The Arising

OCTOBER 12, 2026

DAILY ISSUES



EDITORIAL ILLUSTRATION / AN ARTISTIC INTERPRETATION

The quiet work of renewal.

CELLULAR RECYCLING / RESEARCH / HEALTHSPAN

The full original issue follows, with its articles and sources preserved.
Editorial review copy. This illustration update is not a new evidence audit.

The Arising

Daily intelligence on longevity, age reversal, and the future of human health.

MONDAY, OCTOBER 12, 2026 · VOL 1 NO 10 · ARISING HEALTH

10 stories across 2 desks, about 22 minutes to read, followed by 192 briefs grouped by topic.

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The Arising

MONDAY, OCTOBER 12, 2026 · LONGEVITY & HEALTHSPAN DESK

IN THIS EDITION · LONGEVITY & HEALTHSPAN

1. **Age-Related Decline in a Cellular Recycling Pathway Lets 'Zombie' Cells Pile Up, Mouse Study Finds**
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LONGEVITY & HEALTHSPAN · STANDARD READ · 3 MIN — NATURE AGING · 2 SOURCES

Age-Related Decline in a Cellular Recycling Pathway Lets 'Zombie' Cells Pile Up, Mouse Study Finds

As the body ages, damaged "senescent" cells tend to build up in tissues, and a new mouse study suggests one reason: the immune cells meant to clear them lose a cellular recycling pathway of their own.

The work, published in Nature Aging in 2026, comes from a group at Albert Einstein College of Medicine. It is preclinical research. The abstract describes experiments in cells grown in the lab and in mice, including a mouse model of lung scarring. It does not report a human trial. The abstract also does not give the number of animals used, and only the abstract was available to us.

Senescent cells have stopped dividing but stay alive. They release inflammatory signals, known as the senescence-associated secretory phenotype. Some senescent cells help with jobs like wound healing. Their persistence in older tissue is linked to age-related disease.

The study focuses on chaperone-mediated autophagy, or CMA. It is a pathway that picks out specific proteins and breaks them down inside the cell's recycling compartments, called lysosomes. A separate 2025 Nature Aging study from the same research group, using reporter mice, found that CMA activity falls with age in most organs and cell types, and that the fall was greater in males.

According to the 2026 abstract, the loss of CMA changes how senescent cells behave. Cells lacking CMA still became senescent, but they took on features resembling those of senescent cells from aged animals. Their secretions pushed neighboring cells toward senescence more strongly. Those secretions also reduced CMA in macrophages, the immune cells that engulf senescent cells. With less CMA, the macrophages were worse at engulfing them.

The mouse experiments point the same way. Blocking CMA only in macrophages increased the number of senescent cells in mice. It also delayed the resolution of senescence during wound healing. In the other direction, a drug that activates CMA reduced senescent cell burden in aged mice. It also reduced disease severity in the pulmonary fibrosis model. The authors write that CMA decline is a driver of senescent cell persistence.

The press coverage adds some detail that the abstract does not give. Lifespan.io reports that the compound was called CA77.1. It reports that treatment started two days after lung injury reduced fibrosis, while treatment started on day 7 did not. It also reports that effects in aged mice varied by tissue, sex and marker, and that lung tissue from people with fibrosis showed reduced CMA function. We could not check these points against the full paper.

Why does this matter for healthy aging? If the answer holds up, clearing senescent cells may depend partly on keeping the immune system's own recycling machinery working. That would offer a different target from drugs that kill senescent cells directly. If it does not hold up, senescent cells may build up for other reasons, and boosting CMA would not help much. The weakest point is that the evidence is from mice and lab-grown cells, and we have only the abstract.

For now, this is not advice for daily life. CA77.1 is described by Lifespan.io as a drug known to activate CMA, and it has not been shown to be safe or effective in people. Nothing in the abstract concerns fasting or any diet, and no routine has been shown by this work to restore CMA in people. Readers should not start or stop any medication, treatment or supplement without consulting their clinician. Lifespan.io quotes study leader Ana Maria Cuervo: "By restoring cellular recycling, we may be

able to help the body's own defenses clear these cells more effectively. The next challenge is determining whether this approach can eventually be developed into a safe treatment for age-related diseases in people."

WHAT TO WATCH NEXT

Whether the findings are reproduced, whether the full data show consistent effects across sexes and tissues, and whether any CMA-activating drug moves into safety testing in people.

Sources: Nature Aging (2026), Lifespan.io (reporting on Nature Aging, Albert Einstein College of Medicine)

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LONGEVITY & HEALTHSPAN · STANDARD READ · 3 MIN ABC NEWS

Large Review Links Insomnia to 26% Higher Stroke Risk and More Hospital Stays

Long-term trouble sleeping may be more than a nuisance: a large new review links insomnia to a 26% higher risk of stroke, along with more depression, more suicide attempts and more hospital stays.

The study was published in late September 2026 in the journal Sleep Medicine Reviews. Researchers from Austria, Germany, Italy and Switzerland did not run a new experiment. They pulled together about 20 earlier review studies, which covered millions of participants across multiple countries. This approach is sometimes called an umbrella review. It asks what the whole body of research says, rather than relying on one study.

Besides the stroke finding, people with insomnia had nearly 30% higher odds of being hospitalized for any reason, according to ABC News. The review also found that people with insomnia were more likely to have depression and to have attempted suicide than people without insomnia. It also found a connection between insomnia and dementia, particularly Alzheimer's disease.

Insomnia is the most common sleep disorder in the United States, according to the National Institutes of Health. It makes it hard to fall asleep, stay asleep or get good-quality sleep.

The findings show associations only. They do not prove that insomnia causes any of these conditions. Dr. Stefan Seidel, an author of the study and a neurology professor at the Medical University of Vienna, urged calm. "An increased risk at the population level does not mean that an individual with insomnia will develop dementia, depression or have a stroke," he told ABC News.

Seidel said the results instead give "another reason to take persistent sleep problems seriously, identify possible underlying causes and provide evidence-based treatment when appropriate." Lead author Luca Vignatelli, of the IRCCS Institute of Neurological Sciences in Bologna, Italy, framed it as a signal. "Insomnia deserves attention as a warning sign of the status of brain and mental health," he said.

Sleep and mood appear to feed each other. Dr. Thanuja Hamilton, a board-certified sleep medicine physician at Advocare, told ABC News that anxiety and depression can disrupt sleep. Poor sleep, in turn, can make people more irritable, more anxious and less resilient to stress. That can make it harder to sleep again.

On dementia, the NIH says sleep plays a role in clearing waste products linked to impaired brain function and Alzheimer's disease from the brain. Hamilton described it as the brain taking out the trash, and her view is that poor or short sleep could allow more of that waste to build up. That is an explanation offered by an expert, and the new review does not show it is the cause.

The treatment news is the encouraging part. Cognitive behavioral therapy for insomnia, known as CBT, is often the first option for long-term insomnia, according to the NIH. It works on thoughts and behaviors that interfere with sleep. Techniques can include adjusting sleep schedules and limiting time spent awake in bed. Hamilton called it the gold standard. She also said it is difficult and time-consuming, "but it is worth it." Do not start or stop any insomnia treatment or sleep medication without talking to your clinician first.

Experts also pointed to everyday habits. One of the most important, they said, is a consistent sleep schedule, because the body's internal clock likes regularity. They also advised turning off the TV or phone 30 to 60 minutes before bed and avoiding coffee or alcohol late in the day. Trying harder to sleep tends to backfire, Hamilton noted.

The review shows associations, not causes, and that is the weakest point of the argument: it cannot tell us whether insomnia drives these conditions, whether they drive insomnia, or whether something else underlies both.

The practical message is modest but useful. Vignatelli said, "Sleep should be a topic to discuss with your doctor when talking about health, at any age." If you or someone you know is having thoughts of suicide, free, confidential help is available 24 hours a day by calling or texting 988.

WHAT TO WATCH NEXT

Studies that test whether treating insomnia, such as with CBT, actually lowers the risk of stroke, depression and dementia, which this review cannot answer.

Source: ABC News (reporting on Sleep Medicine Reviews)

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LONGEVITY & HEALTHSPAN · STANDARD READ · 4 MIN THE LANCET. PRIMARY CARE · 2 SOURCES

Large Trial Finds Test Scores Rose in All Groups of Older Adults With Low Cognitive Scores, With Slightly More Gain From a Website and Brief Support

A single page of advice on keeping the brain active was followed, a year later, by many older adults no longer scoring in the low range on a reasoning test, and a website with brief phone support did a little better still.

That is the finding of the Active Brains trial, a randomised controlled trial published in The Lancet Primary Care in 2026. It enrolled 11,563 adults aged 60 to 85 from 670 GP practices in England, Wales and Scotland. All had low scores on a computerised verbal reasoning test, the Baddeley test. All needed internet access, and people with a dementia diagnosis were excluded, which limits how far the results can be generalised. The trial was open-label, so participants knew which group they were in. The statisticians and the research team making follow-up calls did not.

Participants were assigned by chance to one of three groups. The control group (3,927 people) got a one-page, evidence-based advice sheet on activities that protect cognitive health, plus usual care. The Active Brains group (3,169) got a website with support for physical activity, a Mediterranean diet and brain-training games. The third group (3,087) got the website plus three brief support sessions of about 10 minutes, by email or phone.

The main result was the verbal reasoning score at 12 months. Higher is better. The control group averaged 18.3. The website group averaged 18.7, an adjusted difference of +0.50 points (95% confidence interval 0.13 to 0.87). The website-plus-support group averaged 19.2, a difference of +0.97 (0.59 to 1.34). These are small gaps on the test scale. The paper does not present them as dramatic.

The more striking result came from the control group itself. The study looked at how many people no longer met the test-score criteria for age-associated cognitive decline, a measure of lower-than-expected thinking ability for age. At 12 months, 883 of 3,113 control participants with data (28.4%) no longer met it. The figures were 842 of 2,566 (32.8%) in the website group and 811 of 2,546 (31.6%) in the website-plus-support group.

Milder and more severe levels of impairment were also measured. Here, "mild" and "severe cognitive impairment" mean score cutpoints on one reasoning test, not clinical diagnoses. According to the authors, fewer people in the website-plus-support group, but not the website-only group, met the test criteria for mild or severe cognitive impairment. Across the trial population, the paper reports an 8% relative reduction in meeting the mild-impairment test criteria with online help plus support (risk ratio 0.92; 95% CI 0.87–0.97). For those who started with the mild-impairment test criteria, there was an 18% reduction in scores consistent with severe impairment (risk ratio 0.82; 0.70–0.96).

Several cautions matter. Everyone received some cognitive-health advice and cognitive testing, so there was no group left entirely untouched. The control group's improvement therefore cannot be pinned on the advice sheet alone. Test scores can also rise on retesting, and people can drift above or below a cut-off by chance. Data at 12 months were available for 79.3% of the control group but only about 67% of the other two groups. The authors used statistical methods to fill the gaps, but the difference in dropout is worth noting. Nearly all participants were White (95.8%). This is where the argument is weakest: without an untreated comparison group, we cannot say how much of any change came from the advice itself.

The trial measured a test score, not dementia. The authors say follow-up for dementia at five years is ongoing, and that research is needed on longer-term effects. Serious adverse events and deaths were similar across groups and judged unrelated to treatment.

The University of Southampton's press release went further than the paper. Its headline said puzzles can "reverse" cognitive impairment, and it said scientists had "proven" this. The trial measured test scores at 12 months and did not diagnose or track impairment over time, so that wording outruns the data. The release also described the 8% and 18% reductions as applying to those who had website access or extra support, which is looser than the paper's wording. Lead researcher Paul Little was quoted in the release saying, "Simple messages and simple things that people can do really make a difference," and that this need not cost the NHS much.

The paper tests brief primary-care interventions and offers no personal advice to readers, so what follows is our reading, not a finding. The study's advice centred on low-cost habits: staying physically active, eating a Mediterranean-style diet, and doing mentally engaging things. The Southampton release lists puzzles, online brain-training games, playing an instrument, singing in a choir, learning a language and social activities. The trial cannot say which of these matters most, or that any one of them caused the score changes. Anyone thinking of changing their exercise or diet should talk to their clinician first, and should not start or stop anything without that advice.

WHAT TO WATCH NEXT

What to watch next is the five-year follow-up, which will show whether these early gains last and whether they translate into fewer cases of dementia.

Sources: The Lancet. Primary care (2026), University of Southampton / The Lancet Primary Care

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LONGEVITY & HEALTHSPAN · STANDARD READ · 3 MIN THE MENOPAUSE SOCIETY

Testosterone Therapy Linked to Higher Cardiovascular Risk in Postmenopausal Women

Women who took testosterone after menopause had a much higher rate of heart and blood vessel disease than women who did not, according to The Menopause Society's report of a new study. The absolute numbers were small, but the lead author calls the gap a potentially important safety signal.

This article is based on that report. The study itself was not reviewed.

Testosterone is not routinely recommended for postmenopausal women, according to The Menopause Society. Long-term safety data are limited. Still, doctors prescribe it off label for low sexual desire. The society says no testosterone products are approved by the FDA for women in the United States. Clinicians use very low doses of male formulations, usually as a cream or gel.

The society says testosterone has proven effective for hypoactive sexual desire disorder. It describes this as a persistent, distressing loss of interest in sex, estimated to affect about 10% to 15% of postmenopausal women. It adds that evidence is insufficient to show benefit for many other menopause symptoms, including fatigue, memory loss, weight gain or loss of bone density.

According to the society's report, the researchers used data from the TriNetX US Collaborative Network. They included more than 6,300 propensity-matched women, meaning women were paired to be similar on factors such as smoking, obesity, diabetes, high blood pressure and cholesterol problems. Women aged 45 and older who started testosterone were compared with women who had no testosterone. Women with earlier cardiovascular disease were excluded. Follow-up averaged nearly three years.

The reported result: 3.8% of women on testosterone had a cardiovascular event, compared with 0.5% of those not on it. The hazard ratio was 8.08, with a 95% confidence interval of 4.72 to 13.82. Put plainly, the rate of events over time was about eight times higher in the testosterone group. The events counted included angina, heart attack, ischemic heart disease, ischemic stroke and heart failure.

The society reports the finding held when women taking testosterone plus hormone therapy were compared with women taking hormone therapy alone. It also reports the link appeared across multiple ways of defining the groups.

There are limits. The study is described as retrospective, meaning it looked back at existing records. Such studies can show a link. They cannot prove that testosterone caused the events. The society's release says results will be presented at its 2026 Annual Meeting, and it does not say the work has been published in a peer-reviewed journal. The weakest point is that we have only a press summary, not the paper, so we cannot check how the groups were built or whether unmeasured differences between them explain the size of the gap.

Lead author Dr. Xuezhi Daniel Jiang of Drexel University College of Medicine said: "Our findings identify a potentially important cardiovascular safety signal associated with testosterone therapy in postmenopausal women. Although absolute event rates were low, the consistency of the association across multiple analyses warrants further prospective investigation."

Dr. Stephanie Faubion, the society's medical director, said the findings are a reminder for clinicians to carefully balance individual risks and benefits when prescribing testosterone. She noted that cardiovascular disease remains the number one killer of women.

For women considering testosterone, or already using it, here are questions we suggest raising with a prescriber. These are our own suggestions, not drawn from the society's report, and not medical advice. What specific symptom is the treatment meant to address, and is there evidence it works for that symptom? Low sexual

desire is the use the society says has proven benefit. Given my own heart risk factors, such as blood pressure, cholesterol, diabetes and smoking, how does this change the balance? What dose and form would be used, and how would benefit be judged? When would we review whether to stop? Are there other options? Do not start or stop testosterone, or any hormone therapy, without talking to your clinician first.

The authors say prospective research, which follows people forward in time, is needed. We would also suggest watching for the full study to appear in a peer-reviewed journal, where its methods and numbers can be checked.

Source: The Menopause Society

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LONGEVITY & HEALTHSPAN · STANDARD READ · 2 MIN

WALL STREET JOURNAL , NOT RETRIEVED; DETAILS COME FROM SECONDHAND RESEARCH NOTES

Report: White House Stalls Kennedy's Push for a Federal Definition of Ultra-Processed Food

Shoppers hoping for an official federal answer to what counts as "ultra-processed" food do not have one, and according to a report attributed to the Wall Street Journal, the White House has stalled the effort. We could not confirm that report ourselves, and we do not know when, or whether, a definition will arrive.

Our account says the Journal reported that three parts of Health Secretary Robert F. Kennedy Jr.'s food agenda have been held up. The biggest is described as the first federal definition of ultra-processed food. The others are described as a stricter USDA school-meals rule and a letter backing David Kessler's petition to declare some refined carbohydrates unsafe.

As relayed to us, health officials wanted any food containing artificial colors, nonnutritive sweeteners or chemical preservatives to count as ultra-processed, with some exemptions. White House staff are said to have worried the definition would cover most grocery-store food and help lawyers already suing food companies.

The account says the White House canceled a planned August announcement by the Department of Health and Human Services days before it was due, then blocked a second attempt. It also says White House regulatory lawyer Mark Paoletta saw the rule as new red tape and a potential boon to trial lawyers. We could not verify either detail.

The same account says the school-meals rule would have cost about $2 billion, roughly four times the earlier projection. We have not seen the underlying figures.

The industry and public health sides are described as disagreeing sharply. General Mills CEO Jeff Harmening is quoted as saying, "Categorizing foods by how they're processed is wrongheaded and can lead to opposite outcomes." Public health advocate Jerold Mande is quoted as saying, "We have the shortest lifespans of any wealthy country. It's an urgent problem." We could not check either quote against the original, so treat them as unverified.

For shoppers, the practical point is our own suggestion, not something from the reporting: if no federal definition exists, no official line separates ultra-processed foods from the rest, and the ingredient list on the package is one tool you can use. The categories the health officials reportedly proposed to target are artificial colors, nonnutritive sweeteners and chemical preservatives, which would appear on such a list. This is the weakest part of the piece: it rests on the unconfirmed report and is a reading suggestion, not evidence about health outcomes.

This article is based on a Wall Street Journal report as relayed by the Genetic Literacy Project. We could not fetch the Genetic Literacy Project page or the Journal's text. Every detail here comes from secondhand internal research notes, not from our own reading of either piece, and none of it has been independently checked.

Watch for whether HHS makes another attempt at a definition, and whether the White House allows it to proceed.

Source: Wall Street Journal (via Genetic Literacy Project), not retrieved; details come from secondhand research notes

The Arising

MONDAY, OCTOBER 12, 2026 · MARKETS & STRATEGY DESK

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MARKETS & STRATEGY · STANDARD READ · 1 MIN

COMPETITIVE LANDSCAPE · STAT; HEALTHCARE DIVE

Humana Wins and Alignment Threatens to Sue as 2027 Medicare Advantage Star Ratings Land

Humana is the biggest winner in the federal government's new quality ratings for Medicare Advantage insurers, according to STAT. Alignment Healthcare, which was downgraded, has threatened to sue.

The Centers for Medicare and Medicaid Services (CMS) released the 2027 star ratings this month. According to CMS, nearly 71% of Medicare Advantage enrollees are currently in a plan that will have at least four out of five stars for quality.

The ratings matter because of money. Plans that reach at least four stars receive bonus payments, which total $13 billion a year across the industry, according to STAT. Ratings for 2027 produce payouts in 2028. An insurer's grade this fall therefore

shapes its revenue a year or more ahead.

STAT also reports that the quality measures come with tens of billions of dollars in extra revenue for the highest-performing plans. That gives insurers a strong reason to compete on ratings and to fight results they dislike.

Alignment Healthcare has already said it may take legal action over its downgrade. STAT describes this as a now-common response from almost any insurer unhappy with its grades.

Our reading: the star system works as both a quality scorecard and a revenue lever. That makes a rating change a competitive event. A gain can help a company's position against rivals. A loss can cut bonus income. Repeated lawsuits add another risk, because final ratings may not stay settled.

STAT also reports deep uncertainty around the quality measures themselves. The available excerpt does not give insurer-by-insurer scores, so the size of each company's gain or loss is not yet clear from it.

WHAT TO WATCH NEXT

Whether Alignment files its lawsuit, whether other insurers challenge their grades, and how Humana and its rivals estimate the effect on their 2028 bonus payments.

Source: STAT; Healthcare Dive

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MARKETS & STRATEGY · STANDARD READ · 2 MIN REGULATORY CHANGE · EURONEWS

German Cabinet Approves Long-Term Care Insurance Reform, Raising Contributions for Childless Members and Higher Earners

Germany's federal cabinet has approved a long-term care insurance reform that asks childless members and higher earners to pay more, while leaving the hardest questions about who pays for care to a new commission.

According to Euronews, the cabinet approved the draft law on Wednesday, September 30, 2026. The two coalition partners, the CDU/CSU and the SPD, had argued over financing for some time. The reform was driven by Health Minister Carsten Linnemann of the CDU. Its stated aim is to steady the finances of the social long-term care insurance system.

The pressure is real. Euronews reports that care funds face rising spending and a growing number of people who need care. For now, the law focuses mainly on savings and financial stabilisation, according to the report.

The firmest change hits members without children. Their contribution surcharge to the social care insurance is due to rise from 0.6 to 0.9 percent on January 1, 2027. That is an increase of 0.3 percentage points. The government wants the extra money to bring in added revenue for the system.

Higher earners are also affected. The income ceiling up to which contributions are charged is to rise by €300. Euronews says this means people with higher incomes would contribute more to financing. The report gives no start date for this change beyond saying that most changes are planned to apply from 2027 or 2028. It does not say how many people this would reach or how much extra revenue it would raise.

From 2028, spouses and registered partners who are currently covered at no charge would owe an additional contribution. Exceptions are planned, including for family members who provide care and for parents of children with disabilities.

Several of the sharpest disputes were not settled. The SPD had criticised Linnemann's original draft as too focused on savings at the expense of people needing care and their relatives. It also wanted private care insurance to play a larger role and asked for a cap on out-of-pocket costs for people living permanently in care homes. According to Euronews, none of these demands entered the law. They are to go to a new commission for further discussion.

That commission is due to present proposals by January 2027. It is to look at how both the statutory and private care insurance systems can contribute more to financing. It will also review benefits for people in residential care. Linnemann said he plans to make subsidies for care home residents more socially targeted, according to the report.

For businesses and strategists, the regulatory picture is therefore split. The contribution changes are concrete, though only the childless surcharge carries a firm date in the report. The larger questions, including the role of private insurers and any cost cap, remain open. The source does not say how private insurers or care providers would be affected, so any view on that is speculation until the commission reports.

The cabinet decision does not make the reform law. The draft must still pass through the parliamentary process, and most changes are meant to apply from 2027 or 2028. Next to watch: the commission's proposals due by January 2027, and whether parliament changes the draft before it passes.

Source: Euronews (German edition)

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MARKETS & STRATEGY · STANDARD READ · 1 MIN

MARKET IMPACT · LONGEVITY.TECHNOLOGY

Investors Say High Consumer Longevity Valuations Will Push the Sector Toward a Decade of M&A

Consumer longevity companies priced for rapid growth may have to buy their way there, according to investors who spoke at a recent industry panel.

Longevity.Technology reported on the discussion, held at INNOCOS Zurich and moderated by Zsolt Farkas of Evolut. According to the report, the panelists expect high valuations to drive aggressive acquisitions over the next decade.

The report cites Oura at a valuation of about $11 billion, with a roadshow target of more than $15 billion. It also cites Function Health, whose valuation rose from $191 million to $2.5 billion in 17 months, alongside a $450 million growth round.

Panelists said companies at those prices will likely need to acquire others to grow into them. According to the report, they expect firms to merge scattered products into integrated "health operating systems."

Nicholas Gnan of Peers Capital said value depends on the customer base. "It's the purchasing power of the customer that you can talk to that decides the value of the business," he said, according to the report.

Arnaud Autret of L'Oréal BOLD, a corporate venture unit, described why large companies buy. "It's more about buying time than buying specific assets," he said.

Max Gottschalk of The Longevity Fund pointed to a limit on marketing-led growth. "Marketing can buy you into a market, but not a second purchase," he said.

Panelists also warned that overstating the scientific evidence can end a company's appeal to potential acquirers, according to the report. For founders, that ties the credibility of their claims directly to their exit options.

The panel's views are forecasts from investors and a corporate executive, not outcomes. What to watch next: whether the high-valuation consumer firms start announcing acquisitions, and how buyers treat companies whose science claims run ahead of the evidence.

Source: Longevity.Technology

IN THIS EDITION · MARKETS & STRATEGY

1. Humana Wins and Alignment Threatens to Sue as 2027 Medicare Advantage Star Ratings Land
2. German Cabinet Approves Long-Term Care Insurance Reform, Raising Contributions for Childless Members and Higher Earners
3. Investors Say High Consumer Longevity Valuations Will Push the Sector Toward a Decade of M&A
4. **Genentech Pays $100 Million Upfront for Alector's Brain-Penetrant Parkinson's Enzyme Therapy AL050**
5. European Commission Official Warns EU Workforce Will Shrink by About One Million a Year by 2050

MARKETS & STRATEGY · STANDARD READ · 1 MIN LONGEVITY.TECHNOLOGY

Genentech Pays $100 Million Upfront for Alector's Brain-Penetrant Parkinson's Enzyme Therapy AL050

Genentech, part of Roche, has agreed to pay $100 million upfront for exclusive worldwide rights to Alector's AL050, a Parkinson's therapy built to get an enzyme into the brain, according to Longevity.Technology, in a report dated October 9, 2026.

AL050 is an enzyme replacement therapy for deficiency of glucosylceramidase, known as GCase. It pairs an engineered GCase enzyme with Alector's Brain Carrier technology, which is designed to cross the blood-brain barrier, according to the report.

The deal could be worth much more. Longevity.Technology reports up to $1.17 billion in development, regulatory and sales milestones, plus tiered royalties. Genentech gets the rights to develop, manufacture and sell AL050.

The first target is Parkinson's patients with GBA1 mutations. The report says the drug may later be used more broadly.

Alector keeps ownership of its Alector Brain Carrier platform, according to the report. That means it can continue to use the delivery technology across the rest of its pipeline. Only AL050 moves to Genentech.

Roche's Boris L. Zaïtra is quoted as saying: "By partnering with companies such as Alector, we aim to delay or halt the progression of Parkinson's."

The notes do not give clinical data, trial stage or timelines, so the size of the upfront payment against the milestone total is the main signal available. A large share of the value depends on future results and sales. Whether AL050 earns those milestones will rest on clinical evidence that has not been reported here. This is the weakest point of the story: a deal price says something about company confidence, not about whether the drug works. AL050 is an investigational treatment, and readers should not start or stop any medication or treatment without talking to their clinician. Watch for the first details on trial design and timing from Genentech and Alector.

Source: Longevity.Technology

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MARKETS & STRATEGY · STANDARD READ · 2 MIN

TALENT SUPPLY AND RETENTION · BTA

European Commission Official Warns EU Workforce Will Shrink by About One Million a Year by 2050

Europe's workforce is on course to shrink by around one million people each year by 2050, a senior European Commission official has warned, and many older people are leaving work earlier than they want to.

Andriana Sukova, Deputy Director-General of the Commission's Directorate-General for Employment, Social Affairs and Inclusion, made the remarks on Monday at the Y50+ Talents forum in Sofia, according to BTA, the Bulgarian News Agency.

She said the problem is not limited to Bulgaria. According to her figures, children aged 14 and under make up 14.4% of the population, while people over 64 make up around 20%. The over-64 share has risen by 2.9 percentage points over the past few years. The rise is steepest in Poland (5.5 points), followed by Slovakia (4.8) and Croatia (4.3).

The part of the workforce she focused on is people aged 55 to 64. Sukova said a significant share of them are already outside the labour market, often against their wishes. She named a lack of adequate support services and care facilities for older people as one main reason. Health problems are another. She also said pension rules and access to extra social benefits can make early retirement easier.

The gap between countries is wide. In Czechia, around one-third of people aged 55 to 64 are outside the labour market. In Slovenia, more than half are.

Sukova also pointed to age discrimination. Employers, she said, often look for people who will fit young and dynamic teams and may overlook the knowledge of older staff. She argued that younger workers' enthusiasm should be paired with older colleagues' experience and judgement, and that people who can no longer carry the same workload should not be pushed out of working life.

On policy, she said about 2.3 million people have received support for continuing education in the 2021–2027 programming period. Measures have included adapting workplaces to employees' needs and subsidies that encourage employers to keep their staff. Drawing on assessments of European Social Fund projects from the previous period, she described mentoring schemes that pair older and younger employees as among the most effective approaches. She said they matter most in technical occupations, where practical knowledge is passed on directly.

For employers and investors, the implication is a tighter labour supply, though the source does not quantify any economic effect. Sukova framed the issue as one of competitiveness, saying a key EU aim is to make full use of its human capital. Her comments suggest that retention, workplace adaptation and mentoring could become more central to workforce planning. Whether they can offset a decline of this size is not addressed in the source.

Earlier at the forum, Bulgaria's Labour and Social Policy Minister Nataliya Efremova said the government recognises the potential of people over 50 and is committed to supporting their participation in the labour market.

WHAT TO WATCH NEXT

Whether national governments change pension rules, care services and anti-discrimination measures to keep more people aged 55 to 64 in work, and how the EU directs its next round of social funding.

Source: BTA (Bulgarian News Agency)

The Arising

MONDAY, OCTOBER 12, 2026 · BRIEFS

IN THIS EDITION · BRIEFS · 192 SHORT STORIES IN 18 TOPICS

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Each brief is a short summary of one published study, preprint, registered trial or news report, checked against its source by a second reviewer. These are for information only and are not medical advice.

VO2 MAX & ZONE 2 TRAINING 12

Studies of mild cognitive impairment measure too many different outcomes

A review of reviews, published in Alzheimer's & Dementia, looked at how trials in mild cognitive impairment report results. It covered 42 reviews and found 143 different outcomes. Only global cognition was reported by more than half of studies. The authors say this inconsistency limits evidence synthesis and argue for a standard core outcome set.

ALZHEIMER'S & DEMENTIA : THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION · 2026-09-01

Fatigue in immunotherapy patients not explained by exercise test results

A small study in Physiological Reports compared 19 people on immunotherapy checkpoint inhibitors with 21 healthy controls. The patient group reported more chronic fatigue, had 33% lower peak oxygen uptake and lower cycling efficiency. Yet exercise test measures did not explain their self-reported fatigue, which the authors say shows its complexity.

PHYSIOLOGICAL REPORTS · 2026-09-01

Exercise training improved fitness similarly in younger and older middle-aged adults with diabetes

A study in Physiological Reports assigned 50 inactive adults with type 2 diabetes, aged 37-59 or 60-70, to training or control groups. A supervised 12-week aerobic and resistance programme improved peak oxygen uptake and oxygen uptake kinetics in both age groups, with no between-group differences. Control groups did not change, and cardiovascular responses were unchanged after training.

PHYSIOLOGICAL REPORTS · 2026-09-01

Estimated fitness linked to different cognitive trajectories in Chinese and U.S. adults

An observational study in Alzheimer's & Dementia compared 3,458 Chinese and 6,905 U.S. middle-aged and older adults. In the U.S. group, each 1-MET higher estimated fitness was linked to lower odds of a moderate rather than persistently high cognitive trajectory. In the Chinese group, it was unexpectedly linked to higher odds of moderate and low trajectories. The authors say measurement differences, confounding or true biological differences could explain this.

ALZHEIMER'S & DEMENTIA : THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION · 2026-09-01

Pooled trials compare blood flow restriction and standard aerobic training for fitness

A systematic review and network meta-analysis in the Journal of Exercise Science and Fitness pooled 34 randomised trials with 1042 adults. It compared aerobic training with and without blood flow restriction on oxygen uptake, a measure of fitness. High-intensity interval training with restriction, low-intensity continuous training with restriction, and moderate-intensity continuous training ranked highest overall. Rankings varied by subgroup.

JOURNAL OF EXERCISE SCIENCE AND FITNESS · 2026-08-31

Heart blood flow gains after revascularization tracked submaximal fitness, not peak

In a study in The American Journal of Cardiology, 62 patients with suspected or established chronic coronary syndrome had PET heart scans and exercise tests before and after angiography. In the 36 revascularized patients, changes in blood flow reserve correlated modestly with changes in submaximal aerobic capacity, but not peak oxygen uptake. Exercise-induced angina fell from 42% to 3% among revascularized patients assessed.

THE AMERICAN JOURNAL OF CARDIOLOGY · 2026-08-31

Body-composition patterns tracked estimated fitness within BMI groups in US survey data

An observational analysis in Frontiers in Nutrition derived three body-composition axes from routine measurements in 23,698 people. It then projected them onto 5,060 US adults aged 20-49 from the NHANES survey. Within BMI groups, some axes remained associated with estimated VO_2max after correction for multiple testing. Links with the liver enzyme ALT were also examined. These are associations, not evidence of cause.

FRONTIERS IN NUTRITION · 2026-08-31

Blood hormone and lipid changes differ across 100, 308 and 622 km ultramarathons

A study in Life took blood samples from 44 experienced male runners before and after 100, 308 or 622 km ultramarathons. Insulin and triglycerides fell in all three events, while T3 and HDL cholesterol rose. Other changes varied by event. LH fell only after 100 km, and total cholesterol fell only after 622 km. The authors say the LH results reflect acute differences, not altered hormone regulation.

LIFE (BASEL, SWITZERLAND) · 2026-08-31

Hypoxic training at normal temperature lowered heart rate in untrained young men

A randomised study in the Journal of Functional Morphology and Kinesiology assigned 80 men aged 19-26 with moderate activity levels to five groups. Four groups trained three times weekly for four weeks under different oxygen and heat conditions, and one was a control group. The intermittent hypoxic group at 21 °C showed significant decreases in heart rate, exercise intensity and perceived exertion after training.

JOURNAL OF FUNCTIONAL MORPHOLOGY AND KINESIOLOGY · 2026-08-31

Extra heartbeats in healthy middle-aged adults linked to age, kidney function and fitness

An observational study in European Heart Journal Open followed 931 adults without structural heart disease who wore 24-hour heart monitors. Frequent atrial extra beats were linked to older age, lower kidney function and low fitness. Frequent ventricular ones were linked only to older age. Major cardiovascular events occurred in 18% of those tracked over a median of 8 years.

EUROPEAN HEART JOURNAL OPEN · 2026-08-30

Higher fitness linked to fewer cardiovascular events in adults aged 70 to 77

An observational study in the European journal of preventive cardiology followed 1547 Norwegian adults aged 70 to 77 for a median of 10 years. Higher directly measured cardiorespiratory fitness was associated with lower risk of major cardiovascular events. Compared with those who stayed unfit over one year, men and women who stayed fit had 36% and 42% lower risk. The authors say external validation is needed.

EUROPEAN JOURNAL OF PREVENTIVE CARDIOLOGY · 2026-08-30

Review finds interval training may improve fitness in older adults

A systematic review in the Journal of Clinical Medicine pooled 25 reports covering about 2,818 older adults. Interval training improved cardiorespiratory fitness most consistently. Some functional and metabolic benefits appeared. Findings on thinking, mood and quality of life were limited and mixed. It was not shown to beat moderate exercise overall. Confidence in the findings is limited.

JOURNAL OF CLINICAL MEDICINE · 2026-08-29

EPIGENETIC REPROGRAMMING & AGE REVERSAL 12

Faster epigenetic aging linked to more memory lapses later, in people in their forties

According to a study in The Journals of Gerontology: Series A, 232 midlife and older adults were assessed. Overall, epigenetic aging pace was not linked to daily memory lapses. Among people aged 40 to 49, a faster pace was associated with more memory lapses about a decade later. This is an observational link, not proof of cause.

THE JOURNALS OF GERONTOLOGY. SERIES A, BIOLOGICAL SCIENCES AND MEDICAL SCIENCES · 2026-09-01

Epigenetic clock estimates age of crown-of-thorns seastars

Researchers writing in Biology Letters built an epigenetic clock for the crown-of-thorns seastar, a coral-eating invertebrate. They found 1910 DNA sites linked to age. Their model predicted age with an average error of 0.31 years. A 14-site version was also built. The work is in seastars, not humans.

BIOLOGY LETTERS · 2026-09-01

Symposium report: how inherited experiences may pass between generations without DNA changes

A report in Environmental Epigenetics summarises a 2025 symposium in Zurich on epigenetic inheritance. This is the passing of traits from experience or exposure without changes to DNA sequence. The report says it is well established in plants and invertebrates, but its mechanisms in mammals remain unclear. Key questions are still open.

ENVIRONMENTAL EPIGENETICS · 2026-09-01

Review links nicotine exposure in pregnancy to placental and long-term brain effects

A review in Birth Defects Research pulled together evidence on nicotine exposure during pregnancy. It describes how nicotine crosses the placenta and disrupts its development. The authors propose a model linking this to adverse birth outcomes, higher risk of sudden infant death syndrome, and later cognitive, behavioural and psychiatric vulnerability.

BIRTH DEFECTS RESEARCH · 2026-09-01

Review links immune cells in stomach tumours to chemotherapy resistance

A review in Cell Biology International examines how tumour-associated macrophages, a type of immune cell, may help gastric cancer resist chemotherapy. It draws on preclinical work and clinical studies. The text says high levels of these cells correlate with poorer chemotherapy response and reduced survival. It also discusses possible therapies aimed at these cells.

CELL BIOLOGY INTERNATIONAL · 2026-09-01

Review looks at long-term health of people conceived through assisted reproduction

A review in Biology of Reproduction examines long-term health of people conceived through assisted reproductive technologies. It says these methods have been associated with adverse placental and fetal outcomes, some persisting into later life. Studies in humans and mice suggest epigenetic, environmental and sex-specific factors contribute. The mechanisms are not fully understood.

BIOLOGY OF REPRODUCTION · 2026-09-01

Review proposes trained immunity may help explain relapse in inflammatory bowel disease

A narrative review in Inflammatory Bowel Diseases examines trained immunity, where immune cells keep a lasting inflammatory memory. The authors suggest it could help explain why bowel disease persists and relapses, even in remission. They note that evidence in this disease is underexplored and largely limited to early preclinical work.

INFLAMMATORY BOWEL DISEASES · 2026-09-01

Review proposes Alzheimer's brain cells lose their identity through 'mesenchymal drift'

A review in BMB Reports applies the idea of mesenchymal drift to Alzheimer's disease. It describes brain cells losing their specialised identities in a disorganised way. The authors say direct evidence of this signature has so far been shown only in astrocytes, oligodendrocytes, pericytes and one stem-cell-derived cell type. They also caution that new cell clusters may be artifacts.

BMB REPORTS · 2026-09-01

Pollutants raise sporadic pregnancy loss risk, but repeat-loss evidence is scarce

A narrative review in Reproductive Toxicology looked at environmental exposures and pregnancy loss. It found pollutants consistently increase the risk of sporadic loss. Evidence on unexplained recurrent loss, which has no identified cause in 50-60% of cases, remains very scarce. The authors say past studies often mixed the two types and call for prospective studies.

REPRODUCTIVE TOXICOLOGY (ELMSFORD, N.Y.) · 2026-09-01

Review links mothers' high-fat diets to possible heart disease risk in offspring

A review in Experimental Biology and Medicine synthesised mechanistic, epidemiological and clinical evidence. It suggests a high-fat diet before and during pregnancy may predispose offspring to coronary artery disease through metabolic, blood-vessel and epigenetic changes. Maternal dietary interventions look promising, but long-term effects are unclear. The authors call for large, long prospective studies.

EXPERIMENTAL BIOLOGY AND MEDICINE (MAYWOOD, N.J.) · 2026-09-01

Review argues gene-activity changes shape progression of blood cancers called MPNs

A review in Hematological oncology argues that chromatin states, not only genetic mutations, shape how myeloproliferative neoplasms progress. It says only some proposed drug targets have MPN-specific evidence. Others rest on related cancers or preclinical studies. The authors propose ideas for future treatment scheduling and biomarkers.

HEMATOLOGICAL ONCOLOGY · 2026-09-01

Oak trees show distinct DNA methylation patterns across seasons and generations

A study in the Journal of Experimental Botany mapped DNA methylation in 180-year-old oak trees across spring, summer and autumn, and in their offspring. One type of methylation rose through the growing season. Parents and offspring differed in other types. This is plant research, not human health, so it says nothing directly about people.

JOURNAL OF EXPERIMENTAL BOTANY · 2026-08-29

FASTING, AUTOPHAGY & METABOLIC HEALTH 12

Review examines how a hormone receptor may affect bone and muscle

A review in The Journal of Endocrinology looks at the mineralocorticoid receptor, known for its role in heart and kidney function. The authors say its role in bone is understudied. They note that drugs blocking it have been associated with beneficial skeletal effects in some settings. The review also describes tools for studying this signalling.

THE JOURNAL OF ENDOCRINOLOGY · 2026-09-01

Review links low SIRT1 activity to brain decline in three diseases

A review in the FASEB Journal looks at SIRT1, a protein involved in stress response and metabolism. It reports that reduced or dysregulated SIRT1 is associated with protein clumping, mitochondrial problems and cognitive decline in Alzheimer's, Parkinson's and Huntington's disease. Effects may vary by disease and stage. The review also weighs the limits of treatments aimed at SIRT1.

FASEB JOURNAL : OFFICIAL PUBLICATION OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY · 2026-09-01

Transcriptomic clock estimates mouse age from liver gene activity

A study in Aging Cell describes a ready-to-use transcriptomic clock that estimates the age of healthy mice from liver RNA-seq data. It showed higher transcriptomic age in mouse models of progeroid syndromes. Snell and Ames dwarf mice, growth hormone receptor-deficient mice, caloric, protein or methionine restriction, and rapamycin in specific contexts lowered the estimated age. This is mouse research.

AGING CELL · 2026-09-01

Muscle gene activity tied to strength retention during calorie-restricted weight loss

This secondary analysis of the CALERIE randomised trial, published in Obesity, studied healthy adults without obesity. In 42 people with muscle samples, 151 genes were linked to strength change after accounting for weight change. The genes involved cell growth, immune regulation and protein secretion. This is an association and does not show cause.

OBESITY (SILVER SPRING, MD.) · 2026-09-01

Two mouse strains may model diabetic nerve damage more closely than others

A mouse study in the FASEB Journal characterised two strains that developed obesity, high blood sugar, abnormal blood fats and diabetic nerve damage by 24 weeks. The authors say these traits resembled human disease more closely than other models. In one strain, eight weeks of calorie restriction improved metabolic health and restored large nerve fibre function.

FASEB JOURNAL : OFFICIAL PUBLICATION OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY · 2026-09-01

Review: dogwood fruit compounds affect cellular aging pathways in lab studies

A short review in the Journal of Pharmacopuncture covers lab and preclinical findings on Cornus officinalis fruit. Its compounds, such as morroniside and loganin, were linked to lower oxidative stress, steadier mitochondria and reduced inflammatory signalling. The authors note that direct evidence on cellular senescence remains limited. The review does not report human trials.

JOURNAL OF PHARMACOPUNCTURE · 2026-09-01

Review argues mitochondrial DNA mutation mosaics could work as an ageing clock

A review in Aging Cell argues that mutations in mitochondrial DNA, which expand within cells over time, could serve as a tissue-specific molecular clock of ageing. It cites mouse studies and biobank analyses linking mutation burden to mortality and disease. The authors say key questions remain before it could be a blood-based biomarker.

AGING CELL · 2026-09-01

Review suggests low SIRT1 activity may contribute to bone marrow edema

A review in Immunity, Inflammation and Disease examined evidence on SIRT1, a protein involved in bone health, and bone marrow edema seen on MRI scans. The authors say a role for reduced SIRT1 is biologically plausible. They note that direct evidence linking SIRT1 to the condition remains limited, so the idea is still unproven.

IMMUNITY, INFLAMMATION AND DISEASE · 2026-09-01

Authors propose a framework treating aging as loss of functional reserve

A conceptual paper in Life proposes modelling aging as a control systems problem. It focuses on functional reserve, the spare capacity that separates independent living from disability. Candidate capacities were scored against three criteria, and five qualified. This is a theoretical framework. It reports no new patient data and claims no single cause of aging.

LIFE (BASEL, SWITZERLAND) · 2026-08-31

Brain excitability measures shifted during Ramadan fasting in a small observational study

An observational study in PLOS One followed 30 healthy adults observing Ramadan daytime fasting, plus 11 non-fasting controls. Using magnetic stimulation, researchers found brain-cortex excitability rose by mid-Ramadan and partly persisted afterwards. Blood glucose and sleep duration fell. The authors say fasting, sleep and body-clock changes cannot be separated, so cause is unclear.

PLOS ONE · 2026-08-31

Intermittent fasting cut weight but may harm testicular tissue in fructose-fed rats

A study of 40 male rats, reported in Ultrastructural pathology, compared a control diet, a high-fructose diet, and the high-fructose diet combined with 8:16 or 5:2 intermittent fasting for 8 weeks. Both fasting schedules reduced body weight. But tissue analysis suggested fasting may worsen testicular damage, especially the 5:2 schedule. This was animal research, so effects in humans are unknown.

ULTRASTRUCTURAL PATHOLOGY · 2026-08-31

Small pilot: time-restricted eating linked to better glucose in veterans with spinal injury

A pilot trial in Nutrients tested a 10-hour daily eating window for six weeks in 15 veterans with spinal cord injury and obesity. Fourteen finished. Adherence was 83%, and several blood glucose measures improved. There was no comparison group. The authors say larger trials are needed to test effectiveness.

NUTRIENTS · 2026-08-29

SLEEP SCIENCE & CIRCADIAN BIOLOGY

12

Longer napping linked to slower processing speed in older adults

A cross-sectional study in The Journals of Gerontology: Series A analysed 686 older adults. More minutes of napping were associated with slower processing speed. Among those with sleep apnea in an under-represented ethno-racial group, napping was linked to poorer executive function. The authors call the findings exploratory. Cross-sectional data cannot show that napping causes these differences.

THE JOURNALS OF GERONTOLOGY. SERIES A, BIOLOGICAL SCIENCES AND MEDICAL SCIENCES · 2026-09-01

Fruit fly study links muscle Timeless gene and exercise to slower aging

A study in Aging Cell used fruit flies. Lowering the Timeless gene in muscle sped up signs of aging, including weaker climbing, heart changes and shorter lifespan. Raising it delayed those signs. Four weeks of endurance exercise offset the harm from lowering the gene. This is animal research, so human effects are unknown.

AGING CELL · 2026-09-01

Irregular sleep linked to higher risk of some age-related eye diseases

An observational study in Sleep followed 78,839 UK Biobank adults. Less regular sleep was associated with higher risks of age-related macular degeneration, cataract and glaucoma. No robust links appeared for retinal vein occlusion or diabetic retinopathy. Regular sleep also correlated with thicker retinal layers. The study shows association, not cause.

SLEEP · 2026-09-01

Heart reflex effectiveness peaks at night when blood pressure dips, small study finds

A small study in Physiological Reports followed eleven healthy young adults through a 30-hour protocol. Systolic blood pressure was lowest around 1:40 am. A measure of baroreflex effectiveness peaked near 1 am. Another measure, baroreflex sensitivity, did not vary. The authors say it is unknown whether the pattern holds in people with disease.

PHYSIOLOGICAL REPORTS · 2026-09-01

Machine-learning model predicts loneliness in older Japanese adults with moderate accuracy

A study in the International Journal of Geriatric Psychiatry followed 1806 Japanese adults aged 65 and over who were not lonely at the start. About 23% reported loneliness roughly three years later. The best model showed moderate predictive ability. It relied heavily on earlier loneliness scores. The authors say further refinement and external validation are needed.

INTERNATIONAL JOURNAL OF GERIATRIC PSYCHIATRY · 2026-09-01

Review describes brain's waste-drainage network and its decline in aging and dementia

A review in Translational Neurodegeneration describes the brain's lymphatic and glymphatic drainage network, which helps clear metabolic waste. The authors say this network is often found to be impaired in natural aging and in neurodegenerative diseases. They also outline possible diagnostic tools and treatment ideas. These are discussed as emerging directions, not proven therapies.

TRANSLATIONAL NEURODEGENERATION · 2026-09-01

Review examines sex and gender differences in activity and sleep after brain injury

A narrative review in the European Journal of Sport Science looks at how sex and gender may shape physical activity, sedentary time and sleep during recovery from traumatic brain injury. The authors say these influences are under-investigated. They argue that recognising them matters for fairer, more individualised rehabilitation.

EUROPEAN JOURNAL OF SPORT SCIENCE · 2026-09-01

Higher sleep apnea risk scores linked to memory problems in older Canadians

According to a study in Frontiers in Psychology using data from 946 participants in the Canadian Longitudinal Study on Aging, people with memory problems had higher sleep apnea risk scores and slower reaction times than matched controls. Insomnia was not linked to cognitive outcomes. The design was cross-sectional, so it shows associations, not cause.

FRONTIERS IN PSYCHOLOGY · 2026-08-31

Review links exercise to better sleep and cognition in older adults

A structured review in Medical Sciences covered twelve studies of adults aged 60 and over, including randomised and observational designs. Exercise was generally associated with better sleep quality and maintained or improved cognition. Some studies suggested sleep may be a pathway. Differences between the studies meant the review could not draw conclusions about causality.

MEDICAL SCIENCES (BASEL, SWITZERLAND) · 2026-08-31

Arlington cohort study describes its design for tracking functional decline with age

GeroScience published the design of the Arlington Study of Healthy Aging, a community cohort study. It combines whole-body MRI, vascular tests, blood biomarkers, cognitive and physical tests, and continuous remote monitoring of activity, sleep, blood pressure and glucose. The paper describes methods only, with no findings. It aims to identify modifiable risk factors for age-related decline.

GEROSCIENCE · 2026-08-28

Review proposes body-clock disruption and brain waste clearance feed neurodegeneration

A conceptual review in Molecular biology reports describes how disrupted circadian rhythms, brain inflammation and the glymphatic clearance system may reinforce one another in neurodegenerative disease. The authors suggest this could allow amyloid-β and tau to build up. Much of the proposed mechanism is stated as possible, not proven.

MOLECULAR BIOLOGY REPORTS · 2026-08-28

Retinal photos used to estimate biological age, linked to disease and mortality

A study in Nature Communications trained an AI model on retinal images from 71,343 UK Biobank participants to predict age. The gap between predicted and actual age was associated with heart disease, dementia, cancer and death from any cause. Patterns differed by sex and menopause status. These are associations, not proof of cause.

NATURE COMMUNICATIONS · 2026-08-26

GUT MICROBIOME & BRAIN AXIS

12

Review weighs diet and gut bacteria as routes to influence Alzheimer's disease

A review in CNS Neuroscience & Therapeutics assessed preclinical studies, clinical trials and Mendelian randomization analyses on diet, gut microbes and Alzheimer's disease. The authors report that some nutrients and dietary patterns appear protective or harmful. They describe nutrition-based approaches as promising but say further mechanistic and clinical studies are needed.

CNS NEUROSCIENCE & THERAPEUTICS · 2026-09-01

Special issue introduction outlines gut microbes' links to brain health

This is a preface to a special issue in the Journal of Neurochemistry, not a study. It describes the gut-brain axis as a framework for how microbes may influence the nervous system. The collection covers microbial metabolites, development and immune signalling, and conditions such as depression, Parkinson's disease and autism. It points to future research directions.

JOURNAL OF NEUROCHEMISTRY · 2026-09-01

Review examines how mother's microbes shape fetal brain development

A mini review in Frontiers in Nutrition examines how metabolites from a mother's microbes shape fetal brain development. It notes that malnutrition, psychosocial distress or infection can alter the richness and diversity of maternal microbes. These changes are known to impair fetal neural circuits, alongside a higher risk of cognitive dysfunction later in life. The complete signaling network remains largely unknown.

FRONTIERS IN NUTRITION · 2026-09-01

Review of 20 trials links probiotics to better mood and sleep, with caveats

A systematic review in Annals of Neurosciences examined 20 randomised trials of probiotics. Overall, probiotics were associated with improvements in depression, anxiety, sleep quality and mood. Results for stress and cortisol were inconsistent. The authors note that trials differed widely in design and quality, and call for better studies.

ANNALS OF NEUROSCIENCES · 2026-09-01

Mice raised without gut microbes show altered gene activity in some brain regions

A mouse study in Microbiology compared brain gene activity in germ-free mice and mice with normal gut microbes. The hippocampus showed 276 differences and the thalamus 345. Other regions showed few or none. The authors say the findings highlight genes for further study of how gut microbes may influence the brain. This is animal research.

MICROBIOLOGY (READING, ENGLAND) · 2026-09-01

Review links gut bacteria and mitochondria to brain and eye disease

A review in Frontiers in Pharmacology discusses how gut microbiota imbalance may disrupt mitochondria and contribute to diseases such as Alzheimer's, Parkinson's and age-related macular degeneration. The authors say most evidence for possible treatments comes from preclinical studies. Clinical validation is limited, and they call for well-designed randomised trials in humans.

FRONTIERS IN PHARMACOLOGY · 2026-09-01

Review: gut microbiota linked to Alzheimer's, but not shown to be a cause

A review in Ageing Research Reviews examines the gut-brain axis in Alzheimer's disease. The authors state gut imbalance has not been established as an independent cause of sporadic disease. Human studies have found microbiota differences in early, biomarker-positive disease and suggest gut barrier abnormalities may be associated with later cognitive change. Clinical intervention evidence is early, and longitudinal cohorts and randomised trials are needed.

AGEING RESEARCH REVIEWS · 2026-09-01

Review links gut, vaginal and urinary microbiome shifts to chronic pelvic pain

A narrative review in Human Reproduction pulls together observational, multi-omics and mechanistic research on the microbiome and chronic pelvic pain in women. It describes imbalances in microbes that may be linked to inflammation and pain pathways. The authors call for longitudinal trials to test microbiome-targeted approaches, since causal evidence is still limited.

HUMAN REPRODUCTION (OXFORD, ENGLAND) · 2026-09-01

Review examines gut microbiome changes in people living with HIV

A review in Reviews in Medical Virology synthesises evidence on how HIV and the gut microbiota affect each other. It covers gut imbalance, immune dysfunction, chronic inflammation, antiretroviral drug effects and links to HIV-related cognitive disorders. It also discusses microbiota-targeted approaches, and identifies knowledge gaps and research priorities.

REVIEWS IN MEDICAL VIROLOGY · 2026-09-01

Review explores how trehalose might protect the brain in Alzheimer's beyond autophagy

A review in Daru looked at trehalose, a sugar studied for Alzheimer's disease. It drew on lab and animal studies, plus some early clinical findings. The authors describe possible effects on cell membranes, immune cells and the gut-brain axis. These are proposed mechanisms, not proven benefits in people. The text gives no human trial results.

DARU : JOURNAL OF FACULTY OF PHARMACY, TEHRAN UNIVERSITY OF MEDICAL SCIENCES · 2026-08-31

Review explores how breast milk microbes may influence infant brain development

A review in the Journal of translational medicine summarises evidence on the human milk microbiome and early brain development. It says experimental and observational evidence supports biologically plausible links. The authors also state that major uncertainties remain, so the findings do not show cause and effect.

JOURNAL OF TRANSLATIONAL MEDICINE · 2026-08-31

Review links stroke to differences in gut bacteria, but not overall diversity

A systematic review and meta-analysis in Frontiers in Aging Neuroscience pooled 59 observational studies of 7,463 patients. Overall bacterial diversity did not differ between stroke patients and controls. Some bacterial families and genera were higher or lower in stroke patients. Because the studies are observational, the findings show associations, not cause.

FRONTIERS IN AGING NEUROSCIENCE · 2026-08-31

ALZHEIMER'S & COGNITIVE DECLINE PREVENTION 11

Research on subjective memory complaints draws mostly from similar populations

A review in Alzheimer's & Dementia examines subjective cognitive decline, where people notice cognitive concerns that tests may not detect. It may be an early marker of dementia. The authors say most supporting research uses samples with similar backgrounds. Limited studies in more diverse groups show varying prevalence and outcomes, so they call for broader research.

ALZHEIMER'S & DEMENTIA : THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION · 2026-09-01

Fearful people more likely to have cognitive impairment in Chinese survey

An observational study in Medicine used data from the China Health and Retirement Longitudinal Study. Cognitive impairment was more common in the fearful group. After adjustment for other factors, fear remained associated with impairment (odds ratio 2.38). The design shows a link only. It cannot show that fear causes cognitive decline.

MEDICINE · 2026-09-01

Trial protocol tests home-based dance and lifestyle program for mild cognitive impairment

A protocol in the Journal of Clinical Neurology describes a planned feasibility trial in South Korea. It will randomise 45 adults with mild cognitive impairment to a tablet program, a smartphone program, or no intervention. The 12-week program combines dance, nutrition education and meditation. Recruitment is ongoing, so there are no results yet.

JOURNAL OF CLINICAL NEUROLOGY (SEOUL, KOREA) · 2026-09-01

Some heart and diabetes drugs linked to differing cognitive trajectories

An observational analysis in Age and Ageing used three cohorts, including over 31,000 people across cognitive stages, to examine seven cardiometabolic drug classes and cognitive change. ACE inhibitors and metformin were associated with slower decline. Angiotensin II receptor blockers were linked to faster worsening in one subgroup, and calcium channel blockers to faster worsening over time. Statin links varied by disease stage. These are associations, not proof of cause.

AGE AND AGEING · 2026-09-01

Genetic activity tied to kidney disease linked to faster Alzheimer's decline

A study in Alzheimer's & Dementia used gene-activity data from blood and brain samples in three groups of people. A higher kidney disease risk score was associated with faster cognitive decline, brain shrinkage and amyloid build-up. Amyloid partly accounted for the link with cognition. This is an association, so it does not show cause.

ALZHEIMER'S & DEMENTIA : THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION · 2026-09-01

Review: Alzheimer's antibody drugs show modest cognitive effects and brain-swelling risks

An umbrella review in the Journal of Clinical Medicine pooled 11 systematic reviews and meta-analyses of lecanemab and donanemab. Both drugs reduced amyloid on brain scans. Cognitive changes were statistically significant but mostly near or below clinically meaningful thresholds. Both were linked to brain swelling and bleeding on imaging, especially in ApoE ε4 carriers.

JOURNAL OF CLINICAL MEDICINE · 2026-09-01

Higher body fat linked to lower Alzheimer's-related decline in two older-adult cohorts

An observational study in Alzheimer's & Dementia followed two cohorts, with 2,349 and 1,858 people. In adults 65 and older, higher body fat was associated with lower risk of Alzheimer's-related cognitive impairment and dementia. Tests for sex and age differences were not significant. The authors say the findings do not support increasing body fat to prevent dementia.

ALZHEIMER'S & DEMENTIA : THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION · 2026-09-01

Higher Alzheimer-linked blood marker tied to poorer cognition in late-onset epilepsy

An observational study in Neurology of 85 people with late-onset unexplained epilepsy found higher plasma p-tau217, a marker of Alzheimer pathology, was associated with poorer cognition after adjusting for age, sex and education. The link was stronger in medication-refractory epilepsy. Higher p-tau217 was also associated with weaker spindle-slow oscillation coupling in sleep, which accounted for about 24% of the association.

NEUROLOGY · 2026-08-31

Review links changes in self-awareness to stages of Alzheimer's disease

A systematic review in Diagnostics covered 42 studies on self-awareness across the Alzheimer's disease spectrum. It found self-awareness changes were linked to cognitive performance and brain integrity. The authors suggest tracking it might help spot people at risk of progression. They say study methods varied too much to judge clinical usefulness.

DIAGNOSTICS (BASEL, SWITZERLAND) · 2026-08-30

Heart procedures not clearly tied to higher dementia risk in older adults

A cohort study in JACC. Advances followed 25,176 adults aged 65 or older hospitalised for acute coronary syndrome. Coronary revascularization was not statistically significantly associated with higher dementia risk than no revascularization or stable coronary disease. The authors suggest wider vascular and systemic factors may matter more than the procedures.

JACC. ADVANCES · 2026-08-28

Review maps who fears dementia and which factors go with that fear

A systematic review in Frontiers in Public Health examined 56 studies of fear of dementia in adults without a diagnosis. Higher fear was associated with being female, memory complaints, depression, anxiety and a family history of dementia. Social support and good family functioning were linked to lower fear. Evidence on some measurement tools remained insufficient.

FRONTIERS IN PUBLIC HEALTH · 2026-08-28

Review maps what molecular studies show about the ovary across life

A systematic review in Human Reproduction Update examined multi-omic studies of the human ovary from fetal development to after menopause, covering genome, methylome, transcriptome and proteome research published before August 2025. The authors say studies of the same modalities often show inconsistencies and call for data standardisation. They also highlight potential for artificial intelligence and machine-learning methods in ovary studies.

HUMAN REPRODUCTION UPDATE · 2026-09-01

Small menopause case series and mouse work explore estriol for brain symptoms

A study in Scientific Reports followed twenty menopausal women taking an estriol and progesterone pack. At twelve months they reported better concentration, memory and less brain fog. There was no control group. In midlife female mice, estriol reduced brain changes and improved cognition. The authors call the work preliminary and say it warrants further investigation.

SCIENTIFIC REPORTS · 2026-09-01

Review maps podcasts on women's health and flags misinformation risk

A scoping review in The Journal of Obstetrics and Gynaecology Research included 37 studies on women's health podcasts. Gynecology was the most common topic, at 48.6%. Many studies targeted health professionals and students. The authors say podcasts are a versatile education tool. They call for better content curation to reduce misinformation risk.

THE JOURNAL OF OBSTETRICS AND GYNAECOLOGY RESEARCH · 2026-09-01

Rat mitochondrial DNA variant linked to faster ovarian aging

A study in Aging Cell compared two groups of genetically mixed rats that differed in mitochondrial haplotype. One haplotype was associated with faster loss of egg-supporting follicles, scarring, inflammation and weaker mitochondrial function. It also showed impaired ovulation. This is animal research, so it does not show the same effect in women.

AGING CELL · 2026-09-01

Author argues new guidance on postmenopausal bleeding will cause unnecessary biopsies

A perspective article in Menopause critiques revised American College of Obstetricians and Gynecologists guidance on postmenopausal bleeding. The guidance favours combining ultrasound with uterine lining sampling for most patients. The author argues earlier ultrasound-based approaches remain generally appropriate and that the revision will lead to many unnecessary invasive procedures. This is one expert's opinion.

MENOPAUSE (NEW YORK, N.Y.) · 2026-09-01

Review proposes FSH may act well beyond reproduction during menopause

A review in the Journal of Clinical Medicine argues that follicle-stimulating hormone may have roles beyond reproduction. The authors say it often rises before estrogen falls, and that its changes during menopause coincide with shifts in bone density, body composition and brain function. They describe the evidence as preclinical and clinical, and the causal role remains plausible rather than proven.

JOURNAL OF CLINICAL MEDICINE · 2026-08-31

Korean cohort links some menopausal hormone types to higher kidney cancer incidence

A retrospective cohort study in the Journal of Korean Medical Science used national health insurance data on postmenopausal women. Kidney cancer incidence was associated with oral and topical oestrogen, but not with other hormone formulations. This is an observational finding, so it does not show that the hormones caused the cancers.

JOURNAL OF KOREAN MEDICAL SCIENCE · 2026-08-31

Interviews with 18 women explore body-based practices during menopause

A qualitative study in the Journal of Health Psychology interviewed 18 UK women aged 40 to 60 about strength training, yoga and cold-water immersion during menopause. Participants described benefits for symptoms and self-awareness. Many blended these practices with hormone therapy. The sample was relatively privileged and health-literate, which limits how widely the findings apply.

JOURNAL OF HEALTH PSYCHOLOGY · 2026-08-30

Review links menopause to blood vessel dysfunction and higher heart disease risk

A literature review in Cardiovascular & Hematological Disorders Drug Targets examined endothelial health in postmenopausal women. It reports that these women have a higher risk of cardiovascular disease and poorer endothelial function. Falling estrogen may contribute through vascular stiffening, less nitric oxide and more inflammation. The review also discusses management strategies.

CARDIOVASCULAR & HEMATOLOGICAL DISORDERS DRUG TARGETS · 2026-08-29

PLoS Biology article says basic research on women's health lags behind

An article in PLoS Biology argues that, despite recent progress in clinical research into women's health, basic research is still lagging behind. The authors say that until the fundamental physiology of women across the life span is understood, meaningful change cannot be expected. The available text presents this as an argument and reports no new data or study results.

PLOS BIOLOGY · 2026-08-28

Educational article reviews menopause physiology and hormone therapy debates

A Staying Current article in Advances in physiology education gives educators an overview of menopause. It covers hormonal changes, staging criteria, common symptoms and the history, risks and benefits of menopausal hormone therapy, including the Women's Health Initiative. It also outlines nonhormonal approaches. It is a teaching review, not new research.

ADVANCES IN PHYSIOLOGY EDUCATION · 2026-08-27

Review links menopause evolution to women's heart risk in longer lives

A review in Ageing Research Reviews examines the Grandmother Hypothesis and other theories of why menopause evolved. The authors argue women now live decades past reproduction, so estrogen loss matters more for heart and other health. They say this mismatch helps explain rising postmenopausal cardiovascular risk. It is a perspective review, not new trial data.

AGEING RESEARCH REVIEWS · 2026-08-25

Six-week group exercise linked to better function in 17 older women

A small study in Medical Sciences gave 17 physically inactive women over 65 a six-week multimodal training programme twice weekly. Afterwards, skeletal muscle mass, handgrip strength and physical performance scores improved, and body fat fell. Catalase activity and serum nitrite/nitrate rose, while superoxide dismutase, glutathione peroxidase and lipid peroxidation markers were unchanged. These are before-and-after changes, and no control group was mentioned.

MEDICAL SCIENCES (BASEL, SWITZERLAND) · 2026-09-01

Review proposes nitric oxide loss links type 2 diabetes to cognitive decline

A review in Biochemical Society Transactions argues that in type 2 diabetes, high blood sugar and insulin resistance lower nitric oxide availability. This may impair blood flow regulation in the brain and create an energy mismatch for neurons, especially in the hippocampus. The authors present this as a mechanism supported by existing evidence, not a new trial.

BIOCHEMICAL SOCIETY TRANSACTIONS · 2026-09-01

Surgery improved blood vessel function more than a drug in 20 patients

A small study in the Journal of Hypertension followed 20 patients with an aldosterone-producing adenoma, a hormone-producing adrenal growth. Both the drug esaxerenone and adrenal surgery improved vessel function and arterial stiffness. Surgery gave somewhat better results. The authors suggest the drug may suit patients who cannot or will not have surgery.

JOURNAL OF HYPERTENSION · 2026-08-31

Review weighs non-invasive heart tests for children with obesity

A narrative review in Medeniyet Medical Journal looked at ways to spot early heart and blood vessel changes in childhood obesity. Blood pressure, body measurements and lab tests remain routine. Newer tools look promising but are mostly limited to selected clinical or research settings. The authors say longer standardised studies are needed to check whether test-guided care improves outcomes.

MEDENIYET MEDICAL JOURNAL · 2026-08-31

Review links liver scarring in fatty liver disease to heart and artery risk

A narrative review in Cureus says emerging evidence suggests liver fibrosis, or scarring, may predict cardiovascular outcomes in metabolic dysfunction-associated steatotic liver disease better than fat buildup alone. It describes possible mechanisms, including inflammation and blood vessel dysfunction. It also discusses noninvasive fibrosis tests and some drugs under consideration. It does not show that fibrosis causes heart disease.

CUREUS · 2026-08-31

Arterial stiffness index rises with age and tracks with coronary calcium in Korean adults

A study in JACC: Asia analysed health check-up data from 15,811 symptom-free adults in Korea, 69.7% of them men. Arterial stiffness, measured by CAVI, rose progressively with age. The rise was more apparent after the 50s in men and after the 60s in women. Higher CAVI was independently associated with any coronary artery calcium, with an optimal cutoff of 8.2. The study is observational.

JACC. ASIA · 2026-08-31

Small trial tests chicken protein supplement and exercise on arterial stiffness in hypertension

A randomised controlled trial in the International Journal of Hypertension studied adults with high blood pressure over 8 weeks. Groups received a chicken protein supplement, the supplement plus training, or nothing extra. Arterial stiffness showed group-by-time differences. Fitness gains occurred only with supplement plus training. The groups were small, and the excerpt gives few further results.

INTERNATIONAL JOURNAL OF HYPERTENSION · 2026-08-30

Review examines remaining heart risk in people with HIV after REPRIEVE trial

A narrative review in Biomolecules discusses cardiovascular risk in people with HIV on antiretroviral therapy. It notes that in the REPRIEVE study, pitavastatin reduced first cardiovascular events. The authors say considerable risk remains even on statins. They review ways to assess risk and possible new treatments. This is an expert review, not new trial data.

BIOMOLECULES · 2026-08-29

Review: mouth and gut bacteria shape how dietary nitrate is used

A narrative review in Nutrients examined how dietary nitrate becomes nitric oxide in the body. It found the first step depends largely on bacteria, including those on the tongue. Later conversion in the stomach depends on acidity and food matrix. The review drew on 93 sources and did not pool results because study designs varied widely.

NUTRIENTS · 2026-08-29

Review: some diabetes drugs may reduce clotting and cardiovascular events

A narrative review in Internal and Emergency Medicine looked at diabetes drugs and clot-related risk. It reports that several drug classes influence platelet activity, blood vessel function and inflammation. GLP-1 receptor agonists showed particularly pronounced effects. The authors say benefits vary across drug classes and patient groups. The review draws on experimental and clinical evidence.

INTERNAL AND EMERGENCY MEDICINE · 2026-08-29

Gut-derived fatty acids may play a role in one form of heart failure

A narrative review in the International Journal of Molecular Sciences looks at short-chain fatty acids, made by gut microbes, in heart failure with preserved ejection fraction. Evidence specific to this condition is limited. Available findings suggest possible links to inflammation and heart stiffness. The authors call treatments based on them investigational, not established.

INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES · 2026-08-29

MITOCHONDRIA & CELLULAR ENERGY 12

Review links mitochondrial DNA leakage to inflammation in aging

A review in Frontiers in Immunology discusses how mitochondrial DNA released into cells can activate the cGAS-STING immune pathway. The authors say overactivation is tied to chronic inflammation and organ decline in aging, and that this varies by organ. They describe targeting the pathway as a promising strategy. The review does not report new trial results.

FRONTIERS IN IMMUNOLOGY · 2026-08-25

Review describes mitochondria's wide role in health, aging and disease

A review in Frontiers in Cell and Developmental Biology says mitochondria do more than produce energy. They help manage calcium, cell death and waste clearance. Dysfunction is linked to aging, metabolic syndrome, cancer and neurodegeneration. The review surveys possible therapeutic approaches, including targeted antioxidants and gene-editing tools, described as promising.

FRONTIERS IN CELL AND DEVELOPMENTAL BIOLOGY · 2026-08-24

Review explores mitochondria's role in blood-brain barrier and psychiatric inflammation

A review in Frontiers in Molecular Neuroscience examines how mitochondrial problems may be linked to a weaker blood-brain barrier and brain inflammation in some psychiatric disorders. It draws on human postmortem and imaging findings plus cell and animal work. The authors call the idea promising but still emerging, and suggest it could guide future biomarker studies.

FRONTIERS IN MOLECULAR NEUROSCIENCE · 2026-08-24

Review frames Parkinson's disease as loss of mitochondrial resilience

A review in Frontiers in Pharmacology argues that Parkinson's disease may be best understood as a gradual erosion of mitochondrial resilience, meaning neurons' ability to withstand stress and recover. It draws on human genetics and cell biology. Several risk genes affect mitochondrial quality control. This is a proposed framework drawn from existing evidence, not a new trial.

FRONTIERS IN PHARMACOLOGY · 2026-08-24

Review explores how damaged mitochondria and RNA molecules may drive type 2 diabetes

A review in Biomedicines examines how faulty clearance of damaged mitochondria, called mitophagy, may contribute to type 2 diabetes. It discusses noncoding RNAs, molecules that appear to regulate this process in several tissues. The authors say these may become diagnostic markers or treatment targets. The review describes research directions and does not report a new trial.

BIOMEDICINES · 2026-08-24

Aged human neurons in lab show faulty cell recycling that was partly reversed

A study in Autophagy used human neurons made from skin cells of donors of different ages. Neurons from donors over 65 showed weaker acidification of autophagosomes, which are part of the cell's recycling system, and altered mitochondria. Boosting autophagosome production through TFEB reversed these changes. This was cell-based work, not a human trial.

AUTOPHAGY · 2026-08-23

Review links Piezo1 mechanical-stress sensor to mitochondrial damage in osteoarthritis

A review in Cells summarises research on Piezo1, a protein that senses mechanical force, in osteoarthritis. The authors describe evidence that persistent Piezo1 activation may harm mitochondria and fuel inflammation in joint cartilage cells. They suggest this could form a self-reinforcing cycle. The review also discusses experimental models and possible treatment strategies.

CELLS · 2026-08-22

Repeated compression lowered autophagy markers in lab-grown human cartilage cells

A study in the International Journal of Molecular Sciences grew human cartilage cells on a 3D collagen scaffold. After 60 or 180 minutes of repeated compression at physiological levels, the autophagy-related proteins ATG5, Beclin-1 and Parkin fell compared with unloaded cells. Electron microscopy showed fewer autophagy structures and more degenerated organelles. This is cell work, not a study in people.

INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES · 2026-08-21

Worm study links mitochondrial calcium to oxidative stress in Parkin-deficient muscle

A study in Antioxidants used C. elegans roundworms deficient in pdr-1, the worm counterpart of the Parkinson's-related gene Parkin. Their muscle cells showed higher mitochondrial calcium and oxidative stress, and the worms later had impaired movement. The oxidative increase was suppressed in mcu-1 mutants. The authors say MCU-1-dependent calcium rise contributes to oxidative mitochondrial defects. This is animal research, not a human study.

ANTIOXIDANTS (BASEL, SWITZERLAND) · 2026-08-21

Review proposes how three cell signals coordinate mitochondrial upkeep in disease and aging

A narrative review in Life Sciences proposes a framework for how mitochondria are maintained. It centres on reactive oxygen species, NAD+ and calcium signals. The authors say balance among these supports repair and turnover, while imbalance disrupts them. They discuss links to metabolic disease, heart disease, neurodegeneration, cancer and aging. It is a conceptual proposal, not new experimental data.

LIFE SCIENCES · 2026-08-20

Review weighs nanoparticle drugs aimed at mitochondria in age-related brain diseases

A review in Advanced Healthcare Materials looks at nanoparticles built to deliver drugs to faulty mitochondria in conditions such as Alzheimer's and Parkinson's. The authors say this may be a disease-modifying approach. They note that targeting, large-scale manufacturing, long-term safety and clinical validation all still need work. This is a review, not a new trial.

ADVANCED HEALTHCARE MATERIALS · 2026-08-19

Bacterial enzyme boosts energy metabolism and health in worms and mice

A study in Science Advances added a bacterial enzyme, LplA, to roundworms and mice. According to the authors, it raised energy metabolism and improved health across the life span without reducing maximum longevity. This is animal research. The authors suggest it may point to a strategy for human aging, but that is untested.

SCIENCE ADVANCES · 2026-08-19

ULTRA-PROCESSED FOOD & ULTRA-PROCESSED DIET 12

Ultra-processed food intake and Crohn's relapse: small meta-analysis

A systematic review and meta-analysis in the Journal of the Academy of Nutrition and Dietetics examined ultra-processed food and relapse in Crohn's disease. It pooled three prospective cohort studies covering 276 patients in remission. The provided text cuts off before the results, so the size and direction of any link cannot be reported here.

JOURNAL OF THE ACADEMY OF NUTRITION AND DIETETICS · 2026-08-31

Pregnancy high blood pressure linked to earlier heart and vascular events

An observational cohort study in JACC: Advances followed 10,368 Australian women who had given birth. Hypertensive disorders of pregnancy, obesity and high saturated-fat intake were associated with more premature cardiovascular events. Longer breastfeeding and high protein intake were associated with fewer. These are associations and do not prove cause.

JACC. ADVANCES · 2026-08-31

Higher ultra-processed food intake linked to more inflammatory diets in Brazil

A cross-sectional analysis of 36,669 adults in the NutriNet-Brasil study, published in the Journal of the Academy of Nutrition and Dietetics, found a link. People who got more energy from ultra-processed foods had higher Dietary Inflammatory Index scores. This design shows an association only. It cannot show that these foods cause the difference.

JOURNAL OF THE ACADEMY OF NUTRITION AND DIETETICS · 2026-08-29

Higher ultra-processed food intake linked to modestly more osteoarthritis in women

An observational study in the International Journal of Women's Health followed women without osteoarthritis at the start. Higher ultra-processed food intake was associated with a modestly higher risk of osteoarthritis. The link disappeared after adjusting for body fat. This shows an association only, and the blood-marker findings were described as exploratory.

INTERNATIONAL JOURNAL OF WOMEN'S HEALTH · 2026-08-29

Review links diabetes and high blood sugar to higher pancreatic cancer risk

An umbrella review in the International Journal of Molecular Sciences pooled 17 earlier reviews. It found metabolic problems had the strongest and most consistent links to pancreatic cancer. Metabolic syndrome, diabetes, high blood sugar and abdominal obesity were graded as probable evidence. High blood sugar showed the strongest link (RR 1.55). These are associations, not proof of cause.

INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES · 2026-08-28

Review argues insulin resistance score could help spot early metabolic problems in children

A narrative review in Frontiers in Pediatrics examines HOMA-IR, a measure of insulin resistance, for assessing children's metabolic health. The authors say BMI and fasting glucose may miss early dysfunction. They acknowledge limits, including assay variability, and note that no prospective screening trials show improved outcomes. They identify such trials as a research priority.

FRONTIERS IN PEDIATRICS · 2026-08-28

Gut Bifidobacterium varies by region in Mongolian adults and links to dairy intake

An observational study in Nutrients analysed stool samples from 100 healthy Mongolian adults in four regions. Bifidobacterium diversity was higher in nomadic Mongolians, and species differed by region. Intake of homemade yogurt and traditional dairy was positively associated with one species, B. angulatum. These links do not show that dairy caused the differences.

NUTRIENTS · 2026-08-28

No dietary pattern linked to psychological distress in older Shanghai adults

A cross-sectional study in Frontiers in Nutrition looked at diet and mental health in 233 community-dwelling adults aged 60 and over in Shanghai. No dietary pattern was associated with the main distress score or the distress cutoff after statistical correction. A secondary, hypothesis-generating analysis looked at a sweet-fried-processed pattern. A snapshot study cannot show cause.

FRONTIERS IN NUTRITION · 2026-08-28

South Korean nutrition teachers describe priorities for school food education

A qualitative study in Nutrients held two online focus groups with eight South Korean nutrition teachers. They named current priorities such as balanced eating and low-sodium diets. They saw future needs in food literacy and sustainable diets. The study is small and records opinions. It does not test any programme's effects.

NUTRIENTS · 2026-08-28

Review finds ultra-processed food linked to poorer sperm quality, causation unproven

A mini-review in Frontiers in Nutrition synthesised human studies on ultra-processed food intake and male reproductive health. Studies generally reported unfavourable associations, most consistently with lower sperm concentration and impaired motility. Prospective evidence linked higher paternal intake with lower fecundability and greater subfertility risk. The authors say the findings are suggestive rather than causal, because intake overlaps with diet quality and lifestyle and samples are modest.

FRONTIERS IN NUTRITION · 2026-08-27

Interviews in Indonesian city show traditional and modern diets existing side by side

A qualitative study in Global Public Health interviewed residents of three urban communities in Yogyakarta, Indonesia. Participants described more ultra-processed food, eating out and food delivery, plus perceived declines in food quality. Traditional food practices also continued. The authors suggest these practices may help prevent cardiometabolic disease, but the study did not test that.

GLOBAL PUBLIC HEALTH · 2026-08-27

Review: ultra-processed medical supplements show benefit in malnourished patients

A review in Clinical Nutrition examines oral nutritional supplements, which count as ultra-processed under the Nova system. It finds consistent benefits for intake and clinical benefits in defined malnourished groups. Evidence for several hard outcomes is mixed. The author proposes judging such products by clinical purpose and nutritional adequacy in individual care.

CLINICAL NUTRITION (EDINBURGH, SCOTLAND) · 2026-08-26

EXERCISE AS MEDICINE & LONGEVITY

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Review links regular joint movement to joint health and pain regulation

A narrative review in Medical Sciences looked at how movement affects joints. The authors say repeated movement may support joint fluid exchange, cartilage nutrition and pain control. Inactivity and excessive or poorly distributed loading may do harm. The review proposes an "adaptive loading window" as a hypothesis. It does not prove cause and effect.

MEDICAL SCIENCES (BASEL, SWITZERLAND) · 2026-08-19

Trial planned to test exercise program in frail older Brazilians

A protocol published in JMIR Research Protocols describes a randomised controlled trial that has not reported results. Frail and prefrail adults aged 60 and over in a Brazilian community centre will join either a 12-week supervised exercise program or health education workshops. The main outcomes are walking capacity and fall risk.

JMIR RESEARCH PROTOCOLS · 2026-08-18

Older adults in India share views on a healthy-ageing digital tool

A qualitative study in BMC Geriatrics gathered views from older adults, caregivers and experts at two sites in India. Participants considered regular sleep, balanced diet, exercise, stress management and meditation beneficial. They expected a digital tool to include health tips, exercise tutorials and sleep advice. The work informs design. It did not test any intervention.

BMC GERIATRICS · 2026-08-18

Review discusses exercise as support for older people with cancer

A review in Frontiers in Immunology examines how exercise may affect ageing-related changes such as inflammation, weakened immunity and muscle loss in older adults with cancer. The authors suggest it could improve treatment tolerance and outcomes. As a review, it summarises existing research and does not present a new trial.

FRONTIERS IN IMMUNOLOGY · 2026-08-18

Review examines exercise and functional foods in relation to DNA damage and aging

A review in Frontiers in Aging Neuroscience gathers research from molecular, animal and human studies. It looks at how exercise and food compounds such as polyphenols and omega-3 fatty acids may affect DNA repair and oxidative stress. The authors describe therapeutic promise, but also note limits and gaps in translating this work to people.

FRONTIERS IN AGING NEUROSCIENCE · 2026-08-14

Review: weight-loss drugs reduce lean mass, but effects on muscle quality vary

A narrative review in Nutrients covers randomised trials and observational studies of semaglutide and tirzepatide. Both drugs cause weight loss with reduced lean body mass, which the authors say is generally proportional to weight lost. Tirzepatide appeared to reduce fat within muscle, while semaglutide's effects on strength were more mixed. Data in older adults remain limited.

NUTRIENTS · 2026-08-14

Meta-analysis: exercise linked to faster reaction times in esports players

A systematic review and meta-analysis in Frontiers in Psychology pooled 10 randomised trials with 503 esports players. Exercise interventions were associated with significantly reduced reaction time. Virtual reality and exergame programmes showed a numerically larger effect than traditional aerobic exercise. The study also reported improved operational accuracy. This is not about aging directly.

FRONTIERS IN PSYCHOLOGY · 2026-08-14

Healthier lifestyle linked to better self-rated health in adults over 75

According to a cross-sectional analysis in the American Journal of Lifestyle Medicine, 421 Loma Linda Longevity Study participants aged 75 and over were studied. A higher Healthy Lifestyle Index score was linked to better quality of life and self-rated health. Long-term vegetarian diet was linked to better self-rated health. These are associations, not proof of cause.

AMERICAN JOURNAL OF LIFESTYLE MEDICINE · 2026-08-13

Review finds limited brain evidence for HMB supplement; exercise appears the main driver

A review in Frontiers in Aging Neuroscience covered 24 experimental and clinical studies of HMB, a leucine metabolite. Most reported better muscle strength and function. Direct evidence on the brain is limited. Many studies combined HMB with exercise or other supplements, so its own effects are hard to separate. Exercise appeared to be the principal driver.

FRONTIERS IN AGING NEUROSCIENCE · 2026-08-13

Review proposes pre-pregnancy cardiac rehabilitation, but no study has tested it

A structured narrative review in Frontiers in Medicine draws on 39 sources to propose preconception cardiac rehabilitation. No study directly evaluated it. Indirect evidence suggests physical activity and fitness before pregnancy may be associated with lower risks of some adverse outcomes. The authors call it a testable framework, not a validated care model.

FRONTIERS IN MEDICINE · 2026-08-13

Small trial finds tablet nutrition platform feasible for older adults, with no effect yet

A feasibility randomised trial in JMIR Aging tested a tablet platform for diet and activity in adults aged 65 and over. Of 31 people randomised, 28 finished 12 weeks. Ten of 14 in the intervention group used it three or more times weekly. Diet and physical function did not differ between groups.

JMIR AGING · 2026-08-28

Review examines bone-muscle loss and how AI might help assess it

A narrative review in the International Journal of Molecular Sciences covers osteosarcopenia, the combination of low bone mass and muscle loss. It summarises how bone and muscle interact at the molecular level. It also discusses how artificial intelligence might help with risk prediction, early diagnosis and treatment planning. These uses are described as emerging.

INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES · 2026-08-27

AI chatbots' diet plans for rare metabolic disorders showed clinically relevant gaps

An exploratory simulation study in Frontiers in Nutrition tested two AI language models on diet plans for three inherited protein metabolism disorders, using standardized pediatric cases. The plans looked generally acceptable overall. However, deviations from disease-specific nutrition targets appeared in all three disorders. In the phenylketonuria case, neither model met protein and tyrosine recommendations together.

FRONTIERS IN NUTRITION · 2026-08-26

More severe sarcopenia linked to poorer daily function and more depression

A study in the Journal of Exercise Rehabilitation assessed 236 older adults grouped by sarcopenia severity. Greater severity was associated with poorer physical function and more depressive symptoms. The link with basic daily activities appeared to be influenced by sex. The links with more complex daily tasks and depression seemed driven largely by age. These findings are associations and do not show cause.

JOURNAL OF EXERCISE REHABILITATION · 2026-08-26

Trials review: protein plus exercise improved grip strength in older adults with sarcopenia

A systematic review and network meta-analysis in Frontiers in Nutrition pooled 18 randomised trials with 1,341 older adults with, or at high risk of, sarcopenia. Adding protein-related supplements to exercise improved grip strength and a muscle mass index. It did not significantly improve timed up-and-go performance, a mobility test.

FRONTIERS IN NUTRITION · 2026-08-25

Low calf size and underweight linked to sarcopenia in older adults with kidney disease

A cross-sectional study in Renal Failure included 3,629 community-dwelling adults aged 60 or older with chronic kidney disease in Taiwan. Underweight and low calf circumference were each associated with sarcopenia and severe sarcopenia after adjustment. The design shows a link only, not cause. The authors note body size may influence the findings and call for further studies.

RENAL FAILURE · 2026-08-24

Methionine and FGF21 tied to ferritin in older adults' diet trial

An exploratory secondary analysis of the PRODMED1 randomised crossover feeding trial, in Frontiers in Nutrition, included 47 adults aged 60 or older who ate meat-protein and pulse-protein diets for 8 weeks each. The meat diet raised blood methionine; FGF21 rose only after the pulse diet. Methionine and FGF21 were each positively associated with ferritin, but not other iron measures. These associations do not show cause.

FRONTIERS IN NUTRITION · 2026-08-24

Review examines nutrition and rehab strategies for muscle recovery after intensive care

A review in Annals of Intensive Care covers recovery after critical illness. ICU-acquired weakness develops in roughly half of mechanically ventilated patients and can last for years. The authors note large randomised trials found that raising calories or protein early does not improve outcomes and may worsen them. They discuss individualised, phased nutrition and rehabilitation.

ANNALS OF INTENSIVE CARE · 2026-08-24

Review: weight-loss drugs may affect nutrition in ways body weight alone misses

A narrative review in Nutrients looked at nutrition during GLP-1-based obesity drugs. These drugs reduce appetite and food intake, which may affect protein, micronutrients and muscle. The authors say responses vary and weight alone is a poor guide. They describe a risk-based, individualised approach, especially for older adults and people with sarcopenic obesity.

NUTRIENTS · 2026-08-23

Review raises concern that GLP-1 drugs may lower protein intake in older adults

A review in Advances in Therapy examined protein intake during GLP-1 and GIP/GLP-1 drug treatment. Randomised trials suggest protein share of calories is generally maintained with liraglutide. But eating less overall may lower absolute protein intake. Few studies have checked whether this causes real muscle or strength loss. The authors call for longer trials.

ADVANCES IN THERAPY · 2026-08-22

Amino acid levels shifted over 12 weeks of resistance training in older adults

In a 12-week study in The Journal of Nutrition, Health & Aging, community-dwelling older adults did supervised resistance exercise alone or with daily protein- and micronutrient-fortified drinks. Among 78 participants analysed, total amino acids generally fell in both groups. Leucine and phenylalanine fell more without supplements. An arginine availability ratio rose in both groups.

THE JOURNAL OF NUTRITION, HEALTH & AGING · 2026-08-19

Eye gene therapy cut abnormal vessel growth in preclinical studies, review finds

A systematic review and meta-analysis in Angiogenesis included 25 preclinical, in vitro and clinical studies of gene therapy for retinal diseases such as neovascular age-related macular degeneration and diabetic retinopathy. In preclinical studies, gene therapy reduced abnormal blood vessel growth. In clinical cohorts, it reduced central subfield thickness by 55.30 micrometres. The authors describe the clinical evidence of anatomical improvement as emerging.

ANGIOGENESIS · 2026-08-31

Review: longer-lasting eye injections depend on more than drug half-life

A narrative review in the International Journal of Molecular Sciences looked at injected anti-VEGF drugs used for eye conditions such as age-related macular degeneration. It says longer gaps between doses can come from higher starting exposure or different drug design, not only a longer half-life. The authors propose a new way to define durability.

INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES · 2026-08-31

Paper proposes overactive DNA repair signaling as a driver of aging

A hypothesis paper in Aging proposes that chronic overactivation of the DNA damage response may help drive aging. It suggests this could push cells toward senescence, deplete stem cells and fuel inflammation. The authors state that no integrated human interventional data exist. They offer a testable research agenda, not a treatment.

AGING · 2026-08-31

Review finds hemophilia trials concentrated in wealthier countries

A systematic review in Haemophilia covered newer hemophilia treatments, including gene therapies, siRNA therapy and antibody drugs. It found most trials took place in high-income countries, with minimal participation from low- and middle-income countries. Gene therapies were limited by high costs and immune reactions. Emicizumab remained costly, with limited data in children and resource-limited settings.

HAEMOPHILIA : THE OFFICIAL JOURNAL OF THE WORLD FEDERATION OF HEMOPHILIA · 2026-08-31

Review compares non-viral methods for delivering gene therapies into cells

A review in Pharmaceutics surveys non-viral ways to deliver gene therapies and genome editors, including lipid nanoparticles, polymer particles and extracellular vesicles. It says lipid nanoparticles are the most clinically mature. Targeting specific cells, escaping cell compartments and tolerating repeat doses remain major barriers. The text does not link this work to aging directly.

PHARMACEUTICS · 2026-08-30

Review: RNA-based cholesterol drugs advance; miR-30c analog C2 still preclinical

A review in Cells covers nucleic acid therapies for high cholesterol, including antisense and siRNA drugs, some already approved. It also describes a microRNA analog called C2. In preclinical work, C2 lowered LDL cholesterol and atherosclerosis. The authors stress these findings remain preclinical, with delivery and safety questions still open.

CELLS · 2026-08-29

Review examines immune and inflammatory drivers of lingering shingles nerve pain

A review in Neurological Sciences describes postherpetic neuralgia, nerve pain after varicella-zoster virus reactivation, as a neuroimmune disorder. Current treatments mostly relieve symptoms rather than change the disease. The authors outline emerging approaches, including inflammasome inhibition and gene or RNA therapies, and propose a stage-specific framework for future care.

NEUROLOGICAL SCIENCES : OFFICIAL JOURNAL OF THE ITALIAN NEUROLOGICAL SOCIETY AND OF THE ITALIAN SOCIETY OF CLINICAL NEUROPHYSIOLOGY · 2026-08-27

Transplanted self-contracting muscle cells improved muscle and metabolism in aging mice

A study in Nature Aging describes myografts, which are muscle cells from the same animal transplanted under the skin. In mice, they formed vascularised tissue that contracts on its own. In aging and obese mice, the grafts improved muscle mass, muscle function and metabolic outcomes. This is animal research, not a human trial.

NATURE AGING · 2026-08-26

Review maps how Saudi Arabia regulates advanced gene and cell therapies

A narrative review in Regenerative Therapy examined advanced gene, cell and tissue-engineered therapies in Saudi Arabia. It reports that the national regulator had approved eight such products as of 2025, including CAR-T and CRISPR-based therapies. Trials focus on cancer, blood and rare genetic diseases. Workforce, manufacturing and reimbursement challenges remain.

REGENERATIVE THERAPY · 2026-08-24

Review highlights the outer blood vessel layer's role in vascular disease

A review in Frontiers in Physiology covers fibroblasts in the outer layer of blood vessels, the adventitia. The authors describe how these cells shape collagen, inflammation and vessel remodelling. They link them to atherosclerosis, hypertension, diabetes, aneurysm and age-related vascular dysfunction. They suggest these cells could become treatment targets. No new trial data are described.

FRONTIERS IN PHYSIOLOGY · 2026-08-24

Review traces progress and hurdles in gene therapy for inherited skin disorders

A review in Frontiers in Bioengineering and Biotechnology covers gene therapy for rare inherited skin diseases such as epidermolysis bullosa. It says corrected skin stem cells have achieved long-term tissue regeneration in patients. Gene editing tools are advancing. Safe delivery, off-target effects, manufacturing and long-term safety remain major challenges.

FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY · 2026-08-24

AI BIOLOGY & DIAGNOSTICS 11

Review summarises how cancer fusion transcripts form and may guide diagnosis

A review in Clinical and Experimental Medicine covers fusion transcripts, hybrid RNA molecules found in many cancers. They can drive tumours and serve as markers for diagnosis, prognosis and treatment targeting. The authors note that the significance of most identified fusions is still poorly understood. They point to better sequencing and validation as key next steps.

CLINICAL AND EXPERIMENTAL MEDICINE · 2026-08-31

Review examines what biological aging clocks measure and where they fall short

A narrative review in Revista de Investigacion Clinica covers biological aging clocks, which estimate aging from molecular and clinical markers. It sorts them into three generations. The authors say the clocks measure different things, not one shared quantity. Open problems include causal interpretation, confounding and clinical use. They call for longitudinal, mechanistic studies.

REVISTA DE INVESTIGACION CLINICA; ORGANO DEL HOSPITAL DE ENFERMEDADES DE LA NUTRICION · 2026-08-31

Language models detected Alzheimer's from speech transcripts, with pauses most informative

A machine learning study in Frontiers in Artificial Intelligence used speech transcripts from DementiaBank. Language models classified Alzheimer's disease best when pauses in speech were highlighted, with an F1 score of 0.8326. Combining all speech features usually did worse. The work is computational. It does not show use in clinical practice.

FRONTIERS IN ARTIFICIAL INTELLIGENCE · 2026-08-31

Review examines wearable and digital tools for tracking sarcopenia

A review in the Journal of Bone Metabolism covers digital tools such as smart watches, smart insoles and motion analysis for monitoring age-related muscle loss. They may offer more objective, continuous measures than traditional tests. The authors say standard protocols and large-scale clinical validation are needed before they can join diagnostic criteria.

JOURNAL OF BONE METABOLISM · 2026-08-31

Review explores using mouth bacteria to estimate biological age

A review in Frontiers in Microbiology covers how the salivary microbiome changes across life and links to age-related diseases. It also covers "salivary MicroAge" models, which use AI to predict biological age. The authors say the approach may offer a noninvasive way to assess aging, but standardisation and generalisability are needed first.

FRONTIERS IN MICROBIOLOGY · 2026-08-28

Review: wearable devices may improve walking and balance, but evidence has gaps

A narrative review in Bioengineering looked at wearable technologies for gait rehabilitation. It says current evidence points to gains in gait speed, balance, endurance and fall-risk monitoring in neurological, frailty-related and ageing groups. The authors note limits: varied protocols, small samples, limited long-term validation and a lack of device standardisation.

BIOENGINEERING (BASEL, SWITZERLAND) · 2026-08-28

Review: molecular profiling may reveal how brain injury influences brain aging

A review in Ageing Research Reviews examines how traumatic brain injury may contribute to accelerated brain aging and later neurodegeneration. The authors say multi-omics methods could identify molecular signatures, biomarkers and treatment targets. They describe the link as potential, with inflammation, oxidative stress and mitochondrial dysfunction among the processes involved.

AGEING RESEARCH REVIEWS · 2026-08-27

AI model using EEG separated Alzheimer's from frontotemporal dementia in small study

Researchers writing in Frontiers in Neuroinformatics built a machine-learning model using brain-wave recordings from 88 people: 36 with Alzheimer's, 23 with frontotemporal dementia and 29 healthy controls. It reached 95.63% accuracy on held-out test segments. The authors say beta-band asymmetry and alpha-band reactivity mattered most. The sample is small and the work is a computational study.

FRONTIERS IN NEUROINFORMATICS · 2026-08-27

Review surveys non-animal methods for testing whether substances harm skin

A review in Toxicological Research covers non-animal ways to assess skin hazards. Traditional rabbit and guinea pig tests match human responses poorly and raise ethical concerns. The authors summarise current methods for irritation, sensitisation and phototoxicity. They also cover newer tools, including organoids, skin-on-a-chip and computer models, and the hurdles to regulatory acceptance.

TOXICOLOGICAL RESEARCH · 2026-08-26

Review outlines AI and lab-on-chip tools for future fertility care

A review in Bioengineering describes how artificial intelligence, organ-on-chip devices and improved freezing methods might change fertility medicine. The authors propose a roadmap toward predictive, personalised care. They evaluate how ready these tools are for clinical use. The text reports no trial results, so the benefits remain a proposal.

BIOENGINEERING (BASEL, SWITZERLAND) · 2026-08-25

Heart-based and blood-based biological ages both link to cardiovascular disease

An observational study in Frontiers in Cardiovascular Medicine used machine learning on echocardiography and blood tests from 1,830 people to estimate heart-based and blood-based biological ages. Faster ageing on each measure was associated with existing cardiovascular disease (odds ratios 1.36 and 1.31). The heart measure's association was only numerically larger. The two measures partly overlapped. The design shows association, not cause.

FRONTIERS IN CARDIOVASCULAR MEDICINE · 2026-08-25

STRESS RESILIENCE & NERVOUS SYSTEM 10

Review links higher allostatic load to worse surgical outcomes

A systematic review in Frontiers in Surgery examined allostatic load, a measure of the body's wear from repeated stress. Across 10 original studies, it appeared to predict outcomes such as postoperative complications and help identify high-risk patients. It may also help explain racial and socioeconomic disparities. The evidence is a set of associations, from a small number of studies.

FRONTIERS IN SURGERY · 2026-08-21

Paper proposes a three-tier model of body regulation for teaching

A paper in Frontiers in Physiology proposes a teaching framework for medical students. It combines reflexes, feedback loops that keep core variables steady, and brain-based prediction into three tiers working over different timescales. This is a conceptual proposal for education. It does not report new experimental or patient data.

FRONTIERS IN PHYSIOLOGY · 2026-08-20

Metal festival-goers showed higher pain tolerance in a small exploratory comparison

A study in Scientific Reports compared fans before and during a metal music festival. The full sample showed no difference in pain perception. After excluding heavy drinkers in an exploratory analysis, pain tolerance was higher among festival-goers. The authors call this a possible sign of resilience. It is unclear whether it applies beyond this festival.

SCIENTIFIC REPORTS · 2026-08-20

Review finds exercise may help ease PTSD symptoms

A review in Frontiers in Psychiatry examined exercise as an add-on treatment for post-traumatic stress disorder. Randomised trials and preliminary studies suggest exercise may reduce symptom severity, anxiety, depression and insomnia. It may also support trauma-focused therapy. The review describes the evidence as emerging, and the proposed brain mechanisms are not proven.

FRONTIERS IN PSYCHIATRY · 2026-08-19

Distress-linked social media profile made more task errors in preliminary study

A study in Frontiers in Psychiatry compared three social media use profiles on an inhibitory control task, alongside heart rate variability and salivary markers. The distress-associated profile made more omissions than the functional profile, including on social media stimuli, and fewer correct rejections of those stimuli. False alarms and reaction times did not differ. The authors call the findings preliminary.

FRONTIERS IN PSYCHIATRY · 2026-08-19

Review: chronic stress and cortisol exposure may raise Alzheimer's risk

A review in the Journal of Neuroimmunology gathers clinical, epidemiological and animal evidence on chronic stress and glucocorticoid exposure in Alzheimer's disease. In animal models, chronic stress or glucocorticoids worsened amyloid, tau pathology and cognition. Human evidence links stress to cognitive impairment. The authors call stress a potent risk factor.

JOURNAL OF NEUROIMMUNOLOGY · 2026-08-18

Sleep and quality of life improved after vagus nerve stimulation in epilepsy cohort

A retrospective cohort study in Frontiers in Surgery followed 29 adults with drug-resistant epilepsy for 24 months after vagus nerve stimulator implantation. Seizures, sleep quality and quality-of-life scores all improved. The sleep and quality-of-life gains were not solely tied to seizure reduction. The authors say cause cannot be established because there was no control group.

FRONTIERS IN SURGERY · 2026-08-18

Study in shelter dogs compares where on the body to sample stress hormones

This study in Veterinary Sciences compared hair stress hormones taken from three body sites in 30 shelter dogs over eight weeks. Hair cortisol differed by site. The shoulder gave the highest concentrations and the least variation, so the authors favour it for sampling. This is animal research, not a human study.

VETERINARY SCIENCES · 2026-08-17

Review links nervous system resilience to delirium after surgery in older patients

A narrative review in Frontiers in medicine proposes that the autonomic nervous system connects frailty, surgical stress and postoperative delirium. The authors call it a hypothesis, not a validated model. They note the evidence linking heart rate variability and baroreflex sensitivity to delirium is mostly observational.

FRONTIERS IN MEDICINE · 2026-08-14

Review examines whether plant terpenes could ease stress-related inflammation

A review in the International Journal of Molecular Sciences summarises evidence on chronic stress, inflammation and disease. It reports that terpenes such as limonene, β-caryophyllene and linalool may influence inflammation and oxidative stress pathways. The text describes these as possible mechanisms. It does not present proof of benefit in people.

INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES · 2026-08-14

Short paper proposes a drug combination based on genetic lifespan signals

A short communication in Frontiers in Aging proposes a three-part oral regimen, drawing on gene activity patterns linked to parental lifespan. It is a proposal, not a test. The authors say the combination has no established safety profile and no direct combination data exist. The underlying gene analysis is still a preprint, not peer reviewed.

FRONTIERS IN AGING · 2026-08-19

Review looks at Chinese herbal compounds and cell senescence in brain diseases

A review in Frontiers in Neurology discusses how senescent cells may contribute to Alzheimer's, Parkinson's and Huntington's disease. It examines compounds from Traditional Chinese Medicine, including ginsenosides, ginkgo biloba extract and curcumin, and how they might affect senescence. The text describes their potential and mechanisms. It does not report clinical results.

FRONTIERS IN NEUROLOGY · 2026-08-19

Lung bacterium pushes immune cells into senescence, early-stage study reports

A study in Nature Communications examined Mycobacterium abscessus, a bacterium that hides inside cells. It pushed alveolar macrophages, a type of lung immune cell, into a senescent, non-dividing state, mainly through DNA damage. Factors these cells secreted spread senescence to nearby uninfected cells. In a prototype approach, the senolytic drug Navitoclax cleared senescent cells and reduced bacterial burden, similarly to antibiotics. The text reports no testing in patients.

NATURE COMMUNICATIONS · 2026-08-18

Review links ageing immune system to slower fracture repair

A review in Frontiers in Immunology gathered evidence that an ageing immune system may contribute to fragile bones and poor fracture healing, beyond bone density alone. Much of the direct evidence on repair comes from preclinical work. The authors say current evidence is insufficient to support immune-guided fracture care and call for prospective studies.

FRONTIERS IN IMMUNOLOGY · 2026-08-17

Review proposes ovarian aging may contribute to aging across the body

A review in Cell Stem Cell outlines how ageing ovaries, through cell damage, inflammation and falling estrogen, may drive wider ageing. It discusses possible interventions, including senolytics and regenerative medicine. The authors say ovarian ageing is possibly associated with age-related multimorbidity in women. The review does not show that targeting the ovary extends healthspan.

CELL STEM CELL · 2026-08-17

Procyanidin C1 plus olaparib suppressed tumour growth in BRCA1-proficient preclinical models

A preclinical study in the American Journal of Cancer Research reports that procyanidin C1 (PCC1) persistently induced DNA double-strand breaks in BRCA1-proficient breast cancer cells. Adding the PARP inhibitor olaparib blocked a DNA repair pathway, so damage accumulated and senescence was triggered. Compared with monotherapy, the combination enhanced cellular senescence and suppressed tumour growth. This is preclinical work, not a test in patients.

AMERICAN JOURNAL OF CANCER RESEARCH · 2026-08-15

Cardiac fibroblasts from newborn rats show scarring and aging signs after TGF-β1

This is a cell study using heart fibroblasts from neonatal rats, reported in Frontiers in Pharmacology. Treating the cells with TGF-β1 produced both scar-forming and senescence markers, plus inflammatory signals. Two senescence-targeting drug treatments, Navitoclax and Dasatinib plus Quercetin, reduced cell viability. The work was done in cells, not in animals or people.

FRONTIERS IN PHARMACOLOGY · 2026-08-14

Senolytics reversed pollution-induced cell senescence in mice, limited vessel activation

A study in Cardiovascular Toxicology exposed mice to concentrated fine air pollution (PM2.5). This caused senescence in blood mononuclear cells and endothelial progenitor cells, plus more white blood cells rolling on and sticking to vessel walls. The senolytics dasatinib and quercetin reversed the senescence, restored progenitor-cell tube formation in the lab and limited vessel activation. This is mouse and cell research, not a trial in people.

CARDIOVASCULAR TOXICOLOGY · 2026-08-13

Greek oregano relative shows senescent-cell-clearing activity in lab cells

A cell-culture study in Planta Medica analysed extracts of Origanum calcaratum, a Greek plant. Researchers identified 27 constituents. In Li-Fraumeni cells, the extracts and rosmarinic acid showed senolytic activity, meaning they cleared aged cells, and did not harm healthy cells. The authors call for further investigation. No animal or human data were reported.

PLANTA MEDICA · 2026-08-13

Review surveys ways to rejuvenate ageing stem cells for bone health

A review in Current osteoporosis reports looks at how senescence affects mesenchymal stem cells and bone. It covers senolytic drugs, inhibitors of senescent cells' secretions, nanoplatforms and exercise, which it says show promise. It notes that clinical trials of therapies to delay age-related bone loss are ongoing.

CURRENT OSTEOPOROSIS REPORTS · 2026-08-12

Review explores bone as an early marker of biological ageing

A review in Biology discusses bone as an indicator of biological ageing. The authors say bone changes often come before clinical signs of age-related diseases, suggesting a possible early biomarker. They also examine studies on diet, exercise and lifestyle for bone health, and note limits in turning the idea into practice.

BIOLOGY · 2026-08-12

CLINICAL TRIALS 8

Completed trial tested blueberries for blood pressure in men; no results listed

A completed phase 1/2 trial, registered on ClinicalTrials.gov and sponsored by Colorado State University, was designed to assess whether blueberries reduce blood pressure and improve blood vessel lining function and arterial stiffness. It involved middle-aged and older men with elevated blood pressure or stage 1 hypertension. The registry entry lists no results, so it is unknown whether blueberries helped.

CLINICALTRIALS.GOV (NCT04530916) · 2026-09-02

Planned trial to test life review therapy for cancer patients and caregivers

A trial registered on ClinicalTrials.gov and sponsored by the University of Rochester plans to test Dyadic Life Review therapy among older adults with advanced cancer and cognitive impairment and their caregivers. It aims to evaluate whether the therapy reduces caregiver distress, measured by caregiver burden. The trial is not yet recruiting, so there are no results.

CLINICALTRIALS.GOV (NCT07796347) · 2026-09-01

Registered trial to test online medication tool for older adults

A University of Michigan trial, listed on ClinicalTrials.gov, is not yet recruiting and has no results. It will test an online self-monitoring platform for older adults who live alone and have memory concerns. The aim is to see whether the tool helps them feel more confident and prepared to manage medications safely at home.

CLINICALTRIALS.GOV (NCT07659548) · 2026-08-31

Planned survey will study lifestyle readiness after heart attack

A registry entry on ClinicalTrials.gov describes a cross-sectional survey that has not yet started recruiting. Patients who had a heart attack treated with stenting in the past six months will complete questionnaires on readiness to change, quality of life, mood and physical function. There are no results yet. The data are meant to inform a later lifestyle trial.

CLINICALTRIALS.GOV (NCT07785921) · 2026-08-31

Registered trial will test adding stomach-lining ablation to endoscopic weight-loss surgery

A trial registered on ClinicalTrials.gov, sponsored by West Virginia University, is not yet recruiting and has no results. It plans to randomise adults with obesity to endoscopic sleeve gastroplasty with or without ablation of ghrelin-producing stomach lining. It will compare weight loss and metabolic outcomes. Earlier studies of the combination were small and single-arm.

CLINICALTRIALS.GOV (NCT07792226) · 2026-08-28

Registered Swedish study will compare home acute care with hospital care for over-75s

A registry entry on ClinicalTrials.gov describes an observational study in Västra Götaland, Sweden. It will examine home-based acute care by mobile teams for people aged 75 and older after acute illness. Researchers will test whether it is non-inferior to emergency department care for care needs and mortality. It is recruiting, with no results yet.

CLINICALTRIALS.GOV (NCT07472335) · 2026-08-28

Registered trial tests virtual reality training in children with hemiplegic cerebral palsy

A trial entry on ClinicalTrials.gov lists a completed randomised study of 30 children aged 7 to 10 with hemiplegic cerebral palsy. Both groups had physical therapy for 8 weeks, and one also had immersive virtual reality. Strength and balance were measured. No results are given in the entry.

CLINICALTRIALS.GOV (NCT07792278) · 2026-08-28

Pilot trial of group program for self-ageism in older adults with mental illness

A registry entry on ClinicalTrials.gov describes a completed pilot trial from Universidad Pontificia Comillas. It tests AgingUP, a 10-session group program, against usual care in adults aged 50 and over with severe mental illness. It aims to reduce self-ageism and stigma. No results are posted in the entry.

CLINICALTRIALS.GOV (NCT07690098) · 2026-08-28

IN THE NEWS

GLP-1 weight loss drugs linked to nail and hair problems

According to a ScienceDaily report, users of GLP-1 drugs such as Ozempic and Wegovy had higher rates of nail detachment, hair loss and scalp inflammation. Some problems were several times more frequent. Researchers found weight loss alone did not fully explain the differences. The report describes a link, not proven cause.

SCIENCEDAILY HEALTHY AGING · 2026-10-12

Report: restoring Menin protein reversed age-related changes in older mice

According to a ScienceDaily report, scientists found that declining levels of a protein called Menin may help drive aging. Restoring Menin in older mice reversed several age-related changes within 30 days. The report adds that supplementing with the amino acid D-serine improved memory and learning, but it does not say in which subjects this was tested or give study details.

SCIENCEDAILY HEALTHY AGING · 2026-10-12