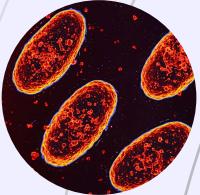


immortigen



# COMPREHENSIVE 360° REPORT

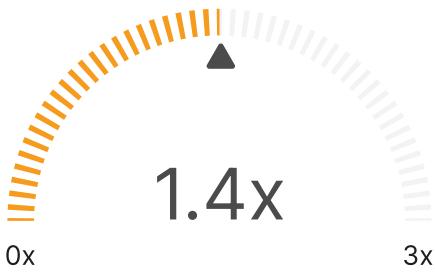


## Biological Age



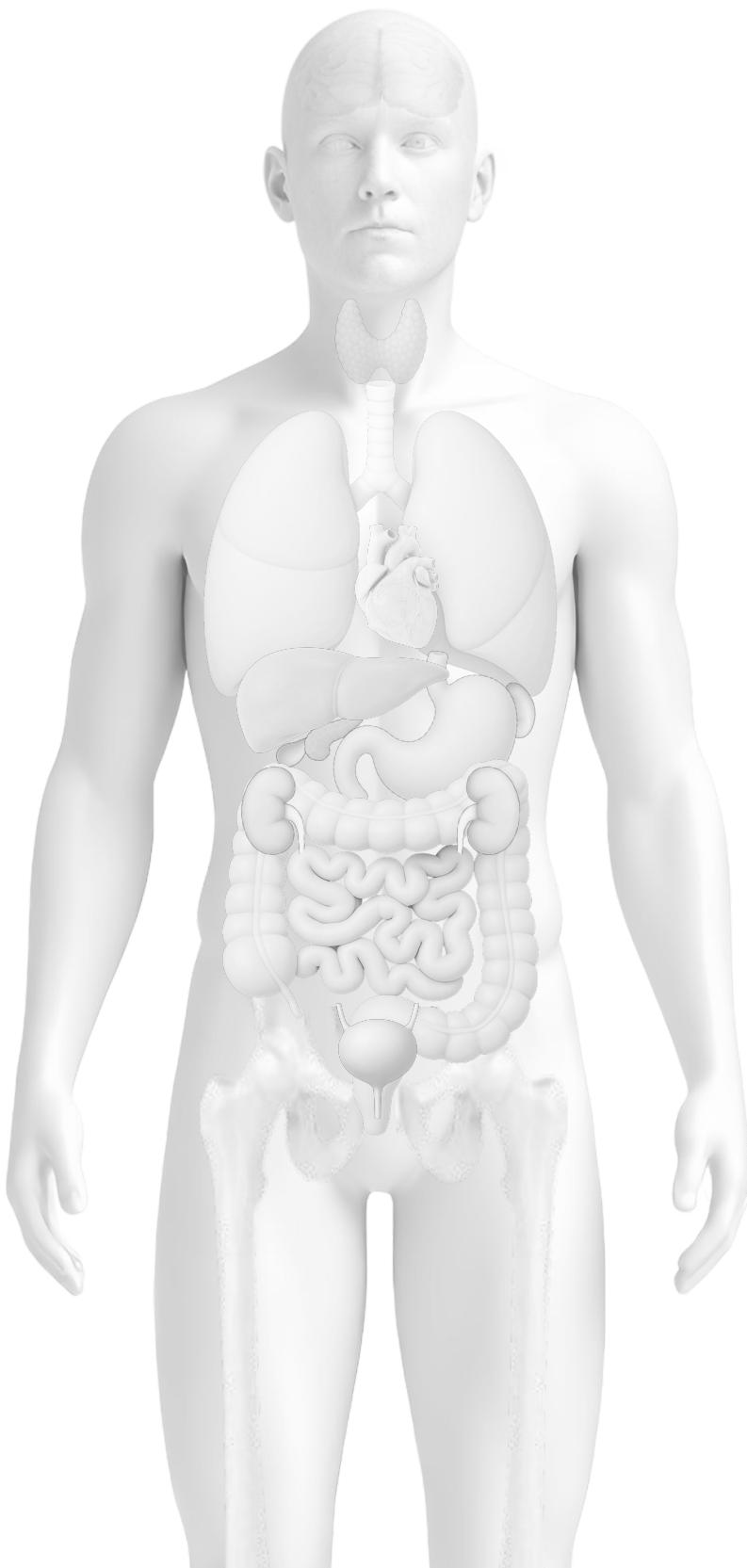
Biological age is an estimate of how well a person's body and organ systems are functioning relative to their chronological age. Unlike the number of years lived, biological age reflects the cumulative effects of genetics, lifestyle, environment, and disease on cellular and systemic health.

## Pace of Aging



Pace of aging refers to the speed at which these biological changes occur over time. A rate of 1x represents typical aging for a given chronological age, while rates lower than 1x suggest slower-than-average aging (greater resilience), and rates higher than 1x indicate accelerated aging and increased vulnerability to age-related decline.

## Organs



This report provides a comprehensive overview of biological health and aging.

Risk Score (0–100), where higher values indicate greater susceptibility to dysfunction or disease.

Rate of Aging (0x–3x), representing how quickly the organ is aging relative to a typical baseline (1x = normal rate, <1x = slower aging, >1x = accelerated aging).

The following sections present detailed scores for each organ, offering a personalised map of resilience and vulnerability across the body.

- **High Risk**  
(Increase likelihood of diseases)
- **Moderate Risk**  
(Moderate risk of diseases)
- **Low Risk**  
(Increase likelihood of diseases)

Organ/ Body System	Risk Score	Rate of Aging
Heart	65	2.5
Lungs	69	2.25
Brain(Nervous system)	25	0.83
Immune system/Inflammatory marker	92	3.02
Brain(Psychiatric)	85	2.85
Kidney	20	0.58
Intestines	22	0.84
Breast(Mammary glands)	19	0.88
Skin	25	1.50
Knee ligaments	03	0.61
Eyes	40	1.91
Endocrine	39	1.52
Liver	31	1.43
Prostate gland	74	3.86

Organ/ Body System	Risk Score	Rate of Aging
Pancreas	08	0.63
Ovaries	63	2.65
Testis	35	1.48
Bones	48	1.75
Thyroid gland	37	1.25
Systemic autoimmune	23	1.13
Hair	14	0.95
Urinary Bladder	82	2.71
Parathyroid	27	1.27
Gall Bladder	53	1.53
Spleen	24	1.61
Nasal epithelium	61	2.42

## Heart

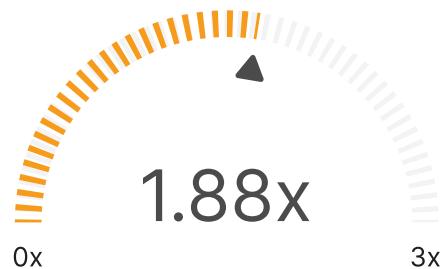
Pumps blood throughout the body, supplying oxygen and nutrients while removing waste. Disorders include heart attack, arrhythmia, and heart failure. Pumps blood throughout the body, supplying oxygen and nutrients while removing waste. Disorders include heart attack, arrhythmia, and heart failure.



Biological Age



Pace of Aging



Each year your heart will age with the speed of 1.88x

Composite Risk Score



Low Risk

Moderate Risk

High Risk

## Genetic Markers for Heart

PGS	Risk Score
<b>HDL cholesterol levels</b> Good cholesterol; higher levels protect arteries, lower risk of heart disease.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Hypertension</b> Chronic high blood pressure, major risk factor for stroke, heart disease	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Heart failure</b> Heart failure is when the heart can't pump blood effectively to meet the body's needs.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Coronary artery disease</b> CAD is the narrowing or blockage of coronary arteries (which supply blood to the heart) due to plaque buildup.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Atrial fibrillation</b> AFib is an irregular, often rapid heartbeat in the heart's upper chambers.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Myocardial infarction</b> Myocardial infarction critical because it damages the heart, potentially leading to heart failure or irregular heart rhythms.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Omega-6:omega-3 ratio</b> Balance of fatty acids; high ratio linked to inflammation, cardiovascular risk.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>
<b>Peripheral artery disease</b> Narrowed leg arteries reduce blood flow, causing pain, cramping, poor healing.	<span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span>

<b>Venous thromboembolism</b> Blood clot in vein, includes deep vein thrombosis and pulmonary embolism.	High Risk	Moderate Risk	Low Risk
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**Blood Biomarker for Heart**

Marker	Risk / Value
<b>Cholesterol-Total, Serum</b> Shows the total cholesterol circulating in the blood, which impacts heart and artery health.	205 mg/dL
<b>CHOL/HDL RATIO</b> Evaluates the balance between protective and harmful cholesterol, indicating the heart's risk of plaque buildup.	3.53
<b>HDL Cholesterol Direct</b> This "good cholesterol" protects the heart by clearing excess cholesterol from blood vessels.	58 mg/dL
<b>LDL Cholesterol - Calculated</b> This "bad cholesterol" can deposit in artery walls, increasing the risk of heart attack and stroke.	130 mg/dL
<b>LDL/HDL RATIO</b> Determines the proportion of bad to good cholesterol, indicating cardiovascular risk.	2.24
<b>Non - HDL Cholesterol, Serum</b> Captures all cholesterol types harmful to the heart, providing a complete risk profile.	170 mg/dL
<b>Triglycerides, Serum</b> High blood fats can strain the heart and lead to artery blockages, raising heart disease risk.	155 mg/dL
<b>VLDL</b> Transports triglycerides and contributes to artery plaque, harming heart health.	40 mg/dL
<b>homocysteine</b> High levels damage blood vessels and increase the risk of heart disease and stroke.	12 µmol/L

<b>HbA1c (Glycosylated Hemoglobin)</b> Tracks long-term blood sugar control, as high glucose can damage heart vessels.	5.1%
<b>APO A1</b> A key protein in HDL that protects the heart by aiding cholesterol removal.	95 mg/dL
<b>APO B</b> A major protein in LDL and VLDL; high levels indicate greater heart disease risk.	180 mg/dL

## Protein markers for Heart

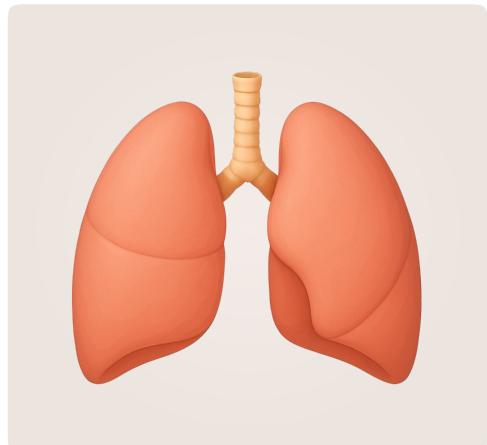
Protein	Risk / Value		
ACE2	High Risk	Moderate Risk	Low Risk
BMP4	High Risk	Moderate Risk	Low Risk
CTF1	High Risk	Moderate Risk	Low Risk
ERBB4	High Risk	Moderate Risk	Low Risk
GALNT10	High Risk	Moderate Risk	Low Risk
GALNT2	High Risk	Moderate Risk	Low Risk

GALNT3	High Risk	Moderate Risk	Low Risk
HDAC5	High Risk	Moderate Risk	Low Risk
HDAC9	High Risk	Moderate Risk	Low Risk
MYL11	High Risk	Moderate Risk	Low Risk
MYL3	High Risk	Moderate Risk	Low Risk
NPPC	High Risk	Moderate Risk	Low Risk
NPY	High Risk	Moderate Risk	Low Risk
PGF	High Risk	Moderate Risk	Low Risk
SIRT1	High Risk	Moderate Risk	Low Risk

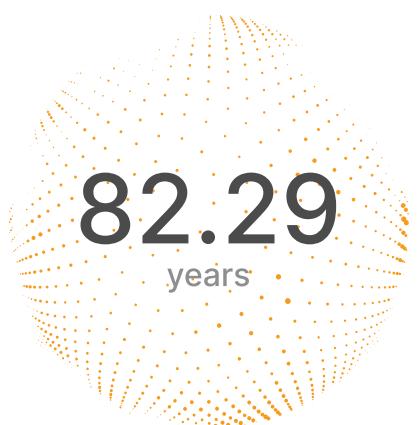
TAB2	High Risk	Moderate Risk	Low Risk
TGFB1	High Risk	Moderate Risk	Low Risk

## Lungs

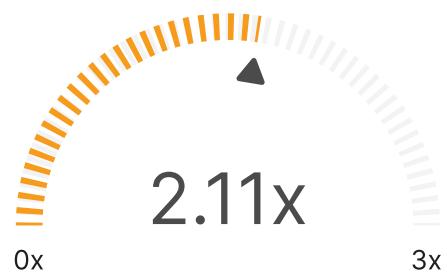
Enables oxygen exchange and carbon dioxide removal, ensuring every cell receives the oxygen needed for energy. It involves the lungs, airways, and diaphragm working together to maintain efficient breathing. Conditions like asthma, COPD, and pneumonia can restrict airflow and impair oxygen delivery, affecting overall vitality and well-being.



### Biological Age

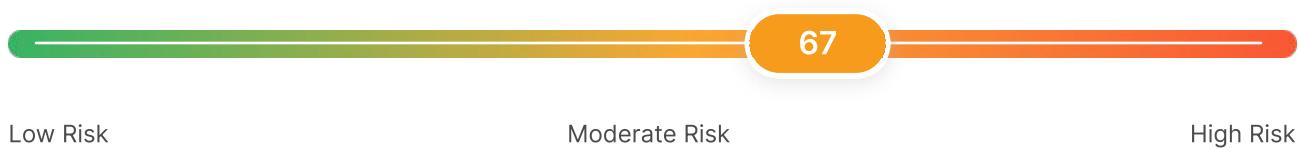


### Pace of Aging



Each year your heart will age with the speed of 2.11x

### Composite Risk Score



## Genetic Markers for Lungs

PGS	Risk Score
<b>Lung function (FVC)</b> Measures total air exhaled, reflecting lung capacity and breathing health.	High Risk    Moderate Risk    Low Risk
<b>Lung function (FEV1/FVC)</b> Assesses how well the lungs expel air, helping detect airflow blockage in conditions like COPD or asthma.	High Risk    Moderate Risk    Low Risk
<b>Lung function (FEV1)</b> Evaluates the volume of air pushed out in the first second of a forced exhale, indicating lung efficiency and health.	High Risk    Moderate Risk    Low Risk
<b>Lung cancer</b> A serious respiratory disease where abnormal cells grow uncontrollably in lung tissue, often linked to smoking or environmental toxins.	High Risk    Moderate Risk    Low Risk
<b>Asthma</b> A chronic respiratory disorder causing airway inflammation and narrowing, leading to wheezing, coughing, and breathing difficulties.	High Risk    Moderate Risk    Low Risk

## Blood Biomarker for Lungs

Marker	Risk / Value
<b>hsCRP (High Sensitive CRP)</b> A highly sensitive blood marker detecting inflammation, predicting early cardiovascular and systemic vascular disease.	0.85 mg/L

<b>ESR</b>	Measures how quickly red blood cells settle, reflecting the presence of inflammation or infection that can affect heart and vascular health	20 mm hr
<b>Hb (Hemoglobin)</b>	An oxygen-carrying protein in red blood cells; low levels reduce oxygen delivery to the heart and body, indicating anemia or potential blood loss	21 g/dL

### Protein markers for Lungs

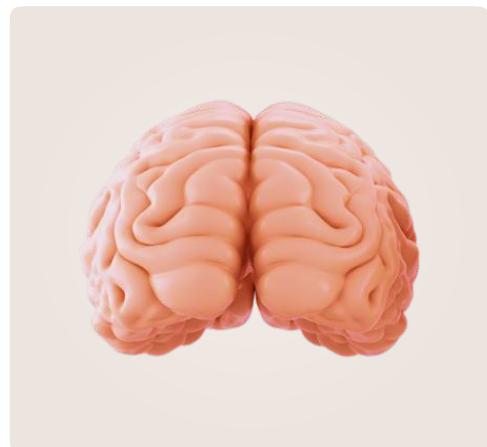
Protein	Risk / Value		
ACE2	High Risk	Moderate Risk	Low Risk
BMP4	High Risk	Moderate Risk	Low Risk
BTC	High Risk	Moderate Risk	Low Risk
BTN3A2	High Risk	Moderate Risk	Low Risk
CSF2	High Risk	Moderate Risk	Low Risk
CHRM1	High Risk	Moderate Risk	Low Risk

CTSH	High Risk	Moderate Risk	Low Risk
ITGAV	High Risk	Moderate Risk	Low Risk
ITGA11	High Risk	Moderate Risk	Low Risk
ITGAL	High Risk	Moderate Risk	Low Risk
ITGB6	High Risk	Moderate Risk	Low Risk
ITGB7	High Risk	Moderate Risk	Low Risk
MUC13	High Risk	Moderate Risk	Low Risk
MUC16	High Risk	Moderate Risk	Low Risk
MUC20	High Risk	Moderate Risk	Low Risk

PLA2G10	High Risk	Moderate Risk	Low Risk
PTGES2	High Risk	Moderate Risk	Low Risk
RET	High Risk	Moderate Risk	Low Risk
SFTPA2	High Risk	Moderate Risk	Low Risk
TGFA	High Risk	Moderate Risk	Low Risk
TGFB1	High Risk	Moderate Risk	Low Risk

## Nervous system (brain)

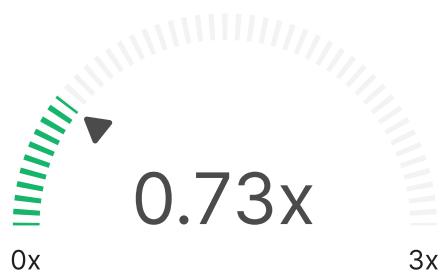
Controls all body functions, thoughts, emotions, and memory, enabling communication between the brain and body. It coordinates movement, sensation, and cognition through a complex network of nerves. Conditions like stroke, neurodegenerative diseases, or injuries can disrupt these signals, affecting coordination, memory, and overall functioning.



### Biological Age



### Pace of Aging



Each year your heart will age with the speed of 0.73x

### Composite Risk Score



Low Risk

Moderate Risk

High Risk

**Genetic Markers for Nervous system (brain)**

PGS	Risk Score
<b>Dementia</b> A group of conditions causing progressive decline in memory, thinking, and daily functioning.	High Risk    Moderate Risk    Low Risk
<b>Alzheimer's disease</b> The most common cause of dementia, characterized by brain cell damage and memory loss.	High Risk    Moderate Risk    Low Risk
<b>Epilepsy</b> A neurological disorder marked by recurrent seizures due to abnormal brain activity.	High Risk    Moderate Risk    Low Risk
<b>Narcolepsy</b> A sleep disorder causing excessive daytime sleepiness and sudden loss of muscle control.	High Risk    Moderate Risk    Low Risk
<b>Multiple sclerosis</b> An autoimmune disease where the immune system attacks the protective covering of nerves.	High Risk    Moderate Risk    Low Risk
<b>ADHD</b> A condition with persistent inattention, hyperactivity, and impulsivity.	High Risk    Moderate Risk    Low Risk
<b>Schizophrenia</b> A severe mental disorder affecting thought processes, emotions, and perception of reality	High Risk    Moderate Risk    Low Risk
<b>Autism</b> A developmental condition affecting social interaction, communication, and behavior patterns.	High Risk    Moderate Risk    Low Risk

**Parkinson's disease**

A progressive brain disorder causing tremors, stiffness, and movement difficulties.

High Risk

Moderate Risk

Low Risk

**Blood Biomarker for Nervous system (brain)**

Marker	Risk / Value
<b>homocysteine</b> An amino acid that, when elevated, can damage brain blood vessels and increase the risk of stroke, cognitive decline, and neurodegenerative diseases.	12 µmol/L
<b>Vitamin B12</b> Vital for nerve cell health, myelin sheath formation, and brain function; low levels can cause nerve damage, memory problems, and cognitive impairment.	750 pg/mL
<b>Vitamin B9</b> Essential for brain development, neurotransmitter balance, and mental function; deficiency may lead to depression, poor memory, and neural tube defects during pregnancy.	26 ng/mL

**Protein markers for Nervous system (brain)**

Protein	Risk / Value
<b>ACE2</b>	High Risk Moderate Risk Low Risk
<b>AHNAK</b>	High Risk Moderate Risk Low Risk

BACE1	High Risk	Moderate Risk	Low Risk
CEMIP2	High Risk	Moderate Risk	Low Risk
CD33	High Risk	Moderate Risk	Low Risk
CTF1	High Risk	Moderate Risk	Low Risk
CHRM1	High Risk	Moderate Risk	Low Risk
DNAJC6	High Risk	Moderate Risk	Low Risk
ERBB4	High Risk	Moderate Risk	Low Risk
GALNT10	High Risk	Moderate Risk	Low Risk

GALNT2	High Risk	Moderate Risk	Low Risk
GALNT3	High Risk	Moderate Risk	Low Risk
GAP43	High Risk	Moderate Risk	Low Risk
GCNT1	High Risk	Moderate Risk	Low Risk
GDNF	High Risk	Moderate Risk	Low Risk
GFAP	High Risk	Moderate Risk	Low Risk
HDAC5	High Risk	Moderate Risk	Low Risk
HDAC9	High Risk	Moderate Risk	Low Risk
LRRN1	High Risk	Moderate Risk	Low Risk

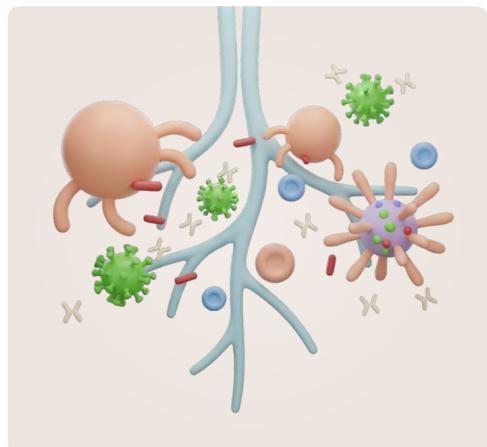
PTRN2	High Risk	Moderate Risk	Low Risk
PTPRR	High Risk	Moderate Risk	Low Risk
PTPRZ1	High Risk	Moderate Risk	Low Risk
PRTG	High Risk	Moderate Risk	Low Risk
PTGES2	High Risk	Moderate Risk	Low Risk
RET	High Risk	Moderate Risk	Low Risk
RYK	High Risk	Moderate Risk	Low Risk
SIRT1	High Risk	Moderate Risk	Low Risk
SIRT2	High Risk	Moderate Risk	Low Risk

MAPT	High Risk	Moderate Risk	Low Risk
NBEAL2	High Risk	Moderate Risk	Low Risk
NCAN	High Risk	Moderate Risk	Low Risk
NCS1	High Risk	Moderate Risk	Low Risk
NEFL	High Risk	Moderate Risk	Low Risk
NLGN1	High Risk	Moderate Risk	Low Risk
NPTXR	High Risk	Moderate Risk	Low Risk
NPY	High Risk	Moderate Risk	Low Risk
NTF3	High Risk	Moderate Risk	Low Risk

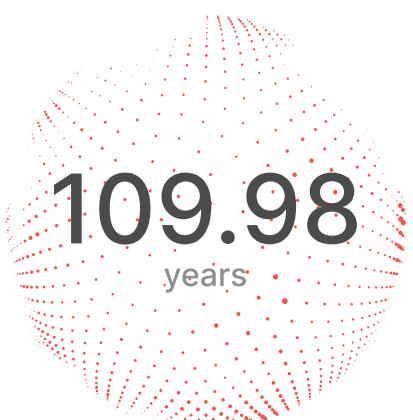
SNAP25	High Risk	Moderate Risk	Low Risk
SNCG	High Risk	Moderate Risk	Low Risk
ST3GAL1	High Risk	Moderate Risk	Low Risk
SYT1	High Risk	Moderate Risk	Low Risk
VGF	High Risk	Moderate Risk	Low Risk

## Immune system

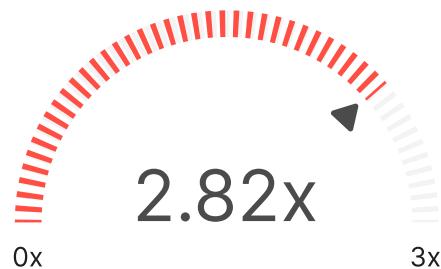
Defends the body against infections, toxins, and diseases, maintaining overall health and resilience. It identifies and neutralizes harmful pathogens through complex cellular responses. Inflammatory markers like CRP indicate immune activation or underlying inflammation, reflecting the body's defense status.



### Biological Age



### Pace of Aging



Each year your heart will age with the speed of 2.82x

### Composite Risk Score



Low Risk

Moderate Risk

High Risk

**Genetic Markers for Immune system/Inflammatory marker**

PGS	Risk Score
<b>C-reactive protein levels</b> A marker of inflammation in the body, often elevated in infections and autoimmune diseases.	High Risk    Moderate Risk    Low Risk
<b>Rheumatoid arthritis</b> An autoimmune disease causing chronic joint inflammation, pain, and potential joint damage.	High Risk    Moderate Risk    Low Risk
<b>Systemic lupus erythematosus</b> A chronic autoimmune condition affecting multiple organs, including skin, joints, and kidneys	High Risk    Moderate Risk    Low Risk

**Blood Biomarker for Immune system/Inflammatory marker**

Marker	Risk / Value
<b>hsCRP (High Sensitive CRP)</b> Shows the total cholesterol circulating in the blood, which impacts heart and artery health.	0.85 mg/L
<b>ESR</b> Reflects the presence and intensity of inflammation by measuring how quickly red blood cells settle, helping identify infections and autoimmune conditions.	20 mm/hr
<b>WBC-Total Counts Leucocytes</b> Measures the total number of white blood cells, key defenders of the immune system, to detect infections, inflammation, or immune-related disorders.	10,500 per µL

## Protein markers for Immune system/Inflammatory marker

Protein	Risk / Value		
BTN3A2	High Risk	Moderate Risk	Low Risk
CCL20	High Risk	Moderate Risk	Low Risk
CCL26	High Risk	Moderate Risk	Low Risk
CCL3	High Risk	Moderate Risk	Low Risk
CCL8	High Risk	Moderate Risk	Low Risk
CD160	High Risk	Moderate Risk	Low Risk
CD200R1	High Risk	Moderate Risk	Low Risk
CD226	High Risk	Moderate Risk	Low Risk

CD274	High Risk	Moderate Risk	Low Risk
CD300E	High Risk	Moderate Risk	Low Risk
CD302	High Risk	Moderate Risk	Low Risk
CD33	High Risk	Moderate Risk	Low Risk
CD38	High Risk	Moderate Risk	Low Risk
CD40LG	High Risk	Moderate Risk	Low Risk
CD6	High Risk	Moderate Risk	Low Risk
CD63	High Risk	Moderate Risk	Low Risk
CD70	High Risk	Moderate Risk	Low Risk

CD83	High Risk	Moderate Risk	Low Risk
CSF2	High Risk	Moderate Risk	Low Risk
CSF2RB	High Risk	Moderate Risk	Low Risk
CXCL10	High Risk	Moderate Risk	Low Risk
CXCL12	High Risk	Moderate Risk	Low Risk
CXCL6	High Risk	Moderate Risk	Low Risk
EBI3_IL27	High Risk	Moderate Risk	Low Risk
FCER1A	High Risk	Moderate Risk	Low Risk
GALNT3	High Risk	Moderate Risk	Low Risk

GCNT1	High Risk	Moderate Risk	Low Risk
IFNAR1	High Risk	Moderate Risk	Low Risk
IFNG	High Risk	Moderate Risk	Low Risk
IFNL4	High Risk	Moderate Risk	Low Risk
IL10	High Risk	Moderate Risk	Low Risk
IL11	High Risk	Moderate Risk	Low Risk
IL12A_IL12B	High Risk	Moderate Risk	Low Risk
IL12RB1	High Risk	Moderate Risk	Low Risk
IL15	High Risk	Moderate Risk	Low Risk

IL17A	High Risk	Moderate Risk	Low Risk
IL17D	High Risk	Moderate Risk	Low Risk
IL18	High Risk	Moderate Risk	Low Risk
IL18RAP	High Risk	Moderate Risk	Low Risk
IL1B	High Risk	Moderate Risk	Low Risk
IL2	High Risk	Moderate Risk	Low Risk
IL22	High Risk	Moderate Risk	Low Risk
IL22RA1	High Risk	Moderate Risk	Low Risk
IL2RB	High Risk	Moderate Risk	Low Risk

IL31RA	High Risk	Moderate Risk	Low Risk
IL33	High Risk	Moderate Risk	Low Risk
IL36G	High Risk	Moderate Risk	Low Risk
IL4	High Risk	Moderate Risk	Low Risk
IL4R	High Risk	Moderate Risk	Low Risk
IL5RA	High Risk	Moderate Risk	Low Risk
IL6	High Risk	Moderate Risk	Low Risk
IL7	High Risk	Moderate Risk	Low Risk
IL9	High Risk	Moderate Risk	Low Risk

## Psychiatric (brain)

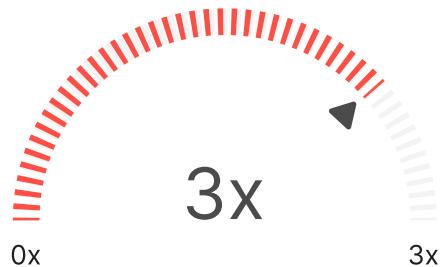
Governs mental and emotional well-being, influencing mood, behavior, and cognitive function. Conditions like depression, anxiety, and schizophrenia affect how the brain processes thoughts and emotions, impacting daily life and overall mental health.



### Biological Age



### Pace of Aging



Each year your heart will age with the speed of 3x

### Composite Risk Score



Low Risk

Moderate Risk

High Risk

## Genetic Markers for Psychiatric (brain)

PGS	Risk Score
<b>Contamination dimension in obsessive compulsive disorder</b> A subtype of OCD marked by germ fears, causing excessive cleaning and avoidance behaviors.	High Risk    Moderate Risk    Low Risk
<b>Bipolar disorder</b> A mental health condition marked by extreme mood swings, including episodes of mania and depression	High Risk    Moderate Risk    Low Risk
<b>Post-traumatic stress disorder</b> A condition triggered by traumatic events, causing flashbacks, anxiety, and emotional distress	High Risk    Moderate Risk    Low Risk

## Protein markers for Psychiatric (brain)

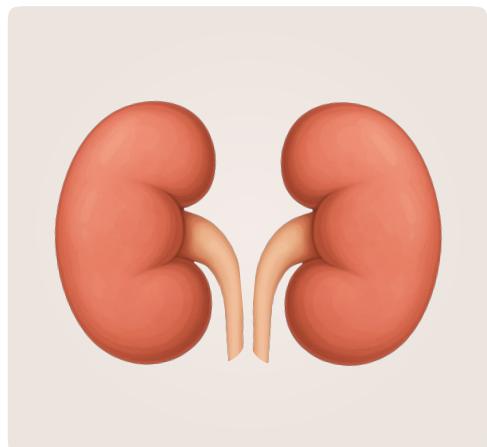
Protein	Risk / Value
ACE2	High Risk    Moderate Risk    Low Risk
AHNAK	High Risk    Moderate Risk    Low Risk
APBB1IP	High Risk    Moderate Risk    Low Risk

BACE1	High Risk	Moderate Risk	Low Risk
CEMIP2	High Risk	Moderate Risk	Low Risk
CD33	High Risk	Moderate Risk	Low Risk
CTF1	High Risk	Moderate Risk	Low Risk
CHRM1	High Risk	Moderate Risk	Low Risk
CHRM3	High Risk	Moderate Risk	Low Risk
CCER2	High Risk	Moderate Risk	Low Risk
CDNF	High Risk	Moderate Risk	Low Risk
DNAJC6	High Risk	Moderate Risk	Low Risk

ERBB4	High Risk	Moderate Risk	Low Risk
FOLH1	High Risk	Moderate Risk	Low Risk
GALNT10	High Risk	Moderate Risk	Low Risk
GALNT2	High Risk	Moderate Risk	Low Risk
GALNT3	High Risk	Moderate Risk	Low Risk
GAP43	High Risk	Moderate Risk	Low Risk

## Renal (kidney)

Filters blood to remove toxins and maintain proper fluid, electrolyte, and pH balance. It regulates blood pressure, supports red blood cell production, and ensures waste elimination through urine. Kidney disease or dysfunction can lead to toxin buildup, swelling, and serious metabolic imbalances affecting overall health.



### Biological Age



### Pace of Aging



Each year your heart will age with the speed of 0.41x

### Composite Risk Score



Low Risk

Moderate Risk

High Risk

## Genetic Markers for Renal (kidney)

PGS	Risk Score
<b>Chronic kidney disease</b> A chronic condition where kidneys slowly lose function, impairing waste filtration and fluid balance in the blood.	High Risk    Moderate Risk <b>Low Risk</b>
<b>Glomerular filtration rate</b> A measure of how well the kidneys filter blood, used to assess kidney function and diagnose kidney disease	High Risk    Moderate Risk <b>Low Risk</b>

## Blood Biomarker for Renal (kidney)

Marker	Risk / Value
<b>Blood Urea</b> Measures urea in the blood, reflecting how efficiently the kidneys remove waste and process protein metabolism.	15 mg/dL
<b>BUN</b> Indicates nitrogen levels from urea, helping assess kidney function and hydration status	13 mg/dL
<b>BUN/Creatinine Ratio</b> Helps distinguish between kidney disease and other causes of abnormal kidney function or dehydration.	14:1
<b>Calcium</b> An electrolyte important for fluid balance, acid-base regulation, and blood pressure, often affected by kidney function	9.6 mg/dL
<b>Chloride</b> An electrolyte important for fluid balance, acid-base regulation, and blood pressure, often affected by kidney function	102 mEq/L
<b>Creatinine</b> A muscle metabolism waste product; elevated blood levels indicate reduced kidney filtering capacity.	0.9 mg/dL

<b>eGFR</b>	Estimates how well the kidneys are filtering blood, allowing early detection of kidney disease	105 mL/min/1.73m <sup>2</sup>
<b>Phosphorus</b>	Essential for bone strength and energy balance; abnormal levels may signal kidney dysfunction or hormonal imbalance affecting the renal system	3.1 mg/dL
<b>Potassium</b>	A key electrolyte regulated by the kidneys; abnormal levels can cause dangerous heart rhythm disturbances and indicate impaired kidney function	4.5 mmol/L
<b>Sodium</b>	Helps maintain fluid balance and nerve signalling; imbalances may reflect dehydration, kidney disease, or electrolyte regulation issues	140 mEq/L
<b>Uric Acid</b>	Excess levels may lead to kidney stones or gout, often linked to reduced kidney clearance or metabolic disorders	5.8 mg/dL

### Protein markers for Renal (kidney)

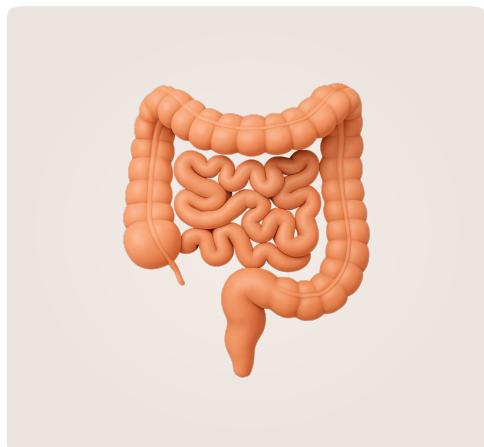
Protein	Risk / Value
ACE2	High Risk    Moderate Risk    Low Risk
CTSH	High Risk    Moderate Risk    Low Risk
CST5	High Risk    Moderate Risk    Low Risk
GAP43	High Risk    Moderate Risk    Low Risk

ACE2	High Risk	Moderate Risk	Low Risk
FOLH1	High Risk	Moderate Risk	Low Risk
GDNF	High Risk	Moderate Risk	Low Risk
MUC13	High Risk	Moderate Risk	Low Risk
MUC20	High Risk	Moderate Risk	Low Risk
MYO1E	High Risk	Moderate Risk	Low Risk
MYO9B	High Risk	Moderate Risk	Low Risk
RET	High Risk	Moderate Risk	Low Risk
RYK	High Risk	Moderate Risk	Low Risk

TGFA	High Risk	Moderate Risk	Low Risk
TGFB1	High Risk	Moderate Risk	Low Risk

## Gastrointestinal (intestines)

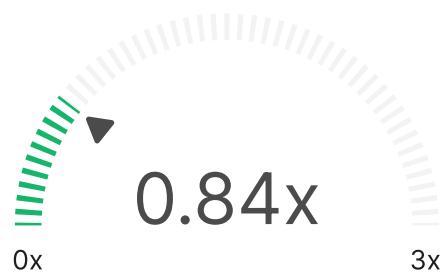
Breaks down food, absorbs nutrients, and supports waste elimination to maintain digestive health. It plays a vital role in nutrient absorption and gut balance. Disorders like irritable bowel syndrome (IBS), Crohn's disease, and infections can disrupt digestion and overall well-being.



### Biological Age



### Pace of Aging



Each year your heart will age with the speed of 0.84x

### Composite Risk Score



Low Risk

Moderate Risk

High Risk

## Genetic Markers for Gastrointestinal (intestines)

PGS	Risk Score
<b>Celiac disease</b> An autoimmune disorder where gluten damages intestines, causing inflammation and poor nutrient absorption.	High Risk    Moderate Risk    Low Risk

## Blood Biomarker for Gastrointestinal (intestines)

Marker	Risk / Value
<b>homocysteine</b> An amino acid; elevated levels can reflect malabsorption or nutrient deficiencies (especially vitamin B) that affect intestinal health and increase risk of gut-related vascular complications.	12 µmol/L
<b>CRP</b> A marker of systemic and intestinal inflammation; elevated levels may indicate inflammatory bowel disease, infections, or other gut-related inflammatory conditions	4 mg/L

## Protein markers for Gastrointestinal (intestines)

Protein	Risk / Value
<b>ABL1</b>	High Risk    Moderate Risk    Low Risk
<b>ALPI</b>	High Risk    Moderate Risk    Low Risk

ACE2	High Risk	Moderate Risk	Low Risk
ATG16L1	High Risk	Moderate Risk	Low Risk
B3GNT7	High Risk	Moderate Risk	Low Risk
BMP4	High Risk	Moderate Risk	Low Risk
BTNL9	High Risk	Moderate Risk	Low Risk
CHRM1	High Risk	Moderate Risk	Low Risk
CSF1	High Risk	Moderate Risk	Low Risk
CEMIP2	High Risk	Moderate Risk	Low Risk
CSF2	High Risk	Moderate Risk	Low Risk

CSF3	High Risk	Moderate Risk	Low Risk
CSF3R	High Risk	Moderate Risk	Low Risk
CTRC	High Risk	Moderate Risk	Low Risk
CTRL	High Risk	Moderate Risk	Low Risk

# COMMON DISEASES

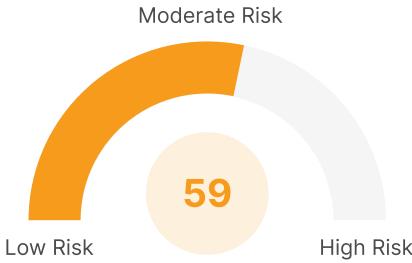
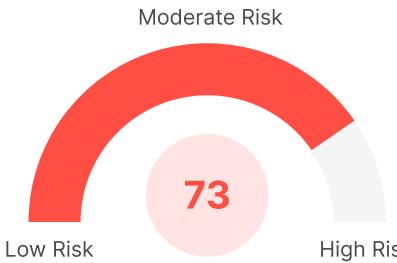
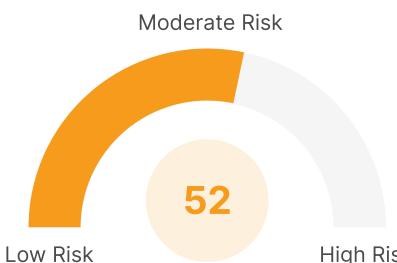
## Common Diseases

Disease	Comprehensive Risk
HDL cholesterol levels	89 (High)
Hypertension	44
Heart failure	66(High)
Coronary artery disease	13
Atrial fibrillation	59
Myocardial infarction	4
Omega-6 to omega-3 ratio	70 (High)
Peripheral artery disease	50
Venous thromboembolism	19
Acute Respiratory Distress	52
Lung function (FVC)	89 (High)
Lung function (FEV1/FVC)	77 (High)
Lung function (FEV1)	9
Lung cancer	62
Asthma	93 (High)
Dementia	22
Alzheimer's disease	81 (High)
Fibrosis	32
Epilepsy	7

Disease	Comprehensive Risk
Narcolepsy	78 (High)
Multiple sclerosis	39
Parkinson's disease	92 (High)
Juvenile Parkinson's	8
Stroke	68
Stroke (ischemic)	98
C-reactive protein levels	87 (High)
Rheumatoid arthritis	78
Systemic lupus erythematosus	23
Contamination dimension in obsessive compulsive disorder	6
Bipolar disorder	90 (High)
Post-traumatic stress disorder	87 (High)
Chronic kidney disease	89
Glomerular filtration rate	2
Schindler disease	100 (High)
colon cancer	78
Autoimmunity (MS, lupus, RA)	94 (High)
gastric cancer	56
Colorectal cancer	32
Immunosenescence	70
Celiac disease	11

Disease	Comprehensive Risk
Breast cancer	82 (High)
Atopic dermatitis	45
Melanoma	92 (High)
Psoriasis	12
Anterior or posterior cruciate ligament injury	55
Diabetic nephropathy (renal involvement)	87 (High)
Diabetic retinopathy	34
Obesity	23
Metabolic syndrome	63
Type 2 diabetes	89
Type 1 diabetes	82
Nonalcoholic fatty liver disease	9
Acute myeloid leukemia	41
Chronic myeloid leukemia	88 (High)
HIV	18
Prostate cancer	99 (High)
Pancreatic cancer	33
Tumor	26
Brain Tumor	11
Ovarian cancer	5
Osteoporosis	15

Organ	Comprehensive Risk
Thyroid cancer	95 (High)
Rheumatoid arthritis	45
Systemic lupus erythematosus	78
Chronic lymphocytic leukemia	12
Analplastic large-cell lymphoma	63
Aging	88 (High)
Fatty liver disease	33

Disease	Comprehensive Risk Score
<b>Atrial fibrillation</b>  AFib is an irregular, often rapid heartbeat in the heart's upper chambers. It matters because it increases the risk of blood clots, stroke, and heart failure by disrupting efficient blood flow.	 <p>Moderate Risk 59 Low Risk      High Risk</p>
<b>Omega-6 fatty acids to omega-3 fatty acids ratio (UKB data field 23459)</b>  This measures the omega-6 to omega-3 fat balance. High ratios increase inflammation, raising risks of heart disease and blood vessel damage.	 <p>Moderate Risk 73 Low Risk      High Risk</p>
<b>Peripheral artery disease</b>  PAD is artery narrowing in limbs from plaque buildup, reducing blood flow and signaling widespread artery disease, increasing heart attack and stroke risk.	 <p>Moderate Risk 50 Low Risk      High Risk</p>
<b>Venous thromboembolism</b>  VTE is blood clots in veins, often in legs or lungs. Clots can travel, causing life-threatening complications and putting stress on the heart.	 <p>Moderate Risk 19 Low Risk      High Risk</p>
<b>Acute Respiratory Distress Syndrome</b>  ARDS is a severe lung condition where fluid fills the alveoli, lowering blood oxygen, often caused by sepsis, pneumonia, trauma, or severe infections.	 <p>Moderate Risk 52 Low Risk      High Risk</p>

### Lung function (FVC)

Lung function (FVC): Measures the total volume of air exhaled forcefully after a deep breath, indicating lung capacity.



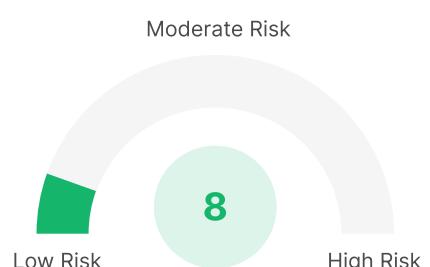
### Lung function (FEV1/FVC)

Lung function (FEV1/FVC): Ratio used to assess airflow obstruction, crucial for diagnosing conditions like COPD or asthma.



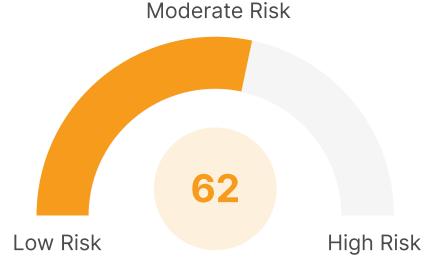
### Lung function (FEV1)

Lung function (FEV1): Volume of air exhaled in the first second of a forced breath, important for evaluating lung health.



### Lung cancer

A malignant growth in lung tissue caused by uncontrolled cell division, often linked to smoking or pollutants.



### Asthma

A chronic respiratory condition causing airway inflammation and narrowing, leading to breathing difficulties.



## Dementia

Dementia is a progressive brain disorder causing memory loss, confusion, and impaired thinking. It affects daily life and can result from Alzheimer's, strokes, or other conditions.



## Alzheimer's disease

The most common cause of dementia, characterized by brain cell damage and memory loss.



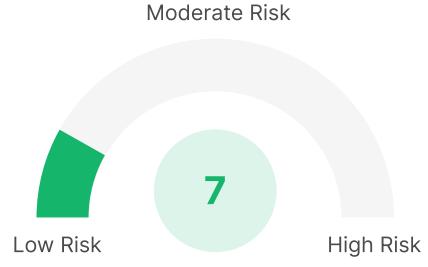
## Fibrosis

Fibrosis is excess scar tissue from chronic inflammation or injury, causing tissue thickening and reduced function. Pulmonary fibrosis stiffens lungs, making breathing hard and lowering oxygen exchange.



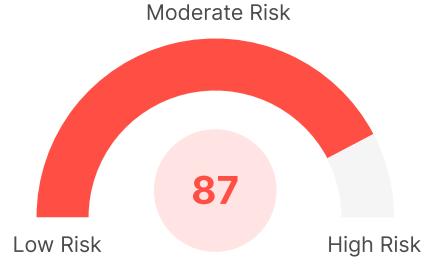
## Epilepsy

A neurological disorder marked by recurrent seizures due to abnormal brain activity.



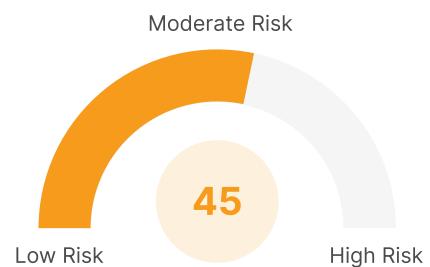
## Narcolepsy

A sleep disorder causing excessive daytime sleepiness and sudden loss of muscle control.



## Multiple sclerosis

An autoimmune disease where the immune system attacks the protective covering of nerves.



## Parkinson's disease

A progressive brain disorder causing tremors, stiffness, and movement difficulties.



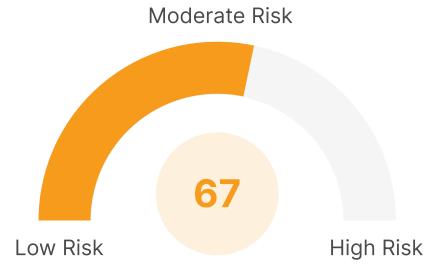
## Juvenile Parkinson's

Juvenile Parkinson's disease is a rare condition starting before age 21, caused by genetic mutations, leading to tremors, muscle stiffness, and slow movements early in life.



## Stroke

Stroke is a medical emergency that occurs when blood flow to a part of the brain is interrupted, causing brain cell damage.



## Stroke (ischemic)

Ischemic Stroke is the most common type, caused by a blood clot or plaque blocking an artery that supplies blood to the brain.



# NUTRITION

Marker	Risk / Value
<b>Adiponectin_Levels</b> ADIPOQ Hormone regulating glucose levels and fatty acid breakdown, linked to insulin sensitivity.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>
<b>Alcohol_Addiction</b> SLC6A4 Chronic brain disorder causing uncontrollable alcohol use despite negative health consequences.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>
<b>Cholesterol-Total, Serum</b> LOC284454, MIR23A, MIR24-2, MIR27A Intake of alcoholic drinks impacting liver, brain, and metabolic health.ws the total cholesterol circulating in the blood, which impacts heart and artery health.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>
<b>Alcohol_Dependence</b> ADH1B, GABRA2, TAS2R16 Physical and psychological reliance on alcohol with withdrawal symptoms upon stopping.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>
<b>BMI</b> MC4R Body mass index indicating weight status using height and weight measurements.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>
<b>Breakfast_skipping</b> PER2 Avoiding morning meals, impacting metabolism and energy balance negatively.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>
<b>Caffeine_metabolism</b> CYP1A2 Body's ability to process caffeine, influencing alertness and sleep quality.	<div style="display: flex; justify-content: space-around;"> <span>High Risk</span> <span>Moderate Risk</span> <span>Low Risk</span> </div>

<b>Calcium_Absorption</b> GC Process of calcium uptake essential for bone strength and nerve function.	High Risk	Moderate Risk	Low Risk
<b>Celiac_Disease</b> TNF-alpha, LOC100131327, IL18RAP, CCR3, SH2B3, HLA-DQA1 Autoimmune reaction to gluten damaging the small intestine lining.	High Risk	Moderate Risk	Low Risk
<b>Choline_Deficiency</b> PEMT Insufficient choline affecting liver function, brain health, and cell membranes.	High Risk	Moderate Risk	Low Risk
<b>Energy_Balance</b> UCP1 Relationship between calories consumed and burned determining weight gain or loss.	High Risk	Moderate Risk	Low Risk
<b>Folate_Deficiency</b> MTHFR, SHMT1, SLC19A1, H27R Low folate leading to anemia, birth defects, and DNA synthesis problems.	High Risk	Moderate Risk	Low Risk
<b>Glucose_metabolism</b> MTERF2 Body's process of using and storing glucose for energy production.	High Risk	Moderate Risk	Low Risk
<b>Histamine_metabolism</b> AOC1 Breakdown of histamine regulating allergy responses, digestion, and immune function.	High Risk	Moderate Risk	Low Risk

<b>Homocysteine_Levels</b> MTHFR, CTH Elevated levels linked to heart disease, stroke, and cognitive decline risk.	High Risk	Moderate Risk	Low Risk
<b>Homocystinuria</b> CBS Genetic disorder causing high homocysteine, affecting eyes, bones, and blood vessels.	High Risk	Moderate Risk	Low Risk
<b>Hyperlipoproteinemia</b> LPL Elevated blood lipoproteins increasing cardiovascular and metabolic disease risk.	High Risk	Moderate Risk	Low Risk
<b>Iron_Deficiency</b> TF Lack of iron leading to anemia, fatigue, and poor oxygen transport.	High Risk	Moderate Risk	Low Risk
<b>Iron_Overload</b> SLC17A1, HFE Excess iron damaging liver, heart, and endocrine organs.	High Risk	Moderate Risk	Low Risk
<b>Ischemic_heart_disease</b> SOD3 Reduced blood supply to heart muscle causing chest pain or heart attack.	High Risk	Moderate Risk	Low Risk
<b>LDL</b> MYRF “Bad cholesterol” that builds plaque in arteries, increasing heart disease risk.	High Risk	Moderate Risk	Low Risk

<b>LDL_Levels</b> ABCG8, HMGCR Measurement of LDL cholesterol to assess cardiovascular health risks.	High Risk	Moderate Risk	Low Risk
<b>Metabolic_syndrome</b> ADRB2 Cluster of conditions raising heart disease, stroke, and diabetes risk.	High Risk	Moderate Risk	Low Risk
<b>Monoamine_oxidase_A_activity</b> MAOA Enzyme breaking down mood-regulating neurotransmitters like serotonin and dopamine.	High Risk	Moderate Risk	Low Risk
<b>MUFA_BMI</b> WDTC1 Monounsaturated fat intake influencing body weight and fat distribution.	High Risk	Moderate Risk	Low Risk
<b>MUFA_Insulin_Sensitivity</b> SCARB1 Monounsaturated fats improving insulin response and blood sugar regulation.	High Risk	Moderate Risk	Low Risk
<b>MUFA_LDL</b> LIPC Monounsaturated fats help lower bad LDL cholesterol and improve heart health.	High Risk	Moderate Risk	Low Risk
<b>Obesity</b> FTO, BDNF, ADRB2, ADRB3, MC4R Excessive body fat increasing risk for heart disease, diabetes, and joint problems.	High Risk	Moderate Risk	Low Risk

<b>Obesity_with_physical_activity</b> NR1D1 Exercise mitigates obesity-related health risks and improves metabolic health.	High Risk	Moderate Risk	Low Risk
<b>Omega-3_Fat_Utilization</b> FADS1, FADS2 Body's ability to use omega-3 fats for energy and inflammation control.	High Risk	Moderate Risk	Low Risk
<b>Phosphatidylcholine_Levels</b> FADS1 Important phospholipid for liver health, brain function, and fat metabolism.	High Risk	Moderate Risk	Low Risk
<b>PUFA_Consumption</b> NOS3 Intake of polyunsaturated fatty acids essential for heart, brain, and cell health.	High Risk	Moderate Risk	Low Risk
<b>Saturated_Fat_Consumption</b> FTO Eating high saturated fats increases cholesterol and heart disease risk.	High Risk	Moderate Risk	Low Risk
<b>SaturatedFattyAcid_BMI</b> LRP1, THRA Saturated fat intake impacting body mass index and fat distribution.	High Risk	Moderate Risk	Low Risk
<b>SaturatedFattyAcid_CVD</b> PPARG High intake raises cardiovascular disease risk through plaque buildup.	High Risk	Moderate Risk	Low Risk

<b>SaturatedFattyAcid_HDL</b> APOA1, APOE, LIPC, TLR4 Saturated fats lower good HDL cholesterol, affecting cardiovascular protection.	High Risk	Moderate Risk	Low Risk
<b>SaturatedFattyAcid_LDL</b> AGT, APOA1, APOB, APOC3 Raises bad LDL cholesterol, increasing risk of arterial blockage.	High Risk	Moderate Risk	Low Risk
<b>SaturatedFattyAcid_TotalCholesterol</b> AGT, APOB Increases total cholesterol, impacting heart and vascular health.	High Risk	Moderate Risk	Low Risk
<b>SaturatedFattyAcid_Triglyceride</b> ABCA1, LIPC, TNF Can elevate triglyceride levels, affecting fat metabolism and cardiovascular health.	High Risk	Moderate Risk	Low Risk
<b>Snacking</b> PER2 Eating between meals influencing weight, hunger control, and energy balance.	High Risk	Moderate Risk	Low Risk
<b>Sucrose_sensitivity</b> T1R3 Body's response to sugar intake affecting metabolism and dental health.	High Risk	Moderate Risk	Low Risk
<b>Total_Cholesterol</b> MYRF Sum of HDL, LDL, and other fats circulating in the bloodstream.	High Risk	Moderate Risk	Low Risk

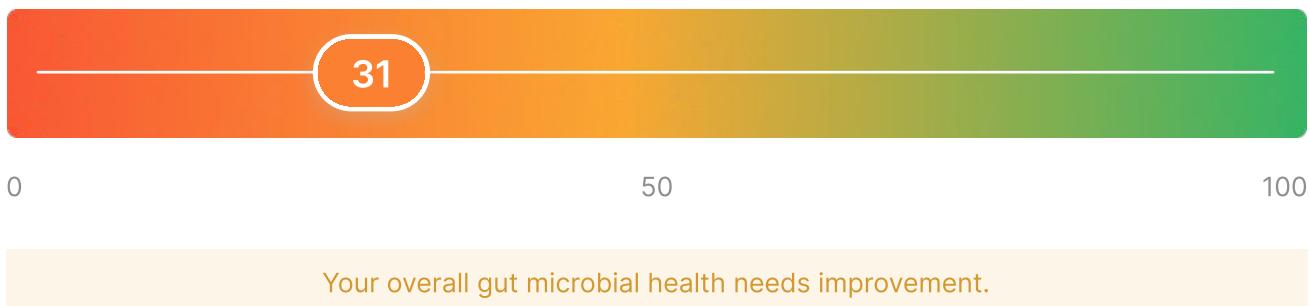
<b>Triglyceride_Levels</b> DOCK7, BAZ1B, XKR6 Measure of blood fats indicating heart disease and metabolic syndrome risk.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>
<b>Type_2_Diabetes</b> ADRA2A, TCF7L2, FTO, MTNR1B Condition with insulin resistance causing high blood sugar and complications.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>
<b>Umami_Tasting_Ability</b> T1R3 Sensitivity to savory flavor influencing food preferences and diet.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>
<b>Vitamin_A_Deficiency</b> BCMO1, BCO1 Lack of vitamin A causing vision problems and immune weakness.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>
<b>Vitamin_B12_Levels</b> FUT2 Indicates nerve health and red blood cell production capacity.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>
<b>Vitamin_B6_deficiency</b> NBPF3 Leads to nerve damage, mood changes, and anemia.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>
<b>Vitamin_C_deficiency</b> SLC23A1 Causes scurvy, weakened immunity, and poor wound healing.	<span>High Risk</span>	<span>Moderate Risk</span>	<span>Low Risk</span>

<b>Vitamin_D_Deficiency</b> CYP2R1, DHCR7, GC Leads to weak bones, poor immunity, and fatigue.	High Risk	Moderate Risk	Low Risk
<b>Weight_Loss</b> ADICLOCK, TMEM165POQ Reduction in body weight by fat loss or muscle breakdown.	High Risk	Moderate Risk	Low Risk
<b>Weight_loss_on_diet</b> FTO Body weight reduction achieved through controlled food intake.	High Risk	Moderate Risk	Low Risk
<b>Weight_Regain</b> ADIPOQ Weight returning after initial loss due to metabolism or lifestyle factors.	High Risk	Moderate Risk	Low Risk
<b>Vitamin_B2_Deficiency</b> MTHFR Causes fatigue, skin problems, and mouth sores due to low riboflavin.	High Risk	Moderate Risk	Low Risk
<b>Alcohol_Flush</b> ALDH2 Redness after drinking due to impaired alcohol metabolism enzyme activity.	High Risk	Moderate Risk	Low Risk
<b>Food_Craving</b> ADIPOQ Intense desire for specific foods often linked to emotions or nutrient deficiency.	High Risk	Moderate Risk	Low Risk

<b>Eating_Unconstrained</b> LEPR Unrestricted eating behavior leading to overeating and weight management challenges	High Risk	Moderate Risk	Low Risk
<b>Metabolism_Rate</b> LEPR Speed at which body burns calories for energy at rest and activity.	High Risk	Moderate Risk	Low Risk

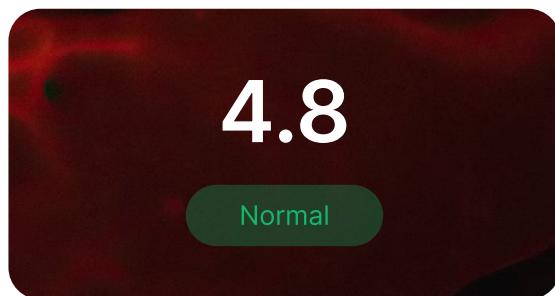
# **FOOD INTOLERANCE**

## Gut Microbiome Health Index



The Gut Microbiome Health Index (GMHI) is a species-level metric derived from stool metagenome samples to predict a person's overall health status. It works by quantifying the abundance of health prevalent and health-scarce species in an individual's gut microbiome, providing a biologically interpretable score that indicates the likelihood of being in a healthy or non-healthy (diseased) state.

## Alpha Diversity Index



Alpha diversity can be described as a key measure of the variety and balance of microbes within your gut sample. Often, a higher diversity is viewed as a sign of a healthy and stable gut microbial community because a diverse microbiome can support better digestion, immune function, and overall health.

## Food Intolerance



A gut microbiome test provides a detailed analysis of the unique bacteria, fungi and microorganisms in your digestive system, revealing imbalances that may contribute to food intolerances. By examining microbial patterns and enzyme-producing genes, it identifies specific triggers—such as lactose, gluten, or high-FODMAP ingredients—that may be challenging for your gut to process.

Unlike symptom-based methods, this test delivers precise and data-driven insights about your unique sensitivities, paving the way for tailored dietary recommendations to enhance your gut health and relieve digestive discomfort.

The report categorizes foods into seven food categories, each tagged with one of three frequency indicators to guide how often you should include them in your meals, ensuring a balanced and personalized approach.



**High Risk**  
(Highly likely to cause indigestion)



**Moderate Risk**  
(Moderately likely to cause indigestion)



**Low Risk**  
(unlikely to cause indigestion)

**Disclaimer:** These evidence-based dietary recommendations are designed to benefit your health with minimal to no adverse effects. However, we strongly advise consulting a physician or nutritionist before making significant changes to your diet especially if you are diabetic, hypertensive, or have specific dietary needs. Personalized guidance ensures safe and effective implementation, including the right balance of included and excluded foods.

## Fruits

Fruits	Safe?
Apple	●
Pear	●
Watermelon	●
Cherry	●
Bananas	●
Coconut	●
Orange	●
Kiwi	●
Strawberry	●
Grapes	●
Lemon	●
Berries	●

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Apple	●
Pear	●
Watermelon	●
Cherry	●
Bananas	●
Coconut	●
Orange	●
Kiwi	●
Strawberry	●
Grapes	●
Lemon	●
Berries	●
Berries	●

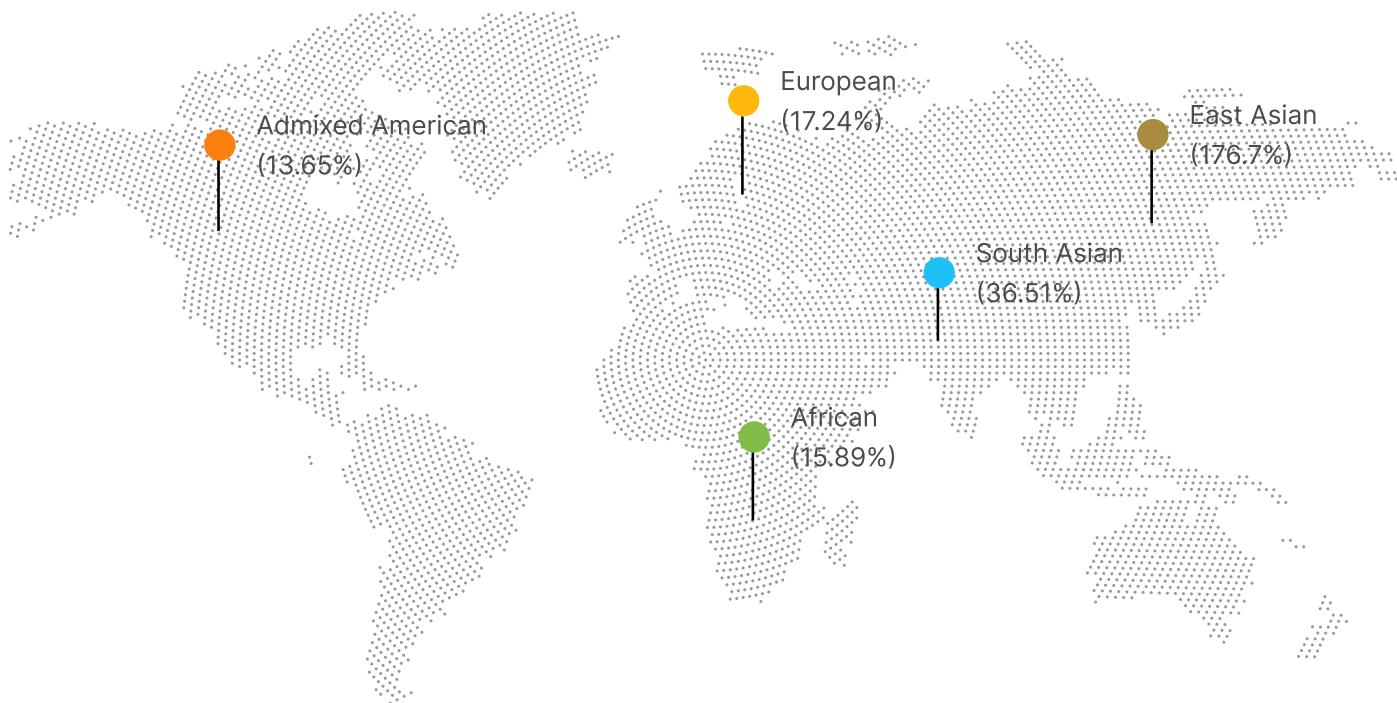
## Fruits

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Strawberry	●
Grapes	●
Lemon	●
Berries	●

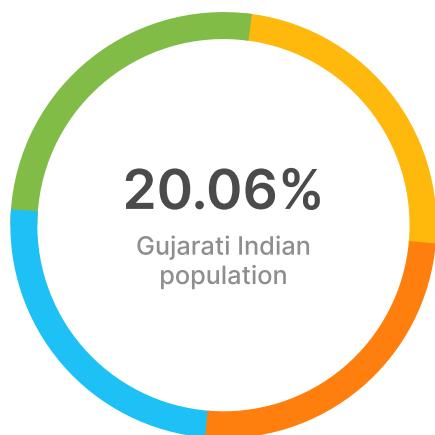
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Grapes	●
Lemon	●
Berries	●
Berries	●

# **ANCESTRY**

## Closest Super Population



## Closest Sub-population

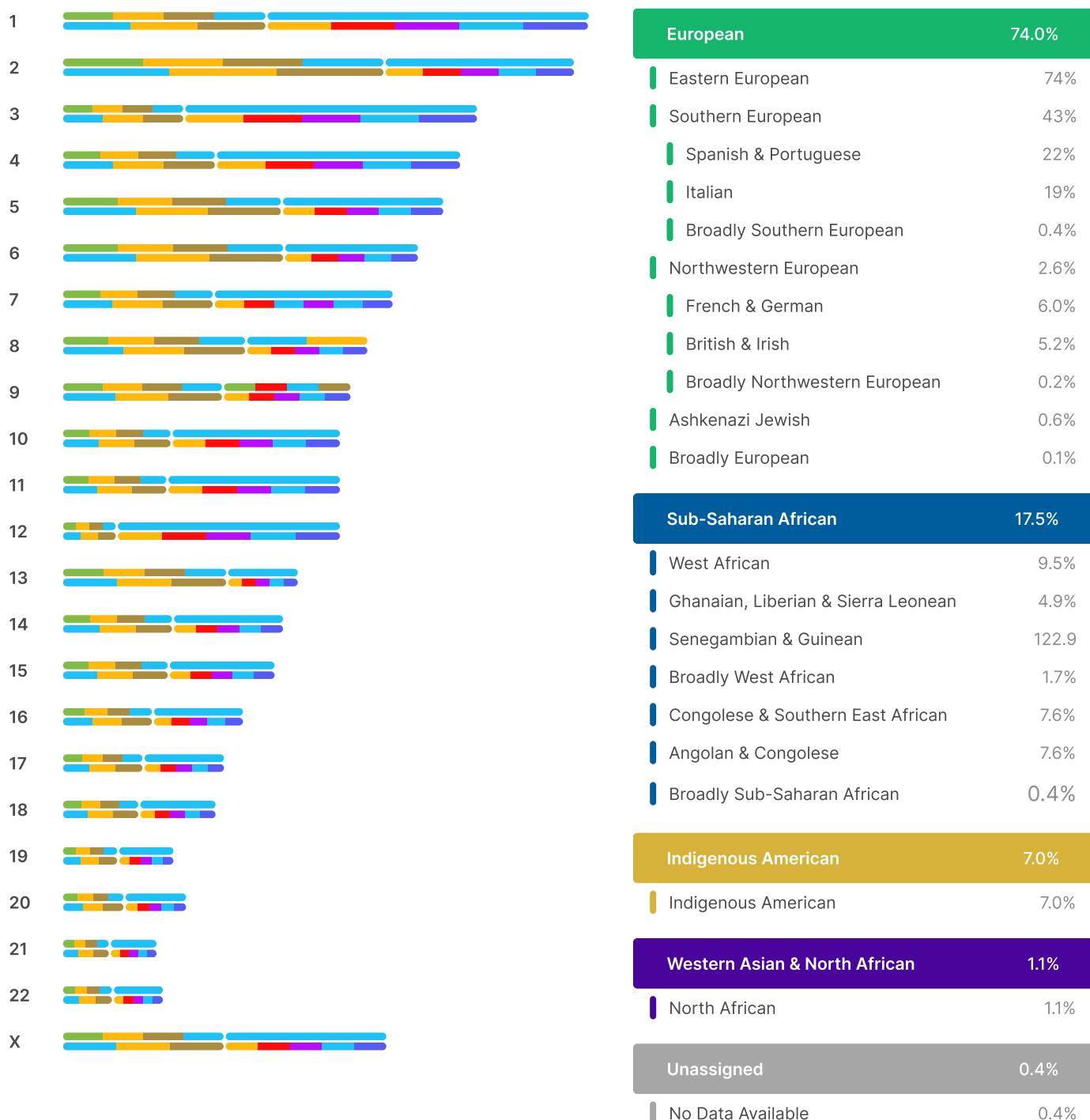


● Punjabi	20.03%
● Bengali	20.05%
● Sri Lankan Tamil	19.93%
● Indian Telugu	19.93%
● Gujarati Indian	20.06%

Your ancestry includes 36.51% South Asian,  
with 20.06% specifically from the Gujarati Indian sub-population.

## Ancestry Composition Chromosome Painting

These are your chromosomes; we've painted them with your Ancestry Composition results. The first 22 are called autosomes and come in pairs of two, each represented by one of the colored horizontal lines in the graphic below. Chromosomes have different lengths, and are named 1 through 22, when sorted by size (scientists are not very creative). Lastly, we also look at ancestry on your X chromosome: two copies like the autosomes if you are female, and only one copy if you're male (that you got from mom).



# RECOMMENDATION

This report is AI generated

# Fitness & Performance

Your guide to peak performance.



## Chrono-fitness

- Exercise between 6–10 AM for peak energy and focus.
- Warm up longer in the morning—dynamic stretches prevent injury.
- Hydrate after waking and have a light pre-workout snack
- Sleep early and consistently to support your body clock.
- Choose energizing workouts—walking, yoga, or strength training.
- Get post-workout sunlight to boost mood and body clock.

## Muscle composition

- Do aerobic workouts—run, cycle, swim, or walk briskly.
- Use light weights and high reps for tone and endurance.
- Add yoga or stretching for better muscle balance.
- Perform steady cardio or moderate intervals 4–5 days weekly.
- Stay hydrated and fuel with carbs for longer workouts.

## Fitness & Performance

### Strength vs. endurance response

- Do strength workouts- weights, bodyweight circuits, or HIIT.
- Gradually increase resistance to build strength safely.
- Eat enough protein- eggs, lentils, lean meats, or dairy- for muscle repair.
- Train 3–5 times weekly with rest for recovery.
- Warm up dynamically and stretch after to prevent injury.
- Add 1–2 light cardio sessions weekly for heart health.

### Explosiveness potential

- Do speed and power workouts- sprints, shuttles, or intervals.
- Recover well- keep sprints to 2–3 times weekly to avoid fatigue or injury.
- Eat protein and complex carbs for energy and recovery.
- Do plyometric drills- jump squats, box jumps, burpees- 2–3 times weekly.
- Do dynamic warm-ups- high knees, leg swings, butt kicks- to activate muscles.
- Maintain proper form to improve speed safely.

### Aerobic capacity ( $\text{VO}_2 \text{ max genes}$ )

- Do endurance workouts — walk, jog, swim, or cycle 30–60 mins, 4–6 days weekly.
- Add interval or tempo runs to boost endurance.
- Increase time or intensity gradually to prevent fatigue.
- Add strength training twice weekly for balance and injury prevention.

## Fitness & Performance

### Aerobic capacity (VO<sub>2</sub> max genes)

- Stay hydrated and eat post-workout to refuel.
- Exercise between 6–10 AM for peak energy and focus.
- Rest and sleep well — endurance builds during recovery.
- Eat balanced meals with complex carbs and lean protein.

### Anaerobic threshold

- Do HIIT, sprints, or resistance training 3–4 times weekly.
- Increase intensity gradually to boost anaerobic performance.
- Balance hard workouts with active recovery- yoga, stretching, or cycling.
- Stay hydrated to reduce lactic acid buildup.
- Eat complex carbs and lean protein for recovery.
- Do breathing and relaxation exercises after training to clear lactic acid.
- Do breathing and relaxation exercises after training to clear lactic acid.

### Injury risk

- Strengthen joints — focus on core, hips, knees, and shoulders.
- Add balance training — single-leg stands or stability ball exercises.
- Avoid hyperextension and maintain proper form during exercises.
- Do low-impact workouts- swim, cycle, or use the elliptical to ease joint stress.

## Fitness & Performance

### Injury risk

- ✓ Warm up well with dynamic, not static, stretches.
- ✓ Prioritize recovery and rest to prevent overuse injuries.
- ✓ Use supportive gear- braces or shoes for high-risk sports.

### Recovery rate

- ✓ Do regular strength training- muscles recover and adapt efficiently.
- ✓ Add active recovery- cycling, walking, or yoga for better muscle recovery.
- ✓ Warm up and cool down to prevent strain and aid recovery.
- ✓ Get enough protein- eggs, lean meats, dairy, or legumes- for muscle repair.
- ✓ Get quality sleep- muscle repair happens during deep rest.
- ✓ Stretch and foam roll after workouts to ease tightness.

### Overtraining risk

- ✓ Monitor intensity — avoid back-to-back high-intensity workouts.
- ✓ Sleep 7–9 hours nightly for hormone balance and recovery.
- ✓ Track fatigue and reduce training if tiredness persists.
- ✓ Manage stress with mindfulness, meditation, or breathing.
- ✓ Eat balanced meals — carbs, protein, and healthy fats.

## Fitness & Performance

### Pain perception

- ✓ Increase intensity gradually- avoid sudden load or duration jumps.
- ✓ Do low-impact workouts- swim, cycle, or do yoga to ease joint stress.
- ✓ Support recovery with hydration and anti-inflammatory foods.
- ✓ Warm up dynamically and cool down with static stretches after exercise.
- ✓ Use pain management strategies like icing, heat therapy, or massage.
- ✓ Listen to your body- stop or modify activity if pain persists or worsens.

### Flexibility & connective tissue elasticity

- ✓ Do strength training to stabilize joints and support muscles.
- ✓ Add balance drills- single-leg stands or stability work to enhance joint control.
- ✓ Warm up regularly to prepare tissues for movement.
- ✓ Focus on controlled stretching, mobility exercises instead extreme ranges.
- ✓ Avoid hyperextension and sudden high-impact moves.
- ✓ Ensure adequate recovery to prevent overuse injuries.

# Sleep & Circadian Rhythm

Sleep well, recover better, live stronger.



## Chronotype (morning/evening preference)

- ✓ Sleep schedule: Sleep early, wake early- get 7–9 hours sleep each night.
- ✓ Morning Light Exposure: Get morning sunlight to boost alertness and rhythm.
- ✓ Exercise Timing: Work out in the morning (6–10 AM) for peak energy.
- ✓ Evening Routine: Limit light and screen use at night to boost melatonin.
- ✓ Meal Timing: Eat breakfast soon after waking to boost energy.
- ✓ Consistency: Keep a consistent sleep schedule, even on weekends.

## Sleep need

- ✓ Keep a consistent sleep schedule — same bedtime and wake time daily.
- ✓ Avoid caffeine or heavy meals 3–4 hours before bed for better sleep.
- ✓ Take short naps (15–20 mins) during the day to maintain alertness.
- ✓ Focus on sleep quality with a dark, quiet, cool room.
- ✓ Include a relaxing routine — read, meditate, or stretch.
- ✓ Track energy and mood — extend sleep if fatigue persists.

## Sleep & Circadian Rhythm

### Sleep depth & quality

-  Keep a regular sleep schedule to support your natural deep sleep.
-  Avoid stimulants and heavy meals close to bedtime to prevent sleep disruptions.
-  Keep consistent sleep duration (7–9 hours) to optimize restorative benefits.
-  Support deep sleep with a comfortable, dark, and quiet sleep environment.
-  Practice relaxation or mindfulness to maximize deep sleep.
-  Track sleep quality using sleep journals or trackers to maintain patterns.

### REM sleep efficiency

-  Maintain consistent sleep schedules
-  Reduce alcohol, caffeine, and screen exposure before bed as these can suppress REM sleep quality.
-  Avoid sleep loss, as it reduces skill learning efficiency.
-  Prioritize 7–9 hours of quality sleep per night
-  Maintain good sleep, exercise, and nutrition for optimal brain performance.
-  Practice new skills early; REM sleep strengthens learning overnight.

### Insomnia risk

-  Keep a consistent sleep routine- same bedtime and wake time daily.
-  Avoid caffeine, nicotine, and heavy meals in the evening.
-  Limit screens exposure an hour before bed to reduce blue light.
-  Relax before bed- meditate, breathe deeply, or stretch.

## Sleep & Circadian Rhythm

### Insomnia risk

-  Create a sleep-friendly environment: dark, quiet, and cool.
-  Engage in morning sunlight exposure to reinforce your natural circadian rhythm.

### Sleep apnea predisposition

-  Maintain a healthy body weight to reduce airway blockage.
-  Sleep on your side rather than your back to reduce airway collapse.
-  Avoid alcohol and sedatives before bed to prevent airway blockage.
-  Keep nasal passages clear with saline or allergy care.
-  Establish a consistent sleep schedule to improve overall sleep quality.
-  Watch for snoring, gasping, or fatigue—consult a doctor if persistent.

### Jet lag adaptation speed

-  Before travel: Shift sleep 1–2 hrs earlier (east) or later (west).
-  Light exposure: Get morning light when flying east; evening light when west.
-  Sleep schedule: Align sleep with destination time early.
-  Meals: Eat on local time to reset your rhythm.
-  Hydration & caffeine: Stay hydrated; use caffeine only in the morning.
-  Naps: Take short 20–30 min naps; avoid long ones.

## Sleep & Circadian Rhythm

### Night-shift tolerance

- ✓ Keep a consistent sleep schedule, to stabilize your body clock.
- ✓ Limit screen exposure before bed or use blue-light filters during night work.
- ✓ Plan short naps and recovery days with natural light exposure to restore energy and rhythm.
- ✓ Avoid caffeine, alcohol, and heavy meals a few hours before sleeping.
- ✓ Stay active and eat balanced meals to reduce fatigue and support circadian health.

### Caffeine impact on sleep

- ✓ Limit caffeine intake to a moderate amount
- ✓ Remember that caffeine is found not only in coffee but also in tea, cola, chocolate, and energy drinks.
- ✓ Avoid consuming caffeine within 4–6 hours of bedtime to prevent mild sleep disruption.
- ✓ Choose decaffeinated or herbal beverages later in the day to promote better sleep.

# Nutrition & Metabolism

Fuel right, stay strong.



## Macronutrient utilization

- ✓ Follow a balanced diet with complex carbs, lean proteins, and healthy fats.
- ✓ Include protein sources like fish, eggs, legumes, and tofu for muscle repair.
- ✓ Combine aerobic and strength exercises to boost metabolism.
- ✓ Track weight and energy, adjusting nutrients as needed.
- ✓ CoLimit refined sugars—opt for whole grains, fruits, and vegetables. Limit added sugars.
- ✓ Choose healthy fats such as olive oil, nuts, seeds, and avocados.
- ✓ Stay hydrated and get enough sleep to support enzyme activity.
- ✓ Consult a dietitian for a personalized macronutrient plan (e.g., 40% carbs, 30% fat, 30% protein).

## Weight gain susceptibility

- ✓ Eat a balanced diet — lean proteins, whole grains, fruits, and veggies.
- ✓ Watch portions to maintain nutrient balance.
- ✓ Add healthy fats like nuts, seeds, and olive oil to support metabolism.
- ✓ Stay hydrated throughout the day to support metabolic processes.

## Nutrition & Metabolism

### Weight gain susceptibility

-  Eat meals on time to manage energy and curb snacking.
-  Combine strength and cardio to preserve muscle and metabolism.

### Basal metabolic rate

-  Eat a balanced diet — lean proteins, whole grains, fruits, and veggies.
-  Add healthy fats like nuts, seeds, and olive oil to support metabolism.
-  Watch portions to maintain nutrient balance.
-  Stay hydrated, as water is important for metabolic processes.
-  Eat meals on time to manage energy and curb snacking.
-  Include regular meal timing to maintain energy levels and support metabolism.

### Insulin sensitivity

-  Eat a balanced diet — lean proteins, whole grains, fruits, and veggies.
-  Stay active with aerobic and strength exercises.
-  Monitor weight and waist size for metabolic health.
-  Limit processed foods and sugary drinks.
-  Get 7–9 hours of sleep and manage stress.

## Nutrition & Metabolism

### Cholesterol metabolism

- Follow a heart-healthy diet (DASH or Mediterranean) with whole grains, fruits, vegetables, nuts, and fish.
- Include fiber-rich foods (oats, lentils, beans) and omega-3 sources (flaxseed, walnuts, salmon).
- Avoid smoking, limit alcohol, and check cholesterol levels regularly.
- Limit saturated and trans fats from butter, red meat, and processed foods.
- Engage in 150 min/week of aerobic exercise and maintain a healthy weight.

### Salt sensitivity

- Maintain moderate sodium intake.
- Include potassium-rich foods like bananas, avocados, spinach, and beans to balance sodium.
- Stay physically active, manage stress, and monitor blood pressure regularly.
- Prefer fresh, unprocessed foods.
- Follow a healthy pattern like emphasizing fruits, vegetables, whole grains, and lean proteins.
- Keep hydration adequate and limit excess caffeine or alcohol to maintain healthy fluid balance.

### Caffeine metabolism

- Enjoy caffeine in moderation and monitor overall daily intake.
- Pair it with balanced meals to maintain steady energy levels.
- Use it strategically to boost energy, focus, and performance.
- Avoid late-day caffeine to support restful, quality sleep.

## Nutrition & Metabolism

### Caffeine metabolism

- ✓ Stay well-hydrated and eat nutrient-rich foods for optimal metabolism.

### Alcohol metabolism

- ✓ Stay hydrated and never drink on an empty stomach.
- ✓ Eat nutrient-rich foods — fruits, veggies, and protein — to support liver function.
- ✓ Remember, fast metabolism doesn't equal safe tolerance.
- ✓ Limit alcohol, as rapid conversion increases toxic acetaldehyde buildup.
- ✓ If you experience flushing or discomfort, avoid alcohol to protect liver and heart health.

### Gluten sensitivity risk

- ✓ Eat whole grains like wheat, barley, and rye for fiber and nutrients.
- ✓ Monitor portion sizes of refined grains to avoid excessive caloric intake.
- ✓ Pair grains with lean protein, fruits, and veggies for balance.
- ✓ Choose whole grains for better digestion and lasting energy.

### Lactose tolerance

- ✓ Include milk, yogurt, and cheese to boost calcium and vitamin D.
- ✓ Choose low-fat or fortified options for better nutrition balance.

## Nutrition & Metabolism

### Lactose tolerance

- ✓ Pair dairy with fiber-rich foods for healthy digestion.
- ✓ Eat a varied diet for strong bones and steady metabolism.
- ✓ Watch portions with high-calorie dairy products.

### Vitamin absorption efficiency

- ✓ Eat a balanced diet with diverse nutrients for healthy absorption.
- ✓ Include vitamin- and mineral-rich foods- fish, eggs, dairy, greens, lentils, and lean meats.
- ✓ Get moderate sunlight or fortified foods for Vitamin D.
- ✓ Avoid unnecessary supplements to prevent toxicity.
- ✓ Stay hydrated and eat fiber-rich foods for better digestion.

### Detox pathways

- ✓ Eat antioxidant-rich foods — berries, citrus, greens, garlic, and cruciferous veggies.
- ✓ Include sulfur-rich foods — onions, eggs, legumes — for glutathione support.
- ✓ Stay well-hydrated to support liver and kidney detox.
- ✓ Limit alcohol, smoking, and processed foods.
- ✓ Exercise regularly to boost circulation and waste removal.

## Nutrition & Metabolism

### Methylation efficiency

- Eat foods rich in B-vitamins — greens, legumes, eggs, and lean meats — to support methylation.
- Get enough protein — amino acids like methionine aid methylation.
- Stay hydrated and active for healthy metabolism.
- Add antioxidant-rich fruits, veggies, and nuts for cellular health.
- Limit processed foods and alcohol to maintain efficiency.

### Vitamin absorption efficiency

- Eat a balanced diet with diverse nutrients for healthy absorption.
- Get moderate sunlight or fortified foods for Vitamin D.
- Stay hydrated and eat fiber-rich foods for better digestion.
- Include vitamin- and mineral-rich foods- fish, eggs, dairy, greens, lentils, and lean meats.
- Avoid unnecessary supplements to prevent toxicity.

### Detox pathways

- Eat antioxidant-rich foods — berries, citrus, greens, garlic, and cruciferous veggies.
- Stay well-hydrated to support liver and kidney detox.
- Include sulfur-rich foods — onions, eggs, legumes — for glutathione support.
- Limit alcohol, smoking, and processed foods.

## Nutrition & Metabolism

### Detox pathways

 Exercise regularly to boost circulation and waste removal.

# Taste Preferences & Eating Behavior

Personal food choices & habits



## Sweet tooth intensity

- ✓ Choose natural sweets — fruits, yogurt, or smoothies — for nutrients and fiber.
- ✓ Pair sweets with protein or fiber to steady blood sugar.
- ✓ Reduce sugar gradually to reset taste preferences.
- ✓ Limit added sugars and sugary drinks to protect metabolism.
- ✓ Eat mindfully to manage cravings and avoid overeating.

## Bitterness perception

- ✓ Cook bitter veggies (like kale or broccoli) with healthy fats, spices, or by roasting to mellow bitterness.
- ✓ Gradually introduce bitter vegetables to build taste tolerance.
- ✓ Practice mindful eating to balance taste preference with nutritional needs.
- ✓ Pair bitter foods with sweet or acidic ingredients for better flavor balance.
- ✓ Keep flavor variety to ensure nutrient diversity and enjoyable meals.

## Taste Preferences & Eating Behavior

### Salt preference

- Moderate salt intake to support heart and blood pressure health.
- Limit processed and packaged foods high in sodium.
- Gradually reduce salt to adjust taste preferences.
- Use herbs, spices, or citrus to enhance flavor naturally.
- Choose low-sodium versions of sauces and snacks.

### Umami sensitivity

- Use umami foods like mushrooms, tomatoes, and proteins to boost flavor.
- Pair umami with veggies, grains, and proteins for balance.
- Practice mindful eating to balance taste preference with nutritional needs.
- Pick low-sodium options for soy sauce or miso.
- Try fermented or plant-based umami for variety.

### Spice tolerance

- Use spices mindfully to suit comfort levels.
- Pair spicy foods with cooling ingredients like yogurt.
- Add chili, garlic, or turmeric for flavor and health.
- Start mild and build spice tolerance gradually.

## Taste Preferences & Eating Behavior

### Spice tolerance

- Explore diverse cuisines for balanced, flavorful meals.

### Alcohol taste preference

- Practice moderation to support liver and metabolic health.
- Stay hydrated by alternating alcohol with water.
- Choose lower-sugar options like dry wine or light beer.
- Limit frequency — moderation supports liver and overall health.

### Food addiction risk

- Eat balanced meals with protein, fiber, and healthy fats.
- Practice mindful eating to recognize true hunger cues.
- Maintain consistency with nutrient-dense, whole foods daily.
- Limit processed and sugary foods that trigger cravings.
- Stay active to support appetite control and mood balance.

### Emotional eating tendency

- Maintain balanced meals and regular eating times for metabolic health
- Keep healthy snacks ready to avoid impulsive choices.

## Taste Preferences & Eating Behavior

### Emotional eating tendency

- Manage stress through relaxation, exercise, or journaling.
- Maintain regular meal timing for stable blood sugar.
- Seek guidance if emotions strongly influence eating habits.

# Cognitive & Psychological Traits

Mindset & behavioral patterns



## Stress resilience

- ✓ Maintain resilience with good sleep, exercise, and mindfulness.
- ✓ Eat nutrient-rich foods with magnesium, omega-3s, and B vitamins.
- ✓ Maintain social connections to buffer the impact of stress
- ✓ Practice relaxation methods like meditation or deep breathing daily.
- ✓ Avoid overcommitment and schedule regular rest or leisure.

## Anxiety/depression predisposition

- ✓ Exercise regularly to support serotonin and brain health.
- ✓ Maintain good sleep, balanced nutrition, and social connection.
- ✓ Seek early help if mood or anxiety changes persist.
- ✓ Eat foods rich in omega-3s, tryptophan, and whole grains.
- ✓ Practice mindfulness, journaling, or nature time for stress relief.

## Cognitive & Psychological Traits

### ADHD risk

 Maintain structured routines to enhance focus and stability.

 Limit screen time before bed to improve sleep and focus.

 Manage stress through mindfulness or time in nature.

 Exercise regularly to support dopamine balance and attention.

 Eat omega-3-rich foods for better brain function.

 Seek professional help if focus or hyperactivity affects daily life.

### Memory ability

 Practice active recall and spaced repetition to strengthen memory.

 Engage in brain-stimulating activities like reading or puzzles.

 Maintain a balanced diet and regular exercise to support cognitive health

 Use notes, summaries, or mnemonics to organize and retain information.

 Prioritize quality sleep and stress management for better recall.

### Sleep & cognition link

 Maintain 7–9 hours of consistent, quality sleep to support focus and memory.

 Engage in regular physical activity and mental exercises for brain health.

 Limit blue light and stimulants before bedtime to enhance sleep quality.

 Practice mindfulness to ease stress-related sleep issues.

## Cognitive & Psychological Traits

### Sleep & cognition link

- Avoid long-term sleep loss to protect cognitive health

### Risk-taking vs. cautiousness

- Channel curiosity and drive into creative or goal-oriented activities.
- Gradually step out of your comfort zone to build adaptability and resilience.
- Maintain balanced routines to prevent overthinking.
- Pause and reflect before major decisions to avoid impulsive actions.
- Maintain stress balance through mindfulness, physical activity, and consistent rest.
- Seek professional help if focus or hyperactivity affects daily life.

### Addiction vulnerability

- Avoid or moderate use of addictive substances like alcohol, nicotine, or drugs.
- Manage stress through mindfulness, social connection, or creative outlets.
- Seek professional or peer support if cravings or compulsive habits feel difficult to control.
- Maintain structured routines with good sleep, exercise, and nutrition to support dopamine balance
- Be mindful of emotional or environmental triggers that may drive habitual behaviors.

## Cognitive & Psychological Traits

### Social bonding & empathy

-  Nurture meaningful relationships through open communication and active listening.
-  Practice empathy-building through perspective-taking or mindfulness exercises.
-  Prioritize mental well-being through therapy or group activities to enhance emotional comfort.

-  Maintain emotional boundaries to prevent fatigue while showing care and support.
-  Balance solitude with social activities for emotional well-being.

### Motivation & reward sensitivity

-  Focus on purpose-driven motivation over external rewards.
-  Exercise regularly to boost natural dopamine levels.
-  Limit caffeine and sugar to avoid motivation crashes.

-  Break big goals into smaller, rewarding steps.
-  Keep good sleep and nutrition for steady energy.
-  Stay connected with motivated, supportive peers.

### Creativity potential

-  Engage in creative activities like writing, art, music, or brainstorming.
-  Keep a journal to capture ideas and reflections.

-  Collaborate with diverse thinkers and seek new experiences.
-  Balance creativity with structure and adequate rest.

## Cognitive & Psychological Traits

### Creativity potential

 Foster a supportive, low-pressure space for curiosity and experimentation.

# Health & Wellness Markers

Key indicators of overall health & wellness



## Biological age (epigenetic clock)

- Prioritize restorative sleep (7–9 hours)
- Engage in daily exercise
- Consider regular medical guidance for optimizing vitamin D, B12, and antioxidant levels.
- Adopt a nutrient-dense diet
- Limit processed foods, sugar, and alcohol to reduce oxidative stress.

## Weight gain susceptibility

- Eat a balanced diet — lean proteins, whole grains, fruits, and veggies.
- Watch portions to maintain nutrient balance.
- Eat meals on time to manage energy and curb snacking.
- Add healthy fats like nuts, seeds, and olive oil to support metabolism.
- Stay hydrated throughout the day to support metabolic processes.
- Combine strength and cardio to preserve muscle and metabolism.

## Health & Wellness Markers

### Oxidative stress resilience

- ✓ Increase antioxidant intake — berries, greens, citrus, nuts, and green tea.
- ✓ Exercise moderately and sleep 7–8 hours nightly.
- ✓ Avoid excess sun, processed food, sugar, and alcohol.
- ✓ Manage stress and include vitamin C, E, selenium, and zinc in diet.

### Inflammation predisposition

- ✓ Eat an anti-inflammatory diet with fruits, vegetables, whole grains, nuts, and healthy fats.
- ✓ Stay active with regular exercise and maintain a healthy weight.
- ✓ Have routine health check-ups and use medications only when prescribed.
- ✓ Avoid processed foods, excess sugar, alcohol, and smoking.
- ✓ Get quality sleep, stay hydrated, and manage stress mindfully.

### Immune system strength

- ✓ Ensure 7–9 hours of quality sleep to support immune recovery.
- ✓ Exercise moderately to strengthen immunity.
- ✓ Avoid smoking, excessive alcohol, and processed or sugary foods.
- ✓ Ensure 7–9 hours of quality sleep to support immune recovery.
- ✓ Stay hydrated and manage stress .
- ✓ Include immune-boosting nutrients like vitamin C, D, zinc, iron, and omega-3s.

## Health & Wellness Markers

### Immune system strength

- ✓ Add probiotic-rich foods like yogurt or kefir to support gut and immune health.

### Autoimmune risk

- ✓ Eat an anti-inflammatory diet with omega-3s, fruits, veggies, and whole grains; limit processed sugar.
- ✓ Get enough vitamin D from safe sun exposure or supplements.
- ✓ Support gut health with fiber, probiotics, and fermented foods.
- ✓ Stay hydrated and maintain a healthy weight for long-term immune strength.
- ✓ Exercise, manage stress, and sleep 7–9 hours to keep immunity balanced.
- ✓ Avoid smoking and excess alcohol to reduce inflammation.
- ✓ Have regular check-ups and address any persistent fatigue or inflammation early.

### Hormone metabolism

- ✓ Eat a balanced diet with healthy fats and adequate protein.
- ✓ Support liver function with cruciferous and fiber-rich foods to aid hormone balance.
- ✓ Exercise regularly.
- ✓ Include key micronutrients like zinc, vitamin B6, magnesium, and antioxidants (vitamin C, E, selenium).
- ✓ Limit alcohol, caffeine, processed foods, and plastic exposure that disrupt hormone metabolism.
- ✓ Manage stress to maintain hormonal stability.

## Health & Wellness Markers

### Hormone metabolism

- ✓ Monitor any mood, energy, or cycle changes with medical guidance.

### Fertility potential

- ✓ Maintain a healthy lifestyle with balanced nutrition, regular exercise, and adequate sleep.
- ✓ Avoid smoking, alcohol, caffeine, drugs, and exposure to toxins or plastics that impair reproductive health.
- ✓ Schedule regular reproductive and hormonal health check-ups or fertility evaluations if planning conception.

- ✓ Eat a fertility-boosting diet rich in folate, zinc, selenium, vitamin D, omega-3s, and antioxidants.

- ✓ Maintain a healthy body weight for optimal reproductive function.

### Skin aging

- ✓ Eat foods rich in vitamins C, E, zinc, and healthy fats for collagen support.
- ✓ Use SPF 30+ sunscreen daily and limit sun exposure.
- ✓ Avoid smoking, alcohol, and pollution.

- ✓ Stay hydrated and sleep 7–8 hours for skin repair.

- ✓ Add antioxidant foods like berries, green tea, and greens.

- ✓ Follow a simple skincare routine with hydrating, collagen-boosting ingredients.

## Health & Wellness Markers

### Hair health

- Eat a balanced diet with protein (eggs, fish, lentils) for keratin support.
- Drink enough water to keep your scalp and hair hydrated.
- Protect hair from UV rays and pollution with hats or serums.
- Include iron, zinc, omega-3s and vitamin D for stronger roots.
- Avoid harsh chemicals.
- Manage stress and get enough sleep to reduce hair shedding.

### Bone density

- Do regular weight-bearing and resistance exercises like walking or strength training.
- Avoid smoking and limit alcohol to maintain bone strength.
- Schedule periodic bone density check-ups as you age.
- Get enough calcium and vitamin D through diet or sunlight.
- Continue strength training to support muscle–bone balance.

### Cardiovascular risk

- Eat a heart-healthy diet: whole grains, lean proteins, fruits, vegetables, and healthy fats (olive oil, nuts, avocados).
- Exercise weekly (e.g., brisk walking, cycling, swimming).
- Keep salt intake moderate (<2,300 mg/day).
- Limit processed foods, trans fats, and added sugars.

## Health & Wellness Markers

### Cardiovascular risk

- Avoid smoking and excessive alcohol.

- Manage stress with yoga, meditation, or relaxation.

### Cancer susceptibility

- Eat a diet rich in fruits, vegetables, and whole grains for antioxidant and DNA protection.

- Exercise regularly

- Avoid smoking and limit alcohol to minimize carcinogen exposure.

- Follow routine health screenings

### Longevity genes

- Eat a balanced diet

- Exercise weekly (e.g., brisk walking, cycling, swimming).

- Schedule regular preventive health checkups.

- Focus on anti-inflammatory, antioxidant-rich foods to slow aging.

- Exercise regularly

- Avoid smoking, alcohol excess, and chronic stress.

- Stay socially connected and mentally active for cognitive longevity.

- Limit toxin exposure and processed foods.

# Substance Response & Lifestyle Exposures

Body's reaction to habits & environment



## Nicotine metabolism

- ✓ Consult a professional for personalized nicotine therapy.
- ✓ Eat well, stay active, and sleep enough to support dopamine balance.
- ✓ Combine healthy habits and support for effective nicotine recovery.
- ✓ Practice stress management through exercise, mindfulness, or relaxation to reduce cravings.
- ✓ Schedule regular health screenings for cardiovascular and lung health.

## Alcohol addiction predisposition

- ✓ Follow low-risk drinking limits
- ✓ Take alcohol-free days weekly to prevent tolerance and dependence.
- ✓ Be mindful of social or emotional triggers that encourage excessive drinking.
- ✓ choose healthy alternatives like exercise, mindfulness, or hobbies.
- ✓ Stay hydrated to reduce alcohol impact.
- ✓ Seek professional support or counseling if drinking patterns increase.

## Substance Response & Lifestyle Exposures

### Alcohol addiction predisposition

- ✓ Maintain a balanced lifestyle with good sleep, nutrition, and regular physical activity for overall well-being.

### Caffeine dependence risk

- ✓ Monitor caffeine intake to avoid overuse.
- ✓ Cut down slowly to avoid withdrawal symptoms.
- ✓ Reduce gradually to avoid withdrawal symptoms like headaches or irritability.
- ✓ Avoid caffeine close to bedtime to protect sleep quality and circadian rhythm.
- ✓ Stay well-hydrated and rely on balanced meals for natural energy.

### Drug metabolism (pharmacogenomics)

- ✓ Tell your doctor your metabolism rate for correct dosing.
- ✓ Support liver and kidney health through balanced nutrition, hydration.
- ✓ Watch for side effects and get regular check-ups on long-term medication.
- ✓ Avoid self-adjusting doses—always follow professional medical advice.
- ✓ Stay well-hydrated and rely on balanced meals for natural energy.
- ✓ Be cautious with drug combinations

## Substance Response & Lifestyle Exposures

### Drug metabolism (pharmacogenomics)

- ✓ Personalized dosing and supervision help maintain safety and optimal therapeutic outcomes.

### Opioid sensitivity

- ✓ Use opioids strictly under medical supervision and never self-medicate.
- ✓ Tell your doctor about your opioid sensitivity for safe dosing.
- ✓ Build pain resilience with exercise, a healthy diet, and stress management.
- ✓ Try non-opioid pain relief methods like physiotherapy, mindfulness, or yoga.
- ✓ Avoid changing doses without guidance to prevent side effects or dependence.

### Environmental toxin resilience

- ✓ Maintain a balanced lifestyle
- ✓ Avoid toxins from pollution, smoke, and processed foods.
- ✓ Manage stress and get quality sleep to aid natural detox functions.
- ✓ Eat antioxidant-rich foods like berries, greens, nuts, and green tea.
- ✓ Support liver and kidney health with rest, hydration, and limited alcohol.
- ✓ Consult a healthcare professional for personalized detox and environmental health advice.

## Substance Response & Lifestyle Exposures

### Pollution sensitivity

- Limit exposure to polluted or high-allergen areas.
- Eat antioxidant-rich foods to combat inflammation.
- Monitor respiratory symptoms and seek medical advice if issues persist.
- Use air purifiers and protective masks when air quality is poor.
- Exercise in clean environments.

### Altitude adaptation

- Stay hydrated and well-nourished to support oxygen use and energy metabolism.
- Ascend gradually to higher elevations to allow proper acclimatization.
- Use supplemental oxygen or rest if discomfort persists
- Engage in regular aerobic or endurance exercise.
- Monitor for symptoms such as shortness of breath, headache, or fatigue during altitude exposure.

### Radiation sensitivity

- Limit unnecessary radiation exposure, including X-rays and CT scans.
- Use sun protection — sunscreen, sunglasses, and protective clothing.
- Follow all safety guidelines for occupational or environmental radiation.
- Eat antioxidant-rich foods like fruits, vegetables, and nuts to support cellular defense.

**Substance Response & Lifestyle Exposures****Radiation sensitivity**

-  Consult healthcare providers before procedures involving radiation.
-  Maintain a healthy lifestyle

# Recovery & Regeneration

Body's healing & renewal process



## Tissue repair speed

- ✓ Increase protein intake to support collagen formation and tissue repair.
- ✓ Stay hydrated to maintain tissue elasticity and promote healthy blood flow.
- ✓ Avoid smoking and limit alcohol, as both reduce oxygen delivery and collagen synthesis.
- ✓ Monitor underlying conditions that may affect wound healing.
- ✓ Eat vitamin-rich foods like citrus, carrots, greens, nuts, and seeds for faster healing.
- ✓ Get adequate sleep and rest to allow the body to focus on regeneration and recovery.
- ✓ Maintain an active lifestyle to improve circulation and overall tissue health.
- ✓ Eat antioxidant-rich foods (berries, leafy greens, green tea) to reduce inflammation and oxidative damage.

## Inflammatory response

- ✓ Eat an anti-inflammatory diet with omega-3s, fruits, and leafy greens.
- ✓ Stay hydrated to support detox and immunity.
- ✓ Support recovery after workouts
- ✓ Get enough sleep for recovery and repair.

## Recovery & Regeneration

### Inflammatory response

Add turmeric, ginger, and green tea for anti-inflammatory support.

Consult a doctor if inflammation markers stay high.

Manage stress with meditation, yoga, or deep breathing.

### Immune recovery rate

Eat an immune-boosting diet rich in vitamins A, C, D, E, and zinc.

Get quality sleep for immune repair and recovery.

Limit alcohol, sugar, and processed foods.

Eat probiotics and prebiotics (yogurt, fermented foods, garlic) for gut health.

Maintain hygiene and get regular checkups to prevent infections.

Stay active with moderate exercise to balance immunity and reduce inflammation.

Stay well-hydrated to support detoxification and metabolic recovery.

Manage stress ,as chronic stress suppresses immunity.

Add seasonal immune boosters like herbal teas, citrus, and sunlight for vitamin D.

### Mitochondrial efficiency

Stay active with a mix of aerobic and strength exercises to boost mitochondrial health.

Eat nutrient-rich foods with omega-3s, complex carbs, and lean proteins for energy.

## Recovery & Regeneration

### Mitochondrial efficiency

- Include antioxidant foods like berries, spinach, and green tea.
- Get enough sleep and manage stress for recovery.
- Include CoQ10, B vitamins, and magnesium-rich foods for better energy metabolism.
- Stay hydrated and balance electrolytes.
- Add occasional HIIT workouts to build stamina and new mitochondria.
- Begin with moderate cardio and gradually increase intensity.

### Longevity-related repair genes

- Support cellular repair through regular exercise, proper sleep, and stress management.
- Avoid smoking, alcohol, and stress to protect DNA.
- Practice fasting or calorie moderation for longevity.
- Ensure quality sleep .
- Eat antioxidant-rich foods to protect against oxidative stress.
- Eat turmeric, dark chocolate, and olive oil for repair.
- Monitor metabolic and cardiovascular health .
- Add NAD+ and resveratrol sources like grains, niacin, and grapes to support healthy aging.

# Other Unique Insights

Additional personalized health findings



## Circadian productivity profile

- Use mornings for routine or administrative work that requires less creativity.
- Reflect or journal before bed to capture spontaneous insights.
- Start the day with light physical activity or mindfulness to boost cognitive flexibility.
- Keep mornings distraction-free to maximize idea flow.
- Create a calm, low-pressure environment with soft lighting to enhance focus and idea flow.
- Schedule high-focus and creative work between 7 AM – 12 PM.
- Ensure consistent sleep and wake times to align your circadian rhythm.

## Painkiller response

- Use common painkillers safely.
- Stay hydrated and avoid alcohol while on medication to support organ health.
- Follow dosage limits carefully.
- Consult your doctor for long-term or recurring pain instead of frequent self-medication.

## Other Unique Insights

### Painkiller response

- ✓ Eat meals on time to manage energy and curb snacking.
- ✓ Track and report side effects to your healthcare provider for safe monitoring.
- ✓ Avoid mixing multiple painkillers without medical supervision to prevent toxicity.
- ✓ Combine strength and cardio to preserve muscle and metabolism.
- ✓ If drug response is low or altered, seek pharmacogenetic guidance for suitable alternatives.

### Thermoregulation

- ✓ Stay hydrated, especially during workouts or prolonged heat exposure.
- ✓ Wear light, breathable clothing to enhance sweat evaporation and cooling.
- ✓ Gradually build heat tolerance and exercise during cooler parts of the day.
- ✓ Stay physically active to boost circulation and heat generation.
- ✓ Avoid prolonged cold exposure without proper gear to prevent frostbite or hypothermia.
- ✓ Balance electrolytes by consuming fluids or foods rich in sodium, potassium, and magnesium.
- ✓ Exercise in cooler hours (morning or evening) to avoid overheating.
- ✓ For colder climates, dress in layers to trap warmth while allowing flexibility.
- ✓ Eat nutrient-rich meals with sufficient proteins and healthy fats for metabolic warmth.
- ✓ Hydrate even in cold weather.

## Other Unique Insights

### Hydration need

- Stay consistently hydrated.
- Replenish electrolytes with foods like bananas, coconut water, oranges, and soups to maintain mineral balance.
- Adjust intake during illness, travel, or high-altitude exposure.
- Sip water gradually throughout the day instead of consuming large amounts at once.
- Limit caffeine and alcohol, as both increase fluid loss.
- Seek professional advice if you often experience dehydration symptoms like fatigue or dizziness.

### Altitude fitness

- Ascend gradually to allow proper acclimatization and prevent altitude sickness.
- Practice deep breathing to strengthen lung capacity and improve oxygen efficiency.
- Avoid alcohol and smoking, which reduce oxygen absorption.
- Monitor for symptoms like headache, nausea, or fatigue and seek help if they persist.
- Boost aerobic fitness to enhance oxygen use.
- Stay hydrated and eat iron-rich foods .
- Rest adequately and pace yourself during high-altitude activities, even with good endurance.

### UV sensitivity

- Apply broad-spectrum sunscreen (SPF 30+ for high sensitivity; SPF 15+ for low sensitivity) every day.
- Wear UV-protective gear — hats, sunglasses, and long sleeves during outdoor activities.

## Other Unique Insights

### UV sensitivity

- Avoid peak sunlight hours.
- Keep skin hydrated with moisturizers and after-sun care.
- Reapply sunscreen every 2 hours.
- Schedule regular skin checks to detect early UV-related changes.

### Smell sensitivity

- Use mild or unscented products.
- Ensure good ventilation or use air purifiers to clear lingering scents.
- Take breaks in fresh air when exposed to strong or unpleasant smells.
- Support nasal health and consider aromatherapy for gentle olfactory stimulation.
- Stay away from strong odor sources.
- Choose subtle food flavors .
- Maintain safety with functioning smoke and gas detectors at home.

### Noise sensitivity

- Protect your ears with noise-canceling headphones or earplugs in loud areas.
- Limit time in high-volume environments like concerts or construction zones.
- Create quiet spaces at home or work to reduce sensory stress.
- Practice relaxation techniques such as mindfulness or deep breathing.

## Other Unique Insights

### Noise sensitivity

- ✓ Get regular hearing check-ups if sensitivity or exposure is high.
- ✓ Follow safe listening habits — keep volume below 60% .
- ✓ Use sound-monitoring tools to track and manage daily noise exposure.

### UV sensitivity

- ✓ Avoid peak sunlight hours.
- ✓ Reapply sunscreen every 2 hours.
- ✓ Keep skin hydrated with moisturizers and after-sun care.
- ✓ Schedule regular skin checks to detect early UV-related changes.

### Longevity resilience

- ✓ Minimize environmental stress.
- ✓ Boost antioxidant intake — include berries, leafy greens, citrus, nuts, green tea, and turmeric.
- ✓ Support DNA repair with nutrients like zinc, selenium, folate, and vitamin B12.
- ✓ Follow anti-aging habits — exercise regularly, get 7–9 hours of sleep.
- ✓ Stay proactive with regular health check-ups and stress management practices.
- ✓ Maintain hydration and balanced nutrition to promote long-term cellular recovery and resilience.