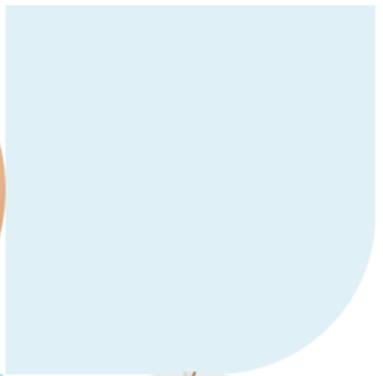
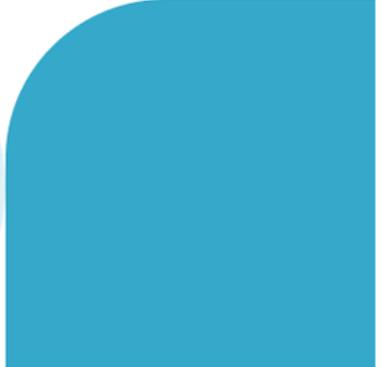
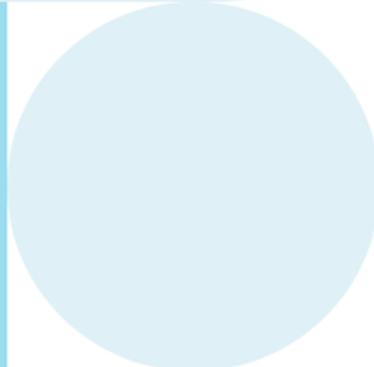
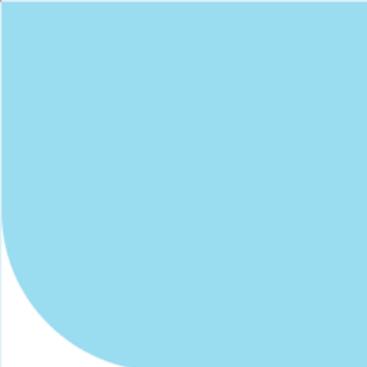
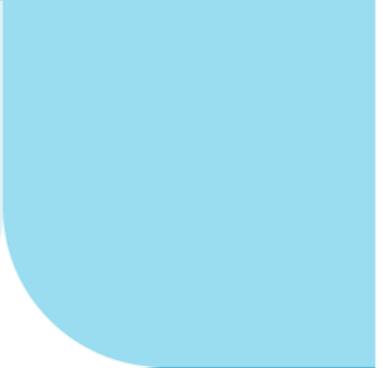
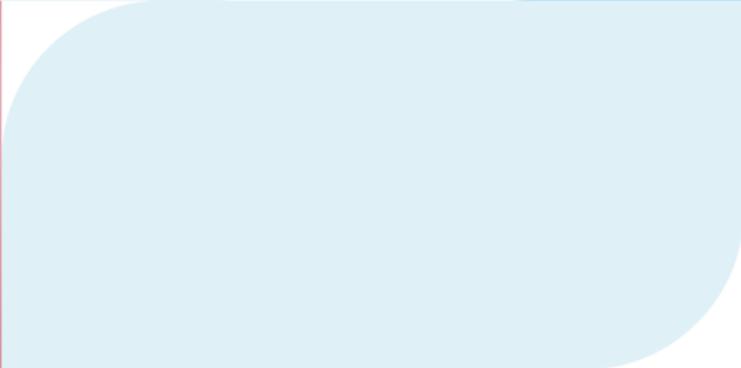




Test report



At-home test



# Amino acid Test

Lab test

Blood

Name: **Dummy Persson**    Date of test: **02/11/2022**    Analysis-ID: **G6GGP5-AA**

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○ Homoarginine	●	○ Valine	○
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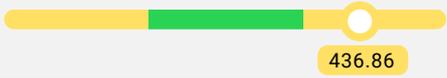
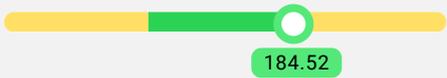
### Part 2 - Detailed explanation of your results

In this section, we go through each result in more detail for each amino acid tested.

# Your test results

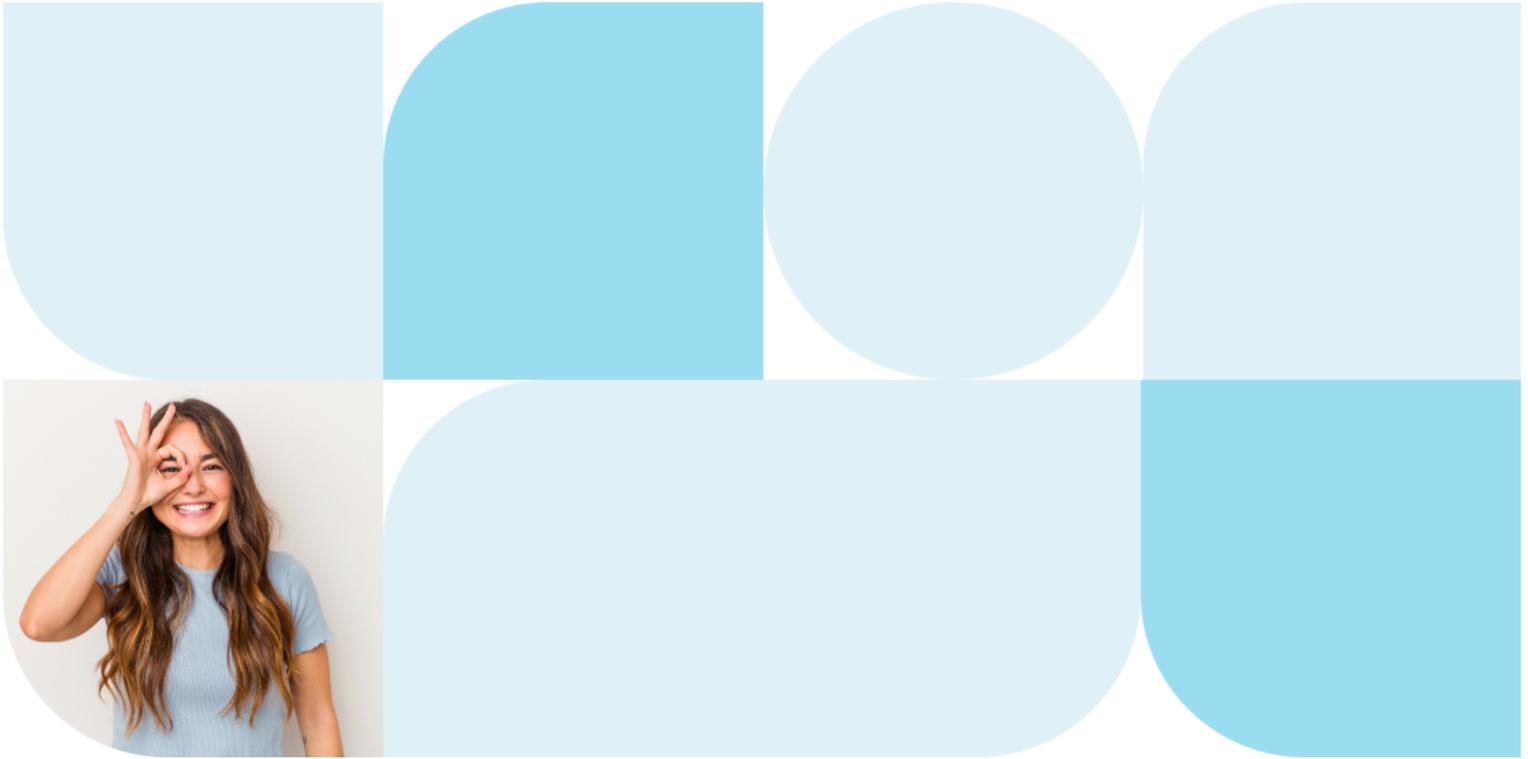
Our lab has tested your blood sample for amino acids. You will find your results below.

## Amino Acids - Overview (1/2)

Name	Your value	Reference value	Scale
Alanine	436.86 µmol/L	<b>Fasting:</b> 115 – 314 µmol/L <b>Non-fasting:</b> 174 – 436 µmol/L	
Arginine	25.29 µmol/L	<b>Fasting:</b> 3.7 – 39 µmol/L <b>Non-fasting:</b> 1.3– 45 µmol/L	
Asparagine	51.45 µmol/L	<b>Fasting:</b> 24 – 48 µmol/L <b>Non-fasting:</b> 35 – 68 µmol/L	
Aspartic acid	85.66 µmol/L	<b>Fasting:</b> 25 – 122 µmol/L <b>Non-fasting:</b> 29 – 162 µmol/L	
Beta-alanine	8.09 µmol/L	<b>Fasting:</b> 3.3 – 11 µmol/L <b>Non-fasting:</b> 3.8 – 17 µmol/L	
Citrulline	26.91 µmol/L	<b>Fasting:</b> 10 – 28 µmol/L <b>Non-fasting:</b> 13 – 36 µmol/L	
Glutamic acid	184.52 µmol/L	<b>Fasting:</b> 92 – 186 µmol/L <b>Non-fasting:</b> 122 – 296 µmol/L	
Glutamine	> 450,07 µmol/L	<b>Fasting:</b> 278 – 650 µmol/L <b>Non-fasting:</b> 8 – 500 µmol/L	
Glycine	365.36 µmol/L	<b>Fasting:</b> 120 – 356 µmol/L <b>Non-fasting:</b> 159 – 410 µmol/L	
Histidine	117.27 µmol/L	<b>Fasting:</b> 26 – 68 µmol/L <b>Non-fasting:</b> 12 – 70 µmol/L	
Homoarginine	1.04 µmol/L	<b>Fasting:</b> 0.4 - 1.9 µmol/L <b>Non-fasting:</b> 0.6 – 2.8 µmol/L	
Iso-leucine	70.50 µmol/L	<b>Fasting:</b> 18 - 66 µmol/L <b>Non-fasting:</b> 26 – 105 µmol/L	
Leucine	123.05 µmol/L	<b>Fasting:</b> 43 - 113 µmol/L <b>Non-fasting:</b> 51 – 179 µmol/L	

## Amino Acids - Overview (2/2)

Name	Your value	Reference value	Scale
Lysine	 118.56 µmol/L	<b>Fasting:</b>  50 - 120 µmol/L <b>Non-fasting:</b>  62 - 159 µmol/L	
Methionine	 21.92 µmol/L	<b>Fasting:</b>  9 - 23 µmol/L <b>Non-fasting:</b>  11 - 33 µmol/L	
Ornithine	 192.15 µmol/L	<b>Fasting:</b>  39 - 139 µmol/L <b>Non-fasting:</b>  52 - 151 µmol/L	
Phenylalanine	 91.36 µmol/L	<b>Fasting:</b>  23 - 56 µmol/L <b>Non-fasting:</b>  31 - 75 µmol/L	
Proline	 197.47 µmol/L	<b>Fasting:</b>  53 - 177 µmol/L <b>Non-fasting:</b>  84 - 295 µmol/L	
Sarcosine	 < 3,05 µmol/L	<b>Fasting:</b>  0.7 - 3.3 µmol/L <b>Non-fasting:</b>  0.5 - 3.4 µmol/L	
Serine	 431.49 µmol/L	<b>Fasting:</b>  105 - 374 µmol/L <b>Non-fasting:</b>  122 - 289 µmol/L	
Threonine	 175.31 µmol/L	<b>Fasting:</b>  41 - 115 µmol/L <b>Non-fasting:</b>  50 - 141 µmol/L	
Tryptophan	 35.92 µmol/L	<b>Fasting:</b>  15 - 36 µmol/L <b>Non-fasting:</b>  18 - 48 µmol/L	
Tyrosine	 74.45 µmol/L	<b>Fasting:</b>  26 - 70 µmol/L <b>Non-fasting:</b>  24 - 96 µmol/L	
Valine	 247.51 µmol/L	<b>Fasting:</b>  79 - 194 µmol/L <b>Non-fasting:</b>  99 - 272 µmol/L	
Taurine	 165.95 µmol/L	<b>Fasting:</b>  91 - 203 µmol/L <b>Non-fasting:</b>  95 - 251 µmol/L	
GABA	 1.06 µmol/L	<b>Fasting:</b>  0.3 - 1.3 µmol/L <b>Non-fasting:</b>  0.1 - 1.5 µmol/L	



## Detailed explanation of your results

## Alanine

Name	Your value	Reference value	Scale
Alanine	● 436.86 µmol/L	<b>Fasting:</b> ● 115 – 314 µmol/L <b>Non-fasting:</b> ● 174 – 436 µmol/L	

Alanine is needed for the metabolism of triglycerides and glucose. Low levels often occur in hypoglycemia. Alanine is found in legumes, pork, cottage cheese, milk, cheese, chicken, and turkey.

## Arginine

Name	Your value	Reference value	Scale
Arginine	● 25.29 µmol/L	<b>Fasting:</b> ● 3.7 – 39 µmol/L <b>Non-fasting:</b> ● 1.3– 45 µmol/L	

Arginine is needed for the synthesis, the production of growth hormone, and the growth itself, but it can be synthesized by both animal and plant. Arginine is also important for the immune system. Arginine helps you relax before after muscle work and improves nitrogen balance and blood flow. Furthermore, it is needed for the cardiovascular system, the sense of smell, the production of growth and the secretion of growth hormone, prolactin, and stress hormones and the release of insulin and growth hormone. Arginine increases the activity of endothelial nitric oxide synthase, which helps blood vessels expand, relax, contract, and improve blood flow.

- Low levels can often occur in protein deficiency or impaired absorption of protein. Low levels can often be associated with kidney failure and arginine is converted to urea. This helps the blood vessels to relax, which improves blood circulation, cardiovascular pressure, and performance.
- High levels can occur if there is a defect in the urea cycle. At high levels, it is recommended to supplement with arginine.

Arginine is found in pork, white beans, turkey, eggs, and milk.

## Asparagine

Name	Your value	Reference value	Scale
Asparagine	● 51.45 µmol/L	<b>Fasting:</b> ● 24 – 48 µmol/L <b>Non-fasting:</b> ● 35 – 68 µmol/L	

Asparagine is needed for synthesizing the nervous system, the brain, and the bones, water of ammonia. Low levels can occur with fatigue and depression and people with brain cancer should avoid intake of asparagine.

Asparagine is the main asparagine found in soy, lentils, proteins, milk, and all eggs and chicken.

## Aspartic acid

Name	Your value	Reference value	Scale
Aspartic acid	● 85.66 µmol/L	<b>Fasting:</b> ● 25 – 122 µmol/L <b>Non-fasting:</b> ● 29 – 162 µmol/L	

Aspartic acid is needed for fat burning, cholesterol and the immune system and is a building block for protein synthesis and other processes.

Aspartic acid is found in high levels in meat, all eggs, fish products, peas, lentils, soy, kidney beans, milk, almonds and hazelnuts.

## Beta-alanine

Name	Your value	Reference value	Scale
Beta-alanine	● 8.09 µmol/L	<b>Fasting:</b> ● 3.3 – 11 µmol/L <b>Non-fasting:</b> ● 3.8 – 17 µmol/L	

Beta-alanine improves athletic performance by increasing the amount of creatine in the muscles.

Beta-alanine is found in high levels in meat, all eggs, fish products, peas, lentils, soy, kidney beans, milk, almonds and hazelnuts.

## Citrulline

Name	Your value	Reference value	Scale
Citrulline	● 26.91 µmol/L	<b>Fasting:</b> ● 10 – 28 µmol/L <b>Non-fasting:</b> ● 13 – 36 µmol/L	

Citrulline is used for energy production for athletes and is directly converted to arginine in the body. Arginine is used for protein synthesis and other processes, and also for the production of nitric oxide. Citrulline can be used to improve performance and reduce fatigue.

Citrulline is found in high levels in watermelon and other melons.

## Glutamic acid

Name	Your value	Reference value	Scale
Glutamic acid	● 184.52 µmol/L	<b>Fasting:</b> ● 92 – 186 µmol/L <b>Non-fasting:</b> ● 122 – 296 µmol/L	

Glutamic acid is used for energy production for the brain, from the brain, and for people with low brain concentrations of neurotransmitters.

- High levels can be associated with various neurological disorders such as epilepsy.

Glutamic acid is found in high levels in meat, all eggs, fish products, peas, lentils, soy, kidney beans, milk, almonds and hazelnuts.



## Homoarginine

Name	Your value	Reference value	Scale
Homoarginine	● 1.04 µmol/L	<b>Fasting:</b> ● 0.4 - 1.9 µmol/L <b>Non-fasting:</b> ● 0.6 - 2.8 µmol/L	

Homoarginine increases the nitric oxide supply in the body and can inhibit muscular growth. Hemoarginine is essential for cardiovascular health and it has been seen that homoarginine can be used to improve health.

Homoarginine is found in:

## Iso-leucine

Name	Your value	Reference value	Scale
Iso-leucine	● 70.50 µmol/L	<b>Fasting:</b> ● 18 - 66 µmol/L <b>Non-fasting:</b> ● 26 - 105 µmol/L	

Iso-leucine is important for the brain health and can be used as a support for the health of the blood sugar regulation. Iso-leucine is essential during fast fasting, muscle, sports, stress and to control diabetes.

- Low levels can lead to fatigue and a loss of muscle mass. Iso-leucine often has a good effect in people with mental health.
- Iso-leucine can be used to support muscle growth and protein synthesis. If the body has low levels of iso-leucine, it can lead to a loss of muscle mass and a decrease in protein synthesis.

Iso-leucine is found in food, all parts of the protein, and it can be used as a support for the health of the blood sugar regulation. Iso-leucine is essential for the health of the brain and can be used as a support for the health of the blood sugar regulation.

## Leucine

Name	Your value	Reference value	Scale
Leucine	● 123.05 µmol/L	<b>Fasting:</b> ● 43 - 113 µmol/L <b>Non-fasting:</b> ● 51 - 179 µmol/L	

Leucine is needed for muscle building and recovery. In the reference it has been seen that leucine is often low in people with mental health.

- Low levels can lead to loss of muscle mass.
- Iso-leucine can be used to support muscle growth and protein synthesis. If the body has low levels of iso-leucine, it can lead to a loss of muscle mass and a decrease in protein synthesis. Iso-leucine can be used to support muscle growth and protein synthesis. Iso-leucine can be used to support muscle growth and protein synthesis. Iso-leucine can be used to support muscle growth and protein synthesis.

Iso-leucine is found in food, all parts of the protein, and it can be used as a support for the health of the blood sugar regulation. Iso-leucine is essential for the health of the brain and can be used as a support for the health of the blood sugar regulation.

## Lysine

Name	Your value	Reference value	Scale
Lysine	● 118.56 µmol/L	<b>Fasting:</b> ● 50 - 120 µmol/L <b>Non-fasting:</b> ● 62 - 159 µmol/L	

Lysine is needed for growth and development in children, essential for sex hormones, it supports the formation of haemoglobin and other iron-containing proteins and supports the immune system in adults.

- Low levels may be due to low protein intake or high arginine intake. Low levels may indicate the presence of certain kidney diseases. In low levels in combination with decreased arginine levels, you may need an essential supplement.
- High levels may be due to excess ingestion of lysine. To make better use of lysine, you may need to increase your intake of arginine.

Lysine is found in legumes, such as soybeans, chickpeas, lentils, and various types of lentils.

## Methionine

Name	Your value	Reference value	Scale
Methionine	● 21.92 µmol/L	<b>Fasting:</b> ● 9 - 23 µmol/L <b>Non-fasting:</b> ● 11 - 33 µmol/L	

Methionine is an sulfur-containing amino acid, which is involved in many cellular processes, for example, the synthesis of proteins. Methionine is also an essential amino acid, which means that the body cannot produce it. You should not take extra methionine unless you have specifically been advised to do so, because of the risk of side effects.

- Low levels may be due to decreased protein intake, decreased intake through diet or the use of certain medications. Methionine supplements can be harmful if other nutrients are severely deficient.
- High levels may be due to high levels of methionine in foods or the use of certain medications.

Methionine is found in many foods, including beef, pork, chicken, turkey, lamb, salmon, tuna, and various types of fish.

## Ornithine

Name	Your value	Reference value	Scale
Ornithine	● 192.15 µmol/L	<b>Fasting:</b> ● 39 - 139 µmol/L <b>Non-fasting:</b> ● 52 - 151 µmol/L	

Ornithine is needed to stimulate the production of growth hormone, which is needed for the utilization and repair of organs. Ornithine is also needed for muscle production.

Low levels may be due to low protein intake. It also occurs in people with certain kidney diseases. High levels may be due to high levels of ornithine in foods or the use of certain medications. Ornithine is found in many foods, including fish, chicken, and meat.



## Serine

Name	Your value	Reference value	Scale
Serine	● 431.49 $\mu\text{mol/L}$	<b>Fasting:</b> ● 105 – 374 $\mu\text{mol/L}$ <b>Non-fasting:</b> ● 122 – 289 $\mu\text{mol/L}$	

Serine is converted in the body into cysteine and phosphoserine, which are needed for the function and stability of cell membranes.

High levels of serine suggest an elevated risk of cardiovascular disease.

Serine is found particularly in fish, poultry, turkey, veal, lamb, almonds, walnuts, and whole wheat.

## Threonine

Name	Your value	Reference value	Scale
Threonine	● 175.31 $\mu\text{mol/L}$	<b>Fasting:</b> ● 41 – 115 $\mu\text{mol/L}$ <b>Non-fasting:</b> ● 50 – 141 $\mu\text{mol/L}$	

Threonine is needed for the synthesis of the protein collagen from collagen production, and methionine. Some studies may indicate that for people who have MS, ALS, and other neurological disorders, the amino acid may be helpful.

Low levels of threonine are associated with depression, diabetes, and hypercholesterolemia. In low levels, supplementation with threonine may be helpful.

High levels may be associated with protein levels in disorders of metabolism. If you suspect this and you are taking threonine, it may be helpful to stop taking it.

## Tryptophan

Name	Your value	Reference value	Scale
Tryptophan	● 35.92 $\mu\text{mol/L}$	<b>Fasting:</b> ● 15 – 36 $\mu\text{mol/L}$ <b>Non-fasting:</b> ● 18 – 48 $\mu\text{mol/L}$	

Tryptophan is needed for the synthesis of serotonin. Tryptophan is used therapeutically in depression, anxiety, Parkinson's disease, Huntington's disease, migraines, and heart pain.

Low levels of threonine are associated with depression and insomnia. In this case, it can be helpful to supplement with a dose of tryptophan. While some studies have found the supplement effective, others have not. Talk to your doctor about the best way to use it.

High levels are associated with depression. In this case, it can be helpful to supplement with threonine.

Tryptophan is found in fish, poultry, turkey, veal, lamb, almonds, walnuts, and whole wheat. It is also found in some fruits and vegetables.

## Tyrosine

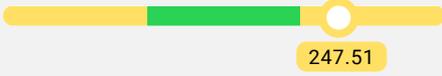
Name	Your value	Reference value	Scale
Tyrosine	● 74.45 µmol/L	<b>Fasting:</b> ● 26 – 70 µmol/L <b>Non-fasting:</b> ● 24 – 96 µmol/L	 74.45

Tyrosine is produced in the liver from tyrosine and is needed for the production of dopamine, norepinephrine and epinephrine (adrenaline). Tyrosine is also used for the production of thyroid hormones, which are necessary for the metabolism of the thyroid gland. Tyrosine is also used for the production of melatonin, the hormone that regulates the sleep-wake cycle.

A low level of tyrosine in the blood may be a sign of a liver problem, a kidney problem or a rare genetic condition called phenylketonuria (PKU).

Tyrosine is found in many foods, including meat, fish, eggs, dairy products, soybeans, lentils, chickpeas, and most other beans. It is also found in some supplements. If you are taking a supplement, you should check the label to see if it contains tyrosine.

## Valine

Name	Your value	Reference value	Scale
Valine	● 247.51 µmol/L	<b>Fasting:</b> ● 79 – 194 µmol/L <b>Non-fasting:</b> ● 99 – 272 µmol/L	 247.51

Valine is needed for the synthesis of hemoglobin, the protein in red blood cells that carries oxygen. It is also needed for the synthesis of neurotransmitters, such as GABA and serotonin.

A low level of valine in the blood may be a sign of a liver problem, a kidney problem or a rare genetic condition called valinemia. It is also found in some supplements. If you are taking a supplement, you should check the label to see if it contains valine.

Valine is found in many foods, including meat, fish, eggs, dairy products, soybeans, lentils, chickpeas, and most other beans. It is also found in some supplements. If you are taking a supplement, you should check the label to see if it contains valine.

## Taurine

Name	Your value	Reference value	Scale
Taurine	● 165.95 µmol/L	<b>Fasting:</b> ● 91 – 203 µmol/L <b>Non-fasting:</b> ● 95 – 251 µmol/L	

Taurine is needed for the production of bile, for long-term vision for maintaining bile acids, and synthesis of the neurotransmitter gamma-aminobutyric acid (GABA). Furthermore, taurine is needed for the contractility of the heart, maintaining the cell membrane, and for the eye (the amino acid taurine can affect the eye with apoptosis). Taurine also plays a role in protein synthesis, which can reduce the weight loss during and the build-up of muscle proteins.

A low level of taurine may be people with epilepsy. Low taurine levels increase the risk of the following factors observed: cholesterol abnormalities, cardiovascular health, and increased fatigue. Women have a greater ability to synthesize taurine than men. A low level can also be associated with anxiety or depression and chronic illness.

A high level is associated with an accumulation in the body.

Taurine is found in meat, protein, and eggs.

## GABA

Name	Your value	Reference value	Scale
GABA	● 1.06 µmol/L	<b>Fasting:</b> ● 0.3 – 1.3 µmol/L <b>Non-fasting:</b> ● 0.1 – 1.5 µmol/L	

Approximately 80% of GABA is in the brain, where it acts as the brain's primary inhibitory neurotransmitter. It is used therapeutically for anxiety, depression, sleep disorders, muscle relaxation, epilepsy, ADHD, and chronic fatigue syndrome.

GABA is found in milk, made from proteins, and in the eye.

