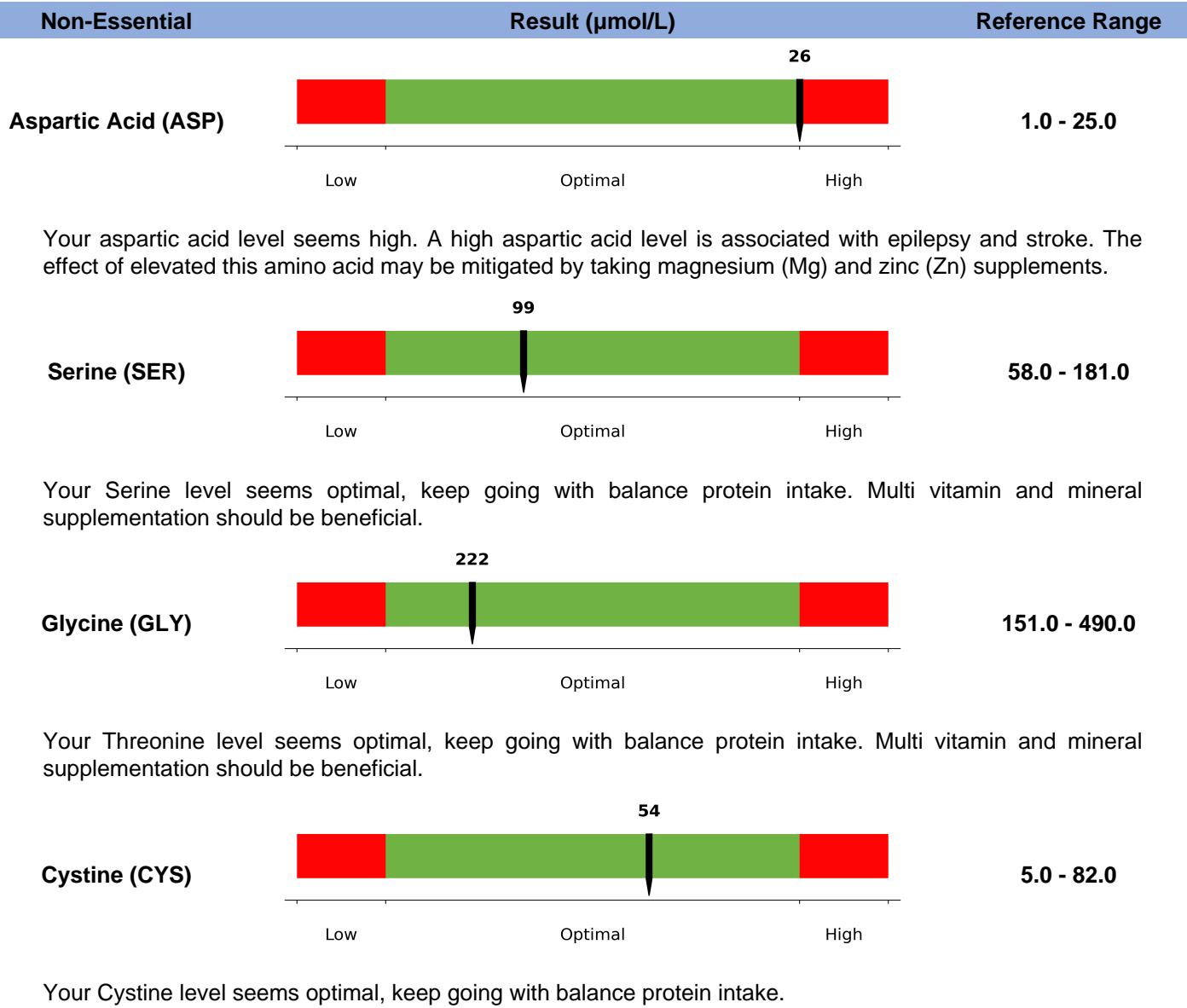
Your Glutamic Acid level seems optimal, keep going with balance protein intake. Multi vitamin supplementation should be beneficial.



Your Proline level seems optimal, keep going with balance protein intake. Multi vitamin supplementation should be beneficial.

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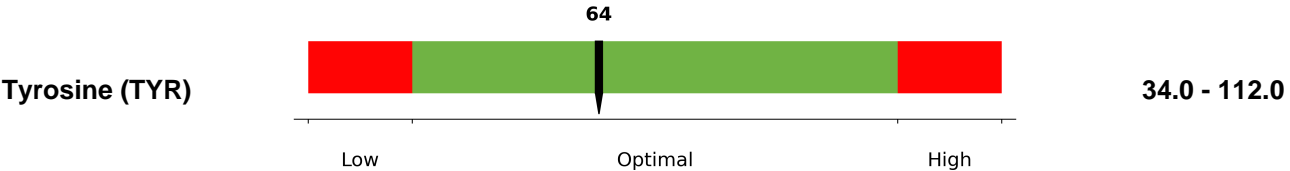
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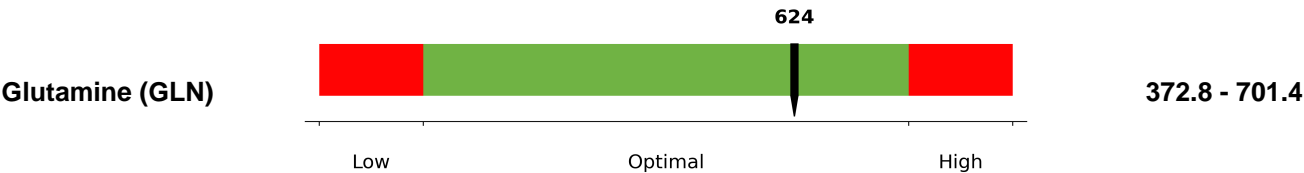
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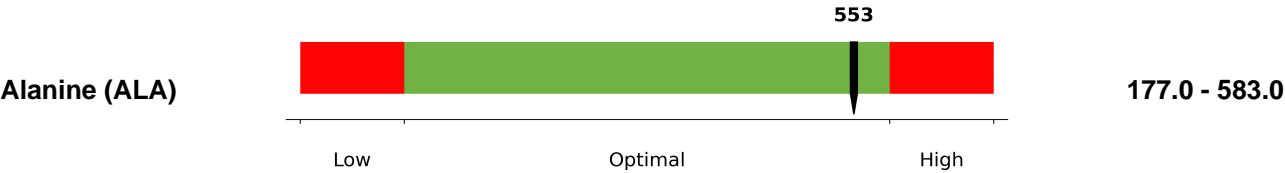
Non-Essential	Result (μmol/L)	Reference Range
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Your Tyrosine level looks optimal, keep going with balance protein intake. Multi vitamins and minerals supplementation should be beneficial.



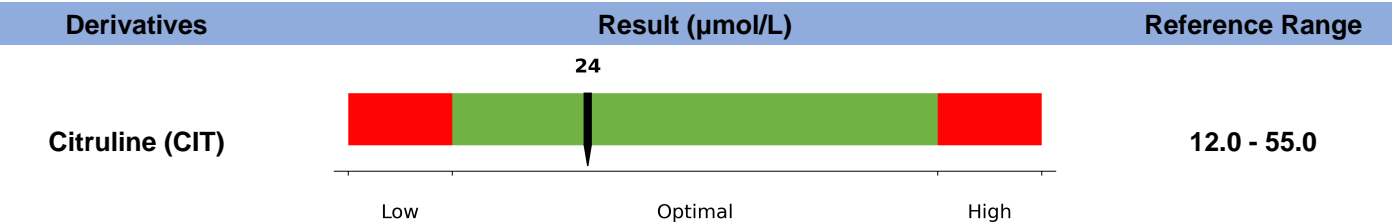
Your Glutamine level seems optimal, keep going with balance protein intake. Vitamin beta-ketoglutarat supplementation should be beneficial.



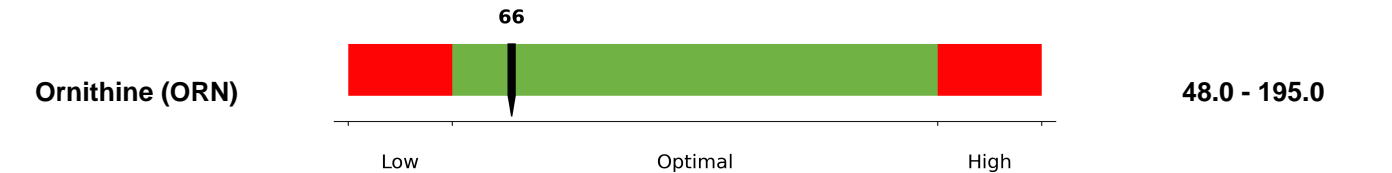
Your Glutamic Acid level seems optimal, keep going with balance protein intake. Multi vitamin supplementation should be beneficial.

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Your Citrulline level seems optimal, keep going with balance protein intake. Multi vitamins and minerals supplementation should be beneficial.



Your Ornithine level seems optimal, keep going with balance protein intake.

Authorized By

Mass Spectrometry & Separation Sciences Laboratory Head

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## Interpretation at-A-Glance/Implied Conditions

### ***Nutrition Intake***

When three or more essential amino acids level in your plasma are tend to be low, you should check your protein intake to help ensuring amino acid adequacy. Pay attention for lysine, it can be lowered by excessive intake of arginine. For particular amino acid, such as histidine and arginine, low level also found in malabsorption condition, take care your gut healthy for better nutrition absorption. When you found that your particular amino acids are tend to high, please refer to another condition. The excess of protein intake mostly give direct impact to increase amino acid level in your blood.

**Here are some of the top food sources of essential amino acids:**

**Meat:** beef, lamb, and many other red meats

**Poultry:** chicken, turkey, duck, goose

**Seafood:** salmon, trout, tuna, mackerel, shrimp, lobster

**Eggs:** whole eggs, egg whites

**Dairy:** milk, cheese, yogurt

**Nuts:** almonds, pistachios, macadamia nuts, cashews, walnuts

**Seeds:** pumpkin seeds, squash seeds, hemp seeds, sunflower seeds

**Nut butters:** peanut butter, almond butter, cashew butter

**Legumes:** lentils, chickpeas, black beans, kidney beans

**Whole grains:** quinoa, oats, rye, barley, wheat

**Soy products:** soybeans, tofu, tempeh, edamame, protein supplements

In general, you don't need to select foods based on their particular amino acid content. Instead, eating a variety of protein-rich foods throughout the day will provide you with all the essential amino acids and nutrients you need

### ***Detoxification Capacity***

The amino acids glutamic acid, cystine, and glycine combine to form glutathione. It is generated by the liver and has a role in numerous bodily functions. Functions of the immune system, synthesis of chemicals and proteins required by the body, and tissue growth and repair are all aided by glutathione. Always monitor your levels of these three amino acids. If they tend to be low, you can take a supplement of glutathione and increase your protein intake.

### ***Vitamin & Mineral Supplementation Presumptive Needs***

Some vitamins and minerals are required in amino acid metabolism, when you found that following amino acids level are tend to high in your blood, consider to take your vitamin and mineral supplementation. When you found that your threonine, lysine, phenylalanine, methionine, cystine, and tyrosine are tend to high, you can take the benefit of zinc, iron, copper, and magnesium in combination with vitamin B1, B6, and vitamin C supplementation. But when you found that your arginine, valine, leucine, tryptophan, glycine, proline, glutamic acid, and glutamine are tend to high, you should consider to take multivitamin B supplementation. Multivitamin and mineral supplements are readily available. Excessive nutriron intake also causing the elevation of your amino acid levels, balanced nutrition intake should be very beneficial for your health. When you found that your severals amino acids are tend to low, please refer to the nutrition intake section.

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### ***Neurological Effect***

Insufficiencies in catecholamines and thyroid function brought on by low phenylalanine levels can cause symptoms of sadness, exhaustion, autonomic dysfunction, and cognitive decline. You should take phenylalanine supplements and try to live a less stressed lifestyle. Mental health issues including depression, insomnia, and schizophrenia are commonly linked to low tryptophan levels. Taking supplements containing 5-hydroxytryptophan (5-HTP) may be advantageous. Pay more attention to phenylalanine and tryptophan when their levels are tend to low.

### ***Obesity and Diabetes Mellitus***

Excessive intake of nutrition should not be beneficial for our health, one of the main disorder is obesity and lead to higher risk for Diabetes Mellitus. Before Diabetes Mellitus occur, several amino acids disturbance are detected as a risk pattern. Pay more attention for the elevation one of these following amino acids; leucine, isoleucine, valine, phenylalanine, tyrosine and tryptophan and also lower level of glycine in your blood, it is better to also check your blood glucose level. If you can detect your risk earlier, the better outcome will you get.