ULTAGENOMICS

DECODE YOUR DNA. GUIDE YOUR HEALTH.

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Skin Health

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Table of Contents

Skin Elasticity and Hydration (new)	Pg. 3
Skin Glycation and Antioxidants	Pg. 4
Skin Aging	Pg. 5
Wrinkles	Pg. 6
Acne & Rosacea	Pg. 7
Skin Response to Sunlight	Pg. 8
Skin Spots	Pg. 9
Psoriasis	Pg. 10
Skin Risks	Pg. 11

The information contained in this report is intended to be interpreted by a licensed physician or other licensed healthcare professional. This report is not intended to take the place of professional medical advice. Decisions regarding use of prescribed medications must be made only after consulting with a licensed physician or other licensed healthcare professional, and should consider each patient's medical history and current treatment regimen.

Module 1

Skin Elasticity and Hydration (new)



Healthy, elastic skin is an essential part of maintaining a youthful appearance and reducing the signs of aging. This page provides insights into genetic predispositions for skin elasticity and hydration to assist in maintaining and improving skin health.

Skin elasticity is a measure of how well skin can stretch and return to its original position. Factors such as aging, sun exposure, and smoking can all contribute to a loss of skin elasticity, leading to wrinkles, sagging, and other visible signs of aging.

Skin hydration is also critical for maintaining healthy skin. When skin is adequately hydrated, it looks full and supple, but when it's dry, it can become itchy, flaky, and more prone to wrinkles.

By understanding your genetic predisposition for skin elasticity and hydration, you can take targeted actions to improve the health and appearance of your skin. This page will help in taking targeted action to support skin health and appearance through understanding how genetics may affect the skin's ability to maintain elasticity and hydration.

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Skin Hydration (New)



Neutral

Understanding what this may mean

Individuals with this genetic result are likely to have typical skin hydration levels. Maintaining adequate hydration through drinking water and using moisturizing skincare products can help maintain skin health.

Skin Elasticity



Neutral

Understanding what this may mean

Individuals with this genetic result are likely to have typical skin elasticity. They may experience some loss of elasticity over time due to aging, but this is generally not severe. Environmental risk factors such as smoking, sun exposure, and poor diet can still have a negative impact on skin elasticity and should be avoided or limited.

Genetic Summary 5

SNP	Marker	Genotype
FLG-AS1 g.G1863A	rs3126085	GG
FLG (C>T)	rs12144049	TT

SNP	Marker	Genotype
IL6/IL6-AS1 (G>C)	rs1800795	CC
MMP9 (C>T)	rs3918242	TT

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OLFM1/FCN1 (A>G)	rs11103631	AG

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Module 2

Skin Glycation and Antioxidants



The skin is constantly exposed to damaging free radicals and other harmful substances that can accelerate the aging process and contribute to a wide range of skin issues. Fortunately, the body has a natural defense system in the form of antioxidants, which can neutralize these harmful substances and protect the skin from damage.

This page provides insights into genetic predispositions for skin antioxidant capacity and anti-glycation, which is the process by which sugar molecules in the body bind to and damage proteins, including those in skin.

By understanding genetic risks for reduced skin antioxidant capacity and increased anti-glycation,targeted steps can be taken to protect the skin from damage and slow down the aging process. This may include incorporating antioxidant-rich foods and supplements into the diet, as well as adopting lifestyle habits that promote healthy skin, such as regular exercise and stress management.

This page will provide personalized insights into genetic risk for reduced skin antioxidant capacity and increased anti-glycation, as well as practical recommendations for protecting and promoting healthy, youthful-looking skin.

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Skin Antioxidant Capacity



Typical

Understanding what this may mean

Individuals with this genetic result are likely to have a typical level of skin antioxidant capacity. While it is still important to protect the skin from environmental stressors, individuals with this result may not need to take additional measures beyond a healthy lifestyle and a balanced diet.

Anti-Glycation



Improved

Understanding what this may mean

Individuals with this genetic result may have an increased ability to counteract glycation, which can lead to improved skin health and a slower rate of aging. However, it is still important to follow a healthy diet and lifestyle, as well as use topical antioxidants and other skin-protective products to maintain optimal skin health.

Genetic Summary 5

SNP	Marker	Genotype
NQO1 G559A	rs1800566	GG
SOD2 A47G	rs4880	AG

SNP	Marker	Genotype
GPX1 G599A	rs1050450	GG
GLO1 G-7A	rs1049346	GG

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CAT (C>T)	rs1001179	CC

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Module 3

Skin Aging



As we age, our skin undergoes a variety of changes that can affect its appearance and health. This page provides insights into genetic predispositions for skin aging, helping to provide clarity on how genetics may affect the aging process and providing personalized recommendations for maintaining youthful, healthy skin.

Skin aging can manifest in various ways, including wrinkles, fine lines, age spots, and a loss of elasticity. While aging is a natural part of life, certain lifestyle factors, such as sun exposure, smoking, and poor diet, can accelerate the aging process.

By understanding genetic predispositions for skin aging, proactive steps can be taken to slow down the aging process and maintain healthy, youthful-looking skin.

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Rate of Skin Aging



Slow

Understanding what this may mean

Individuals with this genetic result may experience a slower rate of skin aging. Proper skincare and sun protection are still important, but this result may suggest a reduced likelihood of developing wrinkles, fine lines, and other signs of aging at a younger age.

Genetic Summary 14

SNP	Marker	Genotype
IRF4 C492+386T	rs12203592	CC
OCA2 C1441T	rs74653330	CC
MC1R G274A	rs2228479	AG
MC1R G178T	rs1805005	GG
MC1R C451T	rs1805007	CC
MC1R C478T	rs1805008	CC
MC1R G880C	rs1805009	GG

SNP	Marker	Genotype
MC1R C*252T	rs35063026	.
RALY G877-563A	rs6059655	GG
RNU6-682P/RPL10P19 (T>C)	rs96621	TT
RAB11FIP2 (C>T)	rs11198112	TC
RNU1-117P (A>C)	rs72620727	AA
Intergenic-4 (C>T)	rs322458	CC
MRPS22 (C>T)	rs4894405	CC

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Module 4

Wrinkles



Wrinkles, particularly crow's feet and under-eye wrinkles, are common signs of skin aging influenced by a combination of genetic and environmental factors. Understanding the genetic basis of wrinkle formation can provide insights into personalized skincare and anti-aging strategies. This section explores the genetic determinants of crow's feet and under-eye wrinkles, emphasizing the role of genetics in skin structure and aging processes.

Crow's feet, the fine lines that radiate from the outer corners of the eyes, and under-eye wrinkles are often among the first signs of aging. Genetic predispositions to thinner skin, reduced collagen production, and lower antioxidant capacity can make these areas particularly vulnerable to wrinkling.

Recognizing the genetic factors that contribute to wrinkle formation allows for more personalized skincare strategies. For instance, individuals with genetic variants associated with decreased collagen production might benefit from collagen-boosting skincare products and treatments. Those with a predisposition to oxidative stress can focus on antioxidants and sun protection to minimize environmental damage.

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Upper eyelid Sagging



Neutral

Understanding what this may mean

Standard risk of experiencing sagging of the upper eyelids during aging. To maintain eyelid health and appearance, it's beneficial to adopt a skincare routine that includes regular moisturization and sun protection. Additionally, staying hydrated and maintaining a healthy diet rich in antioxidants can support skin elasticity.

Rate of under-eye wrinkle development



Neutral

Understanding what this may mean

Individuals with this genetic result are likely to experience a typical rate of under-eye wrinkle development. Environmental risk factors such as smoking, stress, lack of sleep, and UV radiation from tanning beds can increase the rate of development and should be avoided or limited.

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Rate of side-eye wrinkle development (Crow's Feet)



Neutral

Understanding what this may mean

Individuals with this genetic result are likely to experience a typical rate of Crow's Feet development. Environmental risk factors such as smoking, stress, dietary factors, and UV radiation from tanning beds can increase the rate of development and should be avoided or limited.

Genetic Summary 5

SNP	Marker	Genotype
MRPS22 (C>T)	rs4894405	CC
Intergenic-4 (C>T)	rs322458	CC
RNU1-117P (A>C)	rs72620727	AA

SNP	Marker	Genotype
RAB11FIP2 (C>T)	rs11198112	TC
OCA2 C1441T	rs74653330	CC

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Module 5

Acne & Rosacea



Rosacea and acne are common skin conditions influenced by a combination of genetic and environmental factors. This section explores the genetic underpinnings of these conditions, providing insights into personalized approaches for prevention and treatment.

Genetic variations in genes involved in the immune response, such as those affecting the body's inflammatory pathways, can contribute to the development of rosacea. Variants in genes like HLA-DRA and IL13 have been linked to an increased risk of rosacea. Genes that influence blood vessel function and reactivity, such as those involved in vasodilation and vasoconstriction, can affect the severity and presentation of rosacea symptoms.

Genetic variants in genes that regulate sebum production, such as the CYP1A1 and CYP17 genes, can increase the risk of developing acne by promoting excessive oil production. Acne is also influenced by genetic factors that affect the skin's inflammatory response. Variants in genes like TNF-α and IL1A can lead to increased inflammation, contributing to acne severity.

Understanding genetic predispositions can guide personalized treatment approaches for rosacea, including the use of anti-inflammatory medications, laser therapy, and lifestyle modifications to manage triggers like sun exposure and stress. For acne, genetic insights can inform the use of targeted therapies such as retinoids, hormonal treatments, and antibiotics, as well as skincare regimens designed to address specific genetic vulnerabilities.

Genetic factors play a significant role in the development and severity of both rosacea and acne. By leveraging genetic insights, individuals can adopt more effective, personalized strategies for managing these skin conditions, leading to improved outcomes and better skin health.

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Rosacea Propensity



Increased

Understanding what this may mean

This increased risk underscores the importance of proactive skincare and lifestyle management to prevent or minimize symptoms. Individuals with an increased risk should use gentle skincare products, avoid known rosacea triggers, and protect their skin from sun exposure with broad-spectrum sunscreen. Consulting with a dermatologist for personalized skincare advice and potential treatment options can also be beneficial.

Acne Propensity



Neutral

Understanding what this may mean

This standard risk level suggests that environmental factors, lifestyle choices, and skincare routines play significant roles in the potential onset of acne. To manage this neutral risk, individuals should adopt a consistent skincare routine, avoid using overly harsh products, and maintain a healthy lifestyle that includes a balanced diet and stress management. Regular cleansing to remove excess oil and dirt can help prevent breakouts

Genetic Summary 17

SNP	Marker	Genotype	SNP	Marker	Genotype

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HSD11B1 T332-29G	rs12086634	TT
HSD11B1 A-26-3008G	rs846910	GG
OVOL1 (G>T)	rs478304	TG
FST (G>A)	rs38055	AG
TGFB1 (G>A)	rs1159268	AG
RETN G118+181A	rs3745367	GG
RETN C420G	rs1862513	CC
IL-1A C340A	rs17561	CC
TNF C-857T	rs1799724	CC
TNF G-308A	rs1800629	GG
CYP17A1 A-34G	rs743572	AG
IRF4 C492+386T	rs12203592	CC
AIF1 (G>C)	rs3132451	GG
HERC2 C*50T	rs1129038	TT
C2 G73+9517A	rs519417	GG
SLC45A2 C1122G	rs16891982	GG
MICB T1025-1101A	rs3130614	TT

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Module 6

Skin Response to Sunlight

The skin's response to sunlight can impact overall health and well-being. Understanding genetic predisposition for skin tanning ability and UV resilience can help to make informed decisions about sun exposure and protect the skin from potential damage.

This page will provides personalized insights into skin tanning ability and UV resilience based on the genetic analysis.



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Skin Tanning Ability



Reduced

Understanding what this may mean

This result corresponds with reduced skin tanning ability, which can lead to increased susceptibility to sunburns and skin damage from UV radiation. Extra precautions are recommended when exposed to sunlight, such as avoiding prolonged sun exposure.

UV Resilience



Neutral

Understanding what this may mean

Individuals with this genetic result may have typical UV resilience, meaning they have an average ability to resist the damaging effects of UV radiation. However, it is still essential to take precautions to protect the skin from sun exposure.

Genetic Summary 8

SNP	Marker	Genotype
ASIP (G>T)	rs4911414	GG
ASIP (C>T)	rs1015362	CC
IRF4 C492+386T	rs12203592	CC

SNP	Marker	Genotype
MC1R C451T	rs1805007	CC
MC1R C478T	rs1805008	CC
RALY G877-563A	rs6059655	GG

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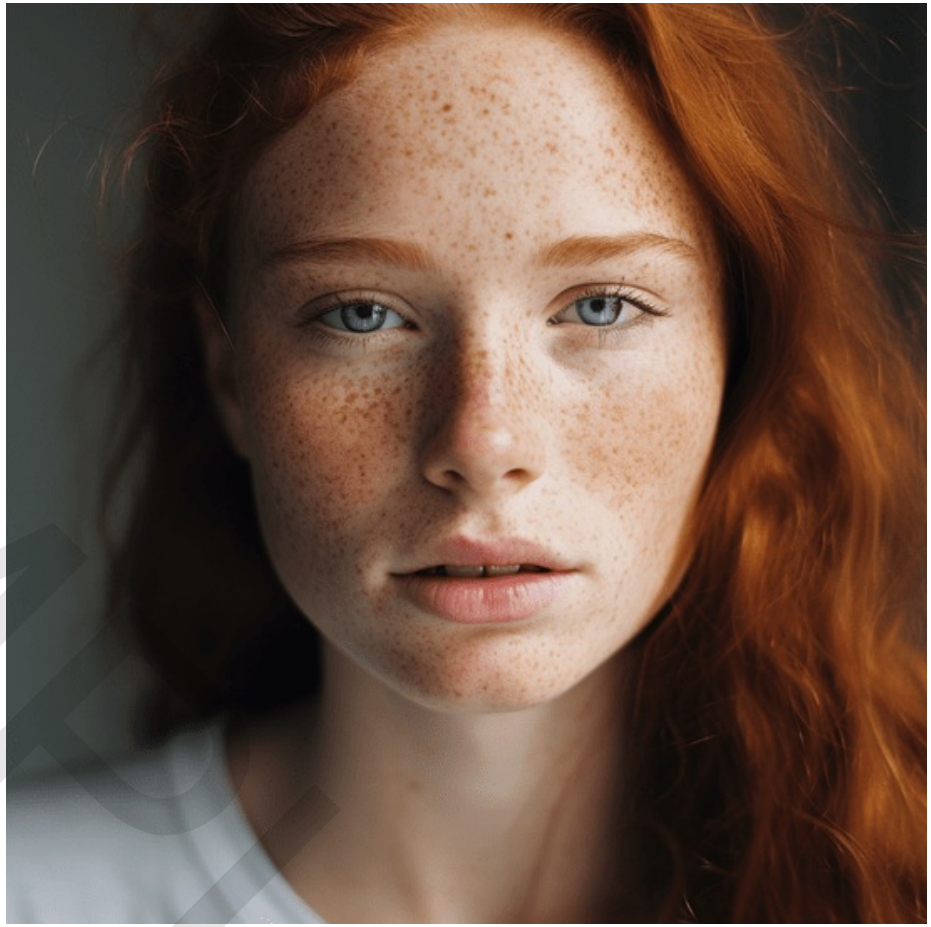
SLC45A2 C1122G	rs16891982	GG

TYR G1205A	rs1126809	GG

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Module 7

Skin Spots



Sunspots, also known as age spots, are dark spots that appear on the skin as a result of sun damage. They are common in individuals who have had a lot of exposure to sunlight or have fair skin. Understanding genetics for sunspots can provide understanding for risk of developing these spots, and take preventative measures to protect skin from further damage.

Freckles, on the other hand, are small brown spots on the skin that are caused by an increase in the production of melanin, the pigment that gives skin its color. While freckles are harmless, understanding genetic risk for freckles can help make informed decisions about sun protection and skincare to keep the skin healthy and prevent the development of sun damage and other skin issues.

By understanding genetics for sunspots and freckles, informed decisions about sun protection and skincare can be made, and preventative measures can be taken to protect the skin from further damage.

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Freckles



Neutral Chance

Understanding what this may mean

Individuals with this genetic result have a typical chance of having freckles.

Sunspots



Neutral

Understanding what this may mean

Individuals with this genetic result may have a neutral risk for developing sunspots. However, it is always beneficial to practice sun protection and regular skin check-ups with a healthcare provider.

Genetic Summary 12

SNP	Marker	Genotype
IRF4 C492+386T	rs12203592	CC
RALY G877-563A	rs6059655	GG
MC1R G274A	rs2228479	AG
MC1R G178T	rs1805005	GG

SNP	Marker	Genotype
MC1R G880C	rs1805009	GG
MC1R C*252T	rs35063026	.
Intergenic-6 (G>A)	rs1540771	CC
TYR C575A	rs1042602	CC

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MC1R C451T	rs1805007	CC
MC1R C478T	rs1805008	CC
ASIP (G>T)	rs4911414	GG
ASIP (C>T)	rs1015362	CC

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Module 8

Psoriasis



Psoriasis is a chronic autoimmune skin condition characterized by the rapid growth of skin cells, leading to thick, red, scaly patches that can be itchy and painful. This condition can affect various parts of the body, including the scalp, elbows, knees, and lower back. Psoriasis is influenced by a combination of genetic and environmental factors, and understanding the genetic components can help in identifying individuals at higher risk and developing personalized treatment plans.

Genetic factors play a significant role in the development of psoriasis. Key genes involved include HLA-C, IL12B, and IL23R. The HLA-C gene, particularly the HLA-Cw6 variant, is strongly associated with an increased risk of psoriasis, as it plays a crucial role in the immune system's response to skin cells. Variations in the IL12B and IL23R genes affect the production and function of interleukins, which are proteins involved in the inflammatory response. These genetic variations can lead to an overactive immune system, resulting in the characteristic symptoms of psoriasis. By examining these genetic markers, it is possible to assess an individual's risk of developing psoriasis and tailor prevention and treatment strategies accordingly.

Understanding genetic predispositions to psoriasis can help create personalized health plans. For individuals with a higher genetic risk, proactive measures such as maintaining a healthy lifestyle, managing stress, and avoiding known triggers can help reduce flare-ups. Treatment options may include topical therapies, phototherapy, and systemic medications that target specific aspects of the immune response. In some cases, biologic drugs that specifically target the IL12 and IL23 pathways may be recommended based on genetic insights. By integrating genetic information, healthcare providers can offer more effective and tailored approaches to managing psoriasis, ultimately improving patient outcomes and quality of life.

SAMPLE

Psoriasis Propensity



Neutral

Understanding what this may mean

This indicates an average likelihood of experiencing psoriasis. Practicing good skin care, maintaining a balanced diet, and managing stress can support overall skin health and help manage potential symptoms.

Genetic Summary 7

SNP	Marker	Genotype	SNP	Marker	Genotype
IL-12B C89-432T	rs3213094	CC	HLA-B*57:01	rs2395029	TT
IL-12B T*159G	rs3212227	TT	HLA-C (G>C)	rs1265181	GG
IL-12B (G>T)	rs4085613	GG	HLA-C (C>T)	rs10484554	CC
Intergenic-18 (G>A)	rs17728338	GG			

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Module 9

Skin Risks



Melanoma and basal cell carcinoma are two of the most common types of skin cancer, and both are linked to exposure to ultraviolet (UV) radiation from the sun. This page provides insights into genetic predispositions for developing these types of skin cancers, enabling proactive steps to reduce risk.

Melanoma is a particularly aggressive form of skin cancer that can quickly spread to other parts of the body. Early detection and treatment are essential for the best possible outcome.

Basal cell carcinoma is a more common type of skin cancer that often appears as a pink or flesh-colored bump on the skin. While it's typically not as aggressive as melanoma, it can still cause significant damage if left untreated.

By understanding genetic risk for developing melanoma and basal cell carcinoma, steps can be taken to reduce the risk of developing these cancers, including avoiding excessive sun exposure, using sunscreen, wearing protective clothing, and getting regular skin checks

SAMPLE

Melanoma Risk



Neutral

Understanding what this may mean

Individuals with this genetic result have a typical risk of developing melanoma compared to the general population. It is important to practice sun safety and consider regular skin cancer screenings.

Basal Cell Carcinoma Risk



Low

Understanding what this may mean

Individuals with this genetic result have a lower risk of developing basal cell carcinoma than the general population. However, regular sun protection and skin checks are still recommended.

Genetic Summary 24

SNP	Marker	Genotype	SNP	Marker	Genotype
MC1R C451T	rs1805007	CC	MC1R C252A	rs1805006	CC
MC1R C478T	rs1805008	CC	MC1R G425A	rs11547464	GG
MC1R G880C	rs1805009	GG	OCA2 G-21-1724A	rs7174027	GG
RALY G877-563A	rs6059655	GG	OCA2 A-22+8550G	rs4778138	AA

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MITF G1255A	rs149617956	GG	HERC2 T3577+2139C	rs8028689	TT
SLC45A2 C1122G	rs16891982	GG	HERC2 T1598+247C	rs916977	CC
TYR G1205A	rs1126809	GG	TYR C575A	rs1042602	CC
ASIP (G>T)	rs4911414	GG	TP53 T*1175G	rs78378222	TT
ASIP (C>T)	rs1015362	CC	RGS22 A2167-3709C	rs7006527	AC
IRF4 C492+386T	rs12203592	CC	TGM3 A7+5254G	rs214782	AG
KITLG (T>C)	rs12821256	TT	PADI6 G1619+204A	rs7538876	AG
TYRP1 C*123A	rs683	AC	Intergenic-1 (T>G)	rs801114	TG

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