You have an increased risk of developing symptoms of G6PD deficiency based on your genetic result. Your risk of developing symptoms of G6PD deficiency depends on many factors. For people with G6PD deficiency, symptoms can be triggered by certain factors.

About G6PD Deficiency

- Men who develop symptoms of G6PD deficiency are at risk of developing symptoms of G6PD deficiency. The severity of symptoms depends on the severity of the genetic variant. The risk of developing symptoms of G6PD deficiency is lower in men who are not exposed to factors that can trigger symptoms.
- Women who are carriers of G6PD deficiency have a 50% chance of passing the genetic variant to their children. The risk of developing symptoms of G6PD deficiency in women is lower than in men who are not exposed to factors that can trigger symptoms.

It is important to discuss this result with a healthcare professional.
G6PD Deficiency

G6PD deficiency is a common genetic disorder that can cause hemolytic anemia. It is characterized by a deficiency in the enzyme glucose-6-phosphate dehydrogenase, which is essential for the production of ATP in red blood cells. This leads to an accumulation of toxic substances and can cause hemolysis, the breakdown of red blood cells.

The NHPs at your facility are at risk of developing anemia due to the deficiency in G6PD. To prevent hemolysis, it is important to maintain a well-balanced diet with adequate iron intake and to avoid consuming foods and medications that are known to induce hemolysis.

You have two copies of a genetic variant that may be linked to the G6PD gene.

The presence of the G6PD variant may increase the risk of hemolytic anemia in your NHPs.

Health Risk Determination

This is a moderate risk factor. The presence of the G6PD variant may increase the risk of hemolytic anemia in your NHPs. It is important to maintain a well-balanced diet with adequate iron intake and to avoid consuming foods and medications that are known to induce hemolysis.

Additional references:

Other Factors

G6PD deficiency is a general condition that may affect other organs in the body, such as the liver and the kidneys. It is important to monitor your NHPs for signs of liver and kidney damage.

Test Interactions

This test interacts with the following tests:
- Hemoglobin
- Iron
- Transaminases

Contraindications:
- Hemoptysis
- Hematemesis
- Melena

Purpose:
- To assess the presence of G6PD deficiency

Reference Ranges:
- G6PD Activity: 400-1500 units/L

Warning and Limitations:
- This test is not available for patients on hemodialysis.
- This test is not available for patients with a history of hemolytic anemia.
- This test is not available for patients with a history of autoimmune disease.

Additional Information:
- G6PD deficiency is a common genetic disorder that can cause hemolytic anemia.
- The G6PD variant may increase the risk of hemolytic anemia in your NHPs.
- It is important to maintain a well-balanced diet with adequate iron intake and to avoid consuming foods and medications that are known to induce hemolysis.

This test can be ordered with the following tests:
- Hemoglobin
- Iron
- Transaminases

This test cannot be ordered with the following tests:
- Hemoptysis
- Hematemesis
- Melena

Test Description

This test measures the activity of the enzyme glucose-6-phosphate dehydrogenase, which is essential for the production of ATP in red blood cells. A deficiency in this enzyme can lead to hemolysis.

Test Performance Summary

- Sensitivity: 98%
- Specificity: 98%
- Positive Predictive Value: 99%
- Negative Predictive Value: 99%
- Accuracy: 99%

Normally, the activity of the enzyme glucose-6-phosphate dehydrogenase is normal in red blood cells. A deficiency in this enzyme can lead to hemolysis.

References
4. Hemoptysis
5. Hematemesis
6. Melena
7. Liver and kidney damage
8. Autoimmune disease
9. Hemolytic anemia
10. G6PD deficiency

Change Log

Date: June 20, 2020
Description: Updated test name to G6PD Deficiency

Date: July 2018
Description: New test created
G6PD Deficiency

G6PD deficiency is a common genetic condition caused by defects in an enzyme called glucose-6-phosphate dehydrogenase, or G6PD. The G6PD enzyme helps protect red blood cells from damage. In people with G6PD deficiency, red blood cells are destroyed upon exposure to certain environmental triggers, which can lead to episodes of anemia. This test includes two common variants linked to G6PD deficiency.

Overview  Scientific Details  Frequently Asked Questions

G6PD Deficiency

What does this test tell us?

What does this test not tell us?

The report says the variant included in this test is not the most common and least studied in certain ethnicities. What does this mean?

The report says my genetic result is based on the sex I indicated in my account settings. What does that mean?

Where can I learn more about G6PD deficiency, support groups, and other resources?

My report says two copies of a genetic variant were detected. What does this mean?

This means you have two copies of a genetic variant we tested. You inherited one copy of this variant from each of your parents. Females with this result are at risk of developing symptoms of G6PD deficiency. However, this does not mean you have developed or definitely will develop symptoms of G6PD deficiency. Exposure to certain environmental factors is usually required to trigger symptoms. Many people with G6PD deficiency do not experience symptoms. Learn more about factors that can trigger symptoms of G6PD deficiency.

Is this answer helpful?  Yes  No

Why do males only need one variant to have an increased risk of developing symptoms of G6PD deficiency, whereas females need two variants or two copies of a variant?

The variants we tested are in the G6PD gene, which is located on the X chromosome. This means the G6PD gene is inherited differently than most genes, in a manner called X-linked recessive inheritance. Learn more about X-linked recessive inheritance.

Is this answer helpful?  Yes  No

What does increased risk mean?

The G6PD enzyme is important for protecting red blood cells against damage. Certain variants in the G6PD gene can make the G6PD enzyme less effective at protecting these cells, which can lead to their destruction in response to certain medications, infections, and foods. When red blood cells are destroyed, people with G6PD deficiency may experience symptoms of anemia, including dark urine, pale skin, a rapid heart rate, and jaundice.

If your report says you have an “increased risk,” it means that your chances of developing symptoms due to G6PD deficiency are increased based on your genetic result for the test. However, many people with G6PD deficiency do not develop symptoms. Exposure to certain environmental triggers — such as certain medications, infections, and foods — is usually required to develop symptoms. Learn more about factors that can trigger symptoms of G6PD deficiency.

The exact percentage of people with your genetic result who develop symptoms of G6PD deficiency is not currently known. It is important to discuss this result with a healthcare professional.

Is this answer helpful?  Yes  No

My report says two copies of a variant were detected. What are some things I could do?

This genetic result is associated with an increased risk of developing symptoms of G6PD deficiency. Consider setting up an appointment with a healthcare professional to discuss this result.

Is this answer helpful?  Yes  No

How could my result affect my family?

Since you share 50% of your family members, they may also be interested in your result. If you are thinking about talking to family members about your results, see this article for a discussion of things to consider before having the conversation.

Because you have two copies of a variant we tested, it is expected that:
- Each of your children will inherit 50% of your G6PD variants.
- Each of your parents have this variant.
- Each of your female siblings has at least one copy of this variant.
- Each of your male siblings has at least a 50% chance of having this variant.

In most cases, your female children are not expected to develop symptoms of G6PD deficiency unless they inherit a variant from your partner. This is because the way this variant is inherited, called X-linked recessive inheritance.

Is this answer helpful?  Yes  No

Have more questions? Check out our Customer Care Help Center.