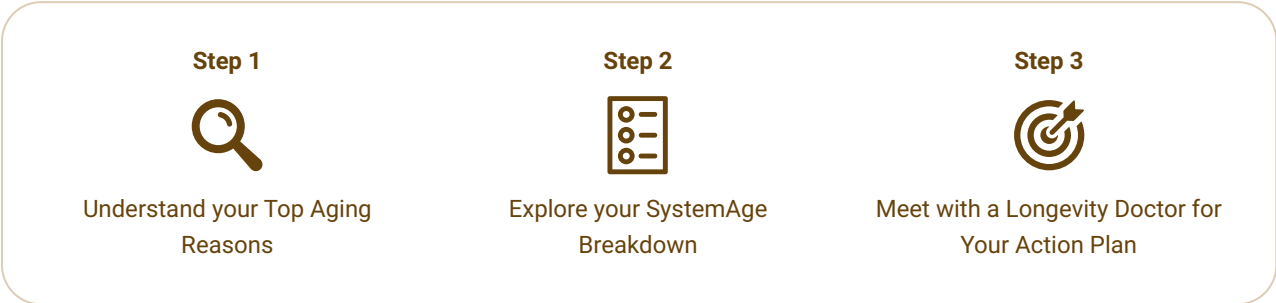


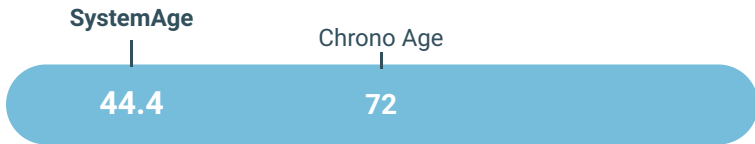
# SystemAge Report



## SystemAge Overview

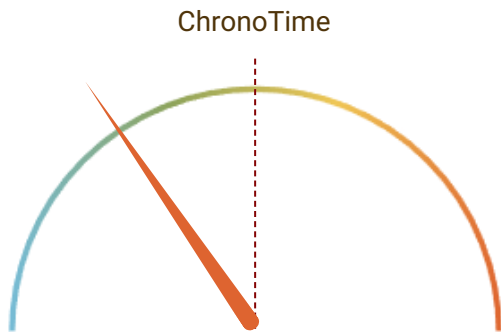
Aging is a complex, non-linear process, and plateau phases can occur at various points in life where biological changes slow down and stabilize. For individuals in their late 20s to early 40s, biological aging typically enters one such plateau phase, where changes are minimal. As a result, seeing a SystemAge of 28, 38, or 40 does not indicate significant biological differences – these ages fall within a range where biological noise is relatively indistinguishable.

### Overall SystemAge



Overall, you are **27.6** years younger than your chronological age

### Overall Aging Speed



You are aging **0.62x** of your chronological age


SystemAge test analyzes changes in DNA methylation patterns that are associated with aging using CpG sites causal to aging-related mortality. This module provides an estimate of the change in your biological age due to the accumulation of biological noise.

### Top Aging Factors


- Oncogenesis**  
SystemAge: 45.6  
-5.15%
- Cardiac System**  
SystemAge: 45.5  
-5.16%
- Digestive System**  
SystemAge: 45.4  
-5.19%
- Inflammatory Regulation**  
SystemAge: 45.4  
-5.19%
- Brain Health and Cognition**  
SystemAge: 45.3  
-5.21%


# SystemAge Breakdown


- Reverse
- Good
- Average
- Need Attention


**Auditory System**  
 SystemAge Aging Speed  
**44.7 0.62x**


**Blood Sugar and Insulin Control**  
 SystemAge Aging Speed  
**45.0 0.63x**


**Skeletal System**  
*(Bone)*  
 SystemAge Aging Speed  
**44.9 0.62x**


**Cardiac System**  
*(Heart)*  
 SystemAge Aging Speed  
**45.5 0.63x**

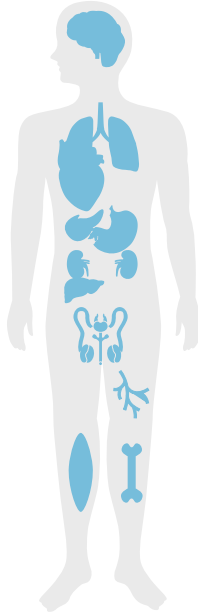
**Digestive System**  
 SystemAge Aging Speed  
**45.4 0.63x**


**Hepatic System**  
*(Liver)*  
 SystemAge Aging Speed  
**45.0 0.63x**


**Immune System**  
 SystemAge Aging Speed  
**45.2 0.63x**


**Oncogenesis**  
*(Cell Mutation)*  
 SystemAge Aging Speed  
**45.6 0.63x**


**Brain Health and Cognition**  
 SystemAge Aging Speed  
**45.3 0.63x**





**Muscular System**  
 SystemAge Aging Speed  
**44.2 0.61x**


**Neurodegeneration**  
*(Nerve Cells)*  
 SystemAge Aging Speed  
**45.2 0.63x**


**Reproductive System**  
*(Testes)*  
 SystemAge Aging Speed  
**44.9 0.62x**


**Respiratory System**  
*(Lung)*  
 SystemAge Aging Speed  
**43.6 0.61x**


**Urinary System**  
 SystemAge Aging Speed  
**45.1 0.63x**

**Blood and Vascular System**  
 SystemAge Aging Speed  
**44.4 0.62x**

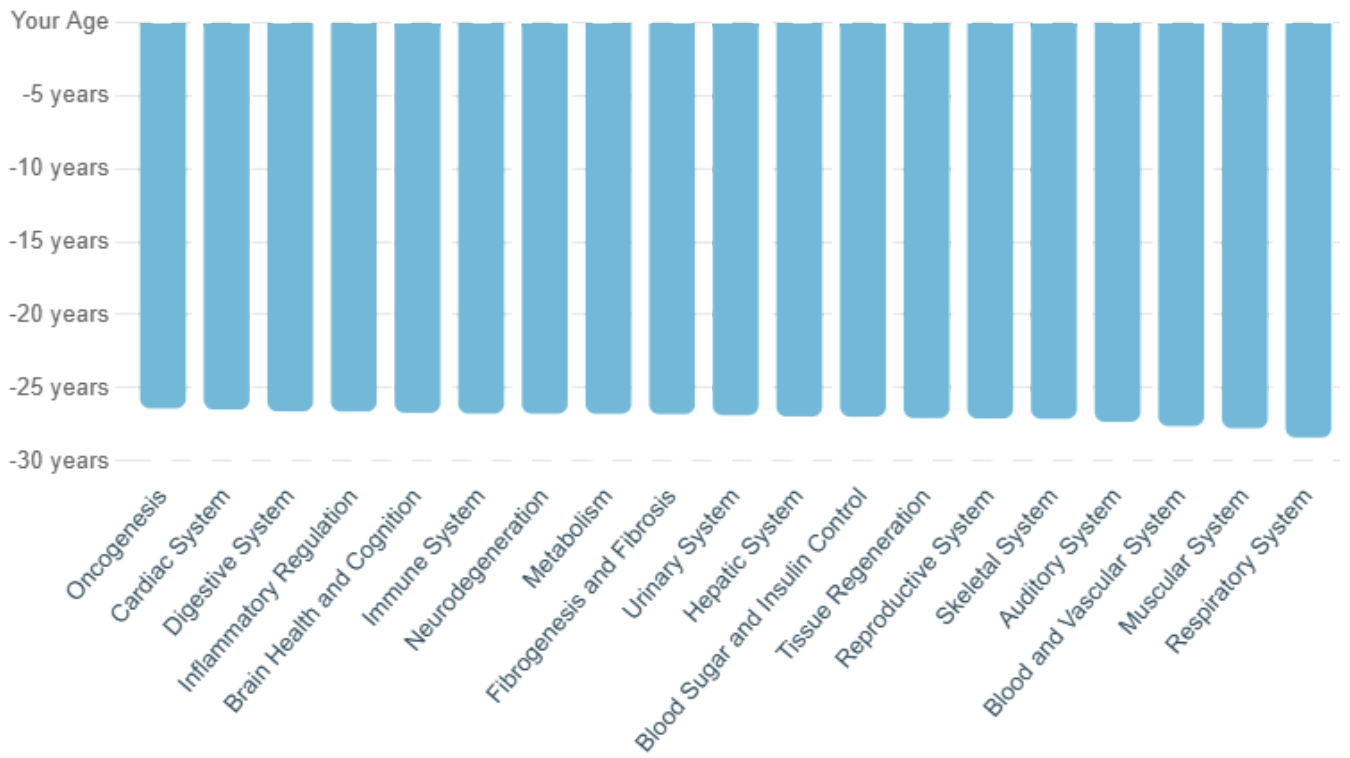
**Metabolism**  
 SystemAge Aging Speed  
**45.2 0.63x**

**Fibrogenesis and Fibrosis**  
*(Scar Tissue Formation)*  
 SystemAge Aging Speed  
**45.2 0.63x**

**Tissue Regeneration**  
 SystemAge Aging Speed  
**44.9 0.62x**

**Inflammatory Regulation**  
 SystemAge Aging Speed  
**45.4 0.63x**

# SystemAge vs Chronological Age



# Lifestyle Recommendations

\* Here are your personalized recommendations based on your test results. These recommendations are for reference only. **Please consult a physician before taking any actions.**

## Nutrition & Supplement Recommendations

### Astaxanthin

Astaxanthin is a potent antioxidant known for its vibrant red pigment. It is renowned for its ability to reduce oxidative stress, enhance skin health and elasticity, and support eye and cardiovascular health.

Suggestions for Astaxanthin:

- Lobster
- Crawfish
- Red Snapper



### Brain Health and Cognition

Your brain health and cognition is biologically 45.3 years old, 26.7 years younger than your chronological age.

Astaxanthin's anti-inflammatory properties can help mitigate brain inflammation, which is associated with cognitive decline and mood disorders. By reducing inflammation, astaxanthin supports mental clarity and emotional well-being.

### Lutein

Lutein is a type of antioxidant found in many fruits and vegetables, particularly leafy greens like spinach and kale. It plays a crucial role in maintaining eye health by filtering harmful blue light and protecting against age-related macular degeneration, which can lead to vision loss. Consuming foods rich in lutein or taking lutein supplements can help support overall eye health and potentially reduce the risk of eye diseases.



Suggestions for Lutein:

- Bell Peppers
- Kale
- Parsley

### Brain Health and Cognition

Your brain health and cognition is biologically 45.3 years old, 26.7 years younger than your chronological age.

Including lutein in one's nutritional intake can positively influence brain health and cognitive abilities. It helps guard against cognitive decline by protecting brain cells from damage and supporting overall brain function. This can lead to better memory performance and improved attention spans.

### Curcumin

Curcumin is the active component of turmeric and is renowned for its anti-inflammatory and antioxidant properties. It has been studied for its potential in managing arthritis pain and reducing risk factors for heart disease.



Suggestions for Curcumin:

- Turmeric
- Mango Ginger
- Curry powder

### Metabolism

Your metabolism is biologically 45.2 years old, 26.8 years younger than your chronological age.

Curcumin positively impacts metabolism by reducing inflammation, which can improve insulin sensitivity and glucose regulation. This makes it easier for cells to take up and use glucose effectively, helping to maintain stable blood sugar levels.

# Fitness Recommendations

## High-Intensity Interval Training

High-Intensity Interval Training, or HIIT, is a workout method that alternates between short bursts of intense exercise and periods of low-intensity recovery or rest. These workouts can be done with various exercises, such as sprinting, cycling, or bodyweight exercises, and typically last anywhere from 10 to 30 minutes. HIIT aims to improve cardiovascular fitness, burn calories, and enhance overall athletic performance in less time compared to traditional exercise routines.

Suggestions for High-Intensity Interval Training:

- High Knees
- Mountain Climbers
- Lunge Jumps



## Metabolism

Your metabolism is biologically 45.2 years old, 26.8 years younger than your chronological age.

HIIT has a significant impact on metabolism due to its ability to increase the rate at which the body consumes energy. The nature of the high-intensity exercises boosts calorie burning even during recovery, leading to an elevated metabolic rate. This helps in maintaining a healthy metabolism and managing body weight.

## Swimming

Swimming is a physical activity that involves moving through water using one's arms and legs. It is an excellent exercise for improving cardiovascular health, building muscle strength, and enhancing flexibility. Swimming is also a low-impact activity, making it suitable for people of all ages and fitness levels. It can be done in pools, lakes, and oceans, providing both recreational enjoyment and competitive opportunities.

Suggestions for Swimming:

- Breaststroke
- Freestyle
- Butterfly



## Cardiac System

Your cardiac system is biologically 45.5 years old, 26.5 years younger than your chronological age.

Swimming's continuous and controlled movements provide excellent cardiovascular conditioning, improving the heart's pumping efficiency and reducing the chance of developing heart issues. This keeps the cardiovascular system robust and healthy.

## Muscular System

Your muscular system is biologically 44.2 years old, 27.8 years younger than your chronological age.

Swimming is effective in increasing muscle tone and strength as it necessitates sustained effort from the body's major muscles. The water's resistance provides a gentle yet effective workout that supports muscular endurance and overall fitness.



# Aging Entropy Curve & Insights

**Aging Entropy Curve Graph** illustrates changes in bodily functions over a lifetime in population. It identifies if you're in a "prime", "plateau", or "accelerated" aging stage. Even if you're healthy for your age, the graph might show you are nearing an "accelerated aging" phase where functions decline faster in general population. This insight helps manage health proactively by anticipating age-related changes before they become noticeable.

**"BioNoise"**, is the variability in gene expression and molecular changes in the body. It increases with age and can signal early stages of aging and diseases. Measuring BioNoise helps identify aging and disease progression, indicating whether a person is becoming unhealthy, stable, or improving.



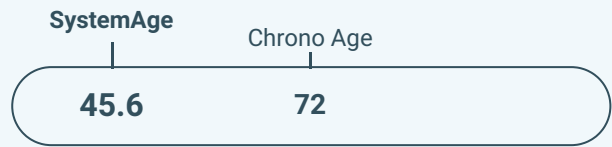
# Oncogenesis

Oncogenesis is the process by which normal cells undergo a transformation into cancerous ones. Understanding the factors that trigger, promote, and suppress abnormal cell fates is crucial in developing strategies for the prevention and treatment of cancer.

## Aging Insights

Your biological age for oncogenesis, or the development of cancer, suggests a slower aging speed compared to your actual age. This indicates that your current health practices and lifestyle choices may be effectively reducing the risk factors associated with cancer development. It's a positive sign that the environment you've created for your cells is lowering the likelihood of malignant transformations.

The test results indicate that you are in the accelerated aging stage for the biological function under examination. This stage represents a period where the pace of aging for this specific function increases more rapidly compared to earlier stages. While this is a natural part of the aging process, it is important to be aware of the changes occurring in your body. Monitoring this function and maintaining a healthy lifestyle can help manage the effects of accelerated aging.



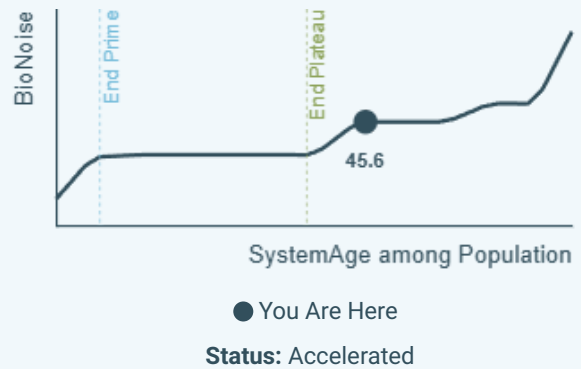
## Associated Diseases

- Ovarian Cancer
- Lymphoma
- Liver Cancer

## Associated Pathways

- p53 pathway
- TGF- $\beta$ /SMAD pathway
- Wnt/ $\beta$ -catenin pathway

## Aging Entropy Curve



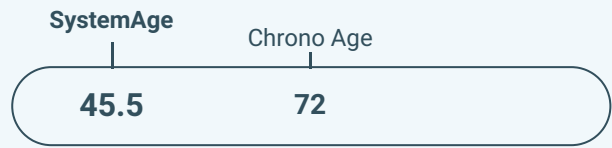
# Cardiac System

Our hearts pump blood without stopping from early embryonic development until the end of our lives. The health of cardiac system is regulated by the complex interplay of the heart organ, cardiac tissue, cardiomyocyte cells, the systemic environment, and feedback to and from other organ systems, including the endocrine system and central nervous system (CNS).

## Aging Insights

Your cardiac health has been assessed as having a reverse age speed, indicating that it is healthier than expected for your actual age. This suggests that your current lifestyle and health practices are contributing positively to maintaining your heart's function. Typically, this trend is associated with lower risk of cardiovascular diseases and may contribute to overall longevity.

In your recent health assessment, you have been identified as being in the accelerated aging stage for cardiac health. This stage signifies that the aging process for your cardiac function has progressed beyond the plateau phase, and changes in your cardiovascular system may be occurring at a quicker pace. While this is a natural part of the aging process, it is important to be aware of and proactive about maintaining cardiac health through appropriate lifestyle choices and medical consultations. Regular check-ups and adhering to a heart-healthy lifestyle can help manage and mitigate the impacts associated with this stage.



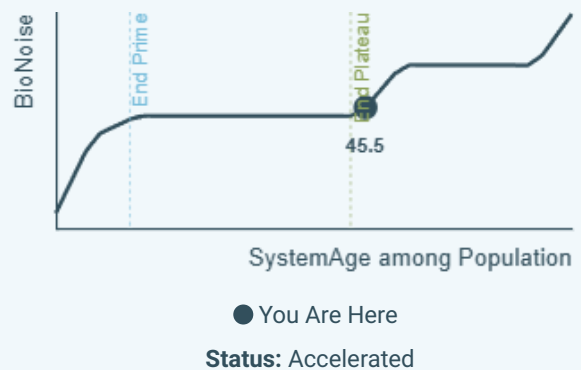
## Associated Diseases

- Endocarditis
- Hypertension (High Blood Pressure)
- Atrial Fibrillation

## Associated Pathways

- Beta-adrenergic Signaling Pathway
- cGMP-PKG Signaling Pathway
- Apoptosis Pathway

## Aging Entropy Curve



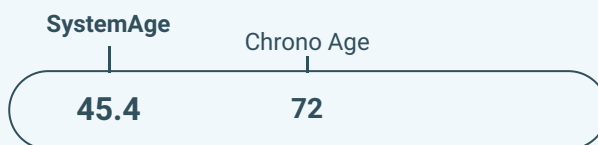
# Digestive System

Digestive health is central to nutrient absorption and overall health. The gastrointestinal tract ensures that the body receives essential nutrients for optimal well-being. From breaking down food into nutrients to absorption in the intestines to the essential functions of the microbiome, the dynamic digestive system nourishes the body and supports overall health.

## Aging Insights

In the assessment of your digestive health, it was found that the biological age of this function is younger than your actual age. This indicates that your digestive system is performing more efficiently than expected for someone of your age group. Such results suggest that your current lifestyle and health practices are positively contributing to the maintenance and enhancement of your digestive health.

In reviewing your digestive health, the results indicate that you are in the accelerated aging stage of the aging trajectory for this function. This stage typically follows a period of relative stability known as the plateau stage. During the accelerated aging stage, it is common to experience a more rapid decline in digestive efficiency and function, reflecting the natural progression of aging. It is important to be aware of these changes and consult with healthcare providers for advice on managing symptoms and maintaining overall digestive health.



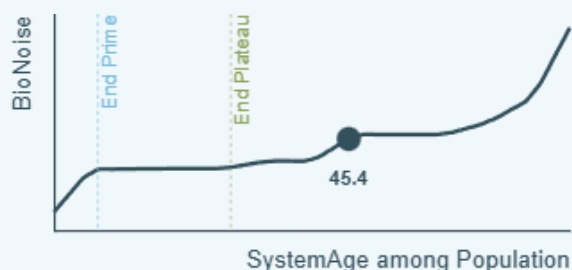
## Associated Diseases

- Liver Cirrhosis
- Celiac Disease
- Hepatitis

## Associated Pathways

- Electron Transport Chain
- Glycolysis
- Fatty Acid Beta-oxidation

## Aging Entropy Curve



● You Are Here

Status: Accelerated

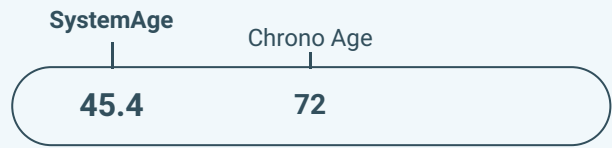
# Inflammatory Regulation

Productive inflammatory regulation overlaps with tissue repair and is the first step in combating pathogens. It plays a vital role in orchestrating the body's response to challenges, ensuring a balanced immune reaction without causing harm. However, when inflammatory regulation becomes persistent (chronic or inflammaging), it exacerbates tissue damage and ironically prevents effective immunity.

## Aging Insights

The results indicate that your inflammatory regulation is functioning younger than your actual age. This suggests that your lifestyle and health practices are contributing positively to maintaining a more robust immune response. Maintaining good inflammatory regulation is crucial for reducing the risk of chronic diseases and promoting overall health and longevity.

In the context of inflammatory regulation, you have entered the accelerated aging stage. This stage is characterized by a more rapid decline in the body's ability to control inflammation, which is a natural part of the aging process. During this period, the body's inflammatory response may become less efficient, potentially leading to increased susceptibility to chronic inflammatory conditions. It is important to be aware of this change, as it signifies a shift in your body's physiological regulation, but it is a common and expected occurrence later in life.



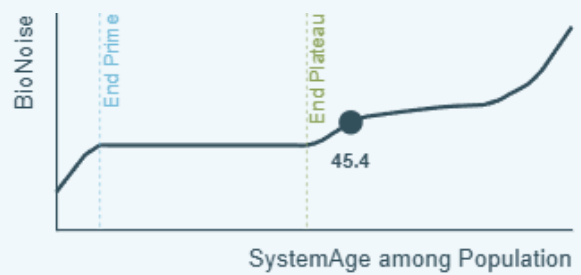
## Associated Diseases

- Crohn's disease
- Psoriasis
- Ulcerative colitis

## Associated Pathways

- MAPK signaling pathway
- NOD-like receptor signaling pathway
- TNF signaling pathway

## Aging Entropy Curve



● You Are Here

Status: Accelerated

# Brain Health and Cognition

Our mental well-being, mood, memory, cognition, and overall mental health depend on the health of the brain, which is influenced by the peripheral organ systems connected by the circulatory system - the blood. Neuroinflammation increases with aging and disease, while maintenance and repair of brain cells, including neurons, decline. Strategies for promoting brain health include changes in the systemic milieu - the blood, as well as implementing mindfulness and fostering social connections.

## Aging Insights

Your test results indicate that your brain health and cognitive function are aging at a reverse age speed, meaning they are healthier than typically expected for someone of your age. This suggests that your lifestyle choices and health practices are positively impacting your brain's vitality and cognitive performance. Maintaining these practices could continue to support your brain health as you age.

The results indicate that you fall into the accelerated aging stage for brain health and cognition, which is the final stage following the plateau stage in the aging trajectory graph for this function. At this stage, it is common to experience a more rapid decline in cognitive abilities compared to earlier life stages. This accelerated pace of aging is a natural part of the aging process and typically includes challenges in memory retention, information processing speed, and problem-solving skills. While these changes are a normal aspect of aging later in life, staying mentally active and engaged can help manage the impacts on your daily life.

SystemAge

Chrono Age

45.3

72

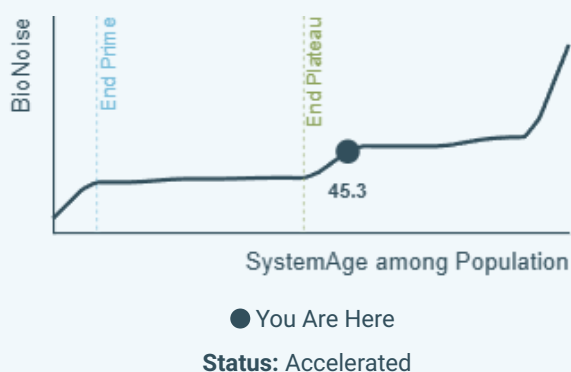
### Associated Diseases

- Post-Traumatic Stress Disorder (PTSD)
- Attention Deficit Hyperactivity Disorder (ADHD)
- Autism Spectrum Disorder

### Associated Pathways

- GABAergic Signaling Pathway
- Circadian Rhythm Pathway
- Dopaminergic Signaling Pathway

## Aging Entropy Curve



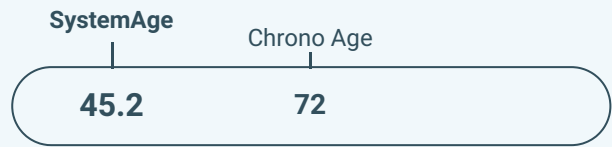
# Immune System

The immunity is the body's defense mechanism against infections and diseases, including cancers. The immunity also facilitates wound healing and tissue repair. With aging and disease, adaptive immunity declines and inflammation becomes excessive.

## Aging Insights

Your test results indicate that your immune system is functioning at a younger biological age than your actual age. This reverse aging trend suggests that your immune system is healthier and more resilient than expected, which may be due to positive lifestyle choices and good health practices. Maintaining these habits can continue to support your immune health and overall well-being.

In your recent biological age assessment for immune function, the results indicate that you are in the accelerated aging stage. This stage represents the final phase of immune function aging, which follows a period of stability known as the plateau stage. It is characterized by a more rapid decline in immune responsiveness and efficiency. While this stage is a natural part of the aging process, it is important to be aware of your overall health and engage in practices that support your immune system.



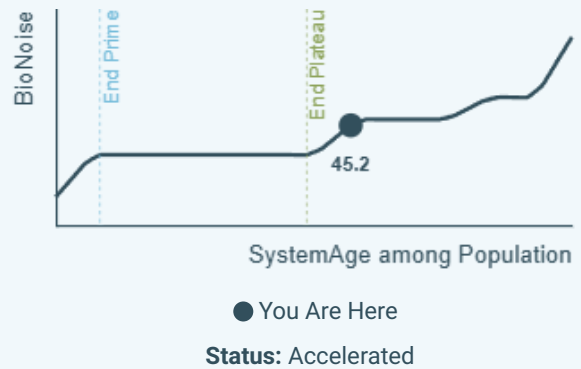
## Associated Diseases

- Crohn's Disease
- Rheumatoid Arthritis
- Graves' Disease

## Associated Pathways

- T Cell Receptor Signaling Pathway
- B Cell Receptor Signaling Pathway
- NF-κB Signaling Pathway

## Aging Entropy Curve



# Neurodegeneration

Certain diseases, exemplified by Parkinson's, Alzheimer's, Multiple Sclerosis, ALS, and aging-related brain changes, result in the progressive neurodegeneration of particular brain areas. In these diseases, the loss of neurons and neuronal connections results in diminished functional capacities.

## Aging Insights

The test results indicate that the biological age of your neurodegenerative function is younger than your chronological age, suggesting a reverse aging speed. This finding implies that your brain health is better than typical for someone of your age, potentially due to positive lifestyle choices and health practices. Maintaining such habits may continue to support optimal cognitive function and reduce the risk of neurodegenerative conditions.

The results of your biological age test for neurodegeneration indicate that you are in the accelerated aging stage. This stage, which follows the plateau stage, is characterized by an increased pace of aging that is typical in the later stages of life. While this is a natural progression, it is important to be aware of the potential for more rapid declines in neurocognitive functions. Staying informed and proactive about your health can help you manage this stage more effectively.

SystemAge

Chrono Age

45.2

72

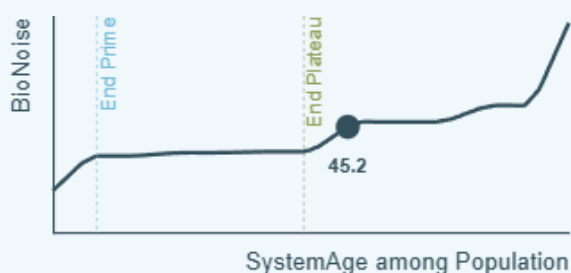
## Associated Diseases

- Lewy Body Dementia
- Parkinson's Disease
- Multiple Sclerosis (MS)

## Associated Pathways

- Tau Protein Phosphorylation and Aggregation Pathway
- Apoptosis Pathway in Neurons
- Insulin Signaling Pathway in Neurons

## Aging Entropy Curve



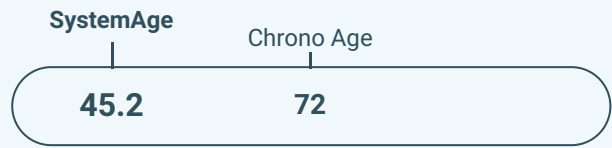
# Metabolism

The sum of chemical processes converting food into energy influences every aspect of our health, including weight and vitality, and involves every organ system. Metabolic pathways are tightly regulated to efficiently utilize nutrients at the level of cells and the entire body, orchestrating a dynamic process that adapts to individual needs and shapes the body's energy landscape.

## Aging Insights

The test results indicate that your metabolic function is aging in reverse speed compared to your actual age. This suggests that your metabolism is healthier and more efficient than typically expected for someone of your age group. Such positive aging in metabolic function can often be attributed to beneficial lifestyle and health practices, which may include balanced nutrition, regular physical activity, and adequate hydration.

The test results indicate that your metabolic function falls into the accelerated aging stage, which is the final phase in the aging trajectory for this function. This stage is characterized by a more rapid decline in metabolic efficiency, which is a natural part of the aging process. While it highlights that changes in metabolic processes are accelerating, it is important to understand that this is a common experience later in life. It is advisable to adopt healthy lifestyle practices and consult with healthcare professionals to manage this stage effectively.



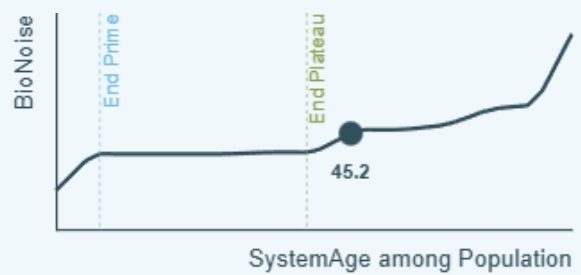
### Associated Diseases

- Gaucher's Disease
- Hypothyroidism
- Wilson's Disease

### Associated Pathways

- Oxidative Phosphorylation
- Glycolysis
- Gluconeogenesis

## Aging Entropy Curve



● You Are Here

Status: Accelerated



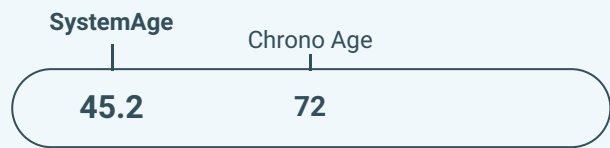
# Fibrogenesis and Fibrosis

Healthy fibrogenesis and fibrosis is the 'plan B' for quickly patching up tissues when the damage is significant, and stem cells might be too slow to heal. This process also re-creates a healthy supportive environment for the cells. In contrast, pathogenic fibrosis produces excessive fibrous connective tissue, diminishing the function of organs and altering tissue structures.

## Aging Insights

Your fibrogenesis and fibrosis function are aging in reverse, indicating they are healthier than expected for your age. This suggests that your lifestyle and health practices are positively impacting this particular function, potentially reducing the risk of fibrotic diseases. Maintaining these healthy habits may further support the optimal functioning of your body's tissue repair and remodeling processes.

A recent assessment indicates that your biological function for fibrogenesis and fibrosis falls into the accelerated aging stage. This stage signifies an advanced level of biological aging where the rate of fibrogenesis, which leads to fibrosis, has increased notably. While this is a natural progression later in life, it is important to be aware that these changes can affect tissue repair and organ function. Regular medical consultations and healthy lifestyle choices can help manage this stage effectively.



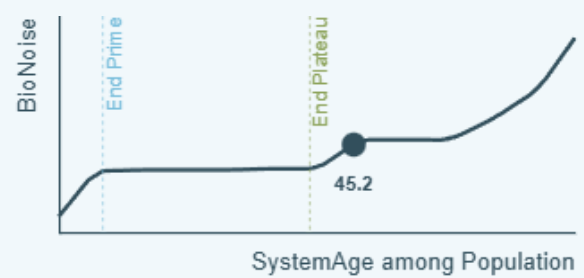
## Associated Diseases

- Pulmonary Fibrosis
- Systemic Sclerosis
- Liver Cirrhosis

## Associated Pathways

- Hedgehog signaling pathway
- Renin-angiotensin system
- Hippo signaling pathway

## Aging Entropy Curve



● You Are Here

Status: Accelerated

# Urinary System

Urinary health encompasses the kidneys, bladder, and associated structures, maintaining fluid balance and waste elimination. It acts as the body's filtration system, ensuring toxins are efficiently removed and fluid balance is maintained, promoting kidney and urinary well-being.

## Aging Insights

Your urinary health is exhibiting a reverse age speed, meaning it is healthier than typically expected for your actual age. This trend indicates that your lifestyle and health practices are positively impacting your urinary function. Maintaining these beneficial habits can continue to support strong urinary health as you age.

In reviewing your urinary health, you fall into the accelerated aging stage of the aging trajectory graph for this function. This stage is characterized by a more rapid decline in urinary function compared to earlier stages. It signifies that the mechanisms responsible for urinary health, such as kidney function and bladder control, are experiencing a faster rate of decrease. While this is a natural part of aging, it may be beneficial to consult healthcare professionals for strategies to manage and mitigate any potential impacts.

SystemAge

Chrono Age

45.1

72

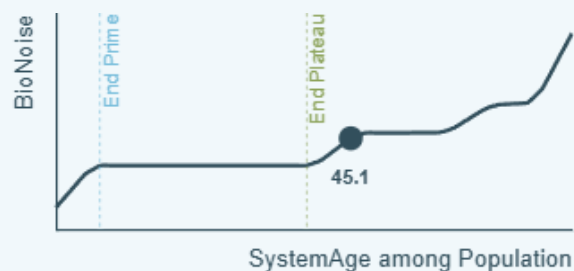
## Associated Diseases

- Renal Cell Carcinoma
- Urinary Incontinence
- Bladder Cancer

## Associated Pathways

- Tubuloglomerular Feedback Mechanism
- Renin-Angiotensin-Aldosterone System (RAAS)
- Calcium and Phosphate Reabsorption Pathways in Nephron

## Aging Entropy Curve



● You Are Here

Status: Accelerated

# Hepatic System

Hepatic health plays a vital role in detoxification, metabolism, and digestive health. With aging and certain diseases (hepatitis), liver tissue becomes replaced with fibrosis and/or experiences persistent inflammation that diminishes liver function and contributes to the overall loss of health.

## Aging Insights

Your hepatic function is exhibiting a reverse aging speed, meaning it is healthier than would be expected for your chronological age. This suggests that your lifestyle and health practices are contributing positively to your liver health, which is crucial for effective metabolism, detoxification, and overall well-being. Maintaining these healthy habits may continue to support your liver function and overall health.

In your hepatic health assessment, you have been categorized in the accelerated aging stage for this function. This stage represents a natural progression in biological aging, where the rate of decline in liver function tends to increase compared to earlier stages. It is important to understand that while this stage indicates that your liver function is diminishing at a faster rate, it is a common part of aging, particularly later in life. Maintaining a healthy lifestyle and regular medical check-ups can help manage and monitor your hepatic health effectively during this time.

SystemAge

Chrono Age

45.0

72

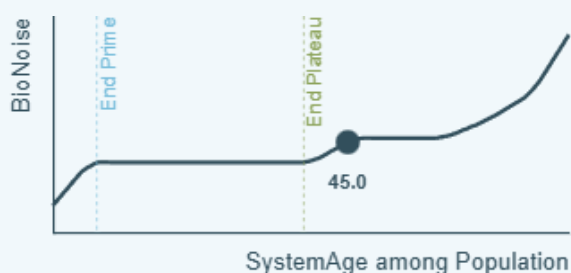
## Associated Diseases

- Hepatitis C
- Hepatitis A
- Liver cancer (hepatocellular carcinoma)

## Associated Pathways

- Gluconeogenesis
- Fatty Acid Synthesis
- Drug Metabolism Pathways (Phase I and Phase II)

## Aging Entropy Curve



● You Are Here

Status: Accelerated

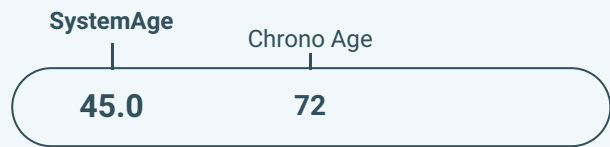
# Blood Sugar and Insulin Control

Blood sugar and insulin control are crucial for metabolic health, and this pancreatic function is responsible for maintaining stable blood sugar levels and proper insulin production. It involves a delicate balance between glucose regulation and insulin sensitivity, essential for preventing metabolic disorders and ensuring overall metabolic harmony. Sugar-insulin imbalance often accompanies human aging and manifests in diabetes.

## Aging Insights

Your test results indicate that the biological age of your blood sugar and insulin control is younger than your actual age, suggesting a slower or reverse aging process for this function. This implies that your current lifestyle choices and health practices are positively impacting your body's ability to manage blood sugar levels and insulin effectively. Maintaining this trend can contribute to a reduced risk of metabolic and age-related diseases in the future.

Your results indicate that you fall into the accelerated aging stage of the biological aging trajectory for blood sugar and insulin control. This stage is characterized by a more rapid decline in the body's ability to regulate blood sugar levels and insulin sensitivity. It is important to note that this is a natural part of the aging process, typically occurring later in life. Awareness of this stage can help guide strategies to manage and maintain optimal health.



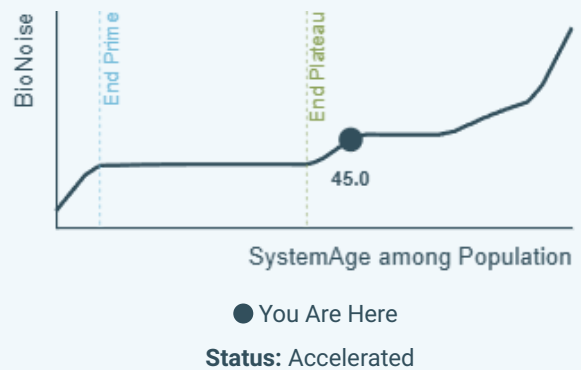
## Associated Diseases

- Type 1 Diabetes
- Insulinoma
- Maturity Onset Diabetes of the Young (MODY)

## Associated Pathways

- Insulin signaling pathway
- Pentose phosphate pathway
- Gluconeogenesis

## Aging Entropy Curve



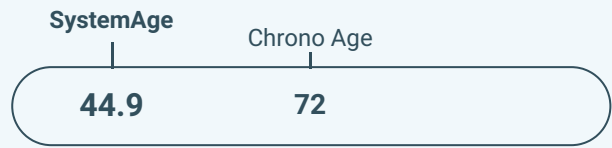
# Tissue Regeneration

Tissue regeneration replaces damaged cells in a tissue with new ones, a process that recapitulates organ development. This process ensures the restoration of normal tissue structure and function after injury or attrition, embodying nature's efficient renovation for sustained health. Tissue regeneration declines with aging and certain degenerative pathologies.

## Aging Insights

The evaluation indicates that your tissue regeneration function is operating at a biologically younger age than your actual age, showcasing a reverse aging trend. This suggests that your current lifestyle and health practices are contributing positively to maintaining and potentially enhancing your tissue repair and healing capabilities. Such a trend is generally associated with a balanced diet, regular physical activity, and effective stress management.

The results of your test indicate that you are in the accelerated aging stage for tissue regeneration. This stage is characterized by a noticeable decline in the body's ability to repair and regenerate tissues, which is a natural part of the aging process. While the efficiency of tissue regeneration decreases, it is important to note that this is a widely observed pattern in biological aging. Maintaining a healthy lifestyle and seeking regular medical advice can help manage this stage effectively.



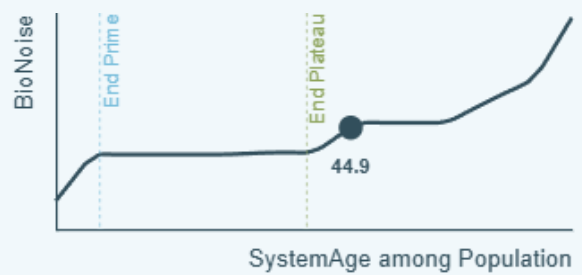
## Associated Diseases

- Osteoarthritis
- Liver Fibrosis
- Cirrhosis

## Associated Pathways

- Notch Signaling Pathway
- Wnt Signaling Pathway
- Hippo Signaling Pathway

## Aging Entropy Curve



● You Are Here

Status: Accelerated

# Reproductive System

Reproductive health depends on the interplay of hormones, the brain, reproductive organs, and gametes. It intricately balances the dance of life, transmitting cell pluripotency features from one organism to another through generations.

## Aging Insights

Your reproductive health function is classified under reverse age speed, suggesting it is healthier than typically expected for someone of your chronological age. This favorable indication implies that your lifestyle and health practices are positively impacting your reproductive system. Maintaining this trend through continued healthy habits could further enhance and prolong optimal reproductive health.

In your recent test, it has been determined that you fall into the accelerated aging stage for your reproductive health function. This means that the pace of aging in this area is accelerating, which is a natural part of the aging process later in life. It is important to recognize that while reproductive capabilities may be declining more rapidly, this stage is a standard progression for many individuals. Being aware of this stage can help you make informed decisions regarding your reproductive health.

SystemAge

Chrono Age

44.9

72

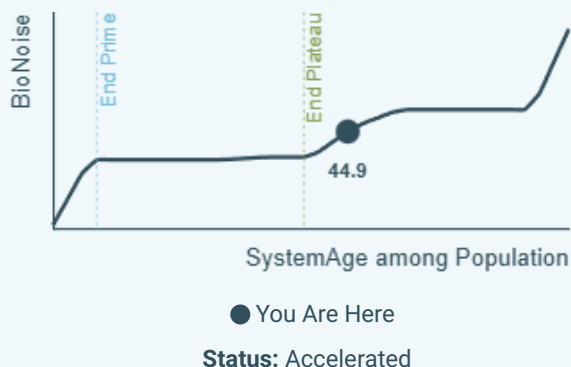
## Associated Diseases

- Erectile Dysfunction (ED)
- Prostatitis
- Varicocele

## Associated Pathways

- Hypothalamic-Pituitary-Gonadal (HPG) Axis
- Spermatogenesis Pathway
- Androgen Signaling Pathway

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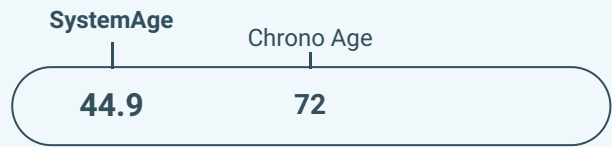
# Skeletal System

Bone function is crucial for skeletal health, and aging negatively impacts bone structure, strength, and density. Bone morphogenesis is the continuous remodeling of bone tissue that is effective in youth and becomes perturbed with aging and disease.

## Aging Insights

The results from your recent test indicate that your skeletal health is displaying a reverse age speed, meaning that it is healthier than what is typically expected for someone of your age. This suggests that your current lifestyle and health practices, such as proper nutrition and regular exercise, are positively affecting your skeletal health. Continuing these practices could help you maintain strong and healthy bones as you age.

Your test results indicate that you are in the accelerated aging stage for skeletal health function. This stage is characterized by a more rapid decline in bone density and strength, making bones more susceptible to fractures and osteoporosis. It is a natural progression that occurs later in life after the plateau stage. While it is important to be conscious of this stage, there are various measures you can take to maintain skeletal health and minimize risks, such as ensuring adequate calcium and vitamin D intake, engaging in weight-bearing exercises, and consulting with healthcare professionals for personalized advice.



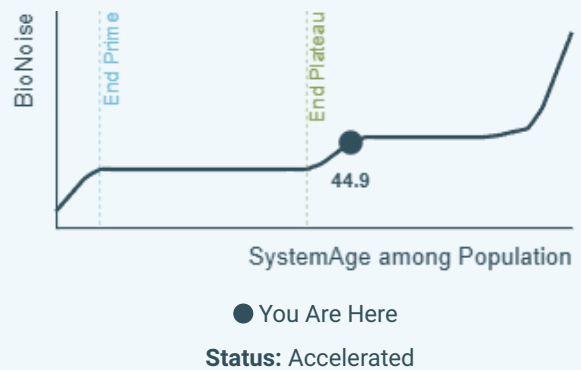
## Associated Diseases

- Rheumatoid Arthritis
- Osteoporosis
- Osteoarthritis

## Associated Pathways

- VEGF (Vascular Endothelial Growth Factor) Signaling Pathway
- RANK/RANKL/OPG Pathway
- PTH (Parathyroid Hormone) Signaling Pathway

## Aging Entropy Curve



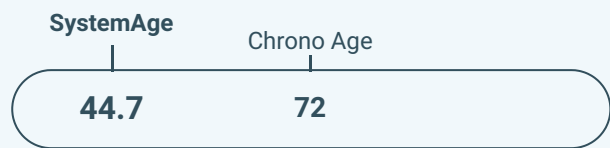
# Auditory System

The Auditory Health is responsible for hearing and plays a pivotal role in our sense of balance, ensuring a symphony of sensory experiences that enrich our daily lives. Auditory health frequently declines with aging and in certain diseases.

## Aging Insights

Your auditory health is aging at a reverse speed compared to your actual age, indicating that your hearing function is in better condition than typically expected for someone your age. This suggests that your lifestyle choices and health practices are positively impacting your auditory system, helping to maintain or even improve your hearing capabilities. It is recommended to continue with these beneficial habits to sustain this healthy trend.

In the context of auditory health, the results indicate that you are currently in the accelerated aging stage for this function. This stage, which follows the plateau stage, is characterized by a more rapid decline in auditory capabilities relative to earlier life stages. It is a natural part of the aging process, and experiencing changes in hearing sensitivity and clarity is common. While the rate of aging for auditory health may increase, understanding and addressing these changes can help manage the impact on your daily life.



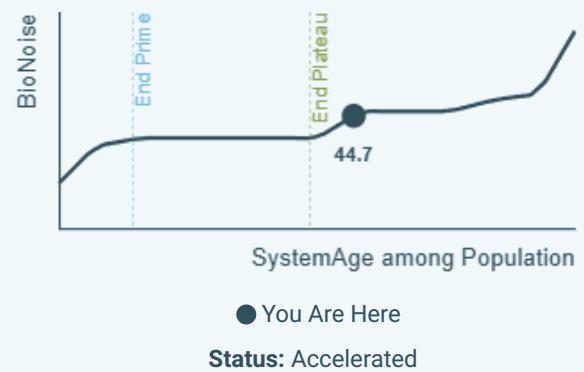
## Associated Diseases

- Meniere's Disease
- Otosclerosis
- Auditory Processing Disorder

## Associated Pathways

- Auditory Cortex Processing Pathway
- Mechanotransduction Pathway
- Auditory Brainstem Response Pathway

## Aging Entropy Curve





# Blood and Vascular System

Blood components include immune cells, oxygen-delivering red blood cells, and platelets that form clots to stop bleeding. In addition to the blood cells, hormones, growth factors, antibodies, and other proteins, macromolecules, and nutrients are circulated in the vasculature. The vasculature is composed of a complex network of blood vessels, which are vital for maintaining proper blood flow. With aging, vascularization becomes perturbed and typically diminished, contributing to many aging-associated dysfunctions.

## Aging Insights

Your blood and vascular health is exhibiting signs of reverse age speed, meaning that this particular function is performing more optimally than expected for your chronological age. This suggests that your current lifestyle and health practices are positively impacting your circulatory system. Overall, your blood and vascular health is in a commendable state, reflecting a favorable trend for this critical bodily function.

In your recent assessment, it has been determined that your blood and vascular health falls into the accelerated aging stage. This stage represents a time when the rate of decline in vascular function increases more rapidly compared to earlier phases. It is a natural and expected part of aging, typically occurring after a prolonged period of stability in these functions. While this indicates an advanced stage of vascular aging, it should be viewed as a routine development later in life.

SystemAge

Chrono Age

44.4

72

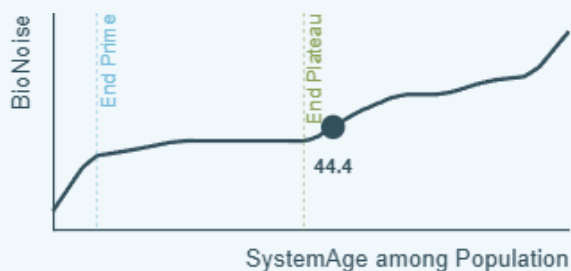
## Associated Diseases

- Acute Limb Ischemia
- Atherosclerosis
- Deep Vein Thrombosis (DVT)

## Associated Pathways

- Angiogenesis
- Arachidonic Acid Metabolism
- Endothelin Signaling Pathway

## Aging Entropy Curve



● You Are Here

Status: Accelerated

# Muscular System

Skeletal muscle allows us to move voluntarily and gives us strength and agility. Muscle tissue becomes progressively lost with aging and in certain diseases (dystrophies), causing people to lose strength, become frail, and depend on others.

## Aging Insights

The results of your test indicate that your muscular health is biologically younger than your actual age. This suggests that your lifestyle choices and health practices are contributing positively to maintaining stronger and healthier muscles. Overall, this trend is encouraging and generally associated with improved physical performance and reduced risk of age-related muscle decline.

The test results indicate that you are in the accelerated aging stage for muscular health. This stage signifies that the natural decline in muscle mass and strength is occurring at a faster pace, which is common later in life. While this is a normal part of the aging process, it is important to be aware of this accelerated change. Continued attention to physical activity, nutrition, and overall health can help manage the effects of this stage.

SystemAge

Chrono Age

44.2

72

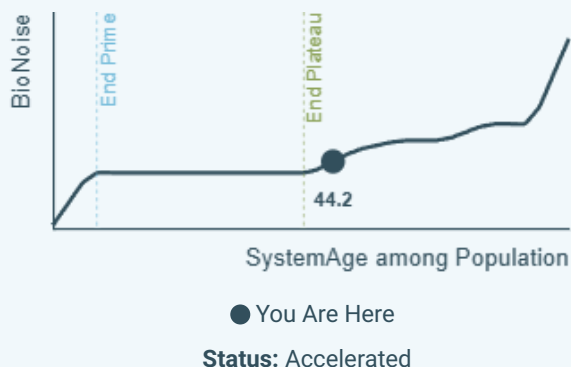
## Associated Diseases

- Compartment Syndrome
- Dermatomyositis
- Muscular Dystrophy

## Associated Pathways

- Pentose Phosphate Pathway
- Krebs Cycle (Citric Acid Cycle)
- Beta-Oxidation of Fatty Acids

## Aging Entropy Curve



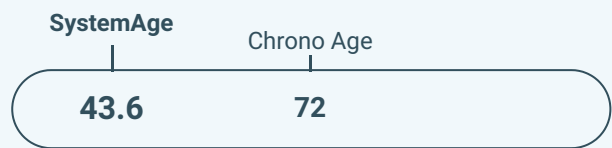
# Respiratory System

Respiratory health is essential for breathing and relies on lung health. Lungs maintain optimal respiratory function throughout our lives. Respiration intakes oxygen and expels carbon dioxide, essential for sustaining life. Respiratory health often declines with aging and in certain diseases, such as pulmonary illnesses.

## Aging Insights

Your respiratory health is indicating a reverse aging pattern, meaning it is performing better than expected for your age. This suggests that your lifestyle and health practices are positively contributing to the robustness of your respiratory system. Maintaining such habits can continue to support healthy lung function and potentially mitigate age-related respiratory decline.

In the accelerated aging stage for respiratory health, you are experiencing an increased rate of decline in lung function, which is a normal part of the aging process. This stage follows the plateau phase, where lung function was relatively stable but already decreased compared to peak levels in earlier life. Though this stage indicates a quicker degradation of respiratory capacity, it is important to note that this is a common trajectory for many individuals as they age. It remains crucial to maintain healthy lifestyle practices and consult healthcare professionals regularly to manage and mitigate the impacts of this natural decline.



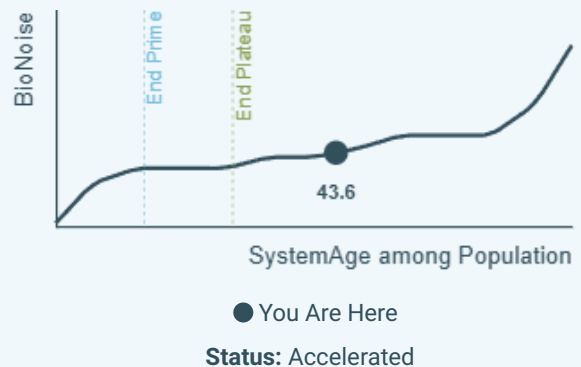
## Associated Diseases

- Emphysema
- Pulmonary Fibrosis
- Cystic Fibrosis

## Associated Pathways

- Pentose Phosphate Pathway
- Oxidative Phosphorylation
- Citric Acid Cycle (Krebs Cycle)

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\*Disclaimer: The information provided by our health recommendation engine, including both Clinical Recommendations and Lifestyle Recommendations, is intended for maintaining or encouraging a healthy lifestyle and is for informational general wellness purposes only. The information provided is unrelated to the diagnosis, cure, mitigation, prevention, or treatment of a disease or condition. and is not intended as a substitute for professional medical advice, diagnosis, or treatment. While we strive to offer accurate and personalized recommendations based on your test results, it is essential that you consult with a qualified healthcare provider before making any decisions or taking any actions based on these recommendations. We do not assume any liability for actions taken based on the information provided by our engine. Always seek the guidance of your physician or other qualified health professional with any questions you may have regarding your health and wellness.