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Longitude Longevity

Routine risk assessment for common chronic diseases

Longitude
Powered by Nightingale Health

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Interpretation guide

This test estimates the patient's risk of developing a set of chronic diseases based on the patient's blood values, age, and sex. The results should be interpreted in the context of the overall clinical picture. For example, if the patient has a well-controlled diagnosed condition, the test may show a low risk, which should be considered when evaluating the test results.

Steps for interpreting the results

1. **Review the clinical summary page:** Evaluate the risk profile and result categories. How does the patient compare to their age peers?
2. **Review the disease-specific pages:** Evaluate the absolute disease percentages for each disease. Are they clinically significant?
3. **Review basic blood values page:** Check cholesterol, apolipoproteins, creatinine, and eGFR.

To further evaluate the condition, consider performing additional clinical examinations (e.g. BP, BMI, family history). Also consider additional blood tests (e.g. fatty acids, amino acids, inflammation, Lp(a)) or other relevant, disease-specific investigations.

Interpreting the risk profile on the clinical summary page

The result categories shown in **green**, **amber**, and **red** in the report are determined by comparing the patient's test results to those of individuals in the same age group. The categories are defined as follows:

Average or lower
The result is at or below the 50th percentile in the age group.

Higher than average
The result is between the 50th and 85th percentile in the age group.

Notably above average
The result is above the 85th percentile in the age group.

Important: Coloured result categories are always relative to age-matched peers.

Interpreting the disease-specific pages

The disease-specific pages start with the coloured result category. Below the category, the report shows the risk of developing each respective disease as an absolute percentage value (10-year risk). When interpreting the results, it's important to note that chronic diseases are strongly correlated with age.

Younger patients: The risk of developing any disease is typically low in absolute terms. The result categories (Average or lower, Higher than average, Notably above average) provide additional insight by comparing the patient to their age peers.

> Example: A **notably above average** result for a young patient indicates a substantially less favourable result category compared to their peers. While the absolute risk for a young patient is likely low and suggest no intervention, this result category indicates that the patient is on an adverse trajectory and the risk is likely to rapidly increase with age. **The notably above average result category allows for early interventions, often decades before the absolute risk prompts action.**

Older patients: The risk of developing any disease in the report is typically on the high side in absolute terms. The result categories (*Average or lower*, *Higher than average*, *Notably above average*) provide additional insight by comparing the patient to their age peers.

> Example: An **average or lower** result for an older patient indicates a more favourable result category compared to their peers. While the absolute risk for an older patient is likely on the high side, this result category indicates that the patient is on a favourable trajectory and the risk is less likely to become an issue in comparison to their peers. **The average or lower result category allows for a more detailed stratification of the absolute risk for older patients and more targeted interventions.**

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Clinical summary

Your risk profile for common chronic diseases in comparison to other women your age

The result categories indicate how your 10-year risks compare to other women of your age. For evaluating the disease-specific risks, see the risk page of each disease.



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Heart attack

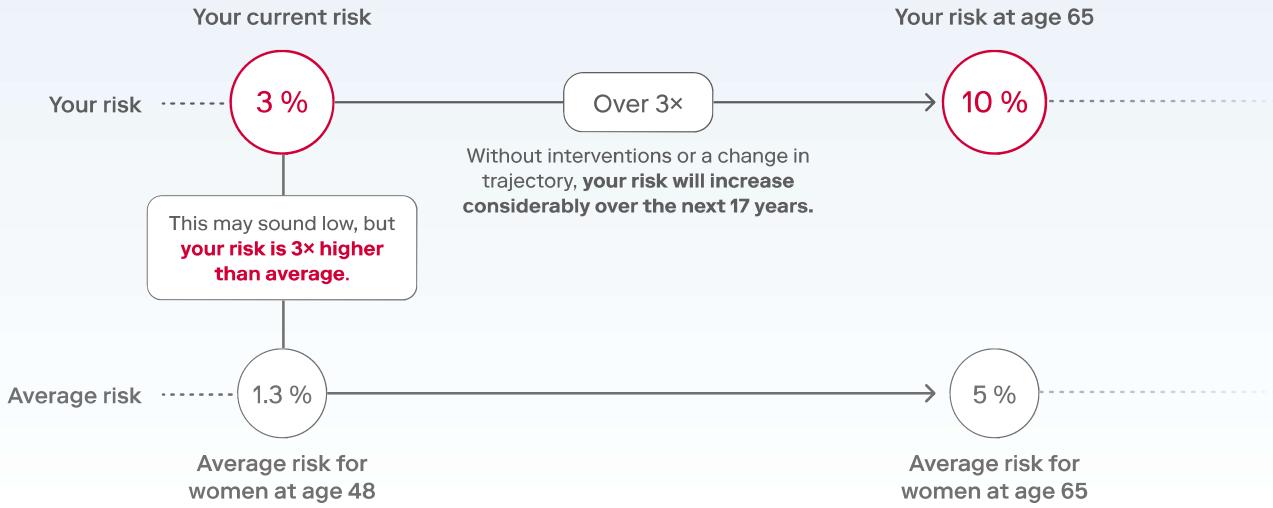
Your current result category

Notably above average
In comparison to women your age

Heart attack is one of the most common causes of death. It occurs when an artery supplying blood and oxygen to the heart muscle is occluded.

Your current 10-year risk and future projection

What is your current risk, how it compares to other women your age, and what happens when you get older.



What factors increase your risk?

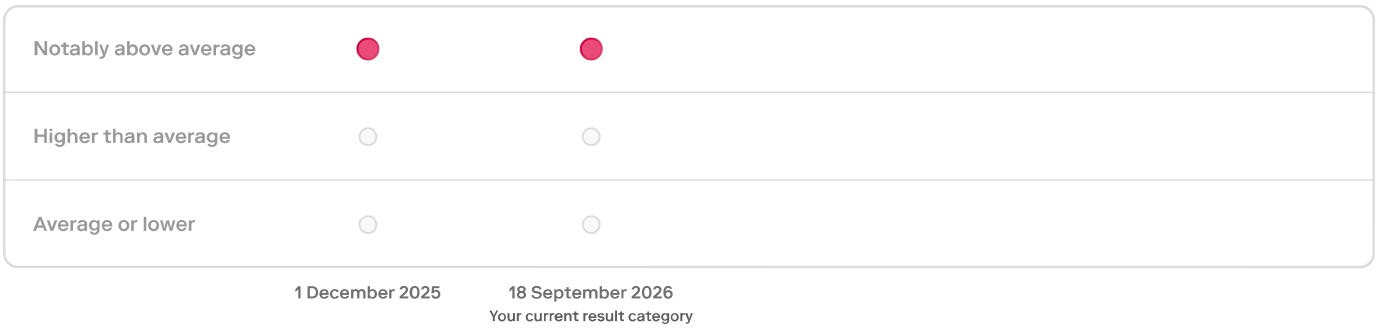
- **Lifestyle** can account for up to 80 % of your risk. Poor diet, sedentary lifestyle, smoking, excessive use of alcohol, high stress, and lack of sleep may influence the **clinical risk factors** and your risk.

How to improve?

- See the **Lifestyle guidance page** for information on lowering risks through healthy habits.
- Consult your healthcare provider to assess and manage the **clinical risk factors.**

Your progress over time

Your result category has stayed the same since your last blood test.



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Ischaemic stroke

Your current result category

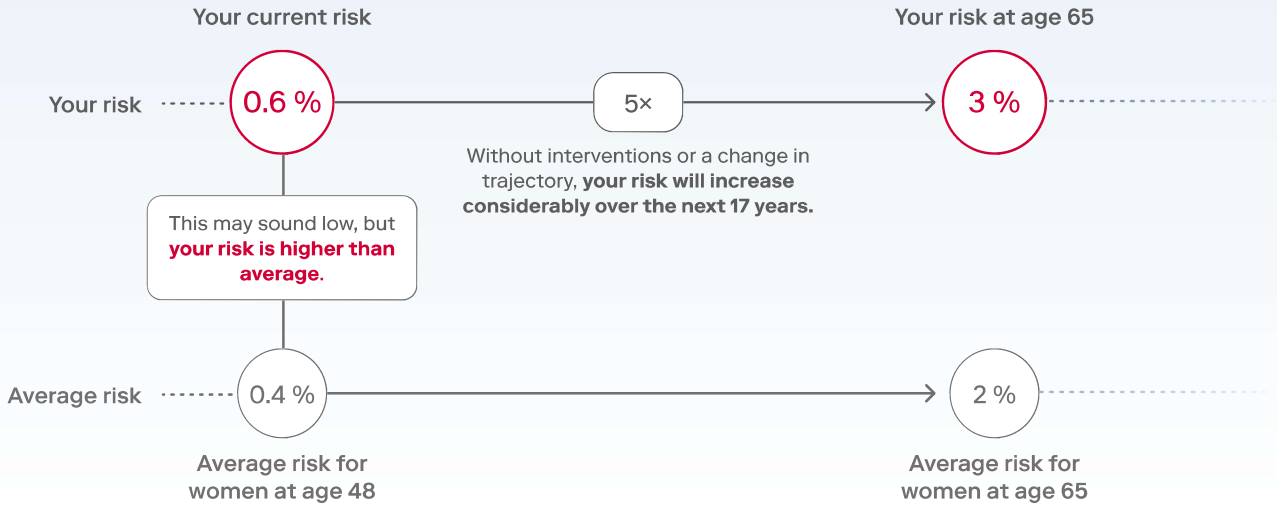
Notably above average

In comparison to women your age

An ischaemic stroke can cause brain damage or even death. It happens when a blood clot blocks a blood vessel in the brain. Smoking, an unhealthy diet, high blood pressure, and lack of exercise increase the risk.

Your current 10-year risk and future projection

What is your current risk, how it compares to other women your age, and what happens when you get older.



What factors increase your risk?

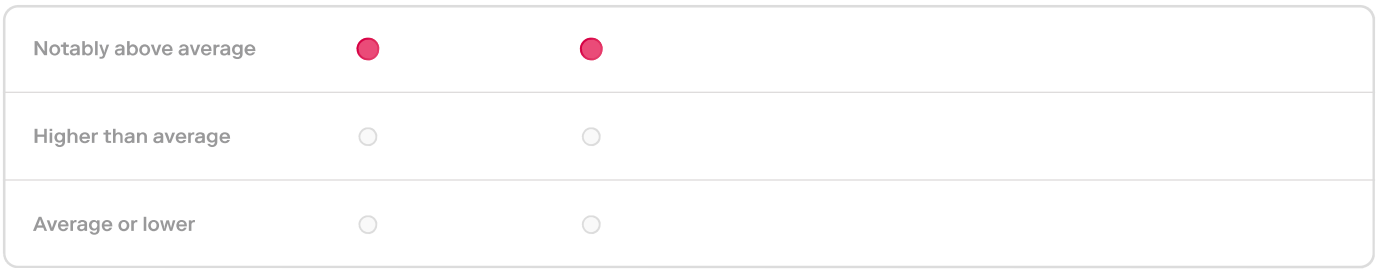
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Type 2 diabetes

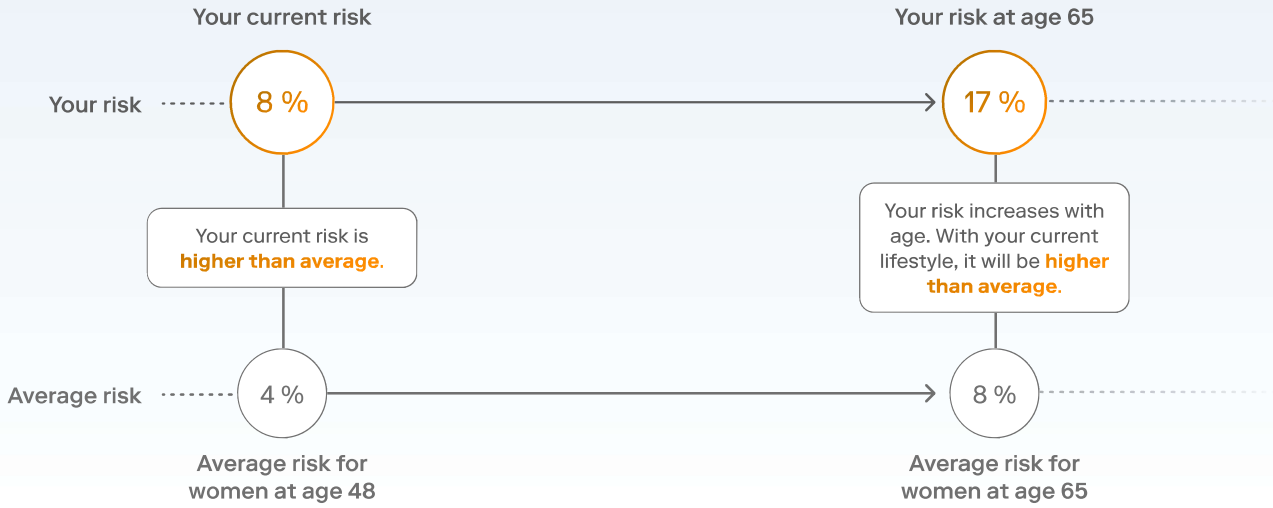
Your current result category

Higher than average
In comparison to women your age

Type 2 diabetes is a common condition that causes high blood sugar and can damage the eyes, kidneys, nerves, and the heart. It can often be prevented and even reversed through lifestyle choices.

Your current 10-year risk and future projection

What is your current risk, how it compares to other women your age, and what happens when you get older.



What factors define my risk?

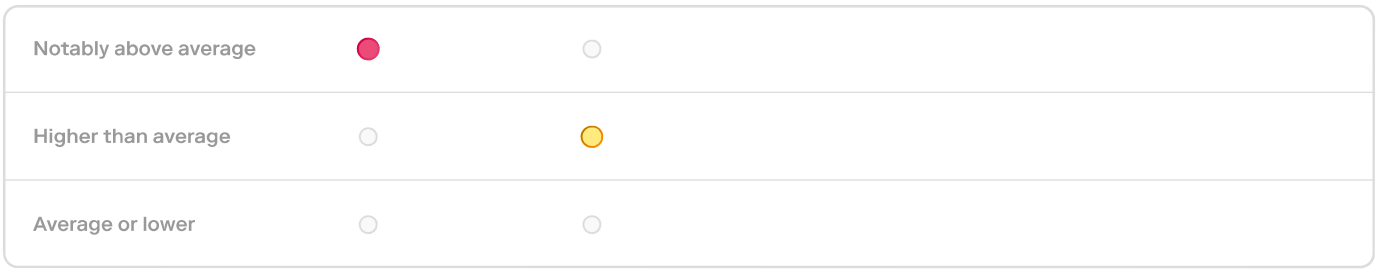
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How to improve?

- See the **Lifestyle guidance page** for information on lowering risks through healthy habits.
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Your progress over time

Your result category has improved since your last blood test. Keep up the good work!



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Chronic kidney disease

Your current result category

Average or lower
In comparison to women your age

Chronic kidney disease is a long-term condition in which the kidneys slowly lose function. It is very common in older people. Diabetes and high blood pressure are major risk factors, both strongly linked to lifestyle.

Your current 10-year risk and future projection

What is your current risk, how it compares to other women your age, and what happens when you get older.



What factors increase your risk?

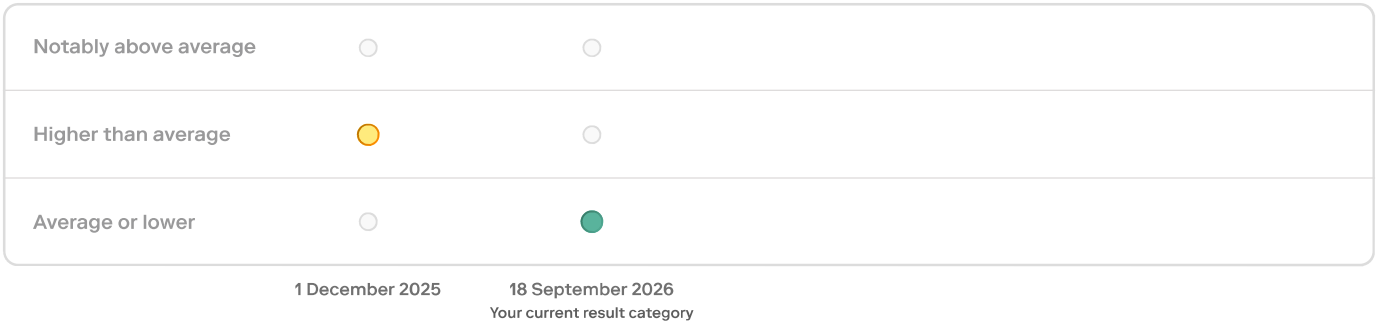
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Fatty liver disease

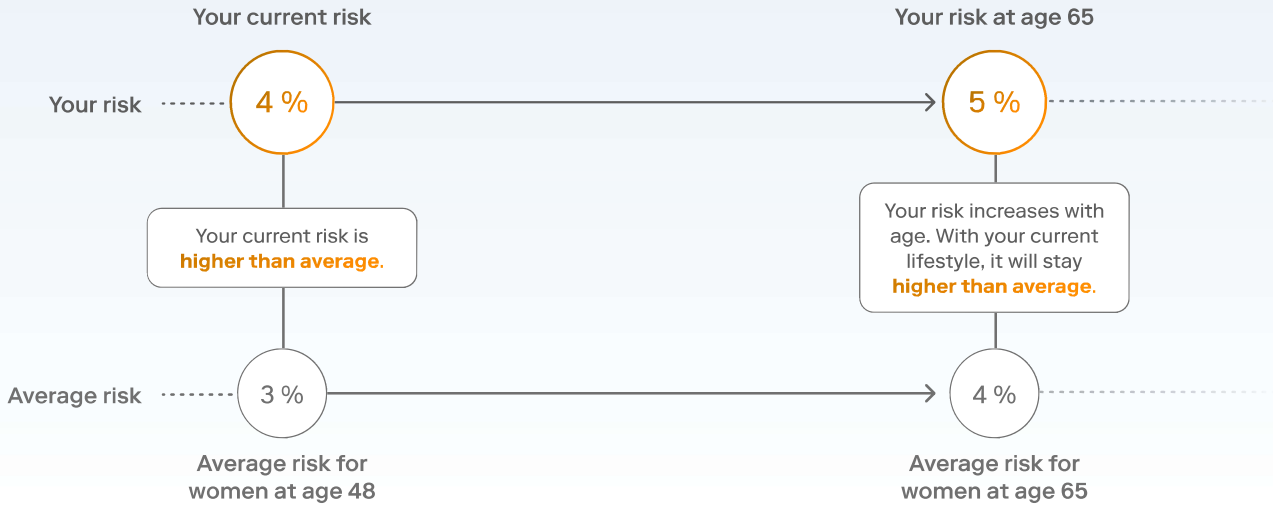
Your current result category

Higher than average
In comparison to women your age

In fatty liver disease, excess fat builds up in the liver. It is a common condition often linked to diabetes and being overweight. It can cause severe liver damage, but can be prevented with a healthy lifestyle.

Your current 10-year risk and future projection

What is your current risk, how it compares to other women your age, and what happens when you get older.



What factors increase your risk?

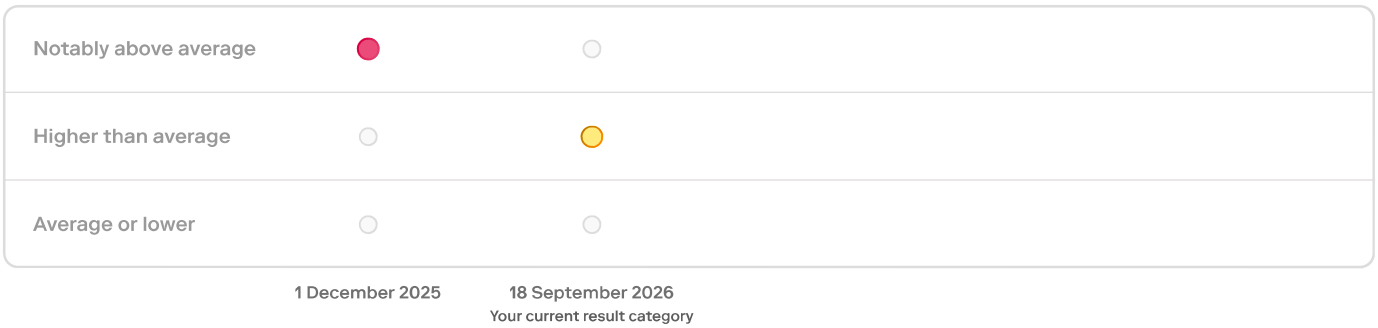
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Blood test results

6 results within recommended range

4 results outside recommended range

Lipid profile

	Within recommendations	Outside recommendations
LDL cholesterol (mmol/L)	2.9 (< 3.0)	≥ 3.0
HDL cholesterol (mmol/L)	1.4 (> 1.2)	≤ 1.2
Total cholesterol (mmol/L)	4.9 (< 5.0)	≥ 5.0
Total triglycerides (mmol/L)		1.8 (≥ 1.7)

Glycated hemoglobin

	Within recommendations	Outside recommendations
HbA1c (mmol/mol)	29 (20–42)	< 20 or > 42

Apolipoproteins

	Within recommendations	Outside recommendations
Apolipoprotein B (g/L)		1.0 (≥ 0.9)
Apolipoprotein A1 (g/L)		1.3 (≤ 1.4)
Ratio of apolipoprotein B to apolipoprotein A1 (ratio)		0.75 (≥ 0.60)

Creatinine

	Within recommendations	Outside recommendations
Creatinine (µmol/L)	55.0 (50.0–90.0)	< 50.0 or > 90.0
Estimated glomerular filtration rate (eGFR) (mL/min/1.73m²)	110 (> 83)	≤ 83

Consult a healthcare professional for clinical interpretation before making medical decisions.

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Lifestyle guidance

Diet

Recommendation:

- Eat plenty of vegetables, fruits, and whole grains.
- Choose lean proteins (like beans, fish, chicken).
- Use small amounts of healthy oils.
- Cut down on foods high in sugar, salt, and saturated fat.

Why this helps?

This helps to keep your weight, cholesterol, and blood pressure in check and prevents blood sugar spikes.

Weight

Recommendation:

- Aim to maintain a healthy body weight by following a healthy diet and having a sufficient amount of exercise.
- As a rule of thumb, a body mass index between 20 and 25 is considered healthy.

Why this helps?

Being overweight is a risk factor for many common chronic diseases. Achieving a healthy body weight lowers the risks and increases wellbeing.

Exercise

Recommendation:

- Aim for at least 150 minutes of brisk activity each week.
- Do muscle-strengthening exercises twice a week.

Why this helps?

Exercise strengthens your heart, lowers blood pressure, improves cholesterol, helps control weight, and keeps blood sugar stable.

Alcohol and smoking

Recommendation:

- Don't smoke.
- Keep your alcohol consumption as low as possible.

Why this helps?

Quitting smoking lowers strain on your heart and also broadly improves other aspects of your health.

Recovery

Recommendation:

- Sleep 7–9 hours each night.
- Manage stress with healthy habits (e.g. relaxation, hobbies, socialising, exercise).

Why this helps?

Good sleep and stress control help keep blood pressure, weight, and blood sugar balanced.

How do lifestyle changes lower the risk?

Heart attack

A heart attack happens when blood flow to the heart is blocked. Smoking, high cholesterol, high blood pressure, and extra weight all make this more likely. By keeping your arteries healthy with better diet, activity, and avoiding smoking, you greatly lower your risk of a heart attack.

Type 2 diabetes

Being active, eating balanced meals, and keeping a healthy weight improve how your body handles sugar. Healthy habits can prevent diabetes from developing or even reverse it.

Fatty liver disease

Too much fat in the liver can lead to damage over time. Eating well, moving regularly, keeping weight healthy, and limiting alcohol all reduce liver fat. This prevents liver scarring and keeps your liver working properly.

Ischaemic stroke

Ischaemic stroke is caused by blocked blood vessels in the brain. High blood pressure and smoking are major triggers. Controlling blood pressure, improving cholesterol, and staying active protect your brain and lower the risk of stroke.

Chronic kidney disease

Kidneys are damaged over time by high blood pressure and high blood sugar. Healthy habits keep both under control and reduce strain on the kidneys. Protecting your kidneys this way lowers the risk of long-term kidney problems.

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Longitude Longevity

Longevity Report

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Metabolic Resilience Score

Metabolic Resilience Score shows how well your body can stay balanced and strong day to day. A higher score means your system can adapt to change — switching between energy sources, managing stress, and returning to balance after everyday challenges like a late night or an indulgent meal. Think of it as having a flexible, well-tuned engine that runs clean and efficiently, even when life speeds up.

Your Metabolic Resilience Score

33 /100

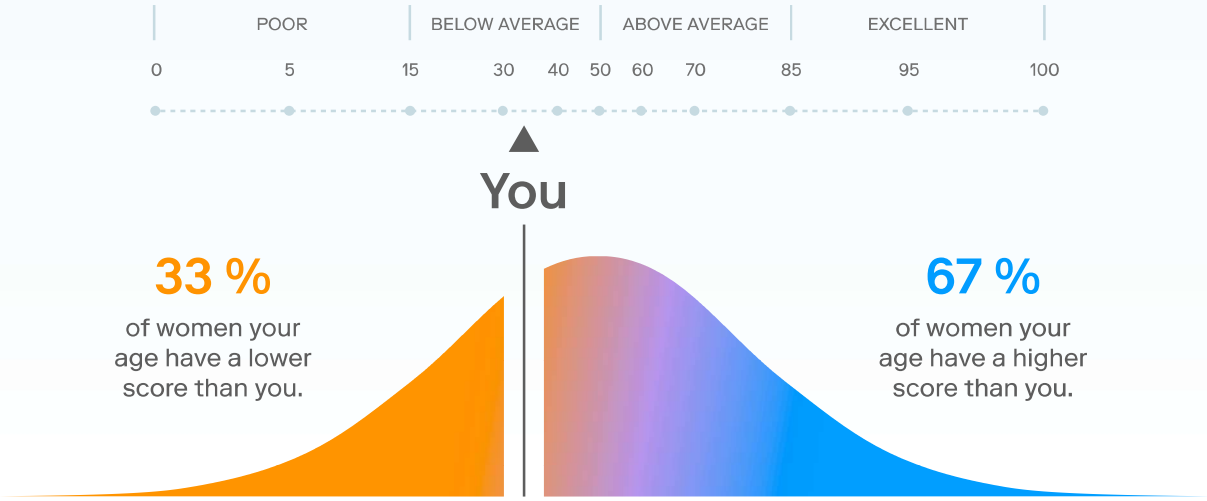
Below average

Your Metabolic Resilience Score is **below average.**

Your Metabolic Resilience Score suggests reduced adaptive capacity in one or more metabolic systems.

Targeted improvements with medical professional help in balanced nutrition, consistent movement, non-smoking, moderate alcohol consumption, restorative sleep, and stress regulation can help enhance resilience and healthspan over time.

Your Metabolic Resilience Score compared to other women your age

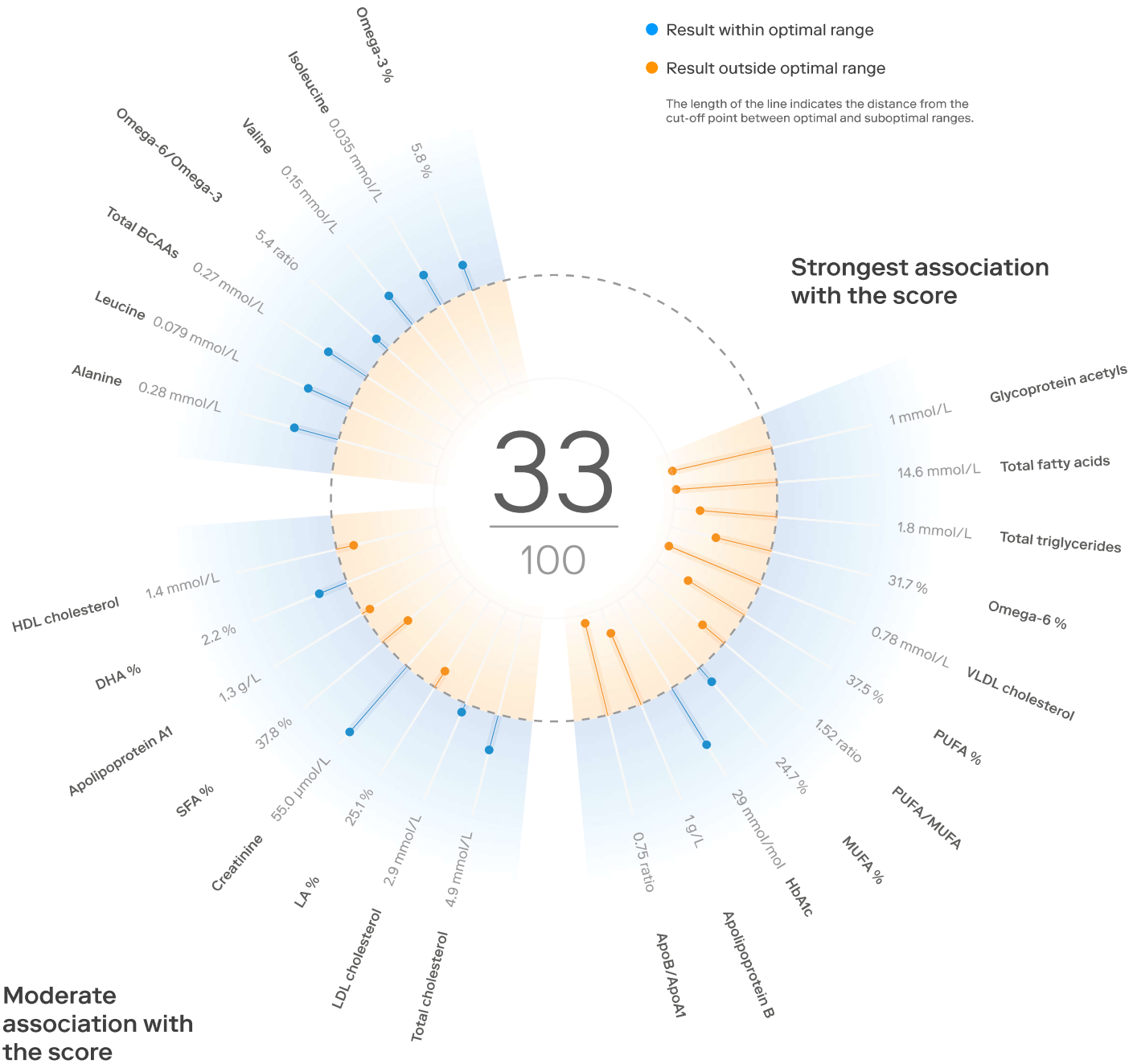


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Blood markers for your Metabolic Resilience Score

Each blood marker in your results is linked to your Metabolic Resilience Score. The longer the blue lines, the more that marker supports your body's ability to stay balanced and strong. The longer the orange lines, the more that marker is holding your score back. This view helps you see where to focus your habits so you can improve your score and strengthen your ability to return to balance. You should aim to have your values in the blue zone. Improving your Metabolic Resilience Score starts with healthy everyday habits: moving regularly, eating nourishing meals, getting enough good-quality sleep, and finding ways to manage stress.

Weakest association with the score



Strongest association with the score

Moderate association with the score

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Strongest association with the score

These blood markers are strongly associated with your Metabolic Resilience Score. As you improve your score through healthy lifestyle choices, such as balanced nutrition, regular exercise, and sufficient recovery, these blood markers typically shift towards their optimal range. The optimal range reflects where the blood marker values of individuals with a high Metabolic Resilience Score generally fall. For clarity, the blood markers are grouped according to their biological role or biochemical class.

	Your result		Optimal range with respect to the score
Inflammation			
Glycoprotein acetyls	1.00 mmol/L	0.83	< 0.83
Triglycerides			
Total triglycerides	1.8 mmol/L	1.4	< 1.4
Fatty acids			
Total fatty acids	14.6 mmol/L	12.4	< 12.4
Omega-6 %	31.7 %	34.8	> 34.8
PUFA %	37.5 %	40.6	> 40.6
PUFA/MUFA	1.52 ratio	1.65	> 1.65
MUFA %	24.7 %	25.3	< 25.3
Cholesterol			
VLDL cholesterol	0.78 mmol/L	0.65	< 0.65
Glycated hemoglobin			
HbA1c	29 mmol/mol	37	< 37
Apolipoproteins			
Apolipoprotein B	1.0 g/L	0.9	< 0.9
ApoB/ApoA1	0.75 ratio	0.61	< 0.61

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Moderate association with the score

These blood markers offer additional context for understanding your metabolic health, even though they are less strongly linked with your Metabolic Resilience Score. As you make healthy lifestyle choices, these markers shift in a positive direction. While they do not define your score, they help you see broader patterns that complement your core results. For clarity, the blood markers are grouped according to their biological role or biochemical class.

	Your result		Optimal range with respect to the score
Cholesterol			
Total cholesterol	4.9 mmol/L	5.0	< 5.0
LDL cholesterol	2.9 mmol/L	2.9	< 2.9
HDL cholesterol	1.4 mmol/L	1.2	> 1.2
Fatty acids			
LA %	25.1 %	26.6	> 26.6
SFA %	37.8 %	36.4	< 36.4
DHA %	2.2 %	1.8	> 1.8
Fluid balance			
Creatinine	55.0 µmol/L	84.6	< 84.6
Apolipoproteins			
Apolipoprotein A1	1.3 g/L	1.3	> 1.3

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Weakest association with the score

These blood markers offer additional context for understanding your metabolic health, even though they are less strongly linked with your Metabolic Resilience Score. As you make healthy lifestyle choices, these markers shift in a positive direction. While they do not define your score, they help you see broader patterns that complement your core results. For clarity, the blood markers are grouped according to their biological role or biochemical class.

Amino acids	Your result		Optimal range with respect to the score
Alanine	0.28 mmol/L		< 0.50
Leucine	0.079 mmol/L		< 0.181
Total BCAAs	0.27 mmol/L		< 0.61
Valine	0.15 mmol/L		< 0.34
Isoleucine	0.035 mmol/L		< 0.106
Fatty acids			
Omega-6/Omega-3	5.4 ratio		> 4.1
Omega-3 %	5.8 %		> 3.2

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Blood marker interpretation guide

The blood marker groups behind your Metabolic Resilience Score are explained below in more detail. This helps you see what each group means for your score and how your everyday choices can improve it.

Your Metabolic Resilience Score is a holistic view of how your body is doing, built from patterns across all your blood marker groups. These markers interact and influence each other, so they are best understood together as an interconnected whole rather than one by one. Use this guide to see where to focus your habits so your body can stay more balanced and strong day to day.

Inflammation

Low-grade inflammation measured by GlycA reflects chronic inflammation and is linked to higher risk for many cardiometabolic diseases.

Low-grade inflammation disrupts metabolic health by promoting insulin resistance and cardiovascular disease. Elevated GlycA indicates a summary of your overall level of inflammation in your body over the long term, rather than due to acute infections.

You can lower your inflammation through lifestyle and diet, such as:

- Maintain regular physical activity, sleep and stress management, and balanced nutrition
- Add anti-inflammatory sources to your diet, such as fatty fish, berries, leafy greens, nuts, and whole grains
- Avoid processed foods, added sugars, and excess saturated fats
- Avoid smoking and moderate alcohol intake

Triglycerides

Triglycerides are blood fats that store excess energy from your food intake and can later be released as a vital source of fuel for your body.

High triglyceride levels in your blood indicate a raised risk for heart attack and stroke. High triglycerides frequently occur with obesity, insulin resistance, and diabetes, collectively heightening cardiovascular risk.

You can improve triglyceride levels through lifestyle and dietary changes, such as:

- Eat less refined carbohydrates and sugar
- Reduce excess weight and engage in regular physical activity
- Choose healthier fats in your diet — such as olive oil and fish rich in omega-3 (e.g. salmon, sardines, mackerel)
- Limit alcohol intake

Fatty acids & fatty acids ratios

Fatty acids come to your bloodstream from dietary fat intake. They are essential to many metabolic processes in your body, such as keeping the structure of your cells and supporting vitamin absorption.

Fatty acids strongly influence metabolic health. Saturated fats can raise LDL cholesterol, while mono and polyunsaturated fats improve cholesterol levels and lower heart disease risk. Omega-3 fats further reduce triglycerides and decrease inflammation.

You can improve fatty acid balance through lifestyle and dietary changes, such as:

- Increase unsaturated fats (olive oil, rapeseed oil, nuts, seeds, fatty fish)
- Increase high quality omega-3 sources (salmon, mackerel, sardines, tuna, anchovies)
- Reduce saturated fats (butter, fatty meats, lard, fried foods, high fat dairy)
- Reduce highly processed foods containing refined oils and additives

Cholesterol

Cholesterol is waxy lipid found in every cell, essential for building membranes, producing hormones, and supporting metabolic functions.

Cholesterol strongly influences metabolic and cardiovascular health. High levels of LDL (“bad” cholesterol) drives buildup of plaque in your arteries, elevating the risk for heart attack and stroke. Low levels of HDL cholesterol are also a marker of heart attack and stroke risk, which often coexists with obesity and elevated blood sugar — intensifying overall cardiometabolic risk.

You can improve cholesterol levels through lifestyle and dietary changes, such as:

- Regular physical activity raises HDL and lowers LDL cholesterol
- Prioritise plant-based foods, whole grains, fruits, vegetables, nuts, poultry, and fish
- Reduce food with saturated fat to lower LDL
- Weight loss, quitting smoking, and moderating alcohol intake further improve cholesterol profiles

Glycated hemoglobin

Glycated hemoglobin (HbA1c) reflects your average blood sugar over the past 3 months. It provides a long-term picture of glucose control rather than day-to-day fluctuations.

Low HbA1c levels indicate stable glucose regulation and reduced risk for diabetes and related heart health conditions.

You can improve HbA1c through lifestyle changes, such as:

- Daily movement, including brisk walking most days and strength training twice a week
- Balanced, fiber-rich meals made from minimally processed foods
- Regular sleep and eating schedule

Apolipoproteins

Apolipoproteins transport cholesterol and triglycerides in your bloodstream, and play essential roles for lipid metabolism.

Apolipoproteins strongly influence cardiovascular health: higher levels of apolipoprotein B (“bad” apolipoprotein) increases cardiovascular risk, while higher levels of apolipoprotein A1 decreases the risk of developing heart disease.

You can improve apolipoprotein levels through lifestyle and dietary changes, such as:

- Regular physical activity
- Limit sugary foods and alcohol intake
- Choose foods rich in healthy fats — such as avocados, olive oil, almonds, and fatty fish
- Weight loss, quitting smoking, and moderating alcohol intake further improve apolipoprotein profiles

Fluid balance

Fluid balance regulates water and electrolytes in your blood stream and indicates the health state of your kidneys.

When fluid balance becomes disrupted, as in chronic kidney disease, metabolic health declines through high blood pressure and impaired nutrient regulation. Monitoring kidney function with blood tests such as creatinine and eGFR enables early detection of these imbalances and related complications.

You can improve fluid balance through lifestyle and diet, such as:

- Stay appropriately hydrated by drinking water
- Limit salt and excess protein intake
- Avoid smoking
- Include fruits and vegetables (apples, carrots, cabbage) and whole grains to your diet

Amino acids

Amino acids are molecules that serve as the building blocks of proteins. Your body needs 20 amino acids, nine of which are essential and must come from food.

Amino acids are deeply connected to metabolic health because the body breaks down dietary proteins into amino acids, then uses them to build new proteins, enzymes, and hormones involved in energy regulation, muscle maintenance, tissue repair, immunity, and blood sugar control.

You can improve amino acid levels through lifestyle and dietary changes, such as:

- Increase high quality plant proteins (tofu, beans, lentils, chickpeas, almonds, quinoa, broccoli, spinach)
- Choose lean animal proteins (fish, eggs, yogurt, low-fat cheese, chicken, lean meats)
- Combine plant proteins (e.g., beans & grains) to improve your amino acid profile
- Avoid processed meats such as sausages, bacon, and deli meats with lower quality protein

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