

ASTRO



DNA

AstroDNA

Motherhood

Advanced genomics DNA test for mother's well-being and baby's growth during and after pregnancy



Report for

Anusha Varma



AstroDNA

Motherhood

Advanced genomics DNA test for mother's well-being and baby's growth during and after pregnancy

Pregnancy – a beautiful journey to motherhood

From the time a couple realizes that a baby is on the way, not only is it a moment of joy for the family, but it also gives rise to a certain degree of anxiety and curiosity. Everybody looks forward to a healthy new born and the nine-month long journey with as few complications as possible.

A Unique Experience

Pregnancy is a complex physiological process controlled by several genes. Every woman experiences her pregnancy differently. The inter-individual variability of the experience of pregnancy is attributed to the variability of genome (or genotype) among individuals. By understanding the variant genomics of the woman, pregnancy risks can be predicted and managed, thus making the journey of pregnancy enjoyable with a happy outcome.

Variant Genomics

Genetic technology is now available to study in-depth the variant genomics of pregnancy. Based on strong research findings in variant genomics of pregnancy, GeneTech has designed a test on saliva or oral swab of the mother providing a comprehensive analysis of the experience of pregnancy.

A Guiding Light

This analysis can be seen as a guiding light along with other medical management protocols (like screening and ultrasound scans of pregnancy) in helping couples mitigate the risks by anticipating various conditions in advance and managing them efficiently.



REPORT OVER VIEW

Nutrition, weight gain, fitness, lifestyle, emotions, skin health, delivery experience, post-partum and other health conditions -- management of all these aspects is crucial for a health and happy pregnancy and child birth. However, every woman is unique. AstroDNA Motherhood report elaborates a woman's risks and susceptibilities to various conditions during pregnancy and after delivery allowing her to prevent complications, seek help, and relish the experience.

Pregnancy and Nutrition

Nutrition needs and healthy diet choices in pregnancy derived based on your genes

Pregnancy and Health conditions

Work out a management plan for medical challenges that may arise in pregnancy



Pregnancy, Body Weight and Metabolism

Know your genetic risk for weight gain and metabolism related issues. Prevent complications.

Delivery and Post Partum

Make your delivery and post-delivery experience enjoyable and stress free



Pregnancy and Physical fitness

Design a fitness regime that suits you the best with maximum benefits

Pregnancy and Skin health

Minimize skin issues, maintain healthy skin, and glow in pregnancy



Lifestyle and Habits during Pregnancy

Choose a good lifestyle and avoid risks to give the best start in life for your baby

Pregnancy and Emotional Behavioural Aspects

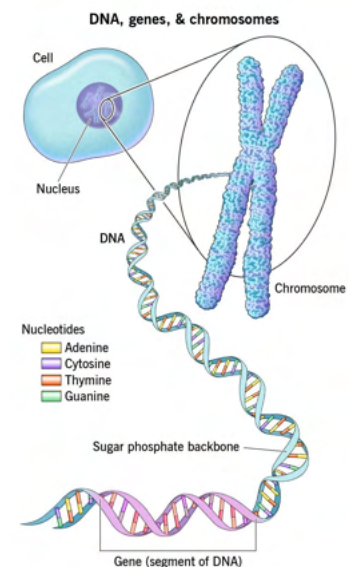
Know your genetic makeup, regulate your emotions, limit worry, and enjoy pregnancy.

A BRIEF INTRODUCTION TO GENETICS

Wellness is an active process of becoming aware of your health and making prudent choices toward a healthier life. Your genetic make-up and lifestyle together have a significant bearing on your overall well-being. This AstroDNA genetic test helps you identify your genetic strengths and weaknesses thereby enabling you to make nutrition choices that are suitable to your body and make adjustments to your lifestyle for a healthier life.

Genetics and your DNA

Genetics plays a major role in determining your body constitution and its response to the environment. Even though the human genome (DNA) of all humans is 99.9% same, the small 0.1% of variation determines the individuality of a person, that is, physical and mental constitution. Knowledge of this human genetic variation offers the potential to not only predict the health outcome of how their body responds to environment and lifestyle, but also prevent or manage adverse outcomes in individuals – based on individual genetic differences. For instance, knowing your genetic constitution or profile can help you determine what kind of diet is best suited to your body and the likelihood of developing any health conditions related to metabolism.



AstroDNA Genetic Test

Using data from worldwide research and GWAS (genome wide association studies) genes and genetic variants associated with crucial health conditions related to dietary nutrition and its metabolism were identified. This AstroDNA test examines large number of such data points or genetic variants on your DNA that are known to be associated with metabolism of different dietary nutrients and provides information about how your body responds to nutrition. This information can also help you maximize your efforts to build a personalized healthy future.

DNA is the genetic material present in every cell containing a code that controls various functions in your body. DNA is made up of four types of chemical structures called nucleotides – Adenine (A), Thymine (T), Guanine (G), and Cytosine (C), arranged in various combinations to form genetic code.

Gene is a unit of DNA with genetic information or code to produce a specific protein or an enzyme in your body to perform a specific function.

Genetic Markers and Variants are identified locations on the genes that are known to be associated with well-being. Change of code at these locations results in a variation among the population which need not cause a disease but can make a person either susceptible to, or protected from, a health condition.

Genotype is combination of the nucleotides at a specific location on the gene. For example, AA, AT and TT are possible genotype combinations for A and T. AstroDNA test identifies your unique genotype for each of the markers for all conditions studied in this test using state-of-the-art gene testing technologies.

A GUIDE TO YOUR REPORT

Contents of your report

Your report has four divisions: (1) Introduction, (2) Summary, (3) Results, (4) End notes.

Introduction (page 2 to 7) division provides you introductory information about the condition categories covered in the test and a brief introduction to genetics. It explains what role genetics plays in your health and well-being, and how lifestyle and environment plays a major role in shaping your health. Introduction includes guide to the report and table of contents.

Summary (page 8 to 12) division provides at a glance the implications of your genotype results for all the markers we tested against your sample.

Results (page 13 to 51) division is divided into multiple sections, one for each condition category. Each section provides results for markers tested for each condition in that category, an explanation for the condition and its importance to your health, and recommendations based on your results.

Limitations (page 52) division mentions details related to the limitations of the test, technology used and the results.

Reading the Summary

The summary division provides an overview of the results for the markers we tested against all the conditions covered in this test. The results are grouped into multiple sections based on condition categories.

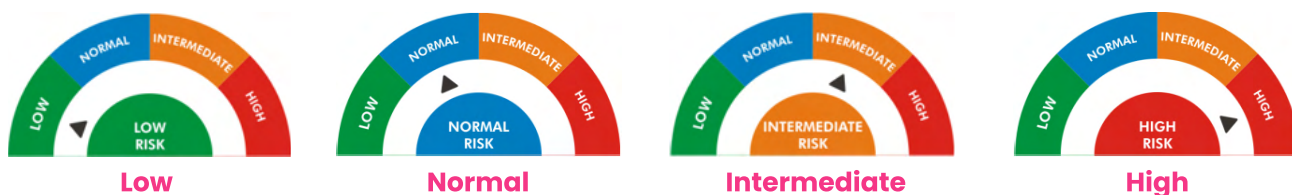
Category icon and name → **Pregnancy and Nutrition** ← Risk Level Indicator

Condition Name	Risk level
Secondary Vitamin A Deficiency	Low, Normal, Intermediate, High
Vitamin B2 Deficiency	Low, Normal, Intermediate, High
Vitamin B6 Deficiency	Low, Normal, Intermediate, High
Vitamin B9 or Folate Deficiency	Low, Normal, Intermediate, High

Condition Name → ← Risk level for Condition

Result Result Risk Level Indicators

In this test, we report your predisposition for various conditions as having Low Risk, Normal Risk, Intermediate Risk or High Risk. Each of these is shown using the following graphic indicators.



What do risk levels mean?

Low Risk result means that your genotype is having a protective effect on you, resulting in reduced risk for a health condition compared to general population risk/baseline risk.

Normal Risk result means that you have no elevated risk of developing a health condition compared to general population risk/baseline risk.

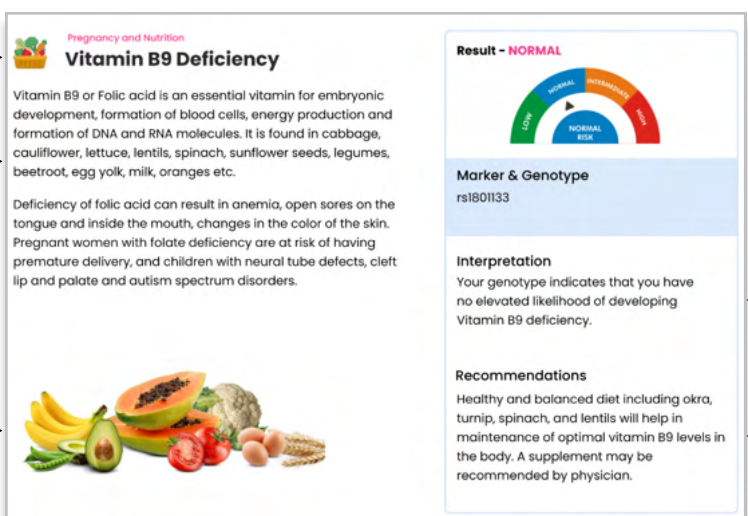
Intermediate Risk result means that you are on borderline risk level.

High Risk result means that you have elevated risk of developing a health condition compared to general population risk/ baseline risk. The word “risk” should be read as “needs more attention”.

Developing a condition is not based on your genotype alone. Your diet, your lifestyle, and the environment are equally contributing factors. If the report says you have a high risk but you have not developed such a condition, it could mean that your lifestyle, diet and other factors may have already contributed to your good health. Please note that this is not a diagnostic test for any genetic disease or existing health condition. This is your genetic profile for the specific conditions chosen for this test and will help you maximize your efforts to build a healthy future.

Reading your detailed results for each condition

All conditions chosen for the AstroDNA test are divided into multiple categories. For each category, results or genotypes for the conditions are reported in this format:



The image shows a detailed report for 'Vitamin B9 Deficiency' with several annotations pointing to different parts of the report:

- Condition icon and name:** Points to the 'Pregnancy and Nutrition' header and the 'Vitamin B9 Deficiency' title.
- About the condition:** Points to the descriptive text about Vitamin B9 or Folic acid, its role in embryonic development, and its sources in various foods.
- Representative image for condition:** Points to the image of various fruits and vegetables like bananas, papaya, avocado, tomatoes, and corn.
- Risk Level Indicator:** Points to the semi-circular risk level indicator showing 'Normal Risk' in the center.
- Markers tested, genotype found:** Points to the 'Marker & Genotype' section showing 'rs1801133'.
- Interpretation for the genotypes:** Points to the 'Interpretation' section stating that the genotype indicates no elevated likelihood of developing Vitamin B9 deficiency.
- Recommendation based on Interpretation:** Points to the 'Recommendations' section suggesting a healthy diet and possibly a supplement.

Acting on your report

AstroDNA test does NOT recommend changes to your medications based on this report and strictly advises patients against self medication. All decisions pertaining to your medications must be taken only after consulting with your family doctor. Scientific references pertaining to markers can be provided on request on case to case basis. Our genetic counselor can help you understand this report better and explain the recommendations in detail.

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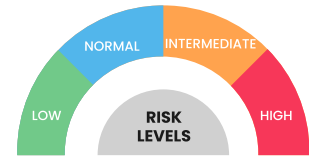
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Pregnancy and Nutrition



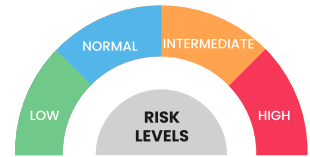
Condition Name

Risk level

Secondary Vitamin A Deficiency	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Vitamin B2 Deficiency	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Vitamin B6 Deficiency	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Vitamin B9 or Folate Deficiency	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Vitamin B12 Deficiency	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Vitamin C Deficiency	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Vitamin D Deficiency	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Vitamin E Deficiency	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Vitamin K Deficiency	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Zinc Deficiency	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Iron Deficiency	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Magnesium Deficiency	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Calcium Deficiency	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Dietary antioxidants Intake and DNA Repair	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Lactose Intolerance related Calcium and Vitamin D Deficiency	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Predisposition to Gluten Intolerance	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>



Pregnancy, Body Weight and Metabolism



Condition Name

Risk level

Obesity	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Body Mass Index	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Carbohydrate And Weight Gain	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Fat Metabolism	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Lipid levels	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Insulin sensitivity	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



Pregnancy and Physical fitness

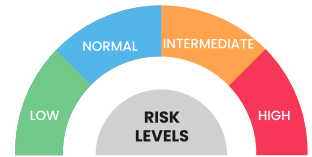
Condition Name

Risk level

Motivation To Exercise	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Achilles Tendinopathy	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Leg cramps or pain	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>



Lifestyle and Habits during Pregnancy



Condition Name

Risk level

Alcohol Craving	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Caffeine	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Smoking	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>



Pregnancy and Emotional Behavioural Aspects

Condition Name

Risk level

Anxiety	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Emotional Eating	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Memory	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>



Pregnancy and Skin health

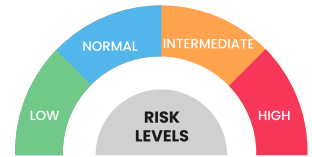
Condition Name

Risk level

Skin pigmentation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Skin Tanning	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Sun Sensitivity (Sun Burn)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Varicose Veins	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Eczema	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Freckles	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



Delivery and Post Partum



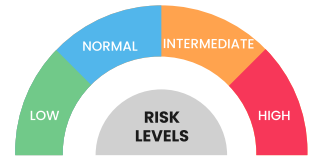
Condition Name

Risk level

Pre-term labour	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Prolonged labour	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Pain Perception (Labour pain tolerance)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Poor birth weight of baby	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Large for gestational age baby	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Weight gain after delivery	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Fibre diet and weight loss	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Post Partum Depression	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Hair Loss	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Maternal OCD	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



Pregnancy and Health conditions

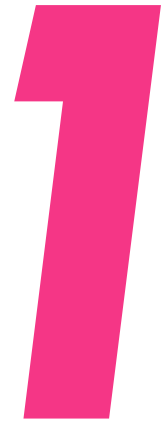


Condition Name	Risk level
Pregnancy Induced Hypertension	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Type 2 Diabetes Predisposition	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Thyroid	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Allergies	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Hemorrhoids	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Excessive day sleep	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Kidney Stones	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Sjogren's Syndrome	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Arrhythmias	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
HDL Cholesterol	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Thrombosis	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Pregnancy and Nutrition

Eating food with good nutrition is one of the best things you can do during pregnancy to provide energy for yourself and your growing baby. The food you eat is your baby's main source of nourishment and therefore it is critical to get all of the nutrients in the diet. The basic principles of good diet remain the same – get plenty of fruits, vegetables, whole grains, lean protein and healthy fats. However, a few nutrients in a pregnancy diet will deserve special attention based on your genes.

The following pages will provide information on your predispositions to deficiencies, likelihood for food cravings and the metabolism of food types, thereby helping you in making healthier diet choices.





Pregnancy and Nutrition

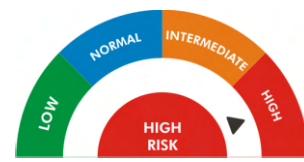
Secondary Vitamin A Deficiency

Vitamin A is a fat soluble vitamin found in orange colored fruits and vegetables, dark green leafy vegetables, organ meats, Salmon, Tuna and Mackerel. It is vital for vision, immune function, bone functioning, cholesterol reduction and for reproduction.

Higher circulating levels of beta carotene indicate secondary Vitamin A deficiency. Subclinical vitamin A deficiency is a problem usually seen during the late pregnancy and may be associated with an increased risk of preterm delivery and maternal anemia.



Result - HIGH RISK



Marker & Genotype

GTMH0001 - CC (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Vitamin A deficiency.

Recommendations

Healthy and balanced diet including orange coloured vegetables and fruits will help maintain optimal Vitamin A in blood and prevent Vitamin A deficiency. The role of supplements is yet to be established in raising Vitamin A and reducing beta carotene in blood



Pregnancy and Nutrition

Vitamin B2 Deficiency

Vitamin B2 or Riboflavin is an essential vitamin for cellular function, energy production, iron absorption and detoxification. It is found in dairy products, eggs, liver and enriched flour. Lack of riboflavin can show up as cracks at the corners of the mouth, anemia, sore throat and cataracts. It is essential during pregnancy because it supports your baby's bone, muscle, and nerve development.

Women with alcohol use, vegetarians and vegans tend to be deficient in riboflavin. All pregnant women need 1.4 mgs of riboflavin per day either in diet or as a supplement. There is no known toxicity for taking too much riboflavin and no upper limit set.



Result - NORMAL



Marker & Genotype

GTMH0002 - GG (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Vitamin B2 deficiency.

Recommendations

If your diet includes a variety of dairy products, lean meats, eggs, green vegetables, and enriched cereals and grains, you will get your daily dose of Vitamin B2. A supplement may be recommended by physician in pregnancy.



Pregnancy and Nutrition

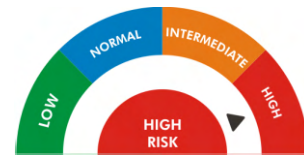
Vitamin B6 Deficiency

Vitamin B6 or Pyridoxine is an essential vitamin vital for body metabolism and minimizes heart disease risk. It is found in cereals, beans, liver, meat, eggs, turkey, chickpeas, tuna, potatoes, sunflower seeds, lentils and bananas. Deficiency can cause scaly patches on skin, dandruff, inflammation of tongue, cracking of the corners of the mouth and depression.

In pregnancy, Vitamin B6 plays a critical role to play in brain and nervous system development of your baby. Ensuring an adequate intake of B vitamins through a nutritious diet, you can enjoy a smoother, healthier pregnancy for you and your baby! It also helps resolve morning sickness in some cases.



Result - HIGH RISK



Marker & Genotype

GTMH0003 - GC (XXX gene)

GTMH0004 - GG (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Vitamin B6 deficiency.

Recommendations

Healthy and balanced diet including whole grain cereals, egg, soya beans and meat will help in maintenance of optimal vitamin B6 levels in the body during pregnancy.



Pregnancy and Nutrition

Vitamin B9 Deficiency

Vitamin B9 or Folic acid is an essential vitamin for embryonic development, formation of blood cells, energy production and formation of DNA and RNA molecules. It is found in cabbage, cauliflower, lettuce, lentils, spinach, sunflower seeds, legumes, beetroot, egg yolk, milk, oranges etc.

Deficiency of folic acid can result in anemia, open sores on the tongue and inside the mouth, changes in the color of the skin. Pregnant women with folate deficiency are at risk of having premature delivery, and children with neural tube defects, cleft lip and palate and autism spectrum disorders.



Result - NORMAL



Marker & Genotype

GTMH0005 - GC (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Vitamin B9 deficiency.

Recommendations

Healthy and balanced diet including okra, turnip, spinach, and lentils will help in maintenance of optimal vitamin B9 levels in the body. A supplement may be recommended by physician.



Pregnancy and Nutrition

Vitamin B12 Deficiency

Vitamin B12 or folate is a crucial water soluble vitamin and is found in animal products, such as fish, meat, eggs, dairy products, yeast extract and fortified breakfast cereals, legumes, nuts and soy. It is essential for nerve tissue health, brain function, formation of red blood cells and energy production. Deficiency of Vitamin B12 results in anemia, fatigue, loss of appetite, mood swings, and soreness of the mouth or tongue. In pregnancy, folate deficiency can increase risk of having a baby with neural tube defect.



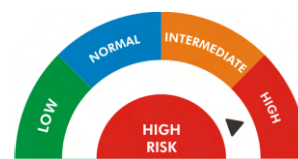
Pregnancy and Nutrition

Vitamin C Deficiency

Vitamin C or Ascorbic acid is essential for bone, skin and blood vessels growth and development, repair of body tissues, maintenance of a healthy heart and immune system. It is present in lemons, oranges, tomatoes, potatoes, broccoli, cauliflower, sprouts, capsicum, guava, berries, kiwi etc. Deficiency of Vitamin C causes fatigue, depression, gingivitis, rash, internal bleeding, impaired wound healing and rarely Scurvy. During pregnancy, vitamin C is vital for both mom and baby. It also prevents preeclampsia (high blood pressure during pregnancy). Therefore, it is important to make sure you're consuming enough when you're expecting.



Result - HIGH RISK



Marker & Genotype

GTMH0006 - TT (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Vitamin B12 deficiency.

Recommendations

A minimum recommended daily allowance of 2.4mg/day is advised. Vegetarians and vegans can include cheese in their diet to meet the requirement. In case of diagnosed Vitamin B12, supplements should be taken based on your physician's recommendation.

Result - NORMAL



Marker & Genotype

GTMH0007 - GC (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Vitamin C deficiency.

Recommendations

To get enough vitamin C during pregnancy, eat citrus fruits and other vegetables. Because it's fairly easy to get enough vitamin C from your diet, you probably don't need to take a vitamin C supplement.



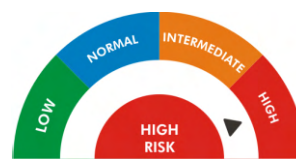
Pregnancy and Nutrition

Vitamin D Deficiency

Vitamin D or Sun Shine Vitamin is produced by your body in response to skin being exposed to sunlight. It is available in milk, fish, fish liver oil, egg yolks, strawberries, yeast, peanuts, beans, lentils etc. Vitamin D is essential for calcium absorption in the intestines, bone health, strength of teeth and muscle function. Vitamin D is important in pregnancy as it supports your baby's healthy bone development. It also prevents preeclampsia (high blood pressure during pregnancy), preterm birth and infections in pregnancy.



Result - HIGH RISK



Marker & Genotype

GTMH0008 - GT (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Vitamin D deficiency.

Recommendations

Healthy and balanced diet including moderate exposure to early day sun shine and prenatal supplement will help in maintenance of optimal Vitamin D levels in the body during pregnancy.



Pregnancy and Nutrition

Vitamin E Deficiency

Vitamin E or Tocopherol balances cholesterol, repairs damaged skin, thickens hair, balances hormones, improves vision, improves muscle strength and it helps the body use vitamin K. It is available in nuts, vegetable oils, soybean oils, mango, kiwi and tomato. Although vitamin E deficiency is rarely seen in healthy adults, for pregnant women, insufficient dietary vitamin E may lead to complications such as pre-eclampsia and the baby being born small.



Result - NORMAL



Marker & Genotype

GTMH0009 - GG (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Vitamin E deficiency.

Recommendations

Healthy and balanced diet including nuts and vegetable oils will help in maintenance of optimal Vitamin E levels in the body. Vitamin E supplement should be taken only on physician's advice during pregnancy.



Pregnancy and Nutrition

Vitamin K Deficiency

Vitamin K helps in blood clotting, wound healing and prevents excessive bleeding. and bone metabolism. Vitamin K supports the maintenance of strong bones, improves bone density and decreases the risk of fractures. It is available in green leafy vegetables, meat, eggs, fish liver, cheese, blue berries etc.

Vitamin K Deficiency of vitamin K is uncommon, but people with celiac disease or heavy alcohol consumption are at risk. There is no increase in dietary requirements of vitamin K when you are pregnant. Most of the vitamin K your body requires is made from the bacteria in the gut and the rest is sourced from your diet.



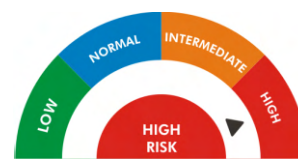
Pregnancy and Nutrition

Zinc Deficiency

Zinc plays an important role in many biological functions and is essential for immune system, maintenance of sense of taste and smell and wound healing. Although severe Zinc deficiency is now rare, moderate Zinc deficiency is still prevalent. In pregnancy, your baby needs zinc for cell growth and brain development. Pregnant women require 11mg of zinc per day. Foods that contain zinc include red meat, shellfish, poultry, pork, dairy products, fortified cereal, beans, and nuts. Low zinc concentrations may cause preterm birth or they may even prolong labour.



Result - HIGH RISK



Marker & Genotype

GTMH0010 - AA (XXX gene)

GTMH0011 - AT (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Vitamin K deficiency.

Recommendations

Include foods such as green leafy vegetables, cheese or meat in your diet to enable sufficient intake of vitamin K. The use of vitamin K supplements during pregnancy is not recommended unless prescribed by a physician.

Result - NORMAL



Marker & Genotype

GTMH0012 - AA (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Zinc deficiency.

Recommendations

Most people who eat meat and have a reasonably well-balanced diet get plenty of zinc. But if you eat a mostly vegetarian diet, consider zinc supplement based on your physician's advice.



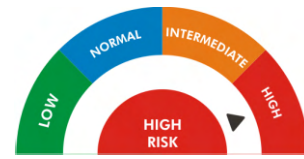
Pregnancy and Nutrition

Iron Deficiency

Pregnant women need about twice the amount of iron as compared to non pregnant women because the body uses iron to make extra blood for the baby and placenta. However, 50% of pregnant women don't get enough of this important mineral. Iron deficiency is the most common cause of anemia in pregnancy. Your doctor will prescribe iron supplements in pregnancy to help avoid Iron deficiency.



Result - HIGH RISK



Marker & Genotype

GTMH0013 - GA (XXX gene)

GTMH0014 - TT (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Iron deficiency.

Recommendations

Dietary sources of iron include lean red meat, poultry, fish, Iron-fortified breakfast cereals, dark green leafy vegetables, dried beans and peas.



Pregnancy and Nutrition

Magnesium Deficiency

Maintaining a healthy and adequate magnesium level can be important for a pregnant woman and aids in good sleep, maintaining bone health, reducing leg cramps and helps keep the body hydrated. Magnesium supplementation showed better pregnancy outcomes by reducing the risk of stillbirth, fetal growth restrictions, and preeclampsia, a blood pressure condition developed during pregnancy.



Result - NORMAL



Marker & Genotype

GTMH0015 - GT (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Magnesium deficiency.

Recommendations

Magnesium is a naturally occurring mineral and pregnant women should increase their intake of magnesium rich foods such as nuts, seeds, beans, and leafy greens and/or to supplement with magnesium at a safe level.



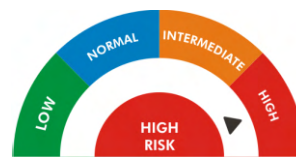
Pregnancy and Nutrition

Calcium Deficiency

Calcium is an important nutrient for the body. During pregnancy, you need more calcium for your health and the health and development of the baby. Regardless of whether or not you take in enough, your body will still give calcium to your baby. So, if you are not replacing what you're giving away, you could end up with weakened bones and a greater risk of osteoporosis later in life. In addition, not consuming enough calcium can lead to High blood pressure during pregnancy and low birth weight of the baby.



Result - HIGH RISK



Marker & Genotype

GTMH0016 - AT (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Calcium deficiency.

Recommendations

Increased consumption of calcium rich food with leafy greens, broccoli, cabbage, okra, fortified flour, tofu etc. may be incorporated in your diet after consultation with a dietician.



Pregnancy and Nutrition

Dietary antioxidants Intake and DNA Repair

Antioxidants are substances that can prevent or slow damage to cells by helping DNA repair and are available in both natural and artificial forms. Including optimal level of foods with antioxidants in diet is a healthy practice especially in pregnancy. Although dietary antioxidant supplements are useful in pregnancy, use of taking dietary anti-oxidants in enhancing DNA repair capacity varies from person to person.



Result - NORMAL



Marker & Genotype

GTMH0017 - AA (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing Dietary antioxidants Intake and DNA Repair deficiency.

Recommendations

Healthy and balanced diet including with exercise is recommended. Major lifestyle changes are recommended for people who engage in smoking or drinking and unhealthy eating habits.



Pregnancy and Nutrition

Lactose Intolerance related Calcium and Vitamin D Deficiency

Calcium and Vitamin D are important nutrients for the body. During pregnancy, you need more calcium for your health and the health and development of the baby. If you are lactose intolerant, you may have higher chances of developing calcium and Vitamin-D deficiency. In addition, not consuming enough calcium can lead to high blood pressure during pregnancy and low birth weight of the baby.



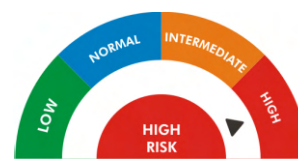
Pregnancy and Nutrition

Predisposition to Gluten Intolerance

Gluten is a family of storage proteins, formally known as prolamins which are naturally found in certain grains. The immune cells sometimes recognize gluten as a threat and trigger an aggressive inflammatory response, usually causing digestive issues and malabsorption. Gluten intolerance is a condition in which the body can't digest gluten well and may result in digestive symptoms and in severe cases celiac disease.



Result - HIGH RISK



Marker & Genotype

GTMH0018 - TT (XXX gene)

Interpretation

Your genotype indicates that you may have higher circulating beta carotene with a likelihood of Lactose Intolerance related Calcium and Vitamin D deficiency.

Recommendations

Increased consumption of calcium rich food with soya, salmon, eggs, leafy greens, broccoli, cabbage, okra, fortified flour, tofu, bread and orange etc. may be incorporated in your diet after consultation with a dietician.

Result - NORMAL



Marker & Genotype

GTMH0019 - TG (XXX gene)

Interpretation

Your genotype indicates that you have no elevated likelihood of developing predisposition to Gluten Intolerance

Recommendations

Most people including pregnancy women with gluten intolerance can manage the symptoms by following a strict gluten-free diet. Avoid Wheat, Rye and Barley. Increase Zinc intake.

AstroDNA

Motherhood

Pregnancy, Body Weight and Metabolism

2

Weight gain during pregnancy is a common phenomenon and between the 3rd and 9th month of pregnancy most women gain substantial weight. The metabolic rate too increases during pregnancy as a result of increased body mass, pregnancy related physiological changes and the growing fetus. However, excessive weight gain during pregnancy is a matter of concern for both the woman and the doctor as it results in disturbance in the metabolism and can lead to pregnancy complications such as hypertension.

Knowing your genetic risk for weight gain and metabolism related issues in pregnancy based on your genes will help in taking effective measures to stay healthy and prevent complications.





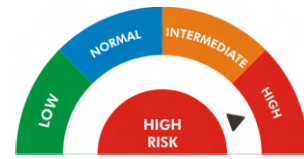
Pregnancy, Body Weight and Metabolism

Obesity

Obesity is a complex health issue that is governed by genetics and behavior alike. Genetic variants in certain genes are known to modulate the effect of fat intake on BMI. Obesity during pregnancy puts you at risk of several serious health problems such as high blood pressure, gestational diabetes, sleep apnea, fatigue and large baby, longer labour and pre term delivery. Knowing your risk for obesity helps you become proactive about taking care of your health and pregnancy.



Result - HIGH RISK



Marker & Genotype

GTMH0020 - CG (XXX gene)
 GTMH0021 - GG (XXX gene)
 GTMH0022 - TT (XXX gene)
 GTMH0023 - TA (XXX gene)
 GTMH0024 - AG (XXX gene)

Interpretation

aa

Recommendations

A healthy and balanced diet including regular exercise is recommended to maintain ideal weight during pregnancy.



Pregnancy, Body Weight and Metabolism

Body Mass Index

Body Mass Index (BMI) is a person's weight in kilograms divided by the square of height in meters. Women with high BMI are at risk of increased blood pressure, blood cholesterol and triglyceride levels and lowering of HDL (good) cholesterol levels, risk for diabetes. Higher BMI during pregnancy can cause pregnancy complications such as preeclampsia, gestational diabetes, difficult ultrasound examinations, difficult labour and c-section complications.



Result - NORMAL



Marker & Genotype

GTMH0025 - GT (XXX gene)
 GTMH0026 - AA (XXX gene)
 GTMH0027 - GG (XXX gene)

Interpretation

q

Recommendations

It is advised to keep the BMI under check during pregnancy by exercising atleast 30 mins a day and taking healthy and balanced diet.



Pregnancy, Body Weight and Metabolism

Carbohydrate And Weight Gain Vitamin A Deficiency

Carbohydrates such as starchy vegetables, grains, rice, breads, and cereals are essential macronutrients in our diets. These food sources are also rich in other nutrients such as vitamins, calcium, iron, and fibre that are needed by the body. However, carbohydrates also lead to weight gain. More than recommended weight gain in pregnancy can lead to at higher risk for pregnancy complications such as gestational diabetes, preeclampsia, preterm birth, sleeplessness and C-section. Certain pregnant women are more likely to gain weight when they consume carbohydrate in their diet.



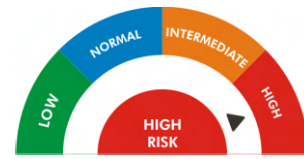
Pregnancy, Body Weight and Metabolism

Fat Metabolism

During early pregnancy there is an increase in body fat accumulation, associated with both hyperphagia (excessive hunger) and increased lipogenesis (fat accumulation). During late pregnancy there is an accelerated breakdown of fat depots, which plays a key role in fetal development. Normal fetal development needs the availability fatty acids through maternal diet. However, excessive intake of fatty foods and impaired fat metabolism can reduce immune capacity of pregnant women and lead to excessive weight gain or fat retention and pregnancy complications.



Result - HIGH RISK



Marker & Genotype

GTMH0028 - GA (XXX gene)

GTMH0029 - GG (XXX gene)

Interpretation

q

Recommendations

Do not starve the body of carbohydrates as. Instead, stay hydrated, choose complex carbohydrates over simple carbs, get into a regular exercise routine, and follow your physician's advice.

Result - NORMAL



Marker & Genotype

GTMH0030 - AG (XXX gene)

Interpretation

q

Recommendations

Eating healthy fats is essential for building baby's proper body, brain and eye development. Do not have excessive fatty food during pregnancy.



Pregnancy, Body Weight and Metabolism

Lipid levels

There is an increase in lipid synthesis and fat storage in preparation for the exponential increases in fetal energy needs in late pregnancy. However, high maternal lipid levels during pregnancy can increase risks of preterm delivery, gestational diabetes and preeclampsia, as well as the later development of atherosclerosis in offspring. A high protein and low carbohydrate diet is helpful if lipid levels are consistently high.



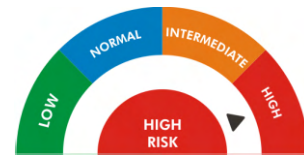
Pregnancy, Body Weight and Metabolism

Insulin sensitivity

Insulin helps control the blood sugar or glucose. Insulin sensitivity refers to body's sensitivity or response to insulin which varies from person to person. As the pregnancy advances to third trimester, insulin sensitivity may gradually decline due to hormonal changes. Abnormal insulin resistance may be associated with poor maternal and fetal outcome. Screening of pregnancy for Insulin sensitivity and early intervention as required may help to reduce the associated complications.



Result - HIGH RISK



Marker & Genotype

GTMH0031 - AA (XXX gene)

Interpretation

q

Recommendations

A balanced and Heart healthy diet with regular exercise, maintaining normal blood glucose, blood pressure and triglycerides levels along with regular medical checkups recommended.

Result - NORMAL



Marker & Genotype

GTMH0032 - GA (XXX gene)

Interpretation

qq

Recommendations

Screening of pregnancy for insulin sensitivity, moderate intensity of aerobic exercises and healthy eating will help women with reduced insulin sensitivity

AstroDNA

Motherhood

Pregnancy and Physical Fitness

Exercise during pregnancy offers many physical and emotional benefits. If you are healthy and you are not experiencing any complications in your pregnancy, doing at least 30 minutes of moderate intensity physical activity on most days is recommended. It helps manage some symptoms of pregnancy and make you feel energetic throughout the day.

However, certain pregnancy hormones can loosen ligaments and could increase your risk of joint injuries or sprains. Knowing your body's needs through your genes can help you design a fitness regime that is best suitable for you.

3





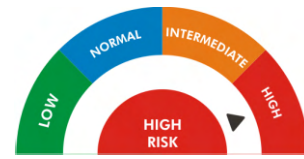
Pregnancy and Physical Fitness

Motivation To Exercise

Ideally, pregnant women should get at least 150 minutes of moderate-intensity aerobic activity every week. Motivation to exercise varies from individual to individual. Regular physical activity can help reduce your risk of pregnancy complications and ease pregnancy discomforts, such as back pain. Physical activity does not increase your risk of miscarriage, low birth weight, or early delivery. Babies of moms who exercise may have stronger and healthier hearts, according to recent research.



Result - HIGH RISK



Marker & Genotype

GTMH0033 - GA (XXX gene)

Interpretation

qq

Recommendations

Choose an exercise that you like, make a plan and consider benefits and be motivated



Pregnancy and Physical Fitness

Achilles Tendinopathy

Achilles tendinopathy is a condition that causes pain, swelling and stiffness of the Achilles tendon that joins your heel bone to your calf muscles. It is a frequent complaint in pregnant women. Metabolic, hormonal and structural changes in the body along with weight gain, contribute to inflammation and pain. For most pregnant women, the symptoms of Achilles tendinopathy usually clear within 3-6 months post delivery.



Result - NORMAL



Marker & Genotype

GTMH0034 - AA (XXX gene)

Interpretation

q

Recommendations

Rest well, use ice pack for pain relief, do exercises to help to stretch and strengthen the Achilles tendon. Take pain killers only under doctor's supervision



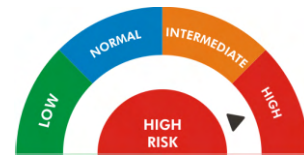
Pregnancy and Physical Fitness

Leg cramps or pain

Leg cramps are painful involuntary muscle contractions that typically affect the calf, foot or both. Leg cramps are common during pregnancy, often striking at night during the second and third trimester. While the exact cause of leg cramps during pregnancy isn't clear, some people have higher tendency to experience leg cramps than others.



Result - HIGH RISK



Marker & Genotype

GTMH0035 - AG (XXX gene)

Interpretation

q

Recommendations

Regular physical activity, stretching before bed, consuming calcium and magnesium rich foods and plenty of water will help prevent cramps

AstroDNA

Motherhood

Lifestyle and Habits during Pregnancy

Your lifestyle during pregnancy has an impact on the unborn baby. It is therefore worth for mothers-to-be to think about their lifestyle and how it might affect the growing child and make necessary changes to guarantee the best start in life for the baby.

Many lifestyle factors including maternal smoking, alcohol, caffeine consumption, nutrition and stress can impact your baby and increases the risk of miscarriage, premature birth and your baby having a low birth weight. Irrespective of the risks provided in the following pages, it is best to avoid alcohol consumption and smoking during pregnancy.

4





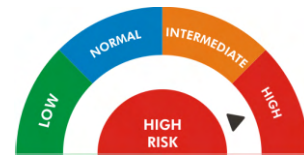
Lifestyle and Habits during Pregnancy

Alcohol Craving

Alcohol craving is like any other craving during pregnancy affected by hormonal changes. If you have a tendency to crave for alcohol, it is important to know that there is no known safe amount of alcohol use during pregnancy. All types of alcohol are equally harmful, including all wines and beer. Drinking alcohol during pregnancy increases the risk of miscarriage, premature birth, low birth weight and foetal alcohol spectrum disorder (FASD) in the baby.



Result - HIGH RISK



Marker & Genotype

GTMH0036 - TT (XXX gene)
 GTMH0037 - AG (XXX gene)
 GTMH0038 - GT (XXX gene)

Interpretation

q

Recommendations

Avoiding alcohol consumption during pregnancy is good for the health of both mother and the child.



Lifestyle and Habits during Pregnancy

Caffeine

Caffeine is a chemical found in many foods and drinks, including coffee, tea and cola. In pregnancy, caffeine is believed to cause blood vessels in the uterus and placenta to constrict, which could reduce the blood supply to the fetus. Consuming large amounts of caffeine during pregnancy may increase the risk of miscarriage or low birthweight, so it's best to limit your intake of caffeine. Women with faster caffeine metabolism may crave for more caffeine.



Result - NORMAL



Marker & Genotype

GTMH0039 - TT (XXX gene)

Interpretation

q

Recommendations

Consuming up to 200mg (1-2 cups) a day is safe for your baby. Avoid caffeine beyond this limit in pregnancy.



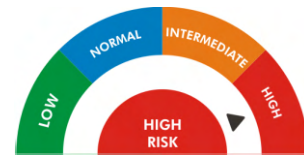
Lifestyle and Habits during Pregnancy

Smoking

Smoking is addictive and harmful to health. Smoking during pregnancy can cause tissue damage in the unborn baby, particularly in the lung and brain, and increases chances of miscarriage and other birth defects. Genes play an important role in smoking dependency since certain people are able to break down nicotine much faster in their bodies leading to higher smoking rates. Smoking anytime during your pregnancy is dangerous. Quitting is the best thing you can do for you and your baby.



Result - HIGH RISK



Marker & Genotype

GTMH0040 - GT (XXX gene)

Interpretation

q

Recommendations

Don't smoke while pregnant and stay away from secondhand and thirdhand smoke. If you need help to quit, tell your health care provider.

AstroDNA

Motherhood

Pregnancy and Emotional Behavioural Aspects

5

It is common to feel anxious, stressed, vulnerable and overwhelmed by the big changes that come with pregnancy. About 15 percent of women will experience depression or anxiety during the journey of pregnancy triggered by hormones. Although periods of happiness and sadness are perfectly normal, a small percentage of women may develop serious anxiety disorder which may affect the baby's wellbeing.

Good food, enough sleep and family support is crucial during pregnancy. Discussing your feelings with your partner, family member or a friend can help you regulate your emotions and limit worry and anxiety.





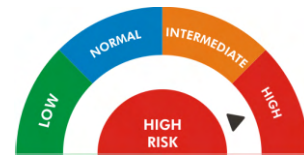
Pregnancy and Emotional Behavioural Aspects

Anxiety

Although it's normal to be worried about your baby in pregnancy, in some cases thoughts about the health of the baby may become obsessive and can result in stressful anxiety. The rates of generalized anxiety disorder appear to be highest in the first trimester and common symptoms include constant worrying, restlessness, muscle tension, irritability, inability to concentrate, and difficulties with sleep.



Result - HIGH RISK



Marker & Genotype

GTMH0041 - TT (XXX gene)
 GTMH0042 - GG (XXX gene)
 GTMH0043 - TA (XXX gene)

Interpretation

q

Recommendations

Regular physical activity, eating healthy, getting adequate sleep and meditation can help reduce anxiety during pregnancy.



Pregnancy and Emotional Behavioural Aspects

Emotional Eating

Emotional eating or emotional hunger is often a craving for high-calorie or high-carbohydrate foods that have minimal nutritional value. Emotional eating can be harmful both to mother and the bay in the womb. Studies have show that pregnant women with increased tendency to over eat when emotional develop gestational diabetes, blood pressure, preterm delivery risk and large babies resulting in C section.



Result - NORMAL



Marker & Genotype

GTMH0044 - AA (XXX gene)

Interpretation

q

Recommendations

Regular physical activity, eating healthy, getting adequate sleep and meditation can help reduce episodes of emotional eating during pregnancy.



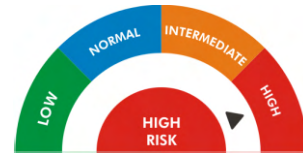
Pregnancy and Emotional Behavioural Aspects

Memory

Pregnancy brain or a brain fog refers to forgetfulness and memory problems that some expecting moms experience during pregnancy. This may be related to hormonal changes, sleep deprivation, stress, or brain changes during pregnancy. It usually starts in the first trimester and subsides after giving birth. Pregnant women who do notice it typically experience minor, manageable forgetfulness.



Result - HIGH RISK



Marker & Genotype

GTMH0045 - GA (XXX gene)

GTMH0046 - AA (XXX gene)

Interpretation

q

Recommendations

Keep a calendar, set alarms and notifications, take notes, eat healthy, get good sleep and exercise to overcome Mommy brain or Pregnancy brain

AstroDNA

Motherhood

Pregnancy and Skin Health

Pregnancy is known to bring glowing skin, rosy cheeks, and shiny hair. However, some women experience skin changes that may include acne, eczema, nail colouration, sun sensitivity and varicose veins. Some women are at higher risk of developing skin issues due to their genetic composition.

Some general guidelines on keeping a healthy skin include keeping the body clean, using mild soap, moisturizer, sunscreen, drinking lot of water, getting enough sleep and staying stress free.

6





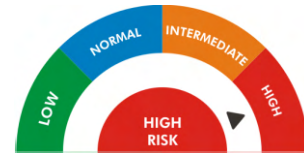
Pregnancy and Skin Health

Skin pigmentation

Some pregnant women develop dark irregular patches on their face most commonly on the upper cheek, nose, lips, and forehead. This is called 'chloasma', 'melasma' or the 'mask of pregnancy'. In this condition, the skin that's already more pigmented, like nipples, freckles, scars, and moles may become even darker during pregnancy. Sun exposure and familial incidence can increase risk of such pigmentation in pregnancy which usually fades without treatment after you have your baby



Result - HIGH RISK



Marker & Genotype

GTMH0047 - AA (XXX gene)

Interpretation

q

Recommendations

It is recommended that pregnant women wishing to minimize skin darkening use sunscreen on sun exposed areas, wear appropriate protective clothing, avoid sunbathing and excessive sun exposure.



Pregnancy and Skin Health

Skin Tanning

Tanning is the process by which melanin, the skin pigment increases in the skin after exposure to the sun leading to a darkening effect. This is the natural defense process of your body when it is exposed to sunlight. It helps protect your skin from the sun like a shield. Pregnancy makes your skin more sensitive and might lead to tanning. Some people tan or sunburn more easily than others. This may be due to different skin types, color or genetics.



Result - NORMAL



Marker & Genotype

GTMH0048 - GA (XXX gene)

Interpretation

q

Recommendations

Home remedies such as application of aloe vera, sandal powder, cucumber juice can reduce your skin tan. Tan prevention by sun block-creams can help. Beach tanning can be avoided.



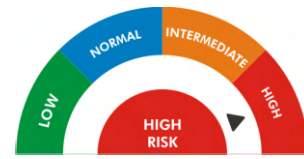
Pregnancy and Skin Health

Sun Sensitivity (Sun Burn)

Pregnant women have extra sensitive skin, including extra sensitivity to the sun, due to increased hormone levels. With UV rays more easily penetrating the skin, pregnant women are more likely to burn. Sunburn can also cause dehydration. Negative effects of UV light specially in early pregnancy can also lead to preterm contractions and may affect the baby's health.



Result - HIGH RISK



Marker & Genotype

GTMH0049 - TT (XXX gene)

GTMH0050 - AT (XXX gene)

Interpretation

q

Recommendations

Use sunscreen on sun exposed areas, wear appropriate protective clothing, avoid sunbathing and excessive sun exposure. Drink plenty of water during the summer months and stay hydrated regardless of sun concerns!



Pregnancy and Skin Health

Varicose Veins

Varicose veins look like winding, lumpy ropes under your skin. They are relatively common during pregnancy, especially in the third trimester. During pregnancy, hormone changes and the weight of your growing baby make you more susceptible to varicose veins. Sometimes they become itchy, uncomfortable, or even painful. Varicose veins often get better after delivery, when the uterus is no longer exerts pressure on veins.



Result - NORMAL



Marker & Genotype

GTMH0051 - TT (XXX gene)

Interpretation

q

Recommendations

Get your daily dose of exercise. Take frequent breaks and move around as much as possible if you have to stand or sit for a while. If you notice that the veins feel hard, warm, or painful, consult your physician.



Pregnancy and Skin Health

Eczema

Eczema also called as Atopic dermatitis, is a condition that causes dry, itchy and inflamed skin. Eczema during pregnancy is generally not dangerous to the mother or the baby and in many cases clears up after pregnancy. Hormone fluctuations or previous history of eczema, can flare up eczema further during pregnancy. Although causes for eczema are not fully known, environmental immunological and genetic factors are indicated to play a role.



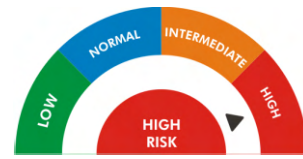
Pregnancy and Skin Health

Freckles

Freckles are small, harmless marks that appear on the skin. Increased hormones during pregnancy cause changes in your skin pigmentation and may appear as dark pigmentation like freckles on face and body. Sun exposure and genetic make up are the primary causes of freckles. The patches usually fade over a period of few months after delivery, though in some women they may last longer.



Result - HIGH RISK



Marker & Genotype

GTMH0052 - TT (XXX gene)

Interpretation

q

Recommendations

Moisturizing the skin regularly can relieve itching and prevent new outbreaks. Natural remedies like coconut oil can help. Topical corticosteroids are usually safe during pregnancy. Moderate to severe eczema may need medical attention

Result - NORMAL



Marker & Genotype

GTMH0053 - GG (XXX gene)

Interpretation

q

Recommendations

It is recommended that pregnant women wishing to minimize freckles use sunscreen on sun exposed areas, wear appropriate protective clothing, avoid sunbathing and excessive sun exposure.

AstroDNA

Motherhood

Delivery and Post Partum

Child birth or delivery is a unique experience and is different for every woman. It varies widely from woman to woman based on the lifestyle and her genes. Learning all you can about affect of your genes on labor and delivery will help you manage the time of childbirth by lifestyle changes and medical help. It can also prevent pre-term delivery, pre-mature births, poor weight gain in babies etc.

In addition 13-19 % of women report elevated symptoms of depression and anxiety in the first year after childbirth. It is proven that addressing predictors of a woman's birth experience may help to reduce postpartum anxiety symptoms. Post partum period needs lot of care and knowing your susceptibilities will help you to help yourself along with much needed social support and quality of partner relationship.

7





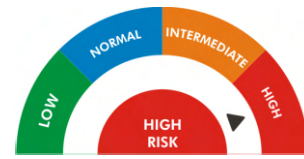
Delivery and Post Partum

Pre-term labour

Preterm labor occurs when regular contractions result in the opening of your cervix before week 37 of pregnancy. Preterm labor can result in premature birth. The earlier premature birth happens, the greater the health risks for your baby. Signs and symptoms of preterm labor include abdominal contractions, constant low, dull backache, pelvic or lower abdominal pressure, mild abdominal cramp, vaginal spotting or light bleeding or preterm rupture of membranes. Along with multiple causes, micronutrient deficiency can lead to preterm labour.



Result - HIGH RISK



Marker & Genotype

GTMH0054 - GT (XXX gene)

GTMH0055 - AA (XXX gene)

Interpretation

q

Recommendations

Talk to your provider about what you can do to help reduce your risk for preterm labor and premature birth. Multi vitamin supplementation with Zinc helpful.



Delivery and Post Partum

Prolonged labour

Prolonged labour, also known as failure to progress, occurs when labour lasts for approximately 20 hours or more if you are a first-time mother, and 14 hours or more if you have previously given birth. Every fifth full term pregnant woman may experience prolonged labour. It can result from a variety of different issues including micronutrient deficiency in pregnant women. Although some causes of prolonged labor may require medical intervention you can ease your way by taking a walk, changing positions etc. Additional treatment depends on why your labor is going slowly.



Result - NORMAL



Marker & Genotype

GTMH0056 - TT (XXX gene)

Interpretation

q

Recommendations

Talk to your provider about what you can do to help reduce your risk for prolonged labor. Multi vitamin supplementation with Zinc helpful.



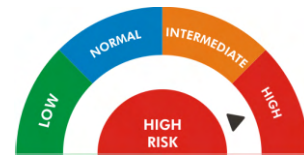
Delivery and Post Partum

Pain Perception (Labour pain tolerance)

Labour pain is caused by contractions of the muscles of the uterus and by pressure on the cervix. Pain during labor is different for every woman. It varies widely from woman to woman and even from pregnancy to pregnancy. Genes play a very important role in this difference, acting on the metabolites that are essential for neurotransmission



Result - HIGH RISK



Marker & Genotype

GTMH0057 - GT (XXX gene)

Interpretation

q

Recommendations

Regular and reasonable exercise as per your doctor's advice can help strengthen your muscles and prepare your body for the stress of labor.



Delivery and Post Partum

Poor birth weight of baby

Just like adults, babies come in all sizes. Although there are several factors influencing birth weight of the baby, mother's genetic contribution also plays a significant role and may result in babies with reduced birth weight. If a baby's weight is in a lower percentile, it does not necessarily signal a problem with their growth or physical development. Babies will gain weight as they develop.



Result - NORMAL



Marker & Genotype

GTMH0058 - GT (XXX gene)

GTMH0059 - AT (XXX gene)

GTMH0060 - GG (XXX gene)

GTMH0061 - GT (XXX gene)

GTMH0062 - TT (XXX gene)

Interpretation

q

Recommendations

Take well balanced healthy diet and nurse your baby regularly



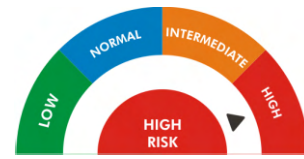
Delivery and Post Partum

Large for gestational age baby

Adiponectin is an adipocyte-derived hormone that plays a critical role in energy homeostasis, mainly attributed to its insulin-sensitizing properties. Low Adiponectin levels are reported in some studies to be associated with pregnancy complications like gestational diabetes, BP in pregnancy, weight gain and large for gestation age (LGA) babies also called as Fetal macrosomia. LGA babies can cause delivery difficulties and complications. Sometimes a C-section is needed.



Result - **HIGH RISK**



Marker & Genotype

GTMH0063 - GT (XXX gene)

Interpretation

q

Recommendations

To lower some of the risks watch your weight, take care of your diabetes (if diagnosed) and follow your physician's advice



Delivery and Post Partum

Weight gain after delivery

Most women, who gain the recommended amount of weight during pregnancy, may hold onto some of the weight gained after delivery. Others may start gaining more weight. Knowing your risk for gaining weight helps you become proactive about taking steps towards losing weight after delivery. Stick to your healthy eating and exercise habits to reach a normal weight. Breastfeeding is recommended for the first year of a baby's life. Not only is breastfeeding the best way to feed your baby, it also may help with postpartum weight loss.



Result - **NORMAL**



Marker & Genotype

GTMH0064 - GT (XXX gene)

GTMH0065 - GG (XXX gene)

GTMH0066 - AA (XXX gene)

GTMH0067 - TT (XXX gene)

GTMH0068 - CT (XXX gene)

Interpretation

q

Recommendations

Limit your extra food after delivery. You're no longer eating for two, even though you feel like it. Exercise daily.



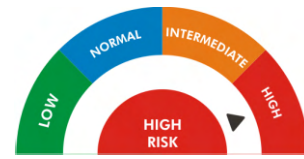
Delivery and Post Partum

Fibre diet and weight loss

To lose weight after delivery needs exercise and diet intervention with decreased intake of fat and increased intake of fibers. Some women lose weight easily with high fiber in-take compared to others. These differences are due to genetic variation among individuals which influence weight gain and loss.



Result - HIGH RISK



Marker & Genotype

GTMH0069 - GT (XXX gene)

Interpretation

q

Recommendations

High rich in fiber and low in fat is good for a healthy body and easy weight reduction. Consider other weight reduction programs along with diet.



Delivery and Post Partum

Post Partum Depression

Being a parent is exciting but can also be tiring and overwhelming. 15% of new moms experience post partum depression which can last longer than baby blues with emotional highs and lows, frequent crying, fatigue, guilt, anxiety and can lead to trouble caring for their baby. Postpartum depression can be treated with medication and counseling.



Result - NORMAL



Marker & Genotype

GTMH0070 - TT (XXX gene)

GTMH0071 - GT (XXX gene)

Interpretation

q

Recommendations

Sleep, rest, exercise and balanced diet will help. Share feelings with family and friends. With professional help, almost all people who experience postpartum depression can overcome their symptoms.



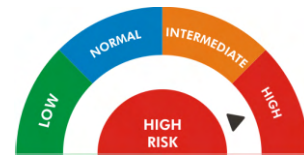
Delivery and Post Partum

Hair Loss

Excessive hair shedding or hair loss is noticeable a few months after having a baby in many moms. The excessive shedding is caused by falling estrogen levels. However, it is usually temporary. Most women see their hair return to its normal fullness within 6 – 12 months. The role of nutrition and diet with vitamins and minerals in hair loss is also significant especially after delivery.



Result - HIGH RISK



Marker & Genotype

GTMH0072 - GT (XXX gene)

GTMH0073 - GG (XXX gene)

GTMH0074 - GA (XXX gene)

Interpretation

q

Recommendations

Use shampoo and conditioner that add volume may help. Supplement your diet with Vitamin B complex, Biotin, Vitamin C, Vitamin E and Zinc.



Delivery and Post Partum

Maternal OCD

Obsessive-compulsive disorder (OCD) is a common anxiety disorder where individuals have recurring, unwanted thoughts, obsessions that make them feel driven to do something repetitively. About 2 to 3 in every 100 women are affected by perinatal OCD in the year after giving birth. Perinatal OCD symptoms are often about the baby's well being but not always. A healthy, balanced lifestyle, support of partner, family and friends plays a big role in easing anxiety and keeping OCD compulsions, fears, and worry at bay.



Result - NORMAL



Marker & Genotype

GTMH0075 - TT (XXX gene)

Interpretation

q

Recommendations

Regular exercise, enough sleep, avoiding alcohol and smoking, practicing meditation or yoga can reduce the symptoms of OCD. Seek medical help if necessary.

AstroDNA

Motherhood

Pregnancy and Health conditions

8

Many women go through mild physical discomforts and with proper medical help, most women enjoy a healthy pregnancy. However, some women are prone to develop medical challenges because of their genetic risk and may need special attention. The following pages give your risk of developing some common pregnancy health issues such as pregnancy induced blood pressure, diabetes, thyroid issues, allergies, sleep problems, auto immune disorders etc.

It's always a good idea to know about these risks and talk to your doctor and work out a management plan. As a general rule, a healthy lifestyle can reduce your chance of pregnancy health problems.





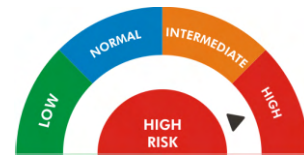
Pregnancy and Health Conditions

Pregnancy Induced Hypertension

Pregnancy-induced hypertension is a form of high blood pressure in pregnancy. It occurs in about 7 to 10 percent of all pregnancies. Early identification of women at risk for pregnancy-induced hypertension may help prevent complications in pregnancy. Specific treatment for pregnancy-induced hypertension will be determined by your physician based on the presentation of the condition and other medical test results during pregnancy.



Result - HIGH RISK



Marker & Genotype

GTMH0076 - CG (XXX gene)
 GTMH0077 - CC (XXX gene)
 GTMH0078 - TC (XXX gene)

Interpretation

q

Recommendations

Control salt, fried food, consume good amount of water, exercise and follow advice of your physician



Pregnancy and Health Conditions

Type 2 Diabetes Predisposition

Gestational diabetes is diabetes diagnosed for the first time during pregnancy. Like other types of diabetes, gestational diabetes affects how your cells use sugar or glucose. Having gestational diabetes can increase your risk of high blood pressure during pregnancy and risk of having a large baby that needs to be delivered by C-section. Managing gestational diabetes will help make sure you have a healthy pregnancy and a healthy baby.



Result - NORMAL



Marker & Genotype

GTMH0079 - CG, GTMH0080 - CT (XXX gene)
 GTMH0081 - CC, GTMH0082 - GC (XXX gene)
 GTMH0083 - TT, GTMH0084 - GG (XXX gene)
 GTMH0085 - TG, GTMH0086 - AC (XXX gene)
 GTMH0087 - AA, GTMH0088 - AT (XXX gene)

Interpretation

q

Recommendations

Don't try to lose weight in pregnancy. If healthy eating and being active aren't enough to manage your blood sugar, your doctor may prescribe medication.

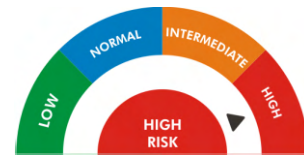


Thyroid

Pregnancy induced hypothyroidism is a condition developed during pregnancy due to an underactive thyroid gland with symptoms similar to pregnancy symptoms such as fatigue and weight gain. It occurs in 2 to 3 out of every 100 pregnancies. Elevated Thyroid Stimulating hormone (TSH) and low free thyroxine levels seen in blood tests. Untreated hypothyroidism increases risk for miscarriage and premature delivery. Medication may be recommended by your physician if tests done during pregnancy diagnose hypothyroidism.



Result - HIGH RISK



Marker & Genotype

GTMH0089 - GG (XXX gene)

Interpretation

q

Recommendations

Hypothyroidism can be avoided with good sources of iodine such as dairy foods, seafood, eggs, meat, poultry, and iodized salt. In case hypothyroidism is diagnosed in pregnancy, it is safe to take thyroid medication.



Allergies

About one-third of pregnant women find their allergy symptoms tend to worsen during pregnancy. Another one-third find their allergy symptoms stay the same. And another one-third find their allergy symptoms actually improve during pregnancy. Women with high allergen response may be hypersensitive in pregnancy and may have higher risk of developing symptoms such as itching or inflammation.



Result - NORMAL



Marker & Genotype

GTMH0090 - TT (XXX gene)

Interpretation

q

Recommendations

Avoid food and environment that triggers your allergies. Consult your physician about your pre existing allergies to prevent complications in pregnancy.



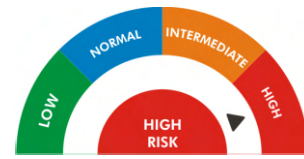
Pregnancy and Health Conditions

Hemorrhoids

Hemorrhoids are swollen veins in the anus and rectum that are common during pregnancy, especially in the third trimester when the enlarged uterus puts pressure on the veins. The increase in the hormone progesterone during pregnancy can also contribute. Hemorrhoids can be painful, and may itch, sting, or bleed, especially during or after a bowel movement. They usually resolve after you have your baby. Consult your doctor if you develop hemorrhoids.



Result - HIGH RISK



Marker & Genotype

GTMH0091 - AG (XXX gene)

Interpretation

q

Recommendations

Eat lots of high fiber foods, drink plenty of water, sitting for long periods of time, soak in warm water.



Pregnancy and Health Conditions

Excessive day sleep

Excessive daytime sleepiness (Narcolepsy) is a common symptom in pregnant women. If it is pre-existing condition, during pregnancy due to hormonal changes, narcolepsy symptoms may change or get worse. People with narcolepsy can have healthy, complication-free pregnancies. However, it is vital to discuss pregnancy plans with a doctor, as a person may need to change or stop their medication.



Result - NORMAL



Marker & Genotype

GTMH0092 - AT (XXX gene)

Interpretation

q

Recommendations

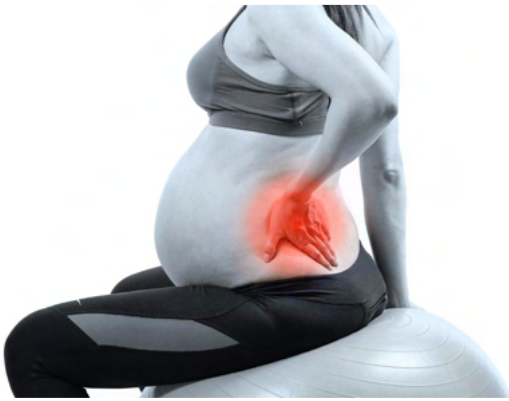
Managing blood sugar levels with diet, lifestyle, maintaining good physical activity will help. Consult your doctor if you have symptoms.



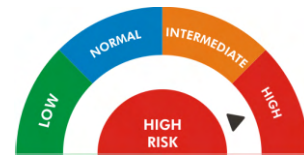
Pregnancy and Health Conditions

Kidney Stones

Research suggests that pregnant women are slightly more likely to develop kidney stones than non-pregnant women. While kidney stones do not directly cause miscarriage, untreated kidney stones can lead to other health complications, such as hypertension in pregnancy and infections, that could increase the risk of miscarriage. Prompt diagnosis and treatment can offer remedy, allowing pregnant mothers to move forward with a healthy pregnancy.



Result - HIGH RISK



Marker & Genotype

GTMH0093 - GG (XXX gene)

Interpretation

q

Recommendations

Drink plenty of water, consult your physician if there is alarming back pain or sharp pain while urinating



Pregnancy and Health Conditions

Sjogren's Syndrome

Sjogren's syndrome is an autoimmune condition of salivary and tear glands inflammation. The condition is predominantly found in women. Most women with Sjögren's will conceive and deliver healthy babies. However, there are potential complications such as increased risk for miscarriage and preterm delivery.



Result - NORMAL



Marker & Genotype

GTMH0094 - TT (XXX gene)

GTMH0095 - AA (XXX gene)

Interpretation

q

Recommendations

It is recommended that women with Sjogren's syndrome consult with their obstetrician and follow medical advice



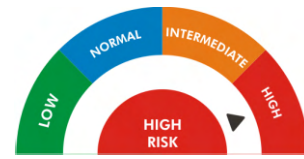
Pregnancy and Health Conditions

Arrhythmias

A heart arrhythmia is an irregular heartbeat with symptoms of racing or a slow heart beat, anxiety, fatigue, sweating or faint episodes. Arrhythmias are the most common cardiac complication encountered during pregnancy in females with and without preexisting heart condition. Arrhythmias may manifest for the first time during pregnancy, and in other cases, pregnancy can trigger exacerbations in those with pre-existing arrhythmias. Consult your doctor in case of any symptoms



Result - HIGH RISK



Marker & Genotype

GTMH0096 - CC (XXX gene)
 GTMH0097 - TC (XXX gene)
 GTMH0098 - GC (XXX gene)
 GTMH0099 - TT (XXX gene)

Interpretation

q

Recommendations

Although usually harmless, sometimes an arrhythmia increases your risk of a heart condition. Consult your physician in case of any symptoms



Pregnancy and Health Conditions

HDL Cholesterol

During pregnancy cholesterol levels naturally increase to help provide the nutrients needed for a growing fetus can climb by as much as 25-50 percent during the last trimester. Cholesterol plays a role in baby's brain development, and also in producing healthy breast milk. High Density Lipoprotein (HDL) is better known as good cholesterol because of its association with lower risk of heart disease. Maintaining good HDL levels is therefore important for a healthy pregnancy.



Result - NORMAL



Marker & Genotype

GTMH0100 - GG, GTMH0101 - TT (XXX gene)
 GTMH0102 - CC, GTMH0103 - GG (XXX gene)
 GTMH0104 - GT, GTMH0105 - GG (XXX gene)
 GTMH0106 - TT, GTMH0107 - AC (XXX gene)
 GTMH0108 - GA, GTMH0109 - TT (XXX gene)

Interpretation

q

Recommendations

Good cholesterol levels can be maintained by consuming healthy fats, fiber food and avoiding fried foods and doing regular exercise



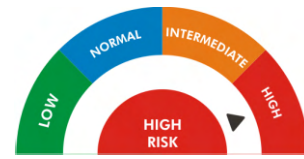
Pregnancy and Health Conditions

Thrombosis

During pregnancy, a woman's blood clots more easily to lessen blood loss during labor and delivery. Pregnant women may also experience less blood flow to the legs later in pregnancy because the blood vessels around the pelvis are pressed upon by the growing baby. Thrombosis during pregnancy does not affect the baby unless there are serious complications. Heparin may be recommended in pregnancy based on preliminary evaluation.



Result - HIGH RISK



Marker & Genotype

GTMH0110 - GA (XXX gene)

Interpretation

q

Recommendations

mobile, exercise and hydrate. Consult physician if there is leg pain or swelling and follow expert advice

LIMITATIONS



Technology

This test was designed and performed by GeneTech using standard technical and operational protocols. Genotyping is done by Next Generation Sequencing using Ion Torrent S5 Sequencer and Ion Chef automation system at GeneTech. As with all medical laboratory testing, there is a small chance of error or misinterpretation.

Design

The purpose of this test is to provide information about how person's genotype in genes may affect risk to specific common health conditions, selected nutrients and lifestyle choices, his or her response to some drugs. The genotypes are interpreted for the conditions/traits based on the current scientific research available. **This is not a medical diagnostic test.**

GeneTech only tests limited number of highly relevant markers for each trait/condition and not all genotypes that have reportedly been associated with specific traits. Low risk for a condition/trait does not rule out higher risk for the condition/trait caused due to another genotypes/SNP that was not tested at GeneTech. The genotypes selected are globally reported and not specifically relevant to any ethnic groups. Reporting for these genotypes has been done as per information that was available on current research today.

Research

The science behind the significance or interpretation of test results continues to evolve. Future research may impact the interpretations given in this report. Tested individuals are strongly advised not to make any changes to their medical care without consulting a health care professional. Based on these test results and knowledge of other medical conditions of the tested individual, health care professionals might consider additional independent testing.



Cryoviva Biotech Pvt. Ltd.
129, Pace City -I, Sector-37,
Gurugram, Haryana 122001 India

AstroDNA test is marketed by Cryoviva Lifesciences



8-2-293/174/A25, Road No. 14,
Opposite KBR Park, Banjara Hills
Hyderabad, TS 500034, India

AstroDNA test is designed by GeneTech. Testing is carried out at GeneTech's laboratory