W Fullscript

Interpretation of results

Jane Doe

🚨 Dr. Mary Roberts

Tested on Jul 21, 2024

Message from Dr. Mary Roberts

Your test results have some biomarkers that are outside the optimal range. Here's a summary of each health area:

Cardiovascular:

Your recent medical tests indicate that several cardiovascular parameters are slightly elevated, which could increase your risk of heart disease if not managed effectively. Your total cholesterol level is slightly above the recommended range, suggesting a need for lifestyle changes. Similarly, your LDL cholesterol and non-HDL cholesterol are both above the optimal range and represent a moderate risk for cardiovascular disease. Elevated LDL particle number and the presence of small and medium-sized LDL particles further underscore the need to monitor and manage your cholesterol levels. Apolipoprotein B (ApoB) is also above the ideal range, indicating an increased number of atherogenic particles that could contribute to plaque buildup in the arteries. However, your HDL cholesterol level is protective against heart disease, and your triglycerides level is well within the optimal range. These markers suggest that, despite the areas of concern, your heart health has some strong protective factors.

Kidneys:

Your blood urea nitrogen (BUN) level is slightly elevated, which, alongside a suboptimal estimated glomerular filtration rate (eGFR), suggests that your kidneys may not be functioning at their peak efficiency. This could be due to mild dehydration, a high-protein diet, or other factors. It's important to ensure adequate hydration and monitor these levels to prevent further kidney strain.

Blood:

The mean platelet volume (MPV) is slightly elevated, which could indicate an underlying inflammatory response. Additionally, your hsCRP level suggests a moderate level of inflammation, which is associated with an increased risk of cardiovascular diseases. The inflammation markers can be monitored and managed through lifestyle adjustments, including diet and stress management. Your overall blood count, including WBC, RBC, hemoglobin, and hematocrit levels, is within optimal ranges.

Hormone:

Your cortisol (AM) level is slightly elevated, which might suggest a mild increase in stress response. This could lead to health issues if persistent, so managing stress through lifestyle changes is recommended. Other hormone-related markers, including TSH, free T4, free T3, and testosterone levels, are within optimal ranges, indicating a healthy hormonal balance overall.

Nutrition:

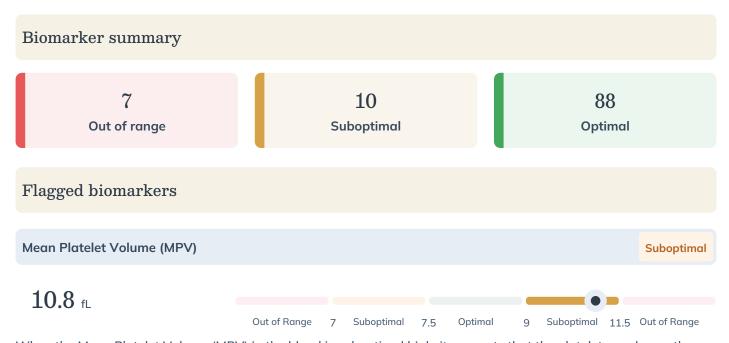
Your vitamin B6 level is elevated, which may indicate over-supplementation, potentially leading to toxicity if not addressed. It's advisable to monitor and possibly adjust your vitamin intake. Additionally, your omega 6 to omega 3 ratio is slightly imbalanced. This suggests a need to increase omega 3 intake and reduce omega 6 rich foods, to reduce inflammation and improve overall health. Other nutritional markers, including levels of iron, zinc, vitamin B12, and magnesium, are within optimal ranges, indicating good nutritional status.

Liver:

Your liver function markers, including total protein, albumin, globulin, bilirubin, and liver enzymes (AST, ALT), are all within the optimal ranges, indicating a healthy liver. This supports your overall vitality and suggests that your current diet and lifestyle are positively impacting liver health.

Metabolic:

Your hemoglobin A1c is at an optimal level, indicating good blood sugar control, reducing the risk of diabetes. Your insulin level is also within the optimal range, supporting a well-regulated metabolism.



When the Mean Platelet Volume (MPV) in the blood is suboptimal high, it suggests that the platelets are larger than average, which can be a sign of various conditions. A suboptimal high MPV might indicate a mild reaction to an underlying issue, such as inflammation or a response to a physiological stressor. It could also be a sign of a recovering bone marrow after a transient decrease in platelet production, where newer platelets tend to be larger. Understanding MPV levels is important because it can provide insights into the production and turnover of platelets within the blood. Platelets play a crucial role in blood clotting and maintaining hemostasis, so changes in their volume can have implications for bleeding and clotting disorders. For individuals with low MPV, which is not the case here, dietary and lifestyle changes, such as increased intake of foods rich in vitamins like B12, folate, and iron, can sometimes help improve platelet volume. However, for those with a slightly high MPV, the focus would typically be on identifying and managing the underlying cause rather than on supplementation. It's important to interpret MPV values in the context of other blood parameters and clinical findings to get a comprehensive understanding of an individual's health status.

Cortisol (AM)

Suboptimal

Suboptimal

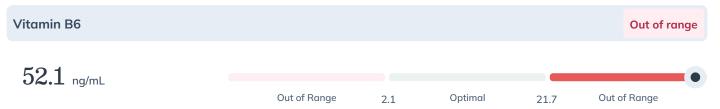
Optimal

Suboptimal

25 Out of Range

Out of Range

When the cortisol level in your blood is slightly increased in the morning, but not excessively high, it may suggest that your body is experiencing a mild increase in stress response. Cortisol is a hormone that helps the body respond to stress, and its levels naturally fluctuate throughout the day, typically peaking in the early morning. A sub-optimally high level could be due to various factors, including stress, poor sleep, or other underlying health issues that are causing a mild strain on your body's stress response system. Understanding the significance of this result is important because cortisol plays a crucial role in many bodily functions, including metabolism, immune response, and the body's ability to manage stress. Persistent, moderately elevated cortisol levels can potentially lead to health issues over time if the underlying causes are not addressed. If you're concerned about low cortisol levels, certain lifestyle changes and supplements might help. For instance, incorporating adaptogenic herbs like ashwagandha or supplements like phosphatidylserine could support adrenal health and help normalize cortisol production. However, it's essential to approach supplementation with caution and under the guidance of a healthcare provider, as they can provide personalized advice based on your specific health needs.



Elevated levels of Vitamin B6 (pyridoxine) in the blood are often the result of taking too much of this vitamin, either through diet or supplements. While Vitamin B6 is essential for numerous bodily functions, including amino acid metabolism, neurotransmitter synthesis, and hemoglobin production, high levels can lead to toxicity. Symptoms of B6 toxicity include nerve damage, resulting in numbness or tingling in the hands and feet (peripheral neuropathy), as well as difficulty walking. Monitoring B6 levels helps healthcare providers ensure that supplementation is within safe limits, preventing potential adverse effects and maintaining overall health.

It's possible you did not hold B6 supplementation long enough before draw or we actually need to reduce your supplement dosage.

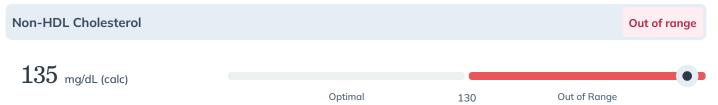


When Apolipoprotein B (ApoB) levels in the blood are suboptimal high but not extremely high, it suggests that there may be a moderate risk of cardiovascular disease. ApoB is a component of certain lipoproteins that are responsible for transporting cholesterol throughout the body, and higher levels can be associated with an increased risk of plaque buildup in the arteries. This buildup can lead to conditions such as atherosclerosis, which is a significant risk factor for heart attacks and strokes. The question of ApoB levels is important because it can help in assessing cardiovascular risk and guiding potential interventions to reduce that risk. While the levels are not in the very high range, they are still above optimal levels, indicating that there may be room for improvement in managing cardiovascular health. To address suboptimally high ApoB levels, lifestyle changes such as a healthier diet, regular exercise, and weight management can be beneficial. Additionally, certain supplements, like omega-3 fatty acids, niacin, and soluble fiber, may help improve lipid profiles, including ApoB levels. However, the effectiveness of these supplements can vary from person to person, and it's important to consider them as part of a broader approach to heart health. It's essential for individuals with suboptimally high ApoB levels to be aware of their cardiovascular risk and to work with their healthcare provider to monitor and manage their condition effectively.

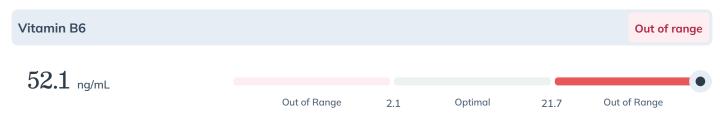


When hsCRP levels in the blood are suboptimal high but not extremely high, it suggests that there may be a moderate level of inflammation present. This can be associated with a variety of issues, such as chronic infections, ongoing health conditions, or lifestyle factors like poor diet and lack of exercise. It's important to consider this information because inflammation plays a role in the development of various diseases, including heart disease and diabetes. Addressing moderately high hsCRP levels can involve lifestyle changes such as adopting a healthier diet, engaging in regular physical activity, and managing stress. Additionally, certain supplements, like omega-3 fatty acids, which are found in fish oil, and curcumin, the active ingredient in turmeric, have been shown to help reduce inflammation and could potentially lower hsCRP levels. Understanding the significance of hsCRP levels is crucial because it can serve as an early indicator of potential health risks, allowing for proactive measures to be taken to improve overall health and reduce the risk of disease.

Out of range biomarkers

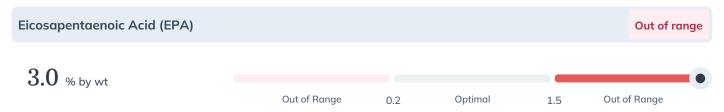


High levels of Non-High Density Lipoproteins (Non-HDL) Cholesterol in your blood can indicate a higher risk of heart disease. This is because Non-HDL cholesterol includes all the 'bad' types of cholesterol; it's a sum of your LDL (low-density lipoprotein) cholesterol and other types of cholesterol. If these bad cholesterols build up in your arteries, they can form plaques, which can narrow or block the arteries and lead to heart disease or stroke. Therefore, keeping your Non-HDL cholesterol levels low is important for maintaining heart health. This matters because heart disease is a leading cause of death, and understanding your cholesterol levels can help you take steps to lower your risk.



Elevated levels of Vitamin B6 (pyridoxine) in the blood are often the result of taking too much of this vitamin, either through diet or supplements. While Vitamin B6 is essential for numerous bodily functions, including amino acid metabolism, neurotransmitter synthesis, and hemoglobin production, high levels can lead to toxicity. Symptoms of B6 toxicity include nerve damage, resulting in numbness or tingling in the hands and feet (peripheral neuropathy), as well as difficulty walking. Monitoring B6 levels helps healthcare providers ensure that supplementation is within safe limits, preventing potential adverse effects and maintaining overall health.

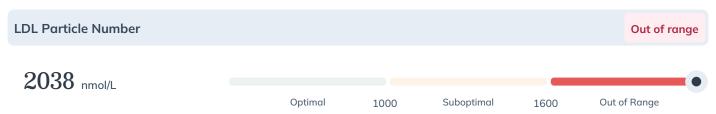
It's possible you did not hold B6 supplementation long enough before draw or we actually need to reduce your supplement dosage.



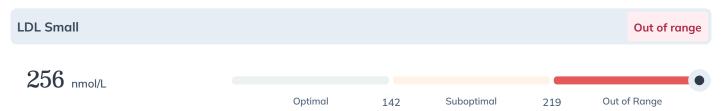
Elevated levels of Eicosapentaenoic Acid (EPA) in the blood are generally associated with a diet high in omega-3 fatty acids, particularly from fish and marine oils. High EPA levels are beneficial and linked to reduced inflammation, improved cardiovascular health, and lower risks of chronic diseases such as heart disease and stroke. EPA helps lower triglyceride levels, reduce blood clotting, and decrease the risk of arterial plaque formation. Monitoring EPA levels can assist healthcare providers in evaluating the effectiveness of dietary habits and guiding recommendations for maintaining optimal heart health.



Elevated levels of Docosapentaenoic Acid (DPA) in the blood can be indicative of a diet rich in marine oils or fish, which are common sources of this omega-3 fatty acid. High DPA levels are associated with various health benefits, including anti-inflammatory effects and improved cardiovascular health. Studies suggest that DPA can help reduce the risk of heart disease by lowering triglycerides, reducing arterial plaque formation, and improving overall lipid profiles. Monitoring DPA levels can help healthcare providers assess dietary habits and guide recommendations for maintaining heart health and preventing chronic diseases.



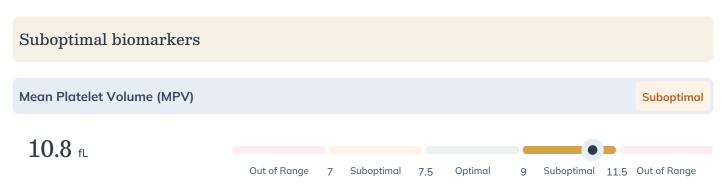
A high Low Density Lipoproteins (LDL) Particle Number means that there are a lot of LDL particles in your blood. Studies have shown that small dense LDL particles confer an increased risk of coronary heart disease (CHD) compared with large LDL. They can build up in the walls of your arteries and form plaques, which can narrow or block the arteries and lead to heart disease. Your healthcare provider may recommend lifestyle changes or medication to help lower your LDL Particle Number.



High levels of small Low Density Lipoproteins (LDL), often referred to as 'bad cholesterol,' can be a cause for concern. These small particles can easily slip through the lining of your arteries and build up as plaque. This buildup can lead to a condition called atherosclerosis, which is a hardening and narrowing of the arteries. This can slow down or block blood flow to your heart and other organs, increasing your risk of heart disease, heart attack, and stroke. Therefore, it's important to keep an eye on your LDL levels and take steps to lower them if they're high. This could involve changes to your diet, exercise habits, or possibly supplements or medication. It's always best to discuss these results and potential next steps with your healthcare provider.



High levels of Low Density Lipoproteins (LDL), often referred to as 'bad cholesterol,' in your blood can be a cause for concern. This is because LDL is responsible for carrying cholesterol to your arteries. When there's too much of it, it can stick to the walls of your arteries, forming a hard substance called plaque. Over time, this plaque can narrow your arteries, limiting the flow of blood to your heart and other organs. This condition is known as atherosclerosis and can lead to serious health problems like heart disease, stroke, and peripheral artery disease. Therefore, it's important to keep your LDL levels in check to maintain good cardiovascular health. Regular exercise, a healthy diet, and certain medications can help manage high LDL levels.

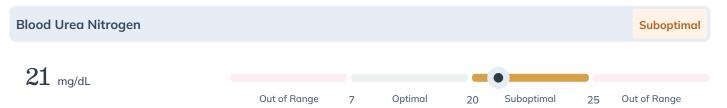


When the Mean Platelet Volume (MPV) in the blood is suboptimal high, it suggests that the platelets are larger than average, which can be a sign of various conditions. A suboptimal high MPV might indicate a mild reaction to an underlying issue, such as inflammation or a response to a physiological stressor. It could also be a sign of a recovering bone marrow after a transient decrease in platelet production, where newer platelets tend to be larger. Understanding MPV levels is important because it can provide insights into the production and turnover of platelets within the blood. Platelets play a crucial role in blood clotting and maintaining hemostasis, so changes in their volume can have implications for bleeding and clotting disorders. For individuals with low MPV, which is not the case here, dietary and lifestyle changes, such as increased intake of foods rich in vitamins like B12, folate, and iron, can sometimes help improve platelet volume. However, for those with a slightly high MPV, the focus would typically be on identifying and managing the underlying cause rather than on supplementation. It's important to interpret MPV values in the context of other blood parameters and clinical findings to get a comprehensive understanding of an individual's health status.

90 ng/mL
Out of Range 24 Suboptimal 45 Optimal 79 Suboptimal 380 Out of Range

When ferritin levels in the blood are somewhat suboptimal but not extremely high, it may suggest a mild increase in the body's iron stores. This condition can be due to various factors, including a diet high in iron, inflammation, or the early stages of conditions that affect iron metabolism. However, it's important to note that ferritin can also be a marker of inflammation, so an increase doesn't always directly point to excess iron. With your mildly elevated hsCRP, that is likely the case here.

The question of ferritin levels is significant because it can provide insights into a person's iron status and overall health. Ferritin is a protein that stores iron, and iron is crucial for producing healthy red blood cells, which carry oxygen throughout the body. Understanding ferritin levels can help healthcare providers make informed decisions about potential dietary adjustments or the need for further investigation into underlying health issues.



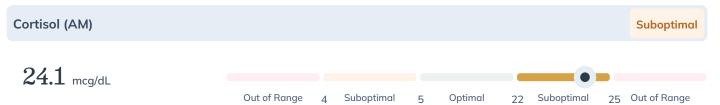
When the blood urea nitrogen (BUN) levels are suboptimal high, it may suggest that your kidneys are not functioning as efficiently as they should. This suboptimal increase could be due to a variety of reasons, such as mild dehydration, where your body doesn't have enough fluids to help the kidneys filter waste properly, or it could be an early sign of kidney disease. Other possible causes include a high-protein diet, which can increase the amount of urea the body needs to process, or certain medications that affect kidney function.

Understanding BUN levels is important because it can help in monitoring the health of your kidneys and identifying potential issues early on. If BUN levels are consistently higher than normal, even if not very high, it may warrant further investigation to determine the underlying cause and to prevent possible kidney damage.

To address suboptimal high BUN levels, healthcare providers might suggest lifestyle changes such as ensuring adequate hydration, adjusting protein intake, and reviewing medications that could affect kidney function. In some cases, they might also recommend supplements that support kidney health, but these should be used under the guidance of a healthcare provider to ensure they are appropriate for your specific health needs.



When the eGFR, or estimated glomerular filtration rate, is suboptimal low but not very low, it suggests that the kidneys are not functioning at their optimal level, but they haven't reached a point of severe impairment. This condition indicates a mild to moderate decrease in kidney function. While the kidneys are still able to filter waste from the blood, they are doing so less efficiently than they should. This matters because the kidneys play a crucial role in maintaining overall health by removing waste products and excess fluid from the blood, helping to regulate blood pressure, and ensuring the right balance of minerals and electrolytes. When the eGFR is suboptimally low, it can be a sign of early kidney disease or damage, which, if not addressed, could progress over time. To support kidney health and potentially improve low eGFR, lifestyle changes such as maintaining a healthy diet, controlling blood pressure, and managing blood sugar levels if diabetic, are important. For example, omega-3 fatty acids, vitamin D, and antioxidants like flavonoids may have a positive impact on kidney health. However, it's critical to avoid over-the-counter supplements that could potentially harm the kidneys, especially those containing creatine or high doses of certain vitamins and minerals.



When the cortisol level in your blood is slightly increased in the morning, but not excessively high, it may suggest that your body is experiencing a mild increase in stress response. Cortisol is a hormone that helps the body respond to stress, and its levels naturally fluctuate throughout the day, typically peaking in the early morning. A sub-optimally high level could be due to various factors, including stress, poor sleep, or other underlying health issues that are causing a mild strain on your body's stress response system. Understanding the significance of this result is important because cortisol plays a crucial role in many bodily functions, including metabolism, immune response, and the body's ability to manage stress. Persistent, moderately elevated cortisol levels can potentially lead to health issues over time if the underlying causes are not addressed. If you're concerned about low cortisol levels, certain lifestyle changes and supplements might help. For instance, incorporating adaptogenic herbs like ashwagandha or supplements like phosphatidylserine could support adrenal health and help normalize cortisol production. However, it's essential to approach supplementation with caution and under the guidance of a healthcare provider, as they can provide personalized advice based on your specific health needs.

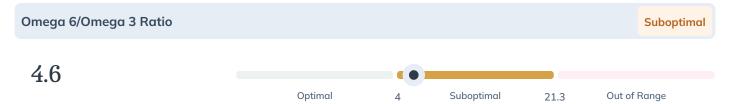
LDL Cholesterol Suboptimal



When LDL cholesterol levels are high but not extremely elevated, it suggests that there is an increased risk for developing heart disease or having a stroke, although the risk is not as severe as it would be with very high LDL levels. This condition indicates that there is more of the "bad" cholesterol in the blood, which can lead to the buildup of plaque in the arteries. Over time, this plaque can harden and narrow the arteries, potentially leading to a blockage that can cause a heart attack or stroke.

Addressing suboptimally high LDL cholesterol is important because it can help reduce the risk of cardiovascular events. Lifestyle changes such as adopting a heart-healthy diet, increasing physical activity, and losing weight if overweight can be effective in lowering LDL cholesterol. Additionally, certain supplements, like plant sterols and stanols, omega-3 fatty acids, soluble fiber, and niacin, have been shown to help improve LDL cholesterol levels.

The question of LDL cholesterol levels is significant because it is a modifiable risk factor for heart disease. By understanding and managing LDL cholesterol, individuals can take proactive steps to improve their heart health and reduce the likelihood of adverse cardiovascular events.



When the Omega 6/Omega 3 ratio in the blood is suboptimally high, it suggests that there is an imbalance between these two types of fatty acids. Omega 6 and Omega 3 are both essential fats that the body cannot produce on its own, so they must be obtained through diet. Ideally, these fats should be in a balanced ratio to support good health. A suboptimally high ratio means that there is relatively more Omega 6 fatty acids compared to Omega 3 fatty acids. While Omega 6 fats are important for health, in excess they can promote inflammation, which is associated with various health issues. Omega 3 fats, on the other hand, are known for their anti-inflammatory properties. To improve a low Omega 6/Omega 3 ratio, dietary changes and supplementation can be helpful. Increasing the intake of Omega 3-rich foods such as fatty fish (like salmon, mackerel, and sardines), flaxseeds, chia seeds, and walnuts can help balance the ratio. Additionally, Omega 3 supplements, such as fish oil or algal oil, can be beneficial. Understanding the Omega 6/Omega 3 ratio is important because it can provide insight into dietary patterns and potential risks for chronic diseases linked to inflammation. Adjusting this ratio towards a more balanced state can contribute to better overall health and may help reduce the risk of certain inflammatory conditions.

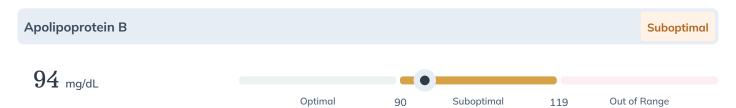


When total cholesterol in the blood is suboptimal high but not extremely so, it suggests that there is an increased amount of cholesterol present, which could be a risk factor for heart disease if not managed properly. Elevated cholesterol can lead to the buildup of plaque in the arteries, potentially causing blockages that can result in heart attacks or strokes. It's important to address this condition because maintaining cholesterol levels within a healthy range is crucial for cardiovascular health.

To improve cholesterol levels, lifestyle changes are often recommended. These can include dietary adjustments such as increasing the intake of fiber-rich foods, reducing saturated fats, and incorporating healthy fats like those found in fish, nuts, and olive oil. Regular physical activity is also beneficial in managing cholesterol levels.

In some cases, supplementation may be advised. For example, omega-3 fatty acids, found in fish oil supplements, have been shown to help lower triglyceride levels, which can contribute to total cholesterol. Plant sterols and stanols, which are substances found in certain margarines, orange juice, and dietary supplements, can also help reduce the absorption of cholesterol in the gut.

It's important to monitor cholesterol levels and take steps to manage them, as doing so can significantly reduce the risk of heart disease and improve overall health.

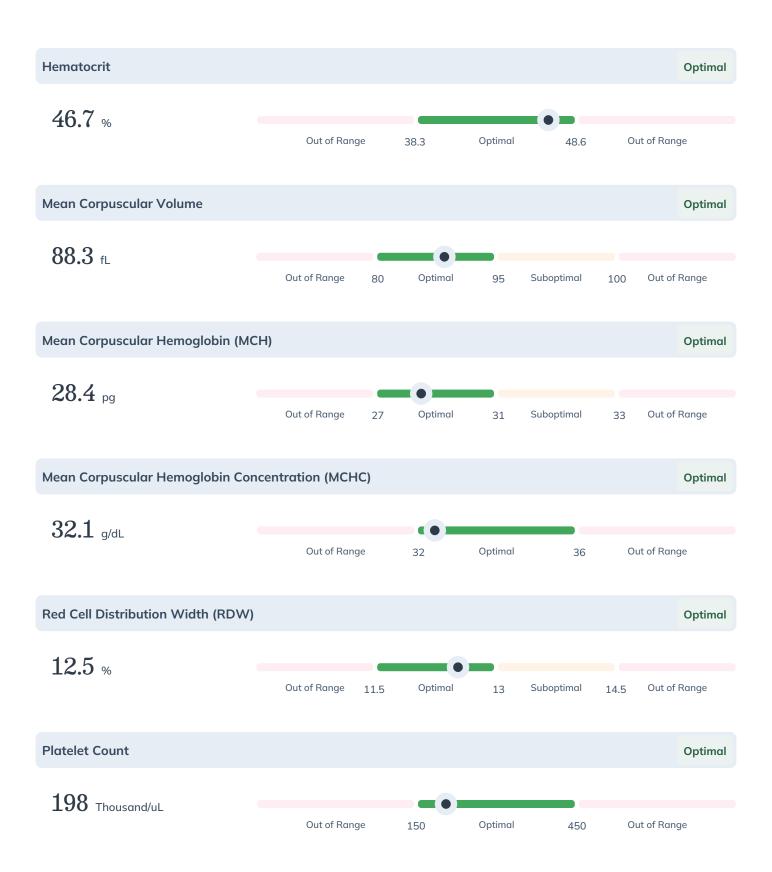


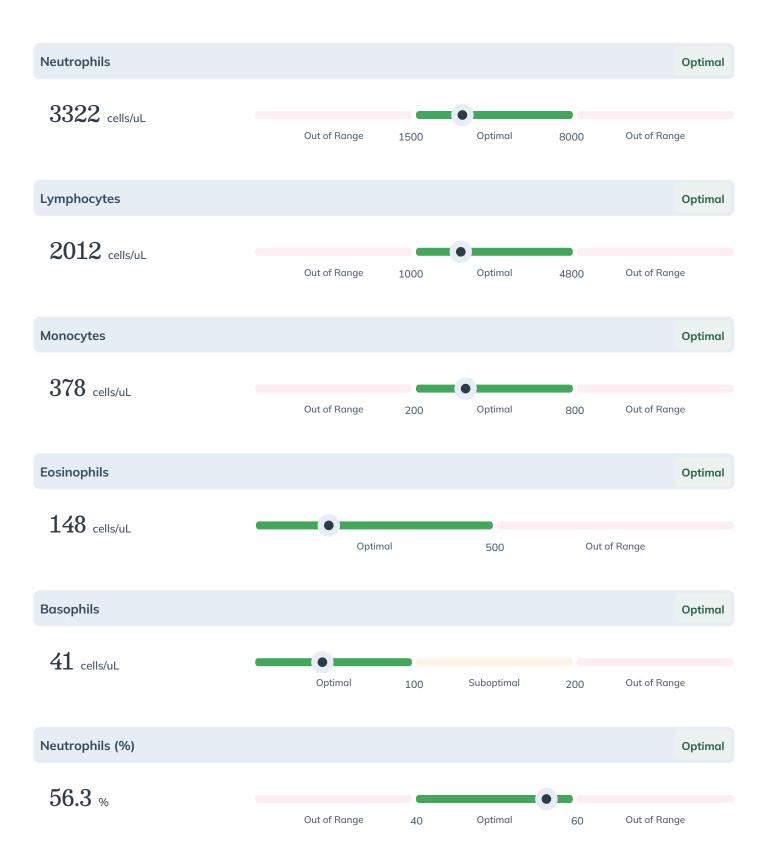
When Apolipoprotein B (ApoB) levels in the blood are suboptimal high but not extremely high, it suggests that there may be a moderate risk of cardiovascular disease. ApoB is a component of certain lipoproteins that are responsible for transporting cholesterol throughout the body, and higher levels can be associated with an increased risk of plaque buildup in the arteries. This buildup can lead to conditions such as atherosclerosis, which is a significant risk factor for heart attacks and strokes. The question of ApoB levels is important because it can help in assessing cardiovascular risk and guiding potential interventions to reduce that risk. While the levels are not in the very high range, they are still above optimal levels, indicating that there may be room for improvement in managing cardiovascular health. To address suboptimally high ApoB levels, lifestyle changes such as a healthier diet, regular exercise, and weight management can be beneficial. Additionally, certain supplements, like omega-3 fatty acids, niacin, and soluble fiber, may help improve lipid profiles, including ApoB levels. However, the effectiveness of these supplements can vary from person to person, and it's important to consider them as part of a broader approach to heart health. It's essential for individuals with suboptimally high ApoB levels to be aware of their cardiovascular risk and to work with their healthcare provider to monitor and manage their condition effectively.

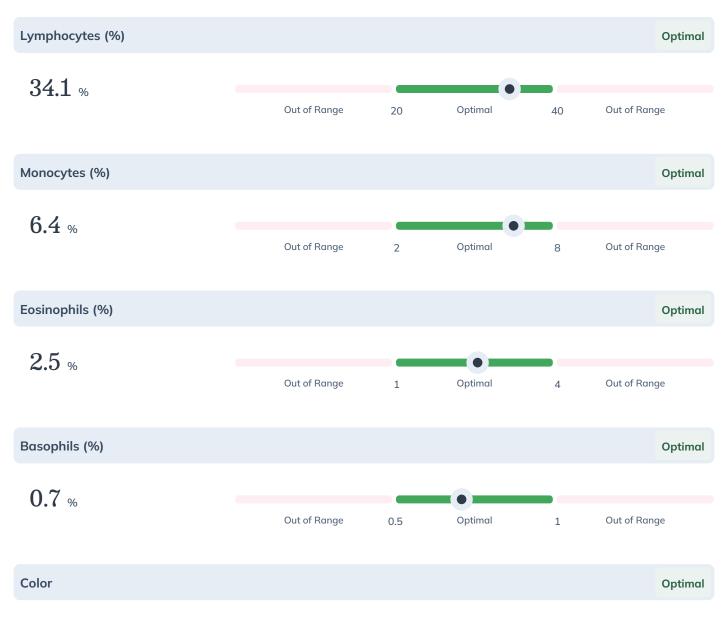


When hsCRP levels in the blood are suboptimal high but not extremely high, it suggests that there may be a moderate level of inflammation present. This can be associated with a variety of issues, such as chronic infections, ongoing health conditions, or lifestyle factors like poor diet and lack of exercise. It's important to consider this information because inflammation plays a role in the development of various diseases, including heart disease and diabetes. Addressing moderately high hsCRP levels can involve lifestyle changes such as adopting a healthier diet, engaging in regular physical activity, and managing stress. Additionally, certain supplements, like omega-3 fatty acids, which are found in fish oil, and curcumin, the active ingredient in turmeric, have been shown to help reduce inflammation and could potentially lower hsCRP levels. Understanding the significance of hsCRP levels is crucial because it can serve as an early indicator of potential health risks, allowing for proactive measures to be taken to improve overall health and reduce the risk of disease.





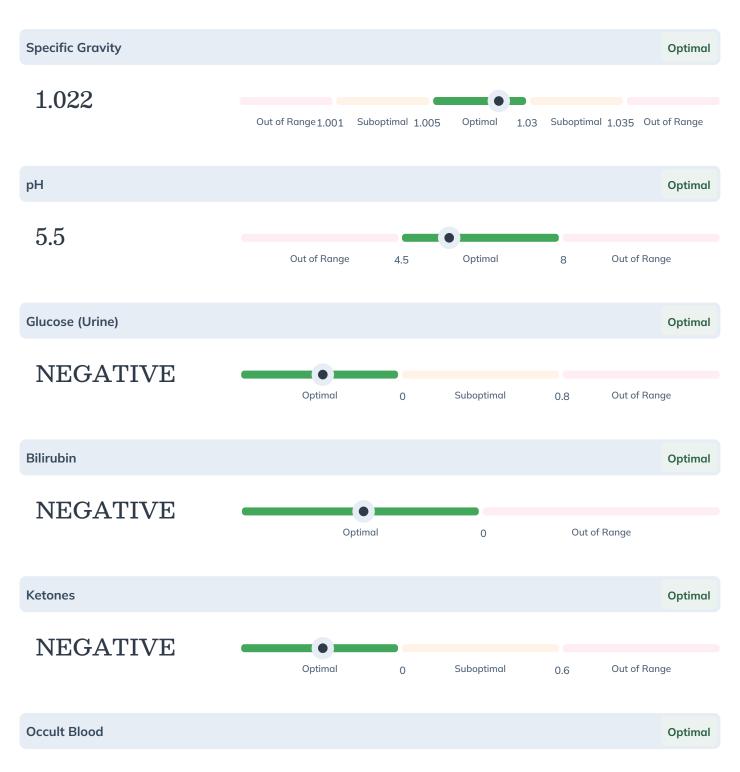




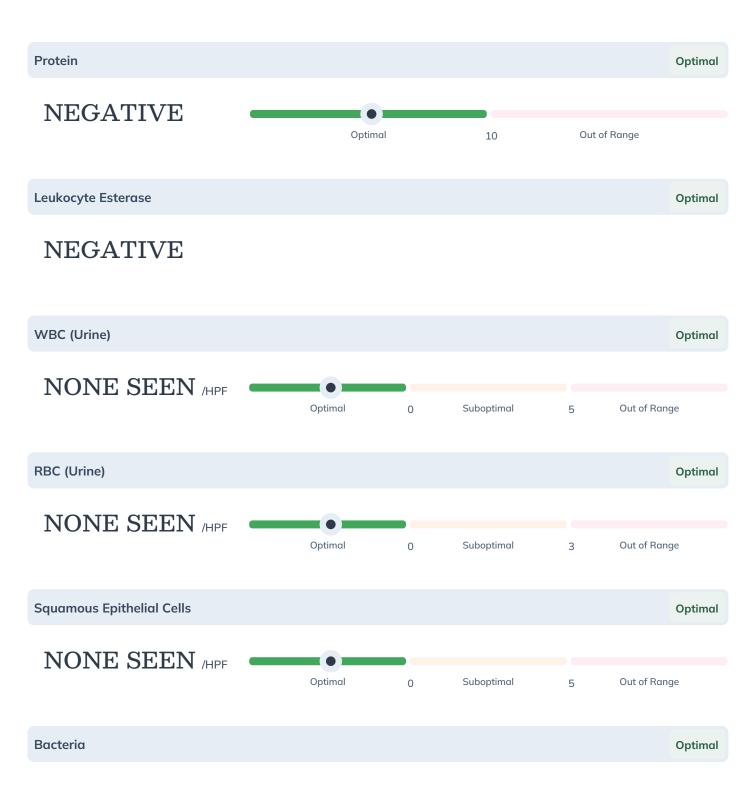
YELLOW

Appearance Optimal

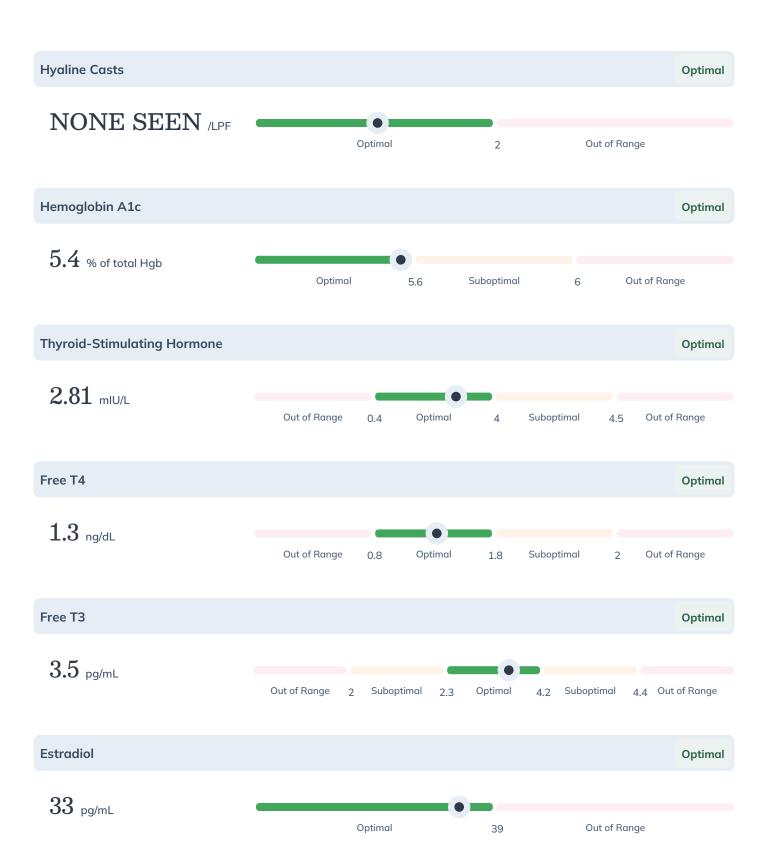
CLEAR



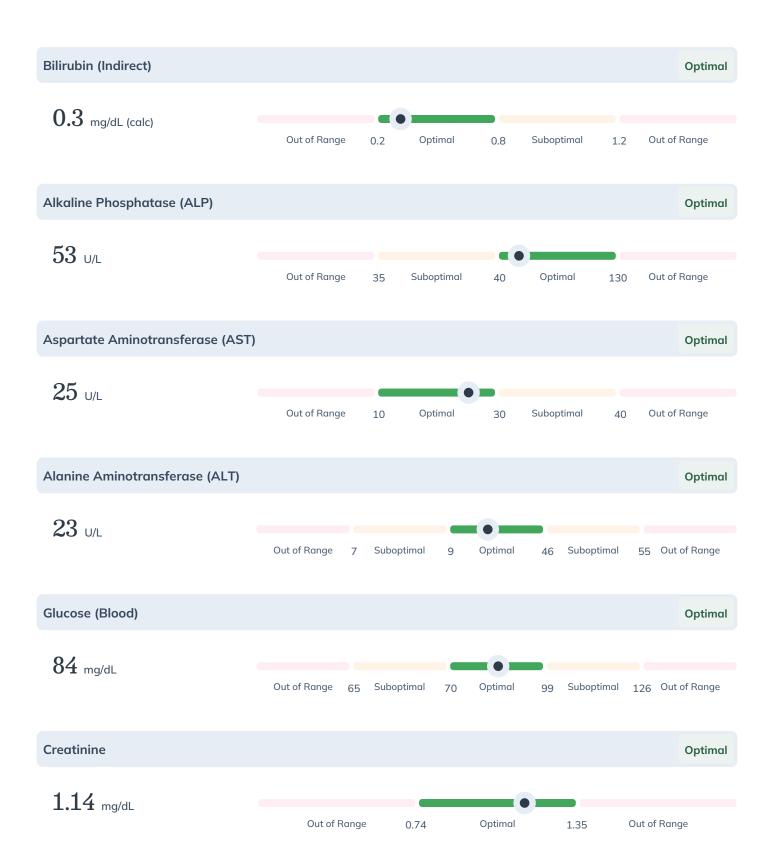
NEGATIVE



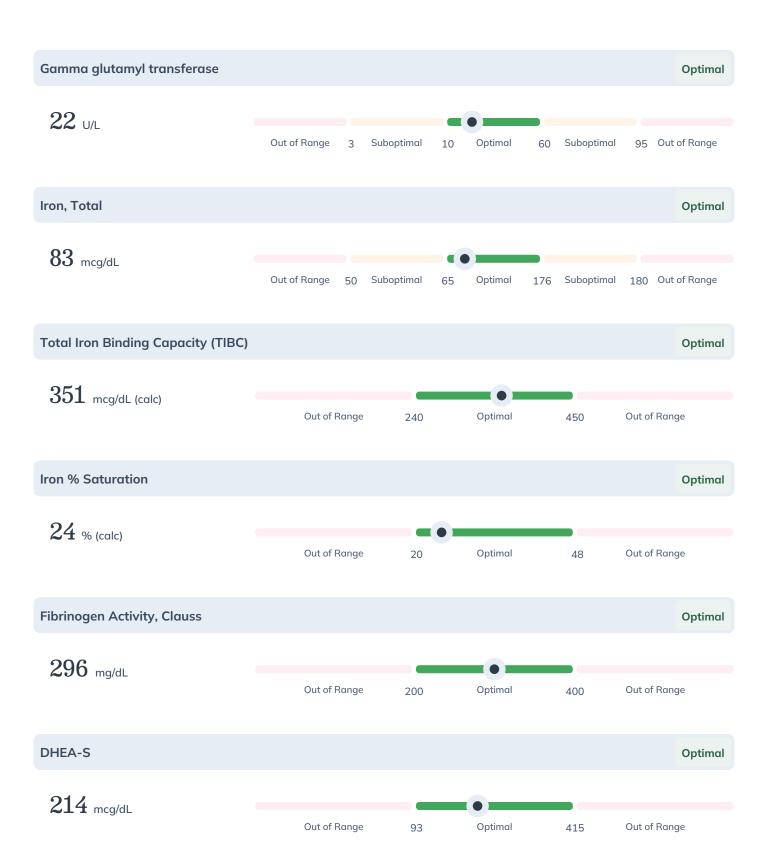
NONE SEEN /HPF







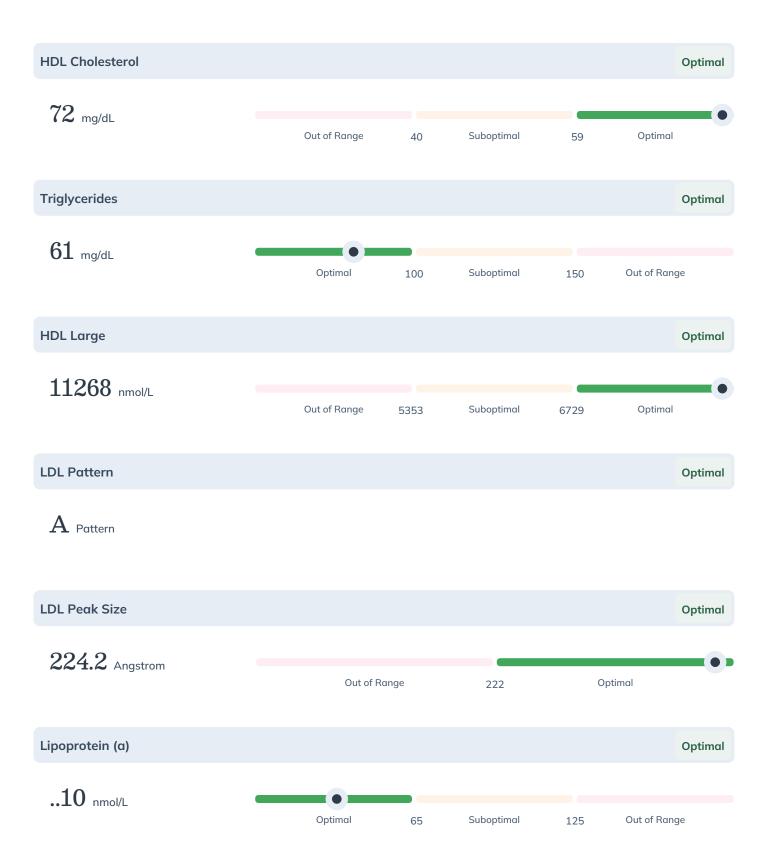












Lp-PLA2 Optimal

116 nmol/min/mL Optimal 123 Suboptimal 225 Out of Range