PRECISION HEALTH

PRECISYA

WOMEN'S HEALTH

PANEL

ENGLISH VERSION

Code: **Sample**

Gender: **Female**

Age:

Prescriber:

Health insurance:

Date: **15.05.2025**

PRECISION HEALTH
PRECISYA

ATTENTION!

THE RESULTS CONTAINED IN THIS EXAM SHOULD BE INTERPRETED AS INDICATORS AND NOT AS A DIAGNOSIS. ANY TREATMENT OR DIAGNOSIS MUST BE DONE BY A TRAINED PROFESSIONAL.

PART ONE

HOW TO INTERPRET:

- The results are divided into:
- Characteristics
- Needs
- Susceptibilities

Each division has categories to facilitate interpretation.

This report is presented in two parts, as well as the graphs: **HIGH**

This report is presented in two parts, as well as the graphs: **MEDIUM-HIGH**

This report is presented in two parts, as well as the graphs: **MEDIUM**

This report is presented in two parts, as well as the graphs: **NORMAL**

This report is presented in two parts, as well as the graphs: **LOW**

This report is presented in two parts, as well as the graphs: **NOT IDENTIFIED**

PART TWO

The second part of the report is a more complete detail of the first part, that is, it presents important information based on the patient's result for each condition.

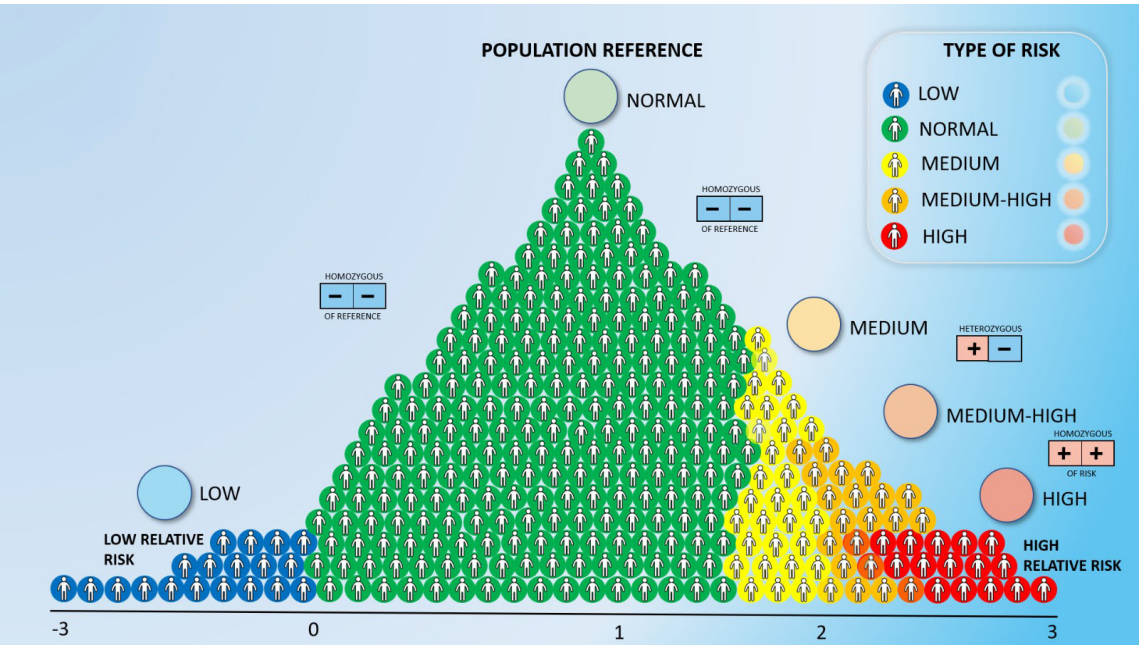
As in the first part, risk factors are separated by color, such as:

HIGH	MEDIUM-HIGH	MEDIUM-NORMAL	NORMAL	LOW	NOT IDENTIFIED

RISK FACTOR

POPULATION DIAGRAM

This chart is a way to illustrate how the distribution of risks in the population works statistically. Since most people are in the green range (normal risk), it is necessary to increase attention when we find results in orange or red.



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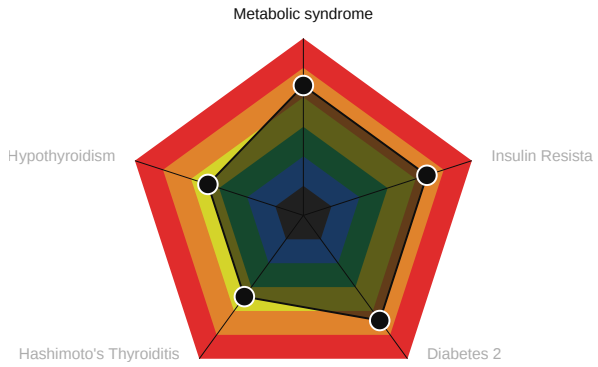
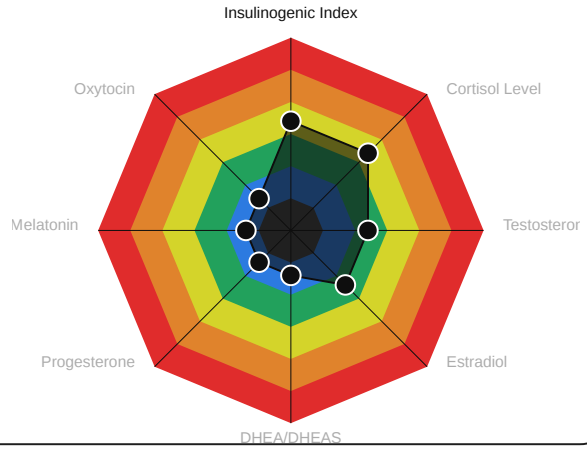
MOST RELEVANT CONDITIONS BY CATEGORY

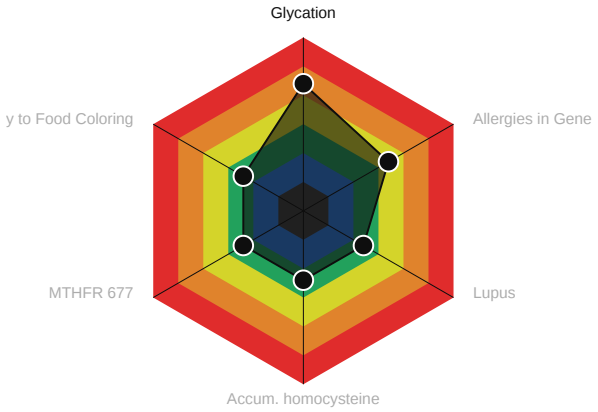
ENDOCRINOLOGICAL SYSTEM DISEASE SUSCEPTIBILITY



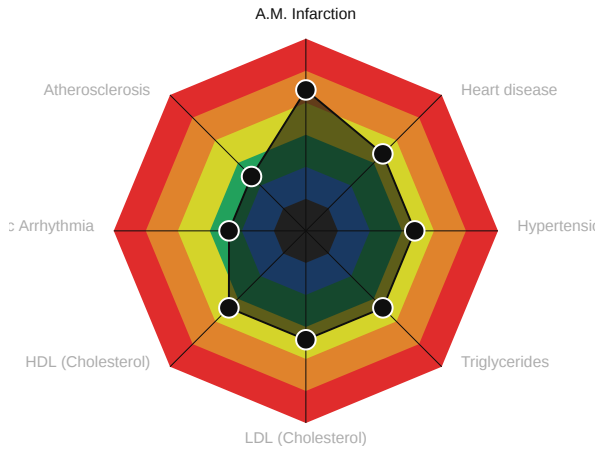
ENDOCRINOLOGICAL SYSTEM HORMONES



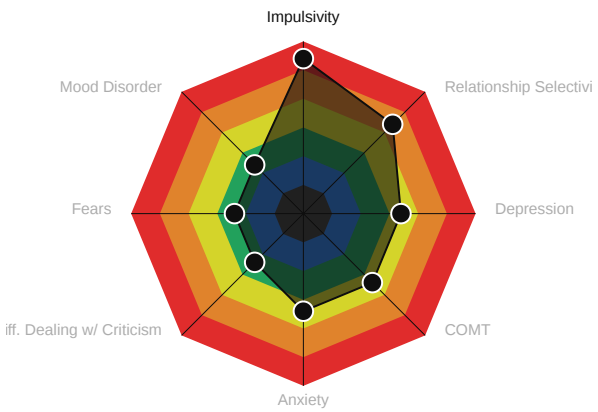
IMMUNE SYSTEM



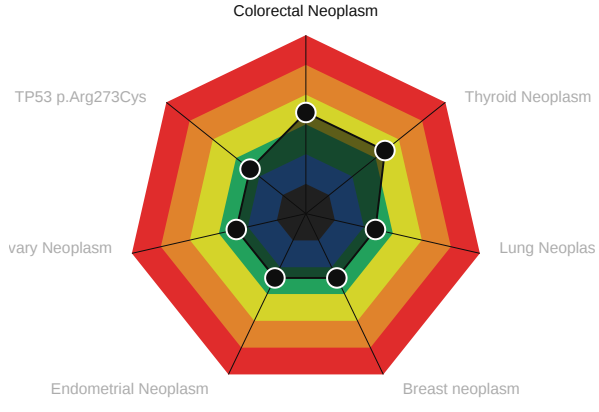
CARDIO-CIRCULATORY SYSTEM



BEHAVIORAL



ONCOLOGY



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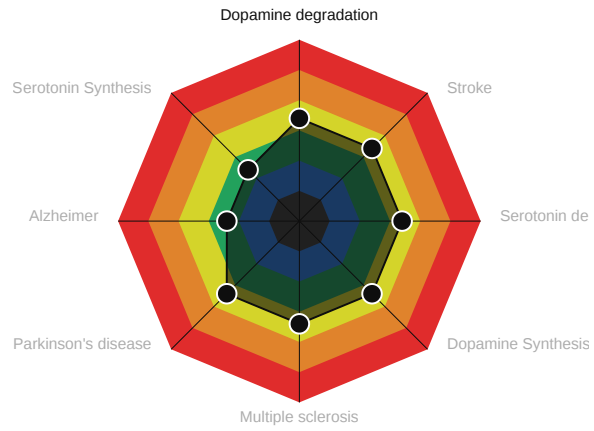
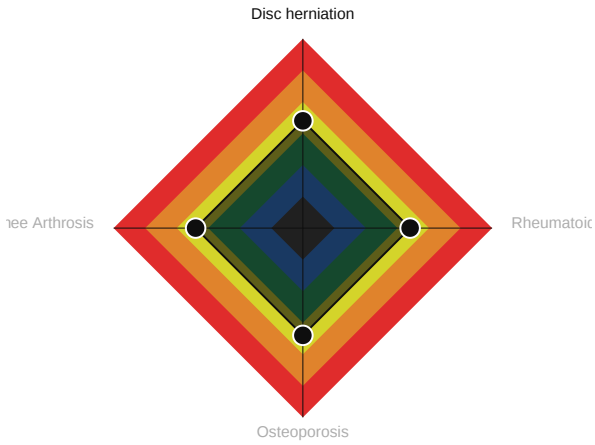
MOST RELEVANT CONDITIONS BY CATEGORY

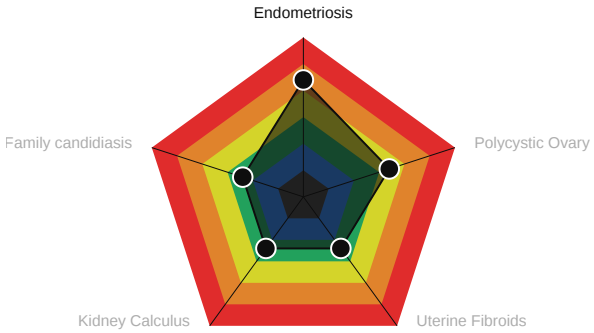
NEUROLOGICAL SYSTEM



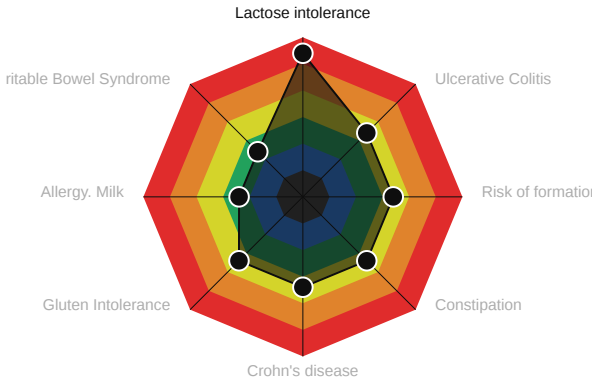
OSTEO-MUSCULAR SYSTEM



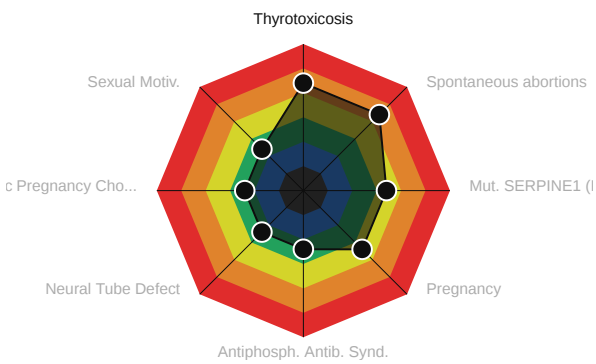
GENITO-URINARY SYSTEM



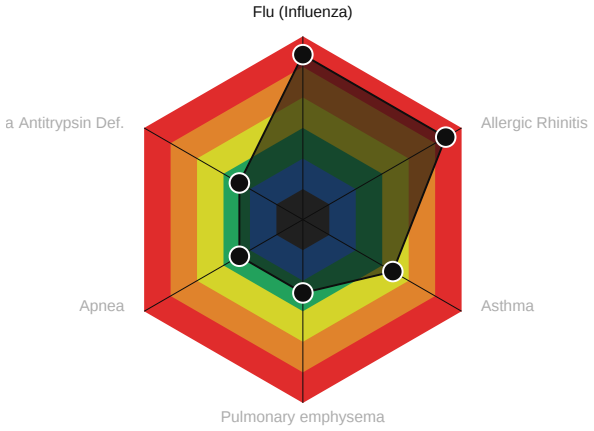
GASTROINTESTINAL SYSTEM



FERTILITY



RESPIRATORY SYSTEM



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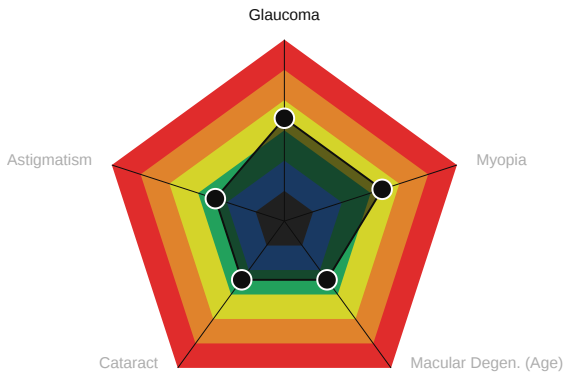
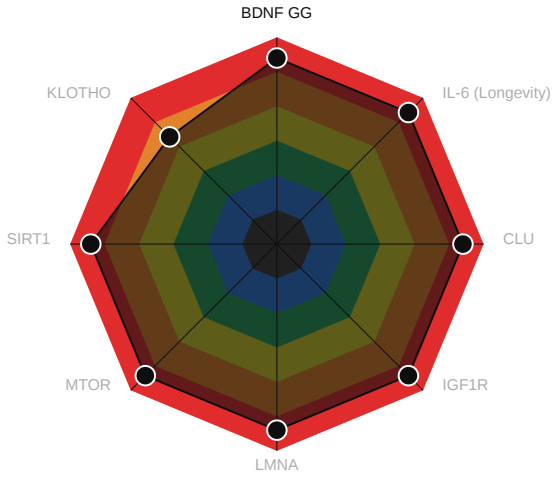
MOST RELEVANT CONDITIONS BY CATEGORY

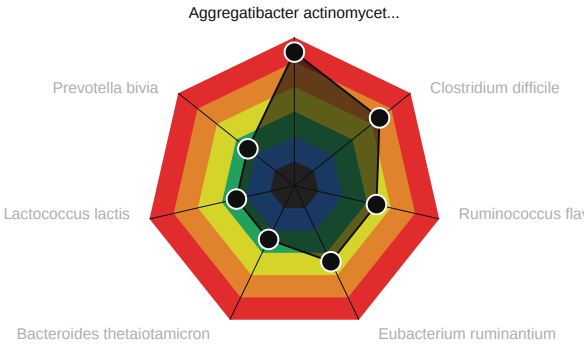
SENSORY SYSTEM



LONGEVITY



MICROBIOME



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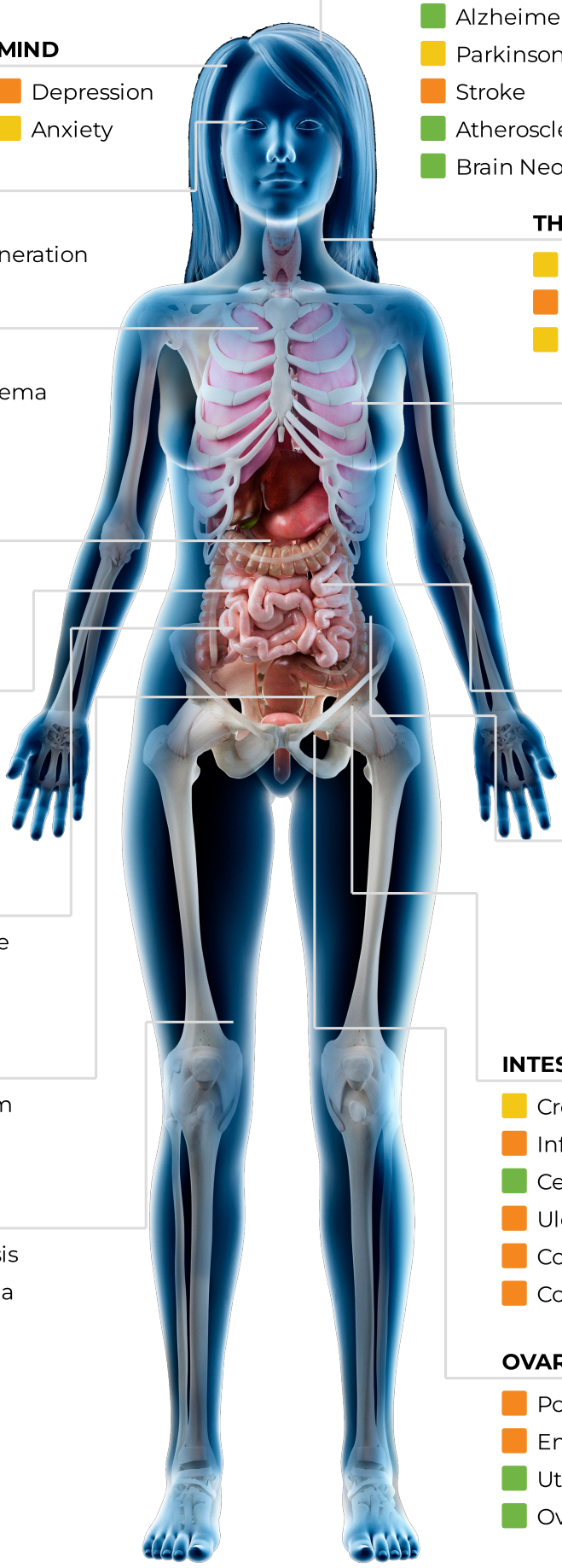


BRAIN
- Alzheimer's disease
- Parkinson's disease
- Stroke
- Atherosclerosis
- Brain Neoplasia

MIND
- Depression
- Anxiety

EYES
- Glaucoma
- Macular Degeneration

THYROID
- Hypothyroidism
- Hashimoto's Thyroiditis
- Thyroid Neoplasia

LUNGS
- Cystic Fibrosis
- Pulmonary Emphysema
- Lung Neoplasm
- Pulmonary Fibrosis

HEART
- Atrial Fibrillation
- Acute Myocardial Infarction
- Cardiovascular Disease
- Hypertension
- Aortic Stenosis
- Cardioembolic Stroke

LIVER
- Hepatic Ateatosis
- Liver Neoplasm

ADRENAL
- Cortisol
- Aldosterone
- DHEA/DHEAS

STOMACH
- Gastritis
- Stomach Neoplasm

PANCREAS
- β Cell Deficiency
- Hyperinsulinemia
- Insulin Resistance
- Type 2 Diabetes
- Pancreatic Neoplasm

KIDNEYS
- Nephrotic Syndrome

BLADDER
- Bladder Neoplasm

INTESTINES
- Crohn's disease
- Inflammatory Bowel Disease
- Celiac Disease
- Ulcerative Colitis
- Constipation
- Colorectal Neoplasia

BLOOD
- Venous Thrombosis
- Thrombocytopenia
- Leukemia

OVARIES / UTERUS
- Polycystic Ovary Syndrome
- Endometriosis
- Uterine Fibroids
- Ovary Neoplasm

RISK FACTOR

HIGH | MEDIUM-HIGH | MEDIUM-NORMAL | NORMAL | LOW | NOT IDENTIFIED

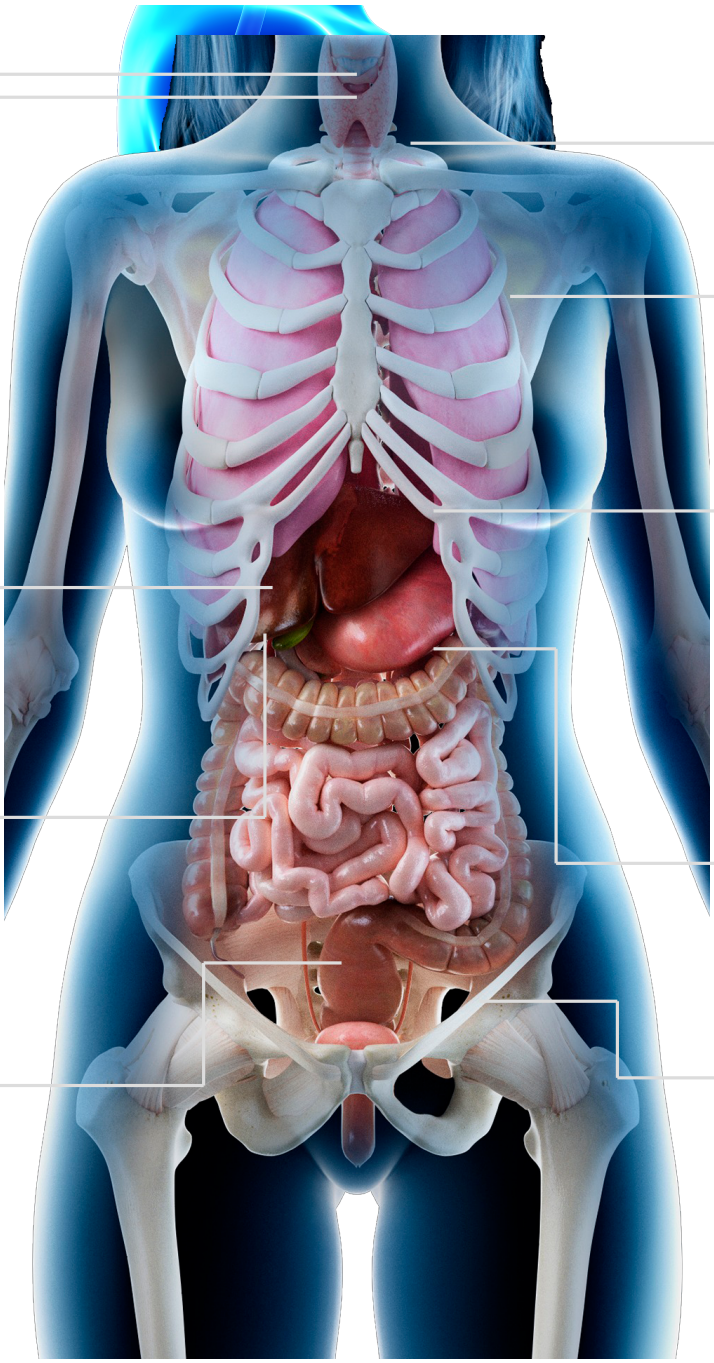
PRECISION HEALTH PRECISYA

WOMEN'S BODY
Endocrine System

HYPOTHALAMUS
- Oxytocin
- Antidiuretic Hormone (ADH)
- Dopamine
- Somatostatin
- Vasopressin

PINEAL
- Melatonin

PITUITARY
- Oxytocin
- Antidiuretic Hormone (ADH)
- Growth hormone
- Prolactin
- FSH
- Luteinizing Hormone
- TSH
- Adrenocorticotropic Hormone
- Vasopressin



THYROID
- T3
- T4
- Calcitonin

PARATHYROID
- Parathyroid Hormone

THYMUS
- Thymosin

HEART
- ANP

STOMACH
- Gastrin
- Ghrelin
- Neuropeptide Y
- Somatostatin
- Histamine
- Endithelin

LIVER
- Angiotensinogen
- Angiotensin
- Thrombopoietin

KIDNEYS
- Erythropoietin
- Calcitrol
- Renina
- Thrombopoietin

PANCREAS
- Insulin
- Glucagon
- Somatostatin

OVARIES
- Estrogens
- Progesterone

ADRENAL
- Adrenaline
- Noradrenaline
- Cortisol
- Corticosterone
- Aldosterone
- Testosterone

FATS
- Leptin
- Adiponectin

Your RESULTS

SUMMARY OF RESULTS

RISK FACTOR

HIGH | MEDIUM-HIGH | MEDIUM-NORMAL | NORMAL | LOW | NOT IDENTIFIED

1. ENDOCRINOLOGICAL SYSTEM - DISEASE SUSCEPTIBILITY

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING ENDOCRINOLOGICAL DISEASES during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

MEDIUM	Hypothyroidism	6	-	-	5	+	-	2	+	+
MEDIUM	Hashimoto's Thyroiditis	6	-	-	1	+	-	0	+	+
MEDIUM-HIGH	Type 2 diabetes	18	-	-	11	+	-	6	+	+
MEDIUM-HIGH	Metabolic syndrome	3	-	-	2	+	-	2	+	+
MEDIUM-HIGH	Insulin Resistance	2	-	-	1	+	-	6	+	+

2. ENDOCRINOLOGICAL SYSTEM - HORMONES

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual having PROBLEMS IN THE PRODUCTION of the hormones evaluated during his/her lifetime. If the risk is HIGH or LOW it is recommended to ask for tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from happening. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

LOW	Oxytocin	0	-	-	2	+	-	0	+	+
LOW	Melatonin	3	-	-	0	+	-	0	+	+
MEDIUM	Insulin	2	-	-	0	+	-	1	+	+

MEDIUM	Cortisol	2	-	-	3	+	-	0	+	+
LOW	DHEA/DHEAS	5	-	-	2	+	-	0	+	+
NORMAL	Testosterone	2	-	-	4	+	-	0	+	+
LOW	Progesterone	3	-	-	0	+	-	0	+	+
NORMAL	Estradiol	0	-	-	1	+	-	0	+	+

3. IMMUNE SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING IMMUNOLOGICAL SYSTEM DISEASES during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

NORMAL	MTHFR 677 Mutation (rs1801133)	1	-	-	0	+	-	0	+	+
NORMAL	Homocysteine Accumulation	6	-	-	6	+	-	0	+	+
MEDIUM-HIGH	Glycation	3	-	-	1	+	-	0	+	+
MEDIUM	Allergies in General	2	-	-	1	+	-	0	+	+
NORMAL	Allergy to Food Dyes	1	-	-	0	+	-	0	+	+
NORMAL	Systemic Lupus Erythematosus	21	-	-	2	+	-	3	+	+

4. CARDIO-CIRCULATORY SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING DISEASES OF THE CARDIO-CIRCULATORY SYSTEM during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

NORMAL	High Ferritin	5	-	-	1	+	-	1	+	+
NORMAL	Atherosclerosis	4	-	-	1	+	-	0	+	+
MEDIUM	Heart disease	3	-	-	0	+	-	1	+	+
MEDIUM	Hypertension (High Blood Pressure)	6	-	-	7	+	-	2	+	+
MEDIUM-HIGH	Acute myocardial infarction	13	-	-	4	+	-	3	+	+
NORMAL	Venous Thrombosis	6	-	-	1	+	-	0	+	+
NORMAL	Ischemic Stroke	2	-	-	0	+	-	0	+	+
NORMAL	Cardiac Arrhythmia	2	-	-	1	+	-	0	+	+
MEDIUM	Cholesterol Level (HDL)	15	-	-	9	+	-	1	+	+
MEDIUM	Cholesterol Level (LDL)	8	-	-	12	+	-	3	+	+
MEDIUM	Triglycerides	16	-	-	8	+	-	3	+	+

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RISK FACTOR

HIGH | MEDIUM-HIGH | MEDIUM-NORMAL | NORMAL | LOW | NOT IDENTIFIED

5. BEHAVIORAL

This section indicates the LEVEL OF POSSIBILITY (in relation to the general population) of the individual to present during his/her lifetime the ASSESSED PSYCHO-BEHAVIORAL CHARACTERISTICS. If the LEVEL is HIGH or MEDIUM-HIGH the person should be referred to a psychotherapist or psychiatrist for evaluation and follow-up or treatment.

MEDIUM	Depression	2	-	-	2	+	-	1	+	+		
MEDIUM	Anxiety	5	-	-	0	+	-	1	+	+		
MEDIUM-HIGH	Relationship Selectivity	1	-	-	3	+	-	1	+	+		
NORMAL	Difficulties in Receiving Reviews	2	-	-	2	+	-	0	+	+		
HIGH	Impulsivity	6	-	-	1	+	-	2	+	+		
NORMAL	Fears	0	-	-	1	+	-	0	+	+		
NORMAL	Mood Disorder	1	-	-	0	+	-	0	+	+		
MEDIUM	COMT	0	-	-	1	+	-	0	+	+		

6. ONCOLOGY

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING CANCER DISEASES during his/her lifetime. If the risk is HIGH, it is recommended to refer to an oncologist for tests and see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

MEDIUM	Thyroid Neoplasm	5	-	-	2	+	-	0	+	+		
MEDIUM	Colorectal Neoplasm	9	-	-	4	+	-	1	+	+		
NORMAL	Breast neoplasm	67	-	-	8	+	-	1	+	+		
NORMAL	Ovary Neoplasm	20	-	-	5	+	-	0	+	+		
NORMAL	Endometrial Neoplasm	7	-	-	1	+	-	0	+	+		
NORMAL	Lung Cancer	18	-	-	6	+	-	5	+	+		
NORMAL	TP53 p.Arg273Cys (Li-Fraumeni)	1	-	-	0	+	-	0	+	+		

7. NEUROLOGICAL SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING DISEASES OF THE NEUROLOGICAL SYSTEM during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

NORMAL	Alzheimer's disease	26	-	-	8	+	-	1	+	+		
MEDIUM	Parkinson's disease	11	-	-	4	+	-	2	+	+		
NORMAL	Mental and Cognitive Decline (Age)	1	-	-	0	+	-	0	+	+		
MEDIUM	Stroke	15	-	-	4	+	-	1	+	+		

NORMAL	Sleep Quality	2	-	-	0	+	-	0	+	+
MEDIUM	Dopamine Synthesis	8	-	-	5	+	-	1	+	+
NORMAL	Serotonin Synthesis	12	-	-	2	+	-	0	+	+
MEDIUM	Multiple Sclerosis	19	-	-	5	+	-	1	+	+
MEDIUM	Dopamine Degradation	12	-	-	14	+	-	0	+	+
MEDIUM	Serotonin Degradation	2	-	-	4	+	-	0	+	+

8. OSTEO-MUSCULAR SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING DISEASES OF THE OSTEO-MUSCULAR SYSTEM during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

MEDIUM	Osteoporosis	4	-	-	2	+	-	1	+	+
MEDIUM	Rheumatoid arthritis	26	-	-	4	+	-	2	+	+
MEDIUM	Arthrosis of the Knee	3	-	-	1	+	-	0	+	+
MEDIUM	Disc Herniation	0	-	-	1	+	-	0	+	+

9. GENITO-URINARY SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING DISEASES OF THE GENITO-URINARY SYSTEM during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

NORMAL	Kidney Calculus	1	-	-	0	+	-	0	+	+
NORMAL	Candidiasis	2	-	-	0	+	-	0	+	+
MEDIUM	Polycystic Ovary Syndrome	4	-	-	7	+	-	0	+	+
MEDIUM-HIGH	Endometriosis	6	-	-	0	+	-	2	+	+
NORMAL	Uterine Fibroids	3	-	-	1	+	-	0	+	+

10. GASTROINTESTINAL SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING DISEASES OF THE GASTROINTESTINAL SYSTEM during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

MEDIUM	Constipation	1	-	-	1	+	-	0	+	+
MEDIUM	Crohn's disease	13	-	-	15	+	-	2	+	+
HIGH	Lactose intolerance	0	-	-	0	+	-	1	+	+

MEDIUM	Ulcerative Colitis	12	-	-	14	+	-	3	+	+
NORMAL	Leaky Gut Syndrome	0	-	-	1	+	-	0	+	+
NORMAL	Celiac disease	11	-	-	4	+	-	0	+	+
MEDIUM	Gluten Intolerance	3	-	-	1	+	-	0	+	+
NORMAL	Irritable bowel syndrome	2	-	-	1	+	-	0	+	+
NORMAL	Milk Protein Allergy	2	-	-	1	+	-	0	+	+
MEDIUM	Biliary Calculus	1	-	-	0	+	-	1	+	+
NORMAL	Ulcer	4	-	-	0	+	-	0	+	+
NORMAL	Gastritis	1	-	-	0	+	-	0	+	+

11. FERTILITY

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual developing problems in relation to their FERTILITY. If the risk is HIGH or if it is MEDIUM-HIGH in a person with an unhealthy lifestyle and who wants to have children, they should be referred to a specialist fertility professional for testing and treatment.

NORMAL	Lower Sexual Desire (Female)	1	-	-	0	+	-	0	+	+
NORMAL	In vitro fertilization	1	-	-	0	+	-	0	+	+
NORMAL	Female Infertility	0	-	-	1	+	-	0	+	+
MEDIUM	Pregnancy	7	-	-	1	+	-	1	+	+
MEDIUM-HIGH	Thyrotoxicosis	0	-	-	0	+	-	2	+	+
NORMAL	Recurrent Pregnancy Loss (lower risk)	5	-	-	0	+	-	0	+	+
NORMAL	Intrahepatic Cholestasis of Pregnancy	12	-	-	1	+	-	0	+	+
LOW	Uterine Fibromyoma	3	-	-	0	+	-	0	+	+
NORMAL	Neural Tube Defect	5	-	-	2	+	-	0	+	+
MEDIUM-HIGH	Spontaneous Abortions	0	-	-	0	+	-	1	+	+
LOW	Protein C Deficiency	5	-	-	1	+	-	0	+	+
NORMAL	Antithrombin Deficiency	3	-	-	0	+	-	0	+	+
NORMAL	Antiphospholipid Antibody Syndrome	4	-	-	6	+	-	0	+	+
MEDIUM	SERPINE1 Gene Mutation (PAI-1)	0	-	-	1	+	-	0	+	+
NORMAL	Protein S Deficiency	2	-	-	0	+	-	0	+	+
NORMAL	Isolated Follicle Stimulating Hormone (FSH) Deficiency	1	-	-	1	+	-	0	+	+
NORMAL	Fragile-X Syndrome	3	-	-	0	+	-	0	+	+
NORMAL	FSH Deficiency	1	-	-	1	+	-	0	+	+

12. RESPIRATORY SYSTEM

This section indicates the LEVEL OF RISK (in relation to the general population) of the individual to DEVELOP THE FOLLOWING DISEASES OF THE RESPIRATORY SYSTEM during his/her lifetime. If the risk is HIGH, it is recommended to order tests to see if you already have the problem and treat, and if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the MEDIUM-HIGH risk level should be considered as being HIGH risk.

NORMAL	Pulmonary emphysema	1	-	-	1	+	-	0	+	+
NORMAL	Apnea	0	-	-	1	+	-	0	+	+
MEDIUM	Asthma	6	-	-	2	+	-	1	+	+
HIGH	Flu (Influenza)	0	-	-	0	+	-	1	+	+
HIGH	Allergic Rhinitis	4	-	-	0	+	-	1	+	+
NORMAL	Alpha Antitrypsin Deficiency (AAT)	1	-	-	0	+	-	0	+	+

13. SENSORY SYSTEM

This section indicates the susceptibility (relative to the general population) of the individual to develop the following sensory system conditions during his/her lifetime. If the risk is high, it is recommended to order tests to see if you already have the problem and treat and, if not, perform an epigenetic treatment to prevent it from developing. In the case of an older person and/or an unhealthy lifestyle the medium-high risk level should be considered high risk.

NORMAL	Cataract	3	-	-	1	+	-	0	+	+
NORMAL	Age-Related Macular Degeneration	13	-	-	7	+	-	2	+	+
MEDIUM	Glaucoma	3	-	-	0	+	-	1	+	+
MEDIUM	Myopia	10	-	-	4	+	-	1	+	+
NORMAL	Astigmatism	1	-	-	0	+	-	0	+	+

14. LONGEVITY

This section indicates the genetic tendency that individuals possess to show an increased concentration (Red colour) of some of the very important genes that play a role in Longevity. This is backed by research as some of these genes like TERT, TOMM40 etc are intricately involved in maintaining cellular homeostasis. Therefore, a slightly higher levels of these genes would mean that oxidative stress can be reduced greatly. However, these genes in the green zone does not attribute to any detrimental disease risk as it means one could have normal levels which can carry out the biochemical processes optimally.

HIGH	BDNF GG	0	-	-	0	+	-	1	+	+
HIGH	IL-6 (Longevity)	0	-	-	0	+	-	1	+	+
LOW	PON1	0	-	-	1	+	-	0	+	+
HIGH	CLU	0	-	-	1	+	-	0	+	+
HIGH	IGF1R	0	-	-	1	+	-	0	+	+
MEDIUM-HIGH	KLOTHO	0	-	-	0	+	-	1	+	+
HIGH	LMNA	0	-	-	0	+	-	1	+	+

HIGH	MTOR	0	-	-	0	+	-	1	+	+
NORMAL	PCSK9	1	-	-	0	+	-	0	+	+
HIGH	SIRT1	0	-	-	1	+	-	0	+	+
LOW	TERT	1	-	-	0	+	-	0	+	+
LOW	TOMM40	0	-	-	2	+	-	0	+	+

15. MICROBIOME

This section indicates the genetic tendency that individuals possess to show an increased concentration (Red colour) of some of the microbial strains present in the gut. It is essential to maintain the gut population at optimum as these strains are involved in digestion, absorption and disease expression. Some of the strains can be beneficial if they are in red while others can be unwanted (follow the description in the last section).

MEDIUM	Ruminococcus yellowfaciens	0	-	-	1	+	-	0	+	+
NORMAL	Lactococcus lactis	1	-	-	0	+	-	0	+	+
MEDIUM	Eubacterium ruminantium	0	-	-	1	+	-	0	+	+
NORMAL	Bacteroides thetaiotaomicron	1	-	-	1	+	-	0	+	+
NORMAL	Prevotella bivia	2	-	-	0	+	-	0	+	+
MEDIUM-HIGH	Clostridium difficile	2	-	-	3	+	-	3	+	+
HIGH	Aggregatibacter actinomycetemcomitans	0	-	-	0	+	-	1	+	+

***Conditions with no variant found:** Bronchitis, Deafness, Faecalibacterium prausnitzii, FOXO3, Hyperopia, MTHFR 1298 Mutation (rs1801131), Nausea during Pregnancy, Recurrent Urinary Tract Infection, SIRT3, Skin Cancer, TP53

1. ENDOCRINOLOGICAL SYSTEM - DISEASE SUSCEPTIBILITY

HYPOTHYROIDISM

Hypothyroidism is a dysfunction in the thyroid (the gland that regulates important organs in the body), which is characterized by a drop in the production of hormones T3 (triiodothyronine) and T4 (thyroxine) that control the speed of metabolism.

Observations

If the results observed fall in the RED zone, it indicates that there is a strong genetic tendency that triggers the candidate to be more susceptible to this condition based on underlying SNPs and Epigenetic factors. It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

CAPZB, CTLA4, DIO1, DUOX2, FGF7, FMNL1, FOXE1, HLA, INSR, INTERGENIC, IYD, MTF1, PDE10A, PDE8B, PHTF1, PTCSC2, SH2B3, TG, TPO, TSHR, VAV3, ZNF804B

HASHIMOTO'S THYROIDITIS

Hashimoto's Thyroiditis is when the immune system attacks an organ as if it were a foreign body, which can lead to loss of function or structure of the organ. If this genetic condition develops, we have an immunological self-aggression on the Thyroid.

Observations

If the results observed fall in the RED zone, it indicates that there is a strong genetic tendency that triggers the candidate to be more susceptible to this condition based on underlying SNPs and Epigenetic factors. It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

CTLA4, FOXE1, IL-1B, MTNR1A, MTNR1B, PARP1, PTPN22

1. ENDOCRINOLOGICAL SYSTEM - DISEASE SUSCEPTIBILITY

TYPE 2 DIABETES

Type 2 DIABETES is a chronic disease that affects the way the body metabolizes glucose, the body's main source of energy. A person with type 2 diabetes may be resistant to the effects of insulin - a hormone that regulates the entry of sugar into cells - or not produce enough insulin to maintain a normal glucose level.

Observations

If the results observed fall in the RED zone, it indicates that there is a strong genetic tendency that triggers the candidate to be more susceptible to this condition based on underlying SNPs and Epigenetic factors. It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

ADCY5, ADIPOQ, ADRA2A, ADRB2, AKT1, CAPN10, CDKAL1, CDKN2A, CDKN2A/B, CDKN2B-AS1, ENPP1, ESR1, FAM58A, FTO, GAD1, GCK, GCKR, GPX1, HHEX, HNF1B, IGF2BP2, INSIG2, IRS1, JAZF1, KCNJ11, KCNQ1, LEPR, MTNR1B, NAF1, NOTCH2, PAX4, PEX5L, PPARG, PTPRD, PTPRS, RPSAP52, SDHAF4, SLC2A14, SLC2A4, SLC30A8, TCF2, TCF7L2, THADA, UBE2E2

METABOLIC SYNDROME

The METABOLIC SYNDROME, according to the SBEM criteria, is an alteration with impairment of the metabolism, considered as such when three of the five following criteria are present: Central obesity - waist circumference greater than 88 cm in women and 102 cm in men; Arterial Hypertension - systolic blood pressure above 130 and/or diatolic blood pressure above 85 mmHg; Altered blood glucose (blood glucose above 110 mg/dl) or diagnosis of Diabetes; Triglycerides above 150 mg/dl and HDL cholesterol above 40 mg/dl in men and 50 mg/dl in women.

Observations

If the results observed fall in the RED zone, it indicates that there is a strong genetic tendency that triggers the candidate to be more susceptible to this condition based on underlying SNPs and Epigenetic factors. It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

ADRB2, APOB, CD36, CYP27A1, CYP2C19, FTO, GHRL, LEPR, MC4R, MTTP, NOS3

1. ENDOCRINOLOGICAL SYSTEM - DISEASE SUSCEPTIBILITY

INSULIN RESISTANCE

Insulin is a hormone produced by the beta cells of the pancreas. Small amounts are secreted after each meal, allowing glucose to be transported into the body's cells, where it is needed for energy production. INSULIN RESISTANCE is, especially in muscle and adipose (fat) cells, a decrease in cell response to this hormone, by blocking cell receptors. When this condition is expressed, it can give rise to a wide clinical spectrum, which includes everything from tiredness and irritability to obesity, type II diabetes and reaching a metabolic syndrome.

Observations

If the results observed fall in the RED zone, it indicates that there is a strong genetic tendency that triggers the candidate to be more susceptible to this condition based on underlying SNPs and Epigenetic factors. It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

ADIPOQ, ADRB2, APOA1, APOC3, C5ORF67, ENPP1, GRB14, IL-6, IRS1, PLIN1

2. ENDOCRINOLOGICAL SYSTEM - HORMONES

OXYTOCIN

OXYTOCIN is a hormone produced by the hypothalamus and stored in the posterior pituitary gland with the following functions: developing attachment and empathy between people; produce part of the pleasure of orgasm; and modulate sensitivity to fear of the unknown. It acts in the gestational area promoting the release of breast milk and uterine muscle contractions during childbirth.

Observations

A result in Blue indicates a lowered production of oxytocin (Blue zone) which may manifest in the form of heightened anxiety, increased irritability and disturbed sleep patterns.

Genes

CD38, OXTR

MELATONIN

Melatonin is a hormone linked to the circadian cycle, that is, the way the body organizes its functions when we are awake and during sleep. It begins to be produced in the pineal gland when the day gets dark, to help the body prepare for sleep. It reaches its maximum level when we are sleeping. With the rising of the sun and the return of light, the gland reduces the production of melatonin, which signals that it is time to wake up.

Observations

A result for Melatonin in blue indicates lower production of melatonin in the body, with regards to the genetics. A low "Benefit of Melatonin", in blue means the patient wouldn't require very high doses of melatonin supplements.

Genes

ASMT, MTNR1A, MTNR1B, TPH2

2. ENDOCRINOLOGICAL SYSTEM - HORMONES

INSULIN

Insulin is a hormone produced by the beta cells of the pancreas. Small amounts are secreted after each meal to allow the transport of glucose into the body's cells, where it is needed for energy production. Other metabolic actions include an induction of increased DNA replication and protein synthesis; an increase in fatty acid synthesis. Insulin induces the transformation of glucose into triglycerides by adipose cells and induces cells to absorb circulating amino acids, in addition to inducing relaxation in the arterial wall musculature.

Observations

Results in red indicate that there is a strong genetic tendency of a higher production of insulin. In some cases, it might be indicative of a hyperactive pancreas. It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

ANK1, GCG, GRB14, PROX1

CORTISOL

CORTISOL is a hormone produced in the cortex of the adrenal gland. Its function is that of energy generation. It is naturally high in the morning so we can act and low at night so we can sleep. Or he can emerge as an emergency, at any time, in stressful situations, so we have the energy to fight (or flee).

Observations

Results in blue indicate that there is a strong genetic tendency observed for a lowered production of Cortisol. It is recommended that clinical evaluation and/or annual examinations to be carried out to understand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

CRHR1, DGKH, FKBP5, HSD11B1, HTR2C, NR3C1, OXTR

2. ENDOCRINOLOGICAL SYSTEM - HORMONES

DHEA/DHEAS

DHEA (dehydroepiandrosterone) and its sulfated form, dehydroepiandrosterone sulfate (sDHEA) is produced in the adrenal gland. Recent studies show that higher physiological levels of DHEA have been associated with greater well-being, better fitness, and greater muscle strength. There is also evidence of the effects of DHEA on bone density, as well as its anti-inflammatory and immune system effects.

Observations

Results in red indicate there is a strong genetic tendency of a higher production of DHEA which might influence the levels of testosterone. A blood test could confirm the levels of DHEA accordingly. In women, excessive levels of testosterone can increase the possibility of Androgenetic Alopecia .It is recommended that clinical evaluation and/or annual examinations to be carried out to undertstand if there is a phenotypic expression of the condition and to develop treatment modalities accordingly.

Genes

ARPC1A, BCL2L11, HHEX, INTERGENIC, SHBG, SULT2A1, TRIM4

TESTOSTERONE

Testosterone is present in less concentrations in women. It is an important hormone for women, helping to produce new blood cells, maintain bone health and libido, and boost other reproductive hormones. Women typically have naturally lower levels of testosterone, falling in the range of 9–55 ng/dL while men fall in the 300–1000 ng/dL range.

Observations

Results in red indicate there is a strong genetic tendency for an increased levels of testosterone in the system. A very high tendency could result in conditions like PCOS/Hairfall in women.

Genes

CYP17A1, CYP19A1, FAM9B, FSHR, HSD17B2, HSD17B3, PDE7B, SHBG

2. ENDOCRINOLOGICAL SYSTEM - HORMONES

PROGESTERONE

PROGESTERONE is an important female sex hormone produced by the corpus luteum in the ovary. Its reproductive function is to prepare the uterus mucosa for a possible pregnancy, in addition to the transport and implantation of the fertilized egg, maintenance of pregnancy and lactation. Physiologically it activates the lymphatic system, is a diuretic, helps the thyroid hormone in burning fat and activates the parasympathetic system, which has a relaxing action, among others.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for this condition to happen (increased production of PROGESTERONE, which indicates that the patient is less prone to problems of lack of PROGESTERONE during his life and in aging). . It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

INTERGENIC, PGR, SLC22A10, ZKSCAN5

ESTRADIOL

The main hormones for females are called estrogens and are produced by the ovaries. There are three of them. Estrona, Estradiol and Estriol. ESTRADIOL is the most active for women. It acts both in the reproductive function, acting on the maturation of eggs and uterine mucosa, as well as in the development of secondary sexual characteristics, such as breast growth and changes in the body, affecting bones, joints and fat distribution. According to studies, estradiol plays more than 300 functions in the female body. Among them in skin elasticity, blood vessel dilation and bone health. In the brain, estradiol plays a significant role in protecting brain functions such as memory, mood and mental well-being.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for this condition to happen (greater production of ESTRADIOL, which indicates that the patient is less prone to problems of lack of ESTRADIOL during his life and in aging). . It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ESR2, SHBG

3. IMMUNE SYSTEM

MTHFR 677 MUTATION (RS1801133)

MTHFR is a key enzyme for certain biological processes, including the conversion of homocysteine into methionine. Mutations in genes that encode this enzyme cause a significant reduction in its activity, causing hyperhomocysteinemia. This condition is related to a high risk of cardiovascular disease and poor pregnancy outcomes. The homozygous genotype for the C677T polymorphism is associated with a 25% increase in the plasma concentration of homocysteine, which can generate genetic changes in the fetus of pregnant women and thromboembolism.

Observations

Results in Red indicate the presence of MTHFR 677 mutation, suggesting severe alterations in the enzyme activity. Candidates with MTHFR 677 (In red) are very prone to excession accumulation of homocysteine and Cardiovascular conditions.

Genes

MTHFR

MTHFR 1298 MUTATION (RS1801131)

Another known point mutation for the gene that encodes the MTHFR enzyme is the nitrogenous base substitution at nucleotide 1298 (A1298C polymorphism). This mutation, as well as the C677T polymorphism, results in elevated homocysteine levels. The homozygous genotype for the A1298C polymorphism is also considered pathogenic, as it considerably increases the risk of thrombotic events and recurrent miscarriages. Individuals heterozygous for both polymorphisms (C677T and A1298C) are also at high risk for vascular events.

Observations

Results in Red indicate the presence of MTHFR 1298 mutation, suggesting severe alterations in the enzyme activity. Candidates with MTHFR 1298 (In red) are very prone to excession accumulation of homocysteine and Cardiovascular conditions.

Genes

MTHFR

3. IMMUNE SYSTEM

HOMOCYSTEINE ACCUMULATION

The high concentration of homocysteine, hyperhomocysteinemia, is considered a risk factor for cardiovascular and brain pathologies, atherosclerosis, stroke, thrombosis and neurodegenerative diseases, such as Alzheimer's and Parkinson's, in addition to some types of cancer, depression and osteoporosis, according to some studies.

Observations

Results in red indicate a greater genetic tendency to accumulate homocysteine.

Genes

ADA, CBS, CPS1, CTH, DPEP1, FGF21, GAD1, GPX1, GPX4, HNF1A, MAOA, MTHFR, MTRR

GLYCATION

Glycation is a process that joins a glucose molecule with a protein molecule, such as collagen and elastin - the same ones responsible for keeping the skin younger and firmer. This union makes the protein and makes it break down. It is an action as damaging as that of free radicals, promoting the formation of wrinkles and resulting in loss of elasticity and tone.

Observations

Results in red indicate a greater tendency. This means there is a higher chance of Collagen degradation and dysregulation of insulin sensitivity.

Genes

AGER, GLO1

ALLERGIES IN GENERAL

Tendency to allergic reactions in general.

Observations

Results in red indicate the candidate could be more prone to allergy.

Genes

FCER1A, HLA-DRA, INTERGENIC, TGFB1

3. IMMUNE SYSTEM

ALLERGY TO FOOD DYES

Not all food dyes can cause allergies, and in addition, dye allergies are quite rare. Even though it affects a small portion of the population, it is important to be aware if you feel discomfort after eating certain foods, as you may be allergic to some of the ingredients.

Observations

Results in red indicate greater sensitivity to food dyes.

Genes

HNMT

SYSTEMIC LUPUS ERYTHEMATOSUS

Inflammatory disease caused when the immune system attacks its own tissues.

Observations

Results in red indicate a higher susceptibility to SLE.

Genes

BANK1, C3, CRP, CTLA4, FCGR3A, GSR, HLA-DQA1, INTERGENIC, IRF5, ITGAM, ITGAX, ITPR3, LY9, MECP2, NELFE, NKX2-5, PRL, STAT4, TBX21, TLR9, TNF, TNFAIP3, TNPO3, TYK2

4. CARDIO-CIRCULATORY SYSTEM

HIGH FERRITIN

Ferritin dosage is very common in the practice of medical nutrition and sports medicine. This is because, in addition to being an inflammatory marker, it is a key protein in the metabolism of iron in the body, being able to convert Fe^{2+} into Fe3+, sequestering large amounts of this metal in the circulation. The sequestered iron is stored inside the protein contained in the tissues and prevents the oxidative damage caused by free iron. Ferritin is an intracellular protein located mainly in the cytoplasm. Small amounts of this protein can be found in plasma. Therefore, it is used in the clinic as a classic marker of iron stores.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

BMP2, BTBD9, HFE, IL-6, INTERGENIC, SLC17A1, SLC40A1, TFR2, TMPRSS6, USF2

ATHEROSCLEROSIS

ATHEROSCLEROSIS is a disease characterized by chronic inflammation of the innermost layers of arteries and arterioles that leads to obstruction of blood flow by formation of composite plaques.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CDKN2B-AS1, CYBA, CYP26B1, MPO, MTHFR, NFE2L2, PON1, TWIST1, VEGFA

4. CARDIO-CIRCULATORY SYSTEM

HEART DISEASE

Heart disease is a general term for a variety of chronic or acute medical conditions that affect one or more components of the heart. This condition assesses a person's overall risk of developing any of them.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is indicated that first the Cardio-Vascular Diseases panel is asked to analyze 114 conditions in 754 genes and 1503 polymorphisms, in order to know specifically which pathology(s) has a high susceptibility to develop and, in addition, perform clinical evaluation and/ or annual exams to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ADIPOQ, APOE, APOE4, ATP2B1, CDKN2B-AS1, INTERGENIC, MAT1A, MTHFR, MTRR, PSRC1

HYPERTENSION (HIGH BLOOD PRESSURE)

HYPERTENSION (or systemic arterial hypertension (SAH) or high blood pressure) is the condition in which there is an increase in blood circulation pressure in the arterial system. The pressure has a higher phase, when the heart contracts, expelling the blood that is inside it and the arteries give in to the strong blood flow, called the systolic phase and another phase when the heart is dilating, to refill with blood and the arteries return to their contracting position, called the systolic phase. If the force of blood flow increases its flow pressure in one or both phases, we have characterized hypertension. Hypertension is a prevalent chronic disease and has a strong relationship with the occurrence of cardiovascular disease, and is the main cause of death in Brazil and in the world.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ACE, ADD1, AGT, AGTR1, APOE4, ATP2B1, BCAT1, CALCA, CLCN6, CNNM2, CYP11B2, CYP17A1, CYP4A11, EDN1, EDNRA, GRK4, GUCY1A3, HIVEP2, IL-6, NEDD4L, NOS3, PPARG, STK39, TRPM6, UMOD

4. CARDIO-CIRCULATORY SYSTEM

ACUTE MYOCARDIAL INFARCTION

MYOCARDIAL INFARCTION, or heart attack, is the condition in which cells in a region of the heart muscle die due to the partial or total interruption of blood flow - suddenly and intensely - in one or more of the coronary arteries, which supply and nourish the heart.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ADRB2, APOA5, BRAP, CDKN2B-AS1, CETP, CYP11B2, F12, F13A1, F7, FLJ25967, GJA4, IL-4, INTERGENIC, ITGB3, LRP8, MMP3, MMP9, OLR1, PSMA6, PSRC1, SH2B3, TLR4, TNFSF4

VENOUS THROMBOSIS

VENOUS THROMBOSIS is the condition in which there is a partial or total interruption of blood flow in the superficial or deep veins of the lower or upper limbs.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ADRB2, F13A1, F13B, F2, F5, F9, LPL, MTHFR, SELE

ISCHEMIC STROKE

ISCHEMIC CEREBRAL VASCULAR ACCIDENT is a pathology characterized by a sudden reduction in blood flow to the brain. This leads to damage to brain cells. It is most often caused by blood clots or a narrowing of the blood vessels that supply the brain. This condition is an emergency, and requires urgent attention from a doctor. Ischemic stroke is the most common type of stroke and one of the leading causes of disability and death worldwide.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CCL5, GP1BA

4. CARDIO-CIRCULATORY SYSTEM

CARDIAC ARRHYTHMIA

Cardiac arrhythmia is an alteration that occurs in the formation or conduction of electrical stimulation in the heart, which can cause changes in the heart rhythm. There are several types of arrhythmias, but the most common are tachycardia, when the heart beats fast, and bradycardia, when the beats are very slow. There are also out-of-step beats, which manifest with irregular pulsation, such as extrasystoles and atrial fibrillation.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ANK2, NOS1AP, SCN5A

CHOLESTEROL LEVEL (HDL)

The HDL CHOLESTEROL LEVEL condition assesses the genetic tendency to have low or high HDL cholesterol. HDL is a lipoprotein. Lipoproteins allow the transport of lipids throughout the body. Without them, this transport would not be possible, since the hydrophobic fats, that is, they do not dissolve in water and therefore, in the blood. HDL is formed in the liver, intestine and bloodstream. As these lipoproteins participate in the removal of cholesterol from the arterial wall, they prevent the accumulation of fat in the arteries. Therefore, the presence of low levels of HDL is a risk factor for atherosclerosis (a disease that affects the arteries).

Observations

If the result of the condition is LOW (blue dot) it means that there is a strong genetic tendency of the person to have LOW HDL cholesterol. If the result of the condition is NORMAL (green ball) it means that there is a strong genetic tendency of the person to have NORMAL HDL cholesterol in relation to the general population. If the result of the condition is AVERAGE (Yellow dot) it means that there is a strong genetic tendency for the person to have slightly HIGHER HDL cholesterol than the general population. If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for the person to have MUCH HIGHER HDL cholesterol than the general population. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCA1, ABCG8, APOA1, APOA4, BUD13, CETP, EDN1, FADS2, FTO, HNF4A, IL-6, INTERGENIC, LDLR, LIPC, LIPG, LPL, LTA, NUTF2, PCIF1, PLTP, PPARD, SCARB1, TTC39B, VWF, ZPR1

4. CARDIO-CIRCULATORY SYSTEM

CHOLESTEROL LEVEL (LDL)

The LDL CHOLESTEROL LEVEL condition assesses the genetic tendency to have low or high LDL cholesterol. LDL is a lipoprotein, however of low density. It is mainly made up of cholesterol. It transports cholesterol throughout the body to be stored and also used in biosynthesis, such as the manufacture of steroid hormones (DHEA, Cortisol, Estrogens, Progeserone, Testosterone, in addition to vitamin D and Aldosterone and also participate in the structure of cell membranes such as It is easily oxidized, because it is so reactive. When oxidized, it changes its structural density, which causes it to become trapped inside the intima of the blood vessel wall, initiating the process of Atherosclerosis. If at high levels, it increases the possibility of oxidation and therefore an increased risk of atherosclerosis.

Observations

If the result of the condition is LOW (blue dot) it means that there is a strong genetic tendency of the person to have LOW LDL cholesterol. If the result of the condition is NORMAL (green ball) it means that there is a strong genetic tendency of the person to have NORMAL LDL cholesterol in relation to the general population. If the result of the condition is MEDIUM (Yellow dot) it means that there is a strong genetic tendency for the person to have LDL cholesterol slightly HIGHER than the general population. If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for the person to have LDL cholesterol MUCH HIGHER than the general population. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCA1, ABCG8, APOB, APOC1, APOC3, APOE, AR, BRCA2, CELSR2, CPS1, CR1L, DNAH11, FABP2, GPX1, HMGCR, HNF1A, LDLR, MAFB, MMAB, MTHFR, MYRF, NAF1, NOS3, PCSK9, SCARB1, SHBG

TRIGLYCERIDES

Triglycerides or Triacylglycerol (TG) are considered as oils or fats produced and stored in living organisms for food reserve purposes. It is formed by the union of three fatty acids to a glycerol molecule. High levels are related to increased cardiovascular risk, obesity, hepatic steatosis (fatty liver) and pancreatitis, among others.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to express high levels of Triglycerides. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCG8, APOA5, APOB, APOE, BUD13, CILP2, DOCK7, FADS1, FADS2, FTO, GCKR, HMGCR, INTERGENIC, JMJD1C, LDLR, LEPR, LIPC, LPL, LYPLAL1, MLXIPL, OR4A46P, PCIF1, PCSK9, PHYHIP, PPARG, RAB11B, SHBG, SUGP1, TBL2, TMEM241, TRIB1, XKR6, ZPR1

5. BEHAVIORAL

DEPRESSION

Depression (ICD 10 – F33) is a chronic psychiatric illness that has symptoms of deep sadness, loss of interest, lack of mood and mood swings.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to have depression during their lifetime, in stressful phases and in aging, depending on environmental and epigenetic triggers. It is recommended that clinical and psychological evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with psychotherapeutic, epigenetic or clinical approaches.

Genes

BDNF, COMT, CRHR1, HTR1A, HTR2A, SLC6A15, TPH1, TPH2

ANXIETY

ANXIETY is defined as a transitory or permanent state of intense, excessive and persistent worry and fear of everyday situations. At these times, physical symptoms such as high heart rate, rapid breathing, sweating and feeling tired may occur. Anxiety can be considered normal when it is mild and serves as a warning signal for danger or an unknown situation, but it is an indicator of underlying illness when feelings become excessive, obsessive, and interfere with everyday life. The tendency to be an anxious person can be influenced by the polymorphisms of several genes.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to have a high ANXIETY during their life, in stressful phases and in aging, depending on environmental and epigenetic triggering factors. It is recommended that clinical and psychological evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with psychotherapeutic, epigenetic or clinical approaches.

Genes

AVPR1A, BDNF, MAOA, NGF, RGS2, TPH2

RELATIONSHIP SELECTIVITY

Selectivity in Relationships is a condition in which the individual is more restricted in relation to the people with whom they relate.

Observations

Results in Red indicate a greater tendency to be selective and particular about choosing people to stay with.

Genes

AVPR1A, BDNF, CRHR1, DBH, GAD1, RGS2, SLC64A, SLC6A4, SNAP25, SNCA, TPH1

5. BEHAVIORAL

DIFFICULTIES IN RECEIVING REVIEWS

No matter how good our relationships are, we will be criticized from time to time, whether in the family, social or professional environment. Some criticism can be constructive and help us grow. Others can be aggressive-destructive. How we handle critical remarks plays an important role in determining the quality of our relationships. A person who has DIFFICULTY DEALING WITH CRITICISM has a lot of difficulty in differentiating the two types of criticism, dealing with them, tends to imagine criticisms that were not even made and can even run away from situations because they imagine that they will be criticized.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to have a great DIFFICULTY IN DEALING WITH CRITICISM during their life, in stressful phases and in aging, depending on environmental and epigenetic triggering factors. It is recommended that clinical and psychological evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with psychotherapeutic, epigenetic or clinical conducts.

Genes

ADH4, CHADL, CLOCK, CRHR1, CTNNA2, DBH, ELP1, EP300, FAM86B3P, FBXL17, FYN, GAD1, GRIK3, INTERGENIC, MAGI1, MTMR9, OPCML, PLEKHM1, PTPRF, SNAP25, SNCA, TMEM16D, VRK2, XKR6

IMPULSIVITY

In psychology, IMPULSIVITY is a behavior in which the person tends to act with little or no thought, evaluation or prior reflection, which can often lead to risky behavior.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to have a great IMPULSIVITY during their life, in stressful phases and in aging, depending on environmental and epigenetic triggering factors. It is recommended that clinical and psychological evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with psychotherapeutic, epigenetic or clinical conducts.

Genes

ANKK1, BDNF, COMT, HTR1A, HTR1B, HTR2A, NRXN3, OPRM1

5. BEHAVIORAL

FEARS

FEAR is in the classification of primordial emotions (a shock emotion due to the perception of present and urgent danger that threatens the individual's preservation). Emotion combines rationality, feeling, and sensation to produce reflective or pre-reflective judgments. Fear would be borderline between a sensation (conscious emotional perception related to a body location) and a feeling (conscious affective emotional perception not linked to a specific bodily reaction). A genetic predisposition to an EXCESSIVE FEAR causes a sensation and feeling of physical or psychological danger so intense that there is a blockage of rationality and from this an error and/or blockage of judgment, action and conduct.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to have an EXCESSIVE FEAR during their life, in stressful phases and in aging, depending on environmental and epigenetic triggering factors. It is recommended that clinical and psychological evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with psychotherapeutic, epigenetic or clinical conducts.

Genes

STMN1

MOOD DISORDER

MOOD DISORDERS are disorders of the mental health and/or psychological and emotional state of mind of an individual in which the emotional changes may consist of prolonged periods of excessive sadness (depression), excessive elation or euphoria (mania), or both . Depression and mania represent the two opposite extremes, or poles, of mood disorders.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to express and develop MOOD DISORDERS during his life, in stressful phases and in aging, depending on environmental and epigenetic triggering factors. It is recommended that clinical and psychological evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with psychotherapeutic, epigenetic or clinical conducts.

Genes

CRY1, FGF20, MTHFR, OXTR, VIPR2

5. BEHAVIORAL

COMT

rs4680 - COMT V158M (allele A = COMT Slow and allele G = COMT Fast), rs4633 - COMT H62H (risk allele: T), rs769224 - COMT P199P (risk allele: A). This gene helps break down dopamine and norepinephrine. A defect causes higher dopamine due to a slower breakdown. More susceptible to dopamine fluctuations, hence mood swings. People without COMT mutations are generally more temperate. COMT metabolizes Estrogens, Dopamine, Norepinephrine and Epinephrine. COMT V158M is associated with: COMT Slow (A:A Allele). These individuals have the slowest COMT system, therefore they have the highest dopamine levels in a resting steady state. They will perform better and have more brain function in low-stress states, but will lose brain function as the number of stressors increases. They are associated with individuals with greater focus, alertness, type A (immediate) personality, good skin, good humor, good learning. COMT Very slow is associated with difficulties calming down when stressed, anxiety when speaking in public, difficulty dealing with stressful situations and problems falling asleep. To accelerate COMT, your healthcare professional may recommend consuming less protein and adding Magnesium and SAMe (before bed). Magnesium Deficiency is also associated with Slow COMT. SAMe helps metabolize histamine, dopamine, norepinephrine and epinephrine. The G:G allele of COMT rs4680 is associated with Fast COMT. These individuals have a faster COMT system, therefore they have lower dopamine levels in a stable resting state. They can handle multiple stressors at the same time better than -/+ or +/+. The A:G allele of COMT rs4680 (heterozygous): These individuals live in the middle between a fast and slow COMT. Compared to the -/- group, they have a slower COMT system, so they have slightly higher dopamine levels in a stable resting state. They can handle less stress than COMT - / - but more than COMT + / +.

Observations

Results in Red indicate Fast COMT which contributes to higher anxiety and faster thinking skills.

Genes

COMT

6. ONCOLOGY

THYROID NEOPLASM

Thyroid Neoplasm is a malignant tumor of the thyroid gland, which is located in the neck. It is the fifth most common type of cancer in women and the seventeenth most prevalent in men. It has a slow clinical course and presents a satisfactory response to treatment in most cases.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to develop gallstones. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

DIRC3, FOXE1, GPX3, HABP2, INTERGENIC, NRG1, RET, XRCC3

COLORECTAL NEOPLASM

COLORECTAL NEOPLASM is a type of malignant tumor that develops in the rectum of the large intestine. It is the third most frequent among men, after prostate and lung cancer. Colorectal cancer is a malignant tumor that develops in the large intestine, that is, in the colon or in its final portion, the rectum.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop COLORETAL NEOPLASM. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ADIPOQ, ALOX5, AURKA, BRAF, CASC8, CHEK2, COLCA1, CYP1A1, EIF3H, GATA3, GSTP1, INSR, INTERGENIC, IRS1, KLRK1, LEP, MGMT, MSH6, MTHFD1, POLD1, PTGS2, SMAD7, TCF7L2

6. ONCOLOGY

BREAST NEOPLASM

BREAST NEOPLASM is a disease caused by the disordered multiplication of breast cells. This process generates abnormal cells that multiply, forming a tumor. There are several types of breast cancer. Therefore, the disease can evolve in different ways. Some types develop rapidly, while others grow more slowly. These different behaviors are due to the characteristics of each tumor.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop a BREAST NEOPLASM. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCC4, AGER, AKT1, ATM, AURKA, BARD1, BMPR1B, BRCA1, BRCA2, BRIP1, CASC16, CASC21, CASP8, CCNE1, CDKN1A, CDKN1B, CDKN2A, CDKN2B-AS1, CHEK2, COMT, CYP1B1, CYP24A1, EPCAM, FANCA, FANCC, FGFR2, FGFR4, FTO, GAD1, GPX1, GPX4, GSTP1, HER2, HMMR, HRAS, INTERGENIC, LPAR6, LSP1, MAP3K1, MIR146A, MRPS30, NCOA3, NOS3, NQO1, PALB2, RB1, RNASEL, RNF146, SLCO1B3, STAT5B, TCF7L2, TERT, TNF, TP53, TPD52, VDR, VTCN1, WRN, XRCC1, XRCC2, XRCC3

OVARY NEOPLASM

OVARY NEOPLASM is the second most common gynecological neoplasm, second only to cervical cancer. Almost all ovarian neoplasms (95%) are derived from epithelial cells (which line the ovary). The rest comes from germ cells (which form eggs) and stromal cells (which produce most of the female hormones).

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop an OVARY NEOPLASM. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

BRCA1, BRCA2, BRIP1, CDKN2A, CHMP4C, CYP24A1, CYP2R1, CYP3A4, ERCC2, ESR1, HNF1B, INTERGENIC, LPAR6, MAGEC3, PGR, PMS2, PON1, RB1, SRD5A2, TIPARP, TP53, XRCC2

6. ONCOLOGY

ENDOMETRIAL NEOPLASM

ENDOMETRIAL NEOPLASIA is a malignant disease that affects the cells of the endometrium, the mucosa that lines the inner wall of the uterus. Endometrial cancer is the most common gynecological malignancy in developed countries. According to American Cancer Society estimates, there were 61,380 new cases of uterine body cancer and 10,920 deaths in 2017.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop an ENDOMETRIAL NEOPLASIA. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CDKN1B, COMT, CYP1B1, ESR1, MDM2, MLH3, MSH6, MUTYH, PGR, POLD1, PTEN, SHBG

LUNG CANCER

Lung cancer is a disease in which certain cells in the lungs become abnormal and multiply uncontrollably to form a tumor. Lung cancer may not cause signs or symptoms in its early stages. Some people with lung cancer have chest pain, frequent coughing, blood in the mucus, breathing problems, trouble swallowing or speaking, loss of appetite and weight loss, fatigue, or swelling in the face or neck. Additional symptoms can develop if the cancer spreads (metastasizes) into other tissues. Lung cancer occurs most often in adults in their sixties or seventies. Most people who develop lung cancer have a history of long-term tobacco smoking; however, the condition can occur in people who have never smoked.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop Lung Cancer. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCB1, ABCC1, AKT1, ATM, AURKA, CDKN1A, CHEK2, CHRNA3, CLPTM1L, CXCR4, CYP1A1, CYP24A1, EGFR, ERCC2, FASLG, G6PD, HNF1A, HYKK, KLF6, MGMT, MMP9, MPO, MTHFR, NOCT, NQO1, PER3, PRKDC, SEZ6L, SLC44A1, SOD2, TERT, XPC, XRCC1

6. ONCOLOGY

SKIN CANCER

Cancer that forms in the tissues of the skin. There are several types of skin cancer. Skin cancer that forms in melanocytes (skin cells that make pigment) is called melanoma. Skin cancer that forms in the lower part of the epidermis (the outer layer of the skin) is called basal cell carcinoma. Skin cancer that forms in squamous cells (flat cells that form the surface of the skin) is called squamous cell carcinoma.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop Skin Cancer. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

TP53 P.ARG273CYS (LI-FRAUMENI)

This is a tumour suppressor gene and the most commonly mutation gene in almost 50% of the cancers expressed .Mutation: M_000546.6(TP53):c.817C>T (p.Arg273Cys)

Observations

Results in red indicate the presence of a mutation which could indicate a loss of ability to induce cell death/apoptosis thus promotin tumorigenesis.

Genes

TP53

7. NEUROLOGICAL SYSTEM

ALZHEIMER'S DISEASE

ALZHEIMER'S DISEASE is an illness characterized by dementia, or loss of cognitive functions (memory, orientation, attention and language). Senile plaques appear in neurological cells resulting from the deposition of beta-amyloid protein and neurofibrillary tangles, the result of hyperphosphorylation of tau protein. Another change observed is the reduction in the number of nerve cells (neurons) and the connections between them (synapses), with a progressive reduction in brain volume. The most commonly affected areas are nerve cells (neurons) responsible for memory and executive functions that involve planning and executing complex functions.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

A2M, ABCA2, ABCA7, APH1B, APOC1, APOE, APOE4, APP, ARHGAP20, ATP8B4, BACE1, BDNF, BIN1, CALHM1, CD2AP, CETP, CHAT, CLU, CNTNAP2, CPS1, CR1, CTNNA3, CTSD, DAPK1, DKK1, EIF2AK2, ENTPD7, FAM171A2, FRMD4A, GAB2, GCKR, GOLM1, IDE, IL-1B, IL-6, INTERGENIC, LDLR, LRP6, LTA, MAPT, MME, MPO, MS4A6A, OLR1, PCDH11X, PCK1, PEX6, PICALM, PLAU, PLD3, POLN, PPP1R3B, PRRC2C, PSEN1, PSEN2, SORL1, SST, TAP2, TET1, TF, TFAM, TM2D3, TOMM40, TREM2

PARKINSON'S DISEASE

PARKINSON'S DISEASE is a neurological disorder that affects a person's movements. It causes tremors, slowness of movement, muscle rigidity, imbalance in addition to speech and writing disorders. The two most intense symptoms are tremor and slowness of movement. The typical tremor affects the fingers or hands, but it can also affect the chin, head, or feet. and it occurs when no movement is being performed, hence it is called a resting tremor. Slowness of movement is perhaps the biggest problem as the affected person takes more time to do the things that he used to do with more ease. Bathing, dressing, cooking, writing checks. The pathology is due to the degeneration of cells located in the substantia nigra in the brain that produce the neurotransmitter dopamine. The lack or decrease in dopamine is what causes the symptoms.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ADH1C, ALDH2, BCKDK, BST1, CCDC62, CNKSR3, CTC1, DLG2, FAM171A2, FAM47E, FGF20, GALNT3, GBF1, GC, GLUD2, GNAI3, GSK3B, INTERGENIC, LRRK2, MAOB, MAPT, MC1R, MCCC1, PRDM2, RAB25, SEMA5A, SH3GL2, SNCA, TF, USP24, USP40

7. NEUROLOGICAL SYSTEM

MENTAL AND COGNITIVE DECLINE (AGE)

MENTAL AND COGNITIVE DECLINE with advancing age is a condition characterized by the progressive deterioration of intellectual abilities, such as, for example, the loss of critical judgment, memory, abstract reasoning and visual-spatial skills and the personality itself that affect the individual's functional capacity in their daily lives, implying a loss of independence and autonomy, which varies according to the degree of severity, with a consequent loss of the elderly's quality of life. It is considered a syndrome of acquired loss of cognitive functions, changes in behavior and loss of social functions.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ALDH5A1

STROKE

CEREBRAL VASCULAR ACCIDENT (CVA) is a condition characterized by the partial or total blockage of the blood supply and nutrition of an area of the brain, with consequent tissue death. There are two types of stroke: Ischemic stroke, which occurs when one or more cerebral arteries are blocked by spasms or blockages such as atheromas, thrombosis or embolism. It usually occurs in older people, with diabetes, high cholesterol, high blood pressure, vascular problems and smokers. The other is the Hemorrhagic Stroke, which occurs when an artery or blood vessel ruptures with bleeding in the brain tissue, which may be due to hypertension, problems in blood clotting, trauma. It can occur in younger people and the evolution is more serious.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency for this condition to happen. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCG2, ADAMTS12, ADD1, ADIPOQ, AOC1, APOE, APOE4, CBS, CPS1, CYP51A1, F5, GAD1, HABP2, HDAC9, ICAM1, INTERGENIC, MTRR, NAA25, NINJ2, PARK7, PDE4D, PITX2, PRKCH, PROC, SERPINI1, SHISA6, SPSB4, TRIM29, TWIST1, VCAN, WDR12, ZFHX3

7. NEUROLOGICAL SYSTEM

SLEEP QUALITY

Sleep has a number of functions and is crucial to keeping our bodies functioning properly. In the first stage of sleep there is a regeneration of the neuronal structure. In the second stage of sleep, the brain reorganizes its files and operational tactics based on its learnings and experiences for the day. Thus, he maintains the psychic, emotional and metabolic balance and restores the disposition to carry out daily activities. Therefore, the quality of sleep is essential for maintaining health. A poor quality of sleep produces tiredness, anxiety, lack of mood and irritability. Studies show that lack of sleep contributes to the emergence of diseases such as diabetes, changes in the immune system and even psychological problems.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to have a poor quality of sleep and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CACNA1C, EGFLAM, FGF12, INTERGENIC, MTNR1B, SLC2A13, TRPM6, TUSC1, VDR

DOPAMINE SYNTHESIS

DOPAMINE is a neurotransmitter, from the catecholamine family, which acts in the brain by modulating emotions, attention, learning, mood and sleep. It also acts by controlling the motor system, and the your disability can affect movement. One of the main characteristics of dopamine is its action in the so-called reward system. When carrying out certain activities, such as drinking when When you are thirsty, the release of dopamine in certain regions of the brain gives a feeling of pleasure. She also acts on learning, motivation and positive reinforcement for activities that guarantee maintenance of life and the species. In the body, it stimulates the sympathetic nervous system, renal, mesenteric, coronary and intracerebral vascular beds, producing vasodilation.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to have a low production of dopamine during their life, in phases of stress and in aging, depending on epigenetic triggering factors and suffer the consequences of the lack of this neurotransmitter. It is recommended that a clinical evaluation and/or annual exams be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with epigenetic or clinical management and treatment.

Genes

DDC, IGF2, TH

7. NEUROLOGICAL SYSTEM

SEROTONIN SYNTHESIS

SEROTONIN is a neurotransmitter from the group of biogenic amines. In the central nervous system, serotonin acts on the reward system, influencing mood, motor activities, learning, among others. It acts indirectly on sleep because Melatonin is produced in the brain from it. Works show that it is produced in the intestine acting on its peristalsis. Decreased serotonin levels can increase pain sensitivity and trigger aggressive and obsessive behaviors, in addition to gastrointestinal and even sleep disorders.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to have a low production of Serotonin during their life, in stressful phases and in aging, depending on epigenetic triggering factors and suffering the consequences of lack of this neurotransmitter. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

DDC, PLEKHA7, PTPRR, TPH1, TPH2

MULTIPLE SCLEROSIS

Disease in which the immune system destroys the protective covering of nerves (myelin). It is an autoimmune disease that affects the brain, optic nerves and spinal cord (central nervous system). This happens because the body's immune system mistakes healthy cells for "intruders" and attacks them, causing damage. It results in the deterioration of the nerves themselves, a potentially irreversible process.

Observations

Results in red indicate a greater susceptibility to MS that explains that this candidate could suffer from Chronic Inflammation.

Genes

AGAP2, AHI1, ALK, ANKRD1, BATF, BRCA2, C1ORF106, CBLB, CD58, CD86, CHST12, CLEC16A, CLSTN2, CYP24A1, CYP27B1, DBC1, DKKL1, DLEU1, DMD, ERG, EVI5, FAM69A, HLA-DRA, HLA-DRB1, IL-2RA, IL-7R, INTERGENIC, IRF5, KIF1B, KLC1, KLRB1, LAG3, MALT1, MERTK, MPV17L2, NCKAP5, NLRP1, PCK1, PDCD1, PDE4B, RNASEL, RPL5, RPS6KB1, SAMD12, SLC30A7, STK11, SYK, TNF, TNFRSF1A, TNFSF14, ZNF767P

7. NEUROLOGICAL SYSTEM

DOPAMINE DEGRADATION

This neurotransmitter performs important functions in the body. The first of these is the feeling of pleasure. During pleasant circumstances, dopamine is released, triggering nerve impulses, which lead to a feeling of pleasure and well-being. Tasty foods, sex, games and drugs are some examples of situations that stimulate the action of dopamine. The substance also acts on the motor function of the human body, being responsible for the execution of voluntary movements, which are those that occur according to our will, such as muscular activity. Recent studies also show that the neurotransmitter is related to memory capacity. According to scientists, this feeling of satisfaction and pleasure generated by the action of dopamine is associated, in the brain, with also pleasurable moments, which causes the information to be stored for a longer period in our memory. The concentration of dopamine in the body is also related to the emergence of diseases. Parkinson's disease, for example, has its origins linked to a lack of dopamine. This is because, with aging, there is the natural death of neurons, which reduces the production of the neurotransmitter. This lack of dopamine ends up altering the body's movements, making them uncoordinated, the main symptom of the disease. Addiction is another disorder associated with dopamine levels in the body. Drugs act on neurotransmitter receptors, so when the individual uses these substances, the brain produces a large amount of dopamine, increasing the state of pleasure. Hence the need to consume the drug constantly to always have that feeling of pleasure. To stimulate the healthy production and release of dopamine, it is recommended to consume foods rich in tyrosine such as milk derivatives, avocado, pumpkin, almonds, beans, nuts, meat, eggs and others; avoid caffeine consumption and exercise regularly. Result in red or orange indicates greater degradation of Dopamine.

Observations

Results in red indicate faster degradation of dopamine.

Genes

ARVCF, COMT, MAOA, MAOB

7. NEUROLOGICAL SYSTEM

SEROTONIN DEGRADATION

In different behavioral states, extracellular changes occur in Serotonin levels. The decrease in serotonin levels increases sensitivity to pain, exploratory behavior, locomotor activity and aggressive and sexual behaviors. In both men and animals, psychic disorders have been correlated with changes in serotonin functions, such as aggressive and obsessive behaviors, in addition to attention deficit. Serotonin is the main inhibitor of the ventromedial hypothalamic nucleus, the place in the CNS where the satiety center is located. This hypothalamic effect is highly specific for carbohydrates, requiring other cofactors to act on proteins and lipids. Therefore, when serotonin decreases, weight gain occurs. Conversely, when it is elevated, it causes loss of appetite. Result in red indicates greater degradation/reduction of serotonin.

Observations

Results in red indicate faster degradation of Serotonin.

Genes

MAOA

8. OSTEO-MUSCULAR SYSTEM

OSTEOPOROSIS

OSTEOPOROSIS is defined as the accelerated loss of bone mass, which is mainly expressed during aging. The body constantly absorbs (osteoclasts) and renews (osteoblasts) bone tissue. In osteoporosis, new bone creation does not accompany the removal of the previous bone layer, leading to a loss of structures and bone fragility, which can lead to easy fractures and difficult to recover (due to the disease's own difficulty in rebuilding bone) Three out of four patients expressing the condition are female and/or postmenopausal.

Observations

Results in red indicate that there is a higher tendency to develop this condition.

Genes

ARHGEF3, BMP2, COL1A1, CYP19A1, ESR1, F12, FDPS, FTCDNL1, GAD1, IL-1B, LRP4, LRP5, NR3C1, QPCT, TNFSF11, TRPM6, VDR, WNT16

RHEUMATOID ARTHRITIS

Rheumatoid arthritis is a chronic inflammatory, autoimmune disease that affects the synovial membranes (thin layer of connective tissue) of multiple joints (hands, wrists, elbows, knees, ankles, feet, shoulders, cervical spine) and internal organs such as lungs, heart and kidneys, of genetically predisposed individuals. The progression of the condition is associated with deformities and alterations in the joints, which can compromise movement.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to develop RHEUMATOID ARTHRITIS. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

AHCY, AIRE, ANAPC4, ANXA3, C5, CDK6, CTLA4, CXCL8, EOMES, FCRL3, GUCY1B2, HLA-DRB1, HTR2A, HYKK, ICAM3, IL-2RA, IL-2RB, INTERGENIC, IRF5, ITGAV, KIAA1109, MMEL1, NFKBIE, NOD2, PADI4, PER2, PHF19, PHTF1, PLD4, PRL, PSMA4, PTPN2, PTPN22, SLC6A11, STAT4, TNFAIP3, TRAF1, TRAF1/C5, UBASH3A, VARS2, WDFY4, ZNF175

8. OSTEO-MUSCULAR SYSTEM

ARTHROSIS OF THE KNEE

Arthrosis is an inflammatory and degenerative disease of the body's joints (joints), marked by the wear of the cartilage that line the bone ends, causing pain and possibly leading to deformities. The joints most affected by arthrosis are those that support weight, such as the spine, hips and knees. Knee pain is usually the first symptom of osteoarthritis. This pain is progressive in nature.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop ARTHROSIS OF THE KNEE. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

COL6A4P1, GDF5, IL-1RN, INTERGENIC, LRCH1, MCF2L

DISC HERNIATION

Disc herniation arises when the intervertebral disc and its gelatinous center, which act as a kind of spinal cushion, leave the correct location, causing compression of the region's nerves.

Observations

Results in red indicate that there is a higher tendency to develop this condition.

Genes

CILP, COL11A1, COL9A3, IL-1A

9. GENITO-URINARY SYSTEM

KIDNEY CALCULUS

KIDNEY CALCULUS (or kidney stones) are solid masses of small crystals that form in the kidneys. They are formed by minerals and acid salts that agglutinate in the urine concentration.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop Kidney Calculus. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CASR

CANDIDIASIS

Candidiasis is a fungal infection caused by overgrowth by any type of the Candida fungus. It usually happens due to a weakened immune system or prolonged use of drugs that can alter the genital microbiota, such as antibiotics and antifungals. When the disease affects the mouth it is called oral thrush, with symptoms such as white patches on the tongue or other parts of the mouth and throat. Mouth infections are more common among children under one month of age, the elderly and people with weak immune systems. When the disease affects the vagina it is called vaginal thrush with symptoms of vaginal itching and irritation and sometimes a white vaginal discharge similar to fresh cheese. Very rarely the infection can become invasive and spread throughout the body, causing fever and other symptoms that depend on the parts of the body affected.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop CANDIDIASIS. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CARD9, CLEC7A, IL-17F, KCNA5

9. GENITO-URINARY SYSTEM

POLYCYSTIC OVARY SYNDROME

POLYCYSTIC OVARY SYNDROME (PCOS), is an endocrine disorder that causes changes in hormone levels, leading to the formation of cysts in the ovaries that cause them to increase in size. It is a disease characterized by irregular menstruation, high production of the male hormone (testosterone) and the presence of microcysts in the ovaries. Scientific works are showing the fundamental importance of the genetic component. It is expressed in about 7% of women of reproductive age, mainly between 30 and 40 years old.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop a POLYCYSTIC OVARY SYNDROME . It is indicated that clinical evaluation and/or annual examinations be carried out to know if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

DENND1A, FSHR, INSR, KISS1, LEPR, LHB, LHCGR, MARK2P9, MTNR1A, MTNR1B, SUOX, THADA, TNF

ENDOMETRIOSIS

ENDOMETRIOSIS is a disease characterized by the presence of the endometrium – tissue that lines the interior of the uterus – outside the uterine cavity, that is, in other organs of the pelvis like fallopian tubes, ovaries, intestines and bladder. Every month, the endometrium thickens so that a fertilized egg can implant in it. When there is no pregnancy, at the end of the cycle it flakes off and is expelled during menstruation. In some women some of this blood migrates in the opposite direction and falls into the ovaries or abdominal cavity, causing endometriotic damage. The causes of this behavior, except for genetic susceptibility, are still unknown. It can express itself from the first menstruation and or it can express itself even in the last one. According to the Brazilian Association of Endometriosis, between 10% to 15% of women of reproductive age (13 to 45 years) can develop it and there is a 30% chance that they will become sterile.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop ENDOMETRIOSIS. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CDKN2B-AS1, CKAP2L, DEFA1A3, ESR1, GRCH37.1, GREB1, IL-6, INTERGENIC, KSR2, MUC4, STIP1, TCN2, VEZT, WNT4

9. GENITO-URINARY SYSTEM

UTERINE FIBROIDS

Fibroids are benign nodules made up of smooth muscle that form in the uterus. They are also known as fibroids. It is estimated that 80% of women of childbearing age have fibroids. They can be located within the uterine cavity (submucosal fibroids), within the uterine wall (intramural fibroids), or on the surface of the uterus (subserous fibroids).

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to develop fibroids. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

BET1L, ESR1, INTERGENIC, TNRC6B

RECURRENT URINARY TRACT INFECTION

Constant pain in the abdominal region, burning when urinating or during sexual intercourse are the main characteristics of a urinary infection. When the problem occurs more than 2 times in a period of 6 months or more than 3 times in less than a year, the condition is considered a recurrent urinary tract infection.

Observations

Results in red indicate a higher chance of UTI.

Genes

10. GASTROINTESTINAL SYSTEM

CONSTIPATION

Intestinal CONSTIPATION or trapped bowel is the difficulty a person has to excrete, with an interval between bowel movements of more than 3 days, incomplete bowel movement and with changes in the stool that tend to be dry and altered in shape leading to intoxication.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to have INTESTINAL CONSTIPATION and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment

Genes

COMT, CRHR1, NXPH1, RET

CROHN'S DISEASE

Crohn's Disease is an inflammatory disease of the gastrointestinal tract. It predominantly affects the lower part of the small intestine (ileum) and large intestine (colon), but it can affect any part of the gastrointestinal tract. Crohn's disease usually causes diarrhea, abdominal cramps, sometimes fever, and rectal bleeding. Loss of appetite and subsequent weight loss can also occur. Symptoms can range from mild to severe.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop CROHN'S DISEASE and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCB1, AOC1, ATG16L1, BSN, C21ORF33, C5ORF56, CDH1, CDKAL1, DEFB1, FGFR1OP, FUT2, IBD5, IL-10, IL-23R, INTERGENIC, IRGM, JAZF1, KIAA1109, KIF21B, LACC1, LINC00824, MST, NELL1, NKX2-3, NOD2, PTPN2, SBNO2, SLC22A4, TCF7L2, TNF, XBP1, ZNF365

10. GASTROINTESTINAL SYSTEM

LACTOSE INTOLERANCE

LACTOSE INTOLERANCE is a condition caused by the lack of a digestive enzyme called lactase, responsible for digesting lactose, which is a sugar present in milk and, therefore, in all its derivatives. As a result of not breaking down, there is an alteration in the digestive process, ranging from more common symptoms such as abdominal cramps, bloating and diarrhea, gas, diarrhea and nausea to distant pictures. APLV is sometimes confused with lactose intolerance, but they are very different .

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop intolerance to lactose(sugar present in milk).It is recommended that the person refrain from milk based product. However yogurt being a probiotic, is permissible.

Genes

LCT, MCM6

ULCERATIVE COLITIS

Ulcerative (rectum) Colitis or colitis is a chronic non-contagious inflammatory bowel disease (IBD) in which there is inflammation and ulcerative colitis in the large intestine (colon) and rectum in its most superficial layer, the mucosa. This process causes symptoms such as diarrhea, bleeding, cramps and fever. Unlike Crohn's disease, (also discussed in this panel) ulcerative colitis usually does not affect the full thickness of the bowel wall and almost never affects the small bowel. The disease usually affects the rectum and the sigmoid (end of the large intestine), and may extend partially or completely through the remaining large intestine.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop an ULCERATION COLITIS and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCB1, CD226, CFB, ECM1, GPR35, IL-10, IL-10RA, IL-10RB, IL-1B, IL-1RN, IL-23R, IL-7R, IRF5, KIAA1109, MMEL1, NR5A2, PLCL1, PROCR, PTPN2, PTPRS, RUNX3, SLC2A14, TCF4

10. GASTROINTESTINAL SYSTEM

LEAKY GUT SYNDROME

Leaky Gut (Leaky Gut) is a condition in which the connecting structure (zonulin) of the cells of the intestine mucosa (one of the main protective barriers of the organism) is altered, leading to an increase in the permeability of the wall and allowing entry of toxins and pathogens into the body. This condition can lead to development ranging from allergic diseases to more serious ones like autoimmune diseases, chronic fatigue syndrome, and even depression.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop the PERMEABLE INTESTINE SYNDROME and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CDH1, TNFSF15

CELIAC DISEASE

Celiac Disease is an autoimmune disease, which leads to an overreaction of the immune system to gluten, and may have a genetic origin. This disease primarily affects the small intestine, reducing the villi and causing an inflammatory process, thus altering the absorption of various nutrients. CELIAC DISEASE is an inflammatory condition caused by an immunological reaction to the ingestion of gluten, a protein found in wheat, barley and rye. This inflammatory process in the intestinal mucosa ends up damaging and even destroying the villi of the small intestine, intense pain and frequent diarrhea, causing a decrease in the absorption of nutrients and, in severe conditions, it can lead to the individual's death. Celiac disease is strongly influenced by genetics, depending on a part of the DNA sequence called the HLA locus (human leukocyte antigen). There are many HLA sequence variants, but only two sequence variants called DQ2.5 (T allele in rs2187668) and DQ8 (C allele in rs7454108) can form inflammatory complexes with gliadin peptides. About 90% of celiac patients carry the DQ2.5 variant, and the remaining 10% produce the DQ8 variant for the person to develop celiac disease.

Observations

If the result of the condition is HIGH (red ball) this means that there is a strong genetic tendency (due to the presence of the aforementioned polymorphisms) for the person to develop CELIAC DISEASE to have its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABL2, ATXN2, CCR3, CTLA4, HLA, HLA-DPA1, HLA-DQA1, HLA-DQB1, HLA-DRA, IL-18RAP, KIAA1109, LPP, MYO9B, NLRP3, RGS1, SH2B3, TAGAP

10. GASTROINTESTINAL SYSTEM

GLUTEN INTOLERANCE

GLUTEN INTOLERANCE is the inability or difficulty in digesting gluten, which is a protein found in wheat, rye and barley. In these people, gluten can be intestinal discomfort and discomfort with a low immunological component. In celiac disease, gluten intolerance also occurs, but there is an immune system reaction (also evaluated in this panel).

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop GLUTEN INTOLERANCE. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

HLA, HLA-DQB1, IL-18RAP, KIAA1109

IRRITABLE BOWEL SYNDROME

Irritable Bowel Syndrome (IBS) is considered a functional disease, as it has no structural and biochemical abnormalities in all complementary, laboratory and imaging tests. It does have an association of symptoms that most often consist of abdominal pain and distension, constipation and/or diarrhea. Many patients with IBS alternate periods of diarrhea with constipation. It is believed that there is a visceral hypersensitivity, responsible for the symptoms, which can be aggravated by the ingestion of certain foods. Admittedly, it is a multifactorial disorder related to neurological alterations directly related to the intestine. In addition to some food intake, symptoms may be preceded by psychosomatic changes, especially stress. Patients with IBS report recurrent abdominal pain and discomfort followed by one or more of the following symptoms: - Change in bowel habits (constipation or diarrhea); - Total or partial improvement in pain after evacuation; - Abdominal distension and flatulence. Symptoms can be present for months, which directly interferes with the quality of life of patients. However, the complaints reported in IBS are very similar to the symptoms of other disorders of the gastrointestinal tract, which makes diagnosis difficult.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop the IRRITABLE BOWEL SYNDROME and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CNR1, CRHR1, HTR3E, TNF, TNFSF15

10. GASTROINTESTINAL SYSTEM

MILK PROTEIN ALLERGY

Allergy to cow's milk protein (APLV) is the most common type of food allergy in children up to 24 months of age, although it is also frequent in adults. It is characterized by the abnormal reaction of the defense system against milk proteins, mainly beta-lactoglobulin and casein. APLV is sometimes confused with lactose intolerance, but they are very different.lactose intolerance does not involve the body's immune system while APLV does, which leads to the production of antibodies and long-term disease at a distance, ranging from respiratory problems such as tonsillitis to asthma, genitourinary disorders such as cystitis, systemic such as arthritis and even gastrointestinal disorders such as diarrhea, constipation and colitis among others.

Observations

If the result of the condition is HIGH (red ball) it means that there is a strong genetic tendency of the person to develop ALLERGY TO MILK PROTEINS and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

FAM117A, IL-10, IMPAD1, INTERGENIC, STAT6, TLR6, TMEM26

BILIARY CALCULUS

Gallstones (stones in the gallbladder or cholestasis) is a condition characterized by the accumulation of material (gallstones) in the gallbladder or bile ducts. This happens due to an imbalance in the concentration of substances that make up bile, a digestive fluid produced by the liver ,stored in the gallbladder and is usually asymptomatic.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop Gall stones and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ABCG8, ADRB3, CDHR5, SULT2A1

10. GASTROINTESTINAL SYSTEM

ULCER

Peptic ulcer is an injury and a chronic disease that occurs in the mucosa of the gastrointestinal tract, characterized by an imbalance between aggressive and protective factors of the gastric or duodenal mucosa.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop ULCER and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CYP2C19

GASTRITIS

Gastritis is a condition where the lining of the stomach becomes inflamed. Acute quads usually occur suddenly and sharply in the lining of the stomach in cases where they are easily associated with a causative agent such as medication, infections and psychological stress. Food can also influence a lot in this case, when there is contamination in more extreme cases or associated with a diet rich in very fatty, spicy or industrialized meals. In chronic gastritis, the concern is greater because it is an ongoing inflammatory process. Symptoms are prolonged and if left untreated, chronic gastritis can last for years or a lifetime. Most cases are the result of infection with a bacterium called Helicobacter pylori (H. pylori). There is also the Nervous Gastritis It is called Functional Dyspepsia. It can cause symptoms similar to those of gastritis, without the slightest sign of pathological change in the stomach mucosa. Unlike other types of gastritis, nervous gastritis is approached primarily from a psychological perspective. It is triggered by some emotional stress affecting the movement of the stomach region.

Observations

If the result of the condition is HIGH (red dot) it means that there is a strong genetic tendency of the person to develop GASTRITIS and its consequences. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

SLC39A11

11. FERTILITY

LOWER SEXUAL DESIRE (FEMALE)

Research shows that female sexual desire and arousal problems have a hereditary component. Previous molecular genetic studies on sexual desire have focused primarily on genes associated with neurotransmitters such as dopamine and serotonin. However, there is reason to believe that hormones with more specific functions related to sexuality may have an impact on desire. We found nominally significant main effects on sexual desire for three ESR2-linked SNPs when controlling for anxiety, suggesting that individuals homozygous for the G allele of SN12 rs1271572 and the A allele of SNPs rs4986938 and rs928554 had lower levels of sexual desire. The rs4986938 SNP also had a nominally significant effect on lubrication.

Observations

Results in Red indicate a higher tendency for lower sexual desire based on the genotype of the individual.

Genes

ESR2

IN VITRO FERTILIZATION

In vitro fertilization is a medically assisted reproduction technique that involves placing a significant number of sperm in a laboratory environment. Orange and red indications indicate greater chances of the technique being successful.

Observations

Results in red indicate greater chances of success.

Genes

AMH, ESR2, GDF9

FEMALE INFERTILITY

Female Infertility is defined as the inability to get pregnant after at least one year of trying (or 6 months if the woman is over age 35). If a woman keeps having miscarriages, it is also called infertility. Female infertility can result from age, physical problems, hormone problems, and lifestyle or environmental factors. In Most cases of infertility in women result from problems with producing eggs. In primary ovarian insufficiency, the ovaries stop functioning before natural menopause. In polycystic ovary syndrome (PCOS), the ovaries may not release an egg regularly or they may not release a healthy egg.

Observations

Results in red indicate a higher chance of female infertility.

Genes

FSHR, GDF9, LIF

11. FERTILITY

PREGNANCY

Ease or not of getting pregnant.

Observations

Results in red indicate higher chances of pregnancy.

Genes

ABCB11, ABCC2, AGT, AGTR1, ATP8B1, CDCA3, IRS1, PRCP, STOX1, TCF7L2, TLR4

NAUSEA DURING PREGNANCY

Feeling nauseous during pregnancy, especially in the first few months.

Observations

Results in red indicate a higher chance of nauseous sensation.

Genes

HTR3C

THYROTOXICOSIS

Thyrotoxicosis means an excess of thyroid hormone in the body. Having this condition ,it also means you have a low level of thyroid-stimulating hormone, TSH, in your bloodstream. Because the hypothesis feels that you have “enough” thyroid hormone. If you are thyrotoxic, you may feel nervous or irritable because all of your body's functions are speeding up. Hyperthyroidism, also known as overactive thyroid, is the most common cause of thyrotoxicosis and occurs when the thyroid gland produces excess thyroid hormone.

Observations

Results in red indicate increased susceptibility to thyrotoxycocis.

Genes

CTLA4, MTNR1A, MTNR1B, TG, TSHR

11. FERTILITY

RECURRENT PREGNANCY LOSS (LOWER RISK)

The occurrence of a spontaneous pregnancy loss before the 20th week is relatively common. However, it happens repeatedly and is not an illness that is easily seen among couples trying to get pregnant. Women who suffer from this often spend a long time searching for a better understanding of what may be happening and what the possible treatments are. In 2008, the American Society for Reproductive Medicine defined recurrent pregnancy loss as the occurrence of 2 or more pregnancy losses of less than 20 weeks. What many do not know is that two or more consecutive pregnancy losses before 20 weeks of gestation occur in 2 to 4% of couples of reproductive age. In Brazil, in 2014, there were around 3 million births, with an estimate of around 90,000 new couples with recurrent pregnancy loss. Recurrent pregnancy loss is an uncommon and very complex pathology. There are numerous factors possibly responsible for the losses. Some of these factors have strong evidence, with a consensus. Other causes are widely discussed and still deserve studies. The main causes described are: Genetic, Endocrine (Hormonal), Anatomical, Infectious, Hematological (Thrombophilias), Immunological, Environmental, Nutritional status, Unknown. Orange or red results indicate a "lower" risk of recurrent pregnancy loss.

Observations

Results in red indicate increased chances for pregnancy loss.

Genes

ALDH2, IL-10, MTHFR, MTR

INTRAHEPATIC CHOLESTASIS OF PREGNANCY

It is a complication that can arise in the third trimester of pregnancy and affects around 1% of pregnant women.

Observations

Results in red indicate higher chances of fat accumulation due to IHC.

Genes

ABCB11, ABCB4, ABCC2, ATP8B1, NR1H4, OPRM1, SLC25A13

UTERINE FIBROMYOMA

Benign tumors in the uterus that can develop during a woman's childbearing years.

Observations

Results in red indicate higher chance of UF.

Genes

BET1L, ESR1, INTERGENIC, TNRC6B

11. FERTILITY

NEURAL TUBE DEFECT

Neural tube defects are a specific type of congenital defect of the brain, spine, and/or spinal cord.

Observations

Results in red indicate higher susceptibility to Neural Tube Defects.

Genes

CBS, MTHFD1, MTHFR, MTRR

SPONTANEOUS ABORTIONS

The C allele of the rs10046 polymorphism of the CYP19A1 gene is associated with greater susceptibility to spontaneous abortions.

Observations

Results in red indicate higher chances of Abortions.

Genes

CYP19A1

PROTEIN C DEFICIENCY

It is a lack of C proteins in the liquid portion of the blood. Proteins are natural substances that help prevent blood clots. Congenital protein C or S deficiency is an inherited disorder. This means it is passed from parents to children. Congenital means it is present at birth. The disorder causes abnormal blood clotting. One in 300 people has one normal gene and one defective gene for protein C deficiency.

Observations

Results in red indicate greater chances of reduced activity of Protein C involved in the regulation of Blood coagulation.

Genes

IL-1B, PROC

11. FERTILITY

ANTITHROMBIN DEFICIENCY

Heterozygous antithrombin deficiency has a prevalence of approximately 0.2 to 0.4%; approximately half of compromised people have venous thrombosis. Homozygous deficiency is likely lethal to the fetus in utero. Acquired deficiencies occur in patients with disseminated intravascular coagulation (DIC), liver disease, or nephrotic syndrome, or during heparin therapy. Heparin exerts its anticoagulant effect through the activation of antithrombin.

Observations

Results in red indicate higher chances of Antithrombin deficiency. Easier blood clot formation.

Genes

SERPINC1

ANTIPHOSPHOLIPID ANTIBODY SYNDROME

Antiphospholipid antibody syndrome or anti-phospholipid antibody syndrome (APS) or Hughes syndrome, is a chronic disease in which the body starts to produce antibodies that affect blood clotting, leading to the formation of clots that end up obstructing the passage of blood in the veins and arteries. It is an important cause for the occurrence of acquired thrombophilia and repeated miscarriages; acquired because, although the cause is not known, there is no known genetic marker, unlike congenital thrombophilia.

Observations

Red = higher chances of AAS - can result in miscarriages or stillbirths in women.

Genes

ATXN2, BANK1, DSTN, EVA1A, INTERGENIC, IRF5, MACROD2, MICAL3, MYO16, PDE1C, SGIP1, STAT1, STAT4, TLR7, TSHR

11. FERTILITY

SERPINE1 GENE MUTATION (PAI-1)

Defects in the SERPINE1 gene are the cause of plasminogen activator inhibitor-1 deficiency (PAI-1 deficiency). PAI -1 (plasminogen activator inhibitor type 1) is a serpin protease that contributes to the control of blood clotting. This substance is secreted in different tissues such as: vascular endothelium, liver and in large quantities by adipose tissue, especially visceral adipose tissue. A high activity and concentration of PAI - 1 reduces fibrinolytic activity, which is associated with an increased risk of cardiovascular diseases. Also considered a pro-inflammatory cytokine, including association with TNF-alpha and IL-6, PAI-1 is associated with clinical and functional variables, for example, showing an inverse correlation with VO2max (maximum capacity that the organism has in capture oxygen from the air, transport it and use it in the muscles), and a positive correlation with insulin resistance (pre-diabetes), cholesterol and triglyceride levels. Most importantly, a balance between t-PA (Tissue Plasminogen Activator) and PAI-1 are necessary for the blood clotting process in order to achieve adequate clotting levels. An imbalance between these or other hemostatic factors facilitates the development of atherosclerosis and thrombus formation. Some medications such as statins (cholesterol control) and metformin (glycemia control) seem to contribute to the adjustment of PAI-1 concentrations. Pregnancy is another state of interest for the complex metabolic and enzymatic interaction present in the coagulation process. In this scenario, PAI-1 is associated with recurrent miscarriages. This occurs especially when related to individuals with polymorphism of the 4G/4G allele, which appears to respond to up to a 47% increase in PAI-1 when compared to other alleles (4G/5G and 5G/5G). Briefly, by reducing fibrinolysis, the action of PAI-1 can cause thrombosis and induce placental insufficiency, preventing fetal development.

Observations

Results in red indicate higher chances of mutation on the SERPINE 1 Gene.

Genes

SERPINE1

PROTEIN S DEFICIENCY

It is a lack of S proteins in the liquid portion of the blood. Proteins are natural substances that help prevent blood clots. Congenital protein C or S deficiency is an inherited disorder. This means it is passed from parents to children. Congenital means it is present at birth. The disorder causes abnormal blood clotting. One in 300 people has one normal gene and one defective gene for protein C deficiency. Protein S deficiency is much less common and occurs in about 1 in 20,000 people.

Observations

Results in red indicate greater deficiency of Protein S - rare inherited condition that can cause blood clot formation easily.

Genes

PROS1

11. FERTILITY

ISOLATED FOLLICLE STIMULATING HORMONE (FSH) DEFICIENCY

FSH, known as follicle-stimulating hormone, is produced by the pituitary gland and its function is to regulate the production of sperm and the maturation of eggs during the fertile age. Thus, FSH is a hormone linked to fertility and its concentration in the blood helps to identify whether the testicles and ovaries are functioning correctly. The reference values for the FSH test vary according to the person's age and gender and, in the case of women, the phase of the menstrual cycle, and can also be useful to confirm menopause.

Observations

Results in red indicate higher chances of FSH deficiency.

Genes

FSHB, FSHR

FRAGILE-X SYNDROME

Fragile X Syndrome, Escalante Syndrome or Martin & Bell Syndrome is the 2nd most common inherited cause of mental retardation, and is also the most common known cause of autism. It is estimated to affect 1 in 4000 men and 1 in 6000 women, with 1 in 150 women carrying the FMR1 gene.

Observations

Results in red indicate higher chances of Fragile X syndrome.

Genes

AFF2, FMR1, SH3BP2

FSH DEFICIENCY

FSH, known as follicle-stimulating hormone, is produced by the pituitary gland and its function is to regulate the production of sperm and the maturation of eggs during the fertile age. Thus, FSH is a hormone linked to fertility and its concentration in the blood helps to identify whether the testicles and ovaries are functioning correctly. The reference values for the FSH test vary according to the person's age and gender and, in the case of women, the phase of the menstrual cycle, and can also be useful to confirm menopause. Orange or red results indicate lower FSH.

Observations

Results in red indicate a greater tendency to FSH deficiency.

Genes

FSHB, FSHR

12. RESPIRATORY SYSTEM

PULMONARY EMPHYSEMA

PULMONARY EMPHYSEMA is a respiratory disease in which the lungs lose elasticity and undergo destruction of the alveoli, which are structures responsible for exchanging oxygen. This process of loss of lung elasticity occurs gradually and, therefore, in most cases, symptoms take a long time to be noticed.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop PULMONARY EMPHYSEMA. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

EPHX1, SERPINE2

APNEA

Obstructive sleep apnea is a condition that occurs when the upper airway collapses during sleep, blocking airflow and oxygenation, despite respiratory effort. These repeated upper airway obstructions often result in oxygen desaturation and awakenings from sleep. Airway occlusion mechanisms are heterogeneous and factors such as anatomical abnormalities, upper airway dilator muscle function, micro-arousal threshold and abnormalities in ventilation control such as difficulty in diaphragmatic movement (common in obese patients) can influence airway obstruction during sleep. The most characteristic symptoms are daytime hypersomnolence, non-restorative sleep, reduced ability to concentrate and fatigue. When more intense, it can even cause neurocognitive dysfunction, development of cardiovascular diseases, metabolic dysfunction and reduced quality of life.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop APNEA. or, not having developed, to silence it with epigenetic or clinical conducts and treatment.

Genes

AHDC1, INTERGENIC, PPARG, ST8SIA6

12. RESPIRATORY SYSTEM

ASTHMA

Asthma is a common disease of the airways or bronchi (tubes that carry air into the lungs) caused by inflammation of the airways. When inflamed airways are exposed to various stimuli or triggering factors, they become hyperreactive and obstructed, limiting airflow through bronchoconstriction, mucus production, and increased inflammation. Asthma is characterized as a chronic inflammatory disease that affects the pulmonary mucosa that starts with an immunological hyper-reactivity in which there is an excessive release of several inflammatory mediators that cause lesions and changes in airway architecture, such as thickening of the basement membrane (sometimes irreversible) of the mucosal epithelium - by an interstitial deposit of collagen in the basement membrane - and proliferation of epithelial cells and myofibroblasts, in addition to changes such as hypertrophy and hyperplasia of smooth muscle, increase in the number of goblet cells, submucosal glands and changes in deposit and degradation of extracellular matrix components. At the same time, neural control, vascular permeability, with mucus hypersecretion, changes in mucociliary function and increased airway smooth muscle reactivity are affected, which, in addition to limiting air flow, lead to the characteristic symptoms of dyspnea from medium to severe and respiratory wheezing..

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency in the person to develop ASTHMA. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

ADRB2, CHI3L1, GLCCI1, GSDML, GSTP1, IL-10, MS4A2, NPSR1, PTGDR2, TBX21, TLR2, TLR4, TNF

BRONCHITIS

Bronchitis is an inflammation of the lining of the bronchial tubes. Inflammation prevents air from entering and leaving the lungs. It is clinically defined as the existence of a productive cough in most days of the month, three months of a year, in two successive years and without other underlying diseases to justify the cough. Other morphological changes in Chronic Bronchitis are variable and include: Excess mucus in the airways , Thickening of the bronchial walls (enlarged glands and edema) , Increased number of goblet cells ,Increased amount of smooth muscle (bronchial hyperactivity) ,Metaplasia squamous bronchial epithelium.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency for the person to develop BRONCHITIS. It is recommended that clinical evaluation and/or annual examinations be carried out to find out if the condition has developed (expressed) and treat it, or, if it has not developed, to silence it with conducts and epigenetic or clinical treatment.

Genes

CRTH2, IL-13, TBX21, TGFB1, TLR2

12. RESPIRATORY SYSTEM

FLU (INFLUENZA)

Influenza is a respiratory infection caused by the influenza virus. Its symptoms usually appear suddenly, with fever, redness of the face, body aches and tiredness. The main symptoms of flu are high fever (above 38°C), muscle pain, sore throat, headache and dry cough.

Observations

If the result of the condition is HIGH (red dot) this means that there is a strong genetic tendency of the person to develop FLU. It is indicated that clinical evaluation and/or annual exams be done to know if the condition has developed (expressed) and to treat it, or, not having developed, to silence it with epigenetic or clinical conducts and treatment.

Genes

IFITM3, IL-10

ALLERGIC RHINITIS

Allergic reaction that causes itching, watery eyes, sneezing and other similar symptoms.

Observations

Results in red indicate a greater tendency to develop allergic rhinitis.

Genes

AHR, BDNF, HLA-DQB1, IL-1RL1, PLCE1, TSLP

ALPHA ANTITRYPSIN DEFICIENCY (AAT)

AAT is usually protective in nature as it guards the lungs from inflammation but a deficiency indicates the candidate is more prone to inflammation.

Observations

Results in red indicate a strong genetic tendency to experience AAT deficiency.

Genes

SERPINA1

13. SENSORY SYSTEM

CATARACT

Opacity of the natural lens of the eye.

Observations

Red indicates higher tendency for cataract.

Genes

CRYBB2, CRYBB3, CRYGD, EPHA2, GJA8, GSR, MAF, PITX2

AGE-RELATED MACULAR DEGENERATION

Eye disease that causes vision loss.

Observations

Results in red indicate a higher susceptibility to vision loss.

Genes

ABCA1, ARMS2, C2, C3, CETP, CFB, CFH, CX3CR1, FGD6, HTRA1, IL-10, INTERGENIC, NOTCH4, REST, SERPINF1, SERPING1, TLR3, VEGFA

GLAUCOMA

A group of eye diseases that can cause blindness.

Observations

Red means a greater chance of Glaucoma.

Genes

AFAP1, COL11A1, COMT, CYP1B1, EPDR1, LOXL1, LTBP2, OPTN, PLEKHA7, TBC1D21, TNF

DEAFNESS

Total or significant hearing loss.

Observations

Red means higher chance of Deafness

Genes

GJB2

13. SENSORY SYSTEM

MYOPIA

Disorder in which close objects are seen clearly, but distant objects are not.

Observations

Red indicates a higher chance of Myopia.

Genes

ADAMTS10, BCO1, BMP2K, CHRM1, CNGB3, CNTN5, COL1A1, COL2A1, ERI1, FGF2, HGF, INTERGENIC, LUM, MIR100HG, PAX6, PPP2R4, TGFB1, TGFB2, TGIF1, TYR, UMODL1, WDR41

HYPEROPIA

Hyperopia, difficulty seeing up close, occurs when the image forms behind the retina.

Observations

Red indicates a higher chance of Hyperopia.

Genes

DBMBX1

ASTIGMATISM

Astigmatism is a common, mild and easily treatable imperfection in the curvature of the eye. Most of the focusing power in the eye occurs along the front surface, called the cornea. The next structure involved in focusing is the crystalline lens, the lens that sits behind the iris inside the eye.

Observations

Results in red indicate greater risk for astigmatism.

Genes

VAX2

14. LONGEVITY

BDNF GG

Brain Derived Neurotrophic Factor (BDNF) is a key molecule involved in plastic changes related to learning and memory. The expression of BDNF is highly regulated, and can lead to great variability in BDNF levels in healthy subjects. Changes in BDNF expression are associated with both normal and pathological aging and also psychiatric disease, in particular in structures important for memory processes such as the hippocampus and parahippocampal areas. Some interventions like exercise or antidepressant administration enhance the expression of BDNF in normal and pathological conditions.

Observations

Results in red indicate higher BDNF levels - in longevity it means greater neuroplasticity.

Genes

BDNF

IL-6 (LONGEVITY)

IL-6 is a pro-inflammatory cytokine that is produced by various immune cells, including macrophages, T cells, and B cells, in response to infection, injury, or tissue damage. It plays a crucial role in orchestrating the immune response by promoting the activation, proliferation, and differentiation of immune cells. Some studies in centenarians and individuals with exceptional longevity have revealed intriguing associations between IL-6 and longevity. Some research suggests that certain genetic variants associated with higher IL-6 levels may be overrepresented in long-lived individuals, indicating a potential role for IL-6 in longevity. Overall, while IL-6 is typically associated with inflammation and age-related diseases, its precise role in longevity remains an area of active investigation. The relationship between IL 6 and longevity is likely influenced by various factors, including the context of inflammation, genetic background, and interactions with other biological pathways.

Observations

Results in red indicate higher levels of IL-6

Genes

IL-6

14. LONGEVITY

PON1

The PON1 gene, which encodes the paraoxonase 1 enzyme, has been associated with longevity in several studies. Paraoxonase 1 is an enzyme primarily produced in the liver and found in high concentrations in the bloodstream, where it plays a role in protecting against oxidative stress and inflammation by breaking down certain toxic compounds, including organophosphates and lipid peroxides. Several lines of evidence suggest a link between PON1 gene variants and longevity. One study found that individuals carrying certain genetic variants of the PON1 gene had increased longevity compared to those with other variants. These variants were associated with higher levels of paraoxonase activity, suggesting that increased enzyme activity may contribute to longevity by reducing oxidative stress and inflammation.

Observations

Results in red indicate higher levels of PON1 activity in the system in terms of genetics.

Genes

PON1

FOXO3

FOXO3 is expressed in multiple tissues throughout the body, including in blood (hematopoietic cells), heart, brain, liver, muscle, spleen, testes, and ovaries. Studies in model organisms have demonstrated that FOXO3 (also termed FoxO3 in rodents and, in C elegans, daf-16) is a key regulator in multiple longevity-associated pathways, including those involved with energy homeostasis, autophagy, stem cell maintenance, and stress-resistance. Telomeres are DNA-protein complexes capping the end of chromosomes and protect the internal genetic material of somatic cells. In human somatic cells, telomeres shorten with every replicative cycle at a rate of between 30 and 150 base pairs (bp)/year depending on the tissue and can serve as a cellular mechanism to determine the number of divisions a cell can undergo before entering senescence or apoptosis. Shorter telomere length has been associated with greater risk for age-related disease and telomere length may be a robust mechanism to assess biological age. A study by Torigoe TH, et al., demonstrated a protective effect on telomeres during aging has been linked to the FOXO3 genotype, specically in carriers of the FOXO3 G-allele.

Observations

Results in red indicate higher levels of FOXO3

Genes

FOXO3

14. LONGEVITY

CLU

Clusterin is a multifunctional protein involved in various cellular processes, including apoptosis (programmed cell death), lipid transportation, and inflammation regulation. Studies investigating the genetics of longevity have identi ed associations between certain CLU gene variants and increased lifespan. These variants may confer protective effects against age-related diseases or promote cellular resilience to stressors, ultimately contributing to enhanced longevity. However, the exact mechanisms by which the CLU gene inuences lifespan are not fully understood and require further investigation.

Observations

Results in red indicate higher levels of CLU

Genes

CLU

IGF1R

This gene is part of a signaling pathway that inuences growth and development. Variations in IGF1R can inuence susceptibility to cancer and other diseases, thus indirectly affecting lifespan.

Observations

Results in red indicate higher levels of IGF1R.

Genes

IGF1R

KLOTHO

This gene encodes a transmembrane protein, α-Klotho, which acts as a co-receptor for fibroblast growth factor (FGF) receptors and is involved in various cellular processes, including mineral metabolism, oxidative stress response, and insulin signaling. In humans, genetic variations in the Klotho gene have been associated with longevity. Specifically, certain variants of the Klotho gene have been found at higher frequencies in centenarians and individuals with exceptional longevity compared to the general population. These variants are associated with higher levels of α-Klotho protein and may confer protective effects against age-related diseases, such as cardiovascular disease, diabetes, and cognitive decline.

Observations

Results in red indicate higher levels of KLOTHO

Genes

KL

14. LONGEVITY

LMNA

The LMNA gene encodes lamin A and lamin C proteins, which are structural components of the nuclear lamina, a mesh-like structure underlying the inner nuclear membrane. These proteins play crucial roles in maintaining nuclear structure and regulating various cellular processes, including DNA replication, gene expression, and cell differentiation.

Observations

Results in red indicate greater levels of LMNA.

Genes

LMNA

MTOR

The mammalian target of rapamycin (mTOR) pathway is a highly conserved signaling pathway that plays a central role in regulating cellular metabolism, growth, and proliferation in response to nutrient availability, energy status, and various environmental cues. Research on the link between mTOR and longevity has uncovered intricate relationships between this pathway and the aging process.

Observations

Results in red indicate higher levels of mTOR.

Genes

MTOR

PCSK9

PCSK9 (Proprotein Convertase Subtilisin/Kexin Type 9): PCSK9 encodes for proprotein convertase subtilisin/kexin type 9, a protein involved in the regulation of cholesterol levels in the blood. Variants in this gene have been linked to increased lifespan. Results in red indicate higher level.

Observations

Results in red indicate higher levels of PCSK9.

Genes

PCSK9

14. LONGEVITY

SIRT1

SIRT1 (sirtuin 1) is a member of the sirtuin family of proteins, which are class III histone deacetylases involved in regulating various cellular processes, including metabolism, DNA repair, stress response, and longevity. SIRT1 has garnered signi cant attention in the eld of aging research due to its ability to modulate key pathways associated with aging and age related diseases. One of the primary mechanisms through which SIRT1 inuences longevity is by regulating cellular metabolism and energy homeostasis. SIRT1 promotes metabolic health by activating pathways such as AMP-activated protein kinase (AMPK) and peroxisome proliferator-activated receptor gamma coactivator 1-alpha (PGC-1 α), which increase mitochondrial biogenesis, enhance oxidative metabolism, and improve insulin sensitivity. By promoting effcient energy production and utilization, SIRT1 activation can mitigate age-related metabolic dysfunction and extend lifespan in various model organisms.

Observations

Results in red indicate higher levels of SIRT 1 .

Genes

SIRT1

SIRT3

One of the primary functions of SIRT3 is its regulation of mitochondrial metabolism and function. SIRT3 is localized in the mitochondria, where it deacetylates and activates key enzymes involved in oxidative phosphorylation, fatty acid oxidation, and antioxidant defense, such as acetyl-CoA synthetase 2 (AceCS2), long-chain acyl-CoA dehydrogenase (LCAD), and superoxide dismutase 2 (SOD2). By enhancing mitochondrial function and reducing oxidative stress, SIRT3 activation can improve cellular bioenergetics and protect against age related mitochondrial dysfunction.

Observations

Results in red indicate Higher SIRT 3.

Genes

SIRT3

14. LONGEVITY

TERT

Telomeres are repetitive DNA sequences located at the ends of chromosomes that protect them from degradation and fusion with neighboring chromosomes. With each cell division, telomeres progressively shorten due to the end replication problem, eventually leading to cellular senescence or apoptosis when critically short telomeres are reached. Telomerase, a ribonucleoprotein enzyme complex that includes TERT, can counteract telomere shortening by adding telomeric DNA repeats to chromosome ends, thereby maintaining telomere length and cellular replicative capacity.

Observations

Results in red higher Telomerase activity.

Genes

TERT

TOMM40

The TOMM40 gene encodes a translocase of the outer mitochondrial membrane 40 homolog (TOMM40) protein, which is involved in the import of proteins into mitochondria, the energy-producing organelles within cells. While TOMM40 has primarily been studied in the context of Alzheimer's disease (AD) due to its association with the APOE gene, recent research has also explored its potential role in longevity. Results in red indicate higher levels.

Observations

Results in red indicate higher levels of TOMM40

Genes

TOMM40, TP53

TP53

The TP53 gene, commonly known as the tumor protein 53 or p53, is a crucial tumor suppressor gene that plays a central role in safeguarding genomic integrity and preventing the development of cancer. p53 functions as a transcription factor that regulates the expression of genes involved in cell cycle arrest, apoptosis, DNA repair, and senescence in response to various cellular stresses, including DNA damage, oncogene activation, and hypoxia. Several lines of evidence suggest that p53 may influence lifespan through its effects on cellular senescence, apoptosis, and DNA repair mechanisms.

Observations

Results in red indicate higher levels of P53.

Genes

15. MICROBIOME

FAECALIBACTERIUM PRAUSNITZII

Faecalibacterium prausnitzii, one of the most abundant bacterial species found in the gut. One of the main candidates for the production of Butyrate. Butyrate has a crucial role in gut physiology and host wellbeing. It is the main energy source for the colonocytes and it has protective properties against colorectal cancer (CRC) and inflammatory bowel diseases.

Observations

Results in red indicate higher genetic tendency to support the growth of that particular strain.

Genes

CNTN6, KCND3, LOC101928721, LOC105369896

RUMINOCOCCUS YELLOWFACIENS

Antidepressants affect the intestinal microbiota and Ruminococcus flavefaciens is capable of abolishing their effects on depressive behavior. Accumulating evidence demonstrates that the gut microbiota affects brain function and behavior, including depressive behavior. Antidepressants are the main medications used to treat depression. We hypothesized that antidepressant treatment could modify the gut microbiota, which may partially mediate its antidepressant effects. Furthermore, R. flavefaciens affects gene networks in the brain, suggesting a mechanism for microbial regulation of antidepressant treatment efficiency. Its abundance increases with diets enriched in flavonoids.

Recommendations

It is the only known bacterium in the rumen shown to possess a definitive cellulosome, i.e., a discrete multi-enzyme complex specialized in the breakdown of cellulose and associated plant cell-wall polysaccharides.

Observations

Results in red indicate favourable conditions for Ruminococcus flavefaciens.

Genes

ATXN1, FBN2

15. MICROBIOME

LACTOCOCCUS LACTIS

Lactococcus lactis is a gram-positive lactic acid-producing bacterium extensively used in the manufacture of dairy products and other fermented products. As a probiotic, Lactococcus lactis improves immune function, reducing the occurrence of allergic episodes and modulating the inflammatory process. In this sense, L. lactis improves the symptoms associated with inflammatory bowel diseases, being an alternative therapeutic approach to the pharmacological therapy usually used in this condition, which generally presents several side effects. Lactococcus lactis also improves the frequency of bowel movements and the consistency of feces, helping to manage chronic constipation. Benefits on skin aspects, such as hydration and elasticity, were also observed with supplementation of this probiotic.

Recommendations

Lactococcus lactis (L. lactis) is the primary organism for lactic acid bacteria (LAB) and is a globally recognized safe microorganism for the regulation of the intestinal micro-ecological balance of animals and improving the immune performance of the host.

Observations

Results in red indicate favourable conditions for the sustainence of Lactococcus lactis

Genes

CPSF2, LINC02757, SPECC1L, ZNRF3

EUBACTERIUM RUMINANTIUM

Eubacterium is a genus of Gram-positive bacteria in the Eubacteriaceae family. Eubacterium hallii is considered an important microbe in regard to intestinal metabolic balance due to its ability to utilize glucose and the fermentation intermediates acetate and lactate, to form butyrate and hydrogen.

Observations

Results in red indicate higher levels of Eubacterium ruminantium.

Genes

INTERGENIC, YTHDC2

15. MICROBIOME

BACTEROIDES THETAIOTAOMICRON

Bacteroides thetaiotaomicron (formerly Bacillus thetaiotaomicron) is a species of bacteria in the genus Bacteroides. It is a gram-negative obligate anaerobe. It is one of the most common bacteria found in the human intestinal flora and is also an opportunistic pathogen. Its genome contains numerous genes apparently specialized in the digestion of polysaccharides. However, the bacterium Bacteroides thetaiotaomicron , which metabolizes starch, which does not metabolize quercetin, stimulates the degradation of quercetin and butyrate production by E. ramulus through the cross-feeding of glucose and maltose molecules released by starch. These results suggest that food substrates and species interactions modulate flavonoid degradation and butyrate production, shaping their bioavailability and bioactivity, and likely affecting their health-promoting effects in humans.

Observations

Results in red indicate higher levels of bacteroides thetaiotamicron.

Genes

INTERGENIC

PREVOTELLA BIVIA

Prevotella bivia is a species of bacterium of the genus Prevotella. It's gram-negative. It is a cause of pelvic inflammatory disease.

Observations

Results in red indicate a higher genetic tendency to support the growth of the strain.

Genes

KIAA1217

CLOSTRIDIUM DIFFICILE

Clostridium difficile is a gram-positive bacillus commensal of the gastrointestinal tract responsible for gastrointestinal diseases associated with antibiotics, ranging from diarrhea to pseudomembranous colitis.

Observations

Results in red indicate higher genetic tendency to support the growth of that particular strain.

Genes

CNTF, ERAP1, INTERGENIC, JAZF1, LINC00598, MMEL1, NKX2-3

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15. MICROBIOME

AGGREGATIBACTER ACTINOMYCETEMCOMITANS

Aggregatibacter actinomycetemcomitans (formerly Actinobacillus actinomycetemcomitans) is a facultative anaerobic, non-motor gram-negative bacterium often found in association with localized aggressive periodontitis, a severe infection of the periodontium.

Observations

Results in red indicate higher genetic tendency to support the growth of that particular strain.

Genes

INTERGENIC

PRECISION HEALTH

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