HEALTH BASICS

Aging

Aging is the lifelong process of biological change that can affect function, resilience, and health risks.

WHAT IT IS
Lifelong biological changes that occur as time passes

WHERE IT COMES UP
Routine care, screening decisions, medicines, and life planning

WHY IT MATTERS
Changes resilience, function, and risks for several conditions

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
Primary care clinician or geriatric care team

HOW IT IS CHECKED
No single test; health and function assessed separately

Overview

Aging is the lifelong process of change that happens as time passes. It begins early in life, not at a particular birthday. It affects cells, organs, physical abilities, and how the body responds to stress.

Aging is not a disease or a diagnosis. It also does not affect everyone in the same way. Two people of the same age may differ greatly in strength, memory, mobility, medical conditions, and ability to manage daily activities.

Your chronological age is the number of years since you were born. Biological aging refers to changes within the body. These two ideas are related, but they are not identical. Genetics, living conditions, health conditions, injuries, activity, nutrition, sleep, social connection, and exposures such as tobacco can all influence health over time.

Healthy aging does not mean remaining free of every condition. The World Health Organization describes it in terms of maintaining the abilities that support well-being, such as moving around, making decisions, maintaining relationships, and doing valued activities.

A new concern should not automatically be blamed on age. Pain, weakness, low mood, memory problems, weight loss, or repeated falls may have causes that can be assessed and treated.

How it works

Cells must continually repair damage, make energy, remove waste, and respond to signals. Over time, these systems may become less efficient. Researchers describe several connected processes called the "hallmarks of aging." These include changes in DNA maintenance, energy production, inflammation, communication between cells, and the ability to replace damaged cells.

These processes do not provide a simple score for an individual person. They are a scientific framework for studying why tissues change over time.

Organs also tend to have less reserve. Reserve is the extra capacity that helps the body handle demands such as infection, surgery, injury, heat, or lack of sleep. A person may function well during ordinary activities but take longer to recover after a major stress.

Body composition often changes with age. Muscle and bone may be lost, while the location and amount of body fat may change. The heart, lungs, kidneys, brain, immune system, eyes, and ears may also work differently than they did earlier in life.

These changes can affect medicines. For example, the kidneys and liver help remove many medicines from the body. Changes in body water, fat, and organ function can alter how long a medicine remains active. Age alone does not determine the right medicine or dose, but it is one factor a prescriber may consider.

No blood test, scan, or questionnaire measures aging as a whole. Tests sold as "biological age" or "epigenetic age" tests examine selected markers, often chemical patterns attached to DNA. They are useful in research, but they do not yet provide a complete or routinely actionable assessment of an individual's health.

Why it matters for your health

Age is one factor used when estimating the chance of certain conditions. It may affect which screening tests, vaccinations, or medicine reviews are appropriate. Decisions also take account of your health history, family history, anatomy, previous test results, daily function, preferences, and local guidance.

The risk of several separate conditions rises with age. These include cardiovascular disease, some cancers, osteoporosis, dementia, hearing loss, vision problems, and type 2 diabetes. Aging itself is not any of these conditions.

Function can sometimes give more useful information than age alone. Clinicians may ask whether you can walk safely, climb stairs, prepare food, manage medicines, handle finances, or

complete personal care. A change in these abilities can help identify a health or support need.

Recovery may take longer after an illness or injury because the body has less reserve. Several small problems can also combine. For example, poor vision, a medicine causing dizziness, and reduced leg strength may together increase the chance of falling.

Social circumstances matter as well. Safe housing, transport, access to food and health care, financial security, and contact with other people can affect independence and well-being. These are not biological changes, but they shape the experience of aging.

What can go wrong

Normal aging can overlap with medical conditions, making it easy to dismiss a treatable problem. Important related conditions and situations include:

These outcomes are not inevitable parts of getting older. They can occur at different ages and may need separate assessment.

Some concerns are suitable for a routine appointment. Examples include gradual changes in hearing or vision, increasing difficulty with daily tasks, repeated near-falls, ongoing memory concerns, unexplained weight change, reduced strength, or persistent low mood. A medication review is also reasonable after a new medicine, a hospital stay, or troublesome side effects.

Sudden changes are different. Seek urgent medical assessment for new confusion, a rapid loss of function, or a fall with possible injury. Call emergency services for signs of stroke such as facial drooping, one-sided weakness, or speech difficulty; severe breathing difficulty; chest pressure; fainting; uncontrolled bleeding; or a serious head injury.

- Frailty: reduced reserve that makes recovery from illness or injury harder
- Sarcopenia: clinically important loss of muscle mass and strength
- Osteoporosis: weakened bones that are more likely to fracture
- Delirium: a sudden change in attention and thinking, often caused by illness or medicine
- Dementia: ongoing decline in thinking abilities that interferes with daily life
- Sensory loss: hearing or vision impairment that affects communication or safety
- Polypharmacy: using multiple medicines, which can increase interaction and side-effect risks
- Falls: events that may result from several medical, physical, medicine-related, or environmental factors

What you can do

There is no single action or test that measures or controls aging. You can instead focus on health, function, and risks that can be assessed.

Ask what screening is appropriate for you. The answer may be based on age, sex, organs present, pregnancy history, family history, previous results, health conditions, and where you live. Screening is intended for people without signs of the condition being checked; new concerns may require a different type of evaluation.

Keep an up-to-date record of prescription medicines, non-prescription products, vitamins, and supplements. Include why you take each one if you know. Ask whether any medicine could affect balance, alertness, blood pressure, memory, or sleep. Do not stop a prescribed medicine without advice from the relevant clinician.

Regular physical activity can support strength, balance, heart health, and daily function. Activities should suit your current abilities and health. If pain, breathlessness, dizziness, or a recent illness limits activity, ask about a safe starting point or whether physiotherapy could help.

Nutrition needs are individual. A clinician or dietitian can assess unexplained weight loss, difficulty chewing or swallowing, reduced appetite, or concerns about getting enough nutrients. Products marketed as "anti-aging" have not been shown to stop aging as a whole, and supplements can interact with medicines.

You can also keep a simple record of changes in walking, falls, memory, hearing, vision, weight, and ability to manage daily tasks. Dates and specific examples are more useful than a general impression.

Planning ahead may include documenting your health priorities, naming someone who could speak for you if needed, and learning about local advance-care planning documents. This is relevant to adults of any age.

Common questions

Is aging the same as becoming ill?

No. Aging is a normal biological process. Some diseases become more common with age, but they remain separate conditions that may need assessment and treatment.

Can aging be reversed?

No treatment has been shown to reverse aging as a whole. Some age-related changes and

health risks can be improved or managed, including reduced strength, poor balance, uncontrolled blood pressure, hearing impairment, and medicine side effects.

Are memory changes always part of normal aging?

No. Taking longer to recall a name can occur with age, but memory problems that disrupt daily life are not something to dismiss. Sudden confusion requires urgent assessment because it may be delirium.

Should I buy a biological age test?

These tests may estimate selected biological markers, but they do not diagnose overall health or reliably tell an individual how long they will live. A standard health and function assessment is usually more useful for making care decisions.

When does old age begin?

There is no biological birthday when a person suddenly becomes old. Age cutoffs may be used for services, research, screening, or benefits, but they do not define an individual's abilities or health.

Sources

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