The Arising

OCTOBER 11, 2026

DAILY ISSUES



EDITORIAL ILLUSTRATION / AN ARTISTIC INTERPRETATION

Looking closely at possibility.

CELLULAR SCIENCE / COGNITION / NEW QUESTIONS

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.

SUNDAY, OCTOBER 11, 2026 · VOL 1 NO 11 · ARISING HEALTH

14 stories across 2 desks, about 39 minutes to read, followed by 187 briefs grouped by topic.

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Longevity & Healthspan

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4. Hidden Artery Plaque Found in More Than Half of Healthy Adults, Including 1 in 13 Under 30
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The Arising

SUNDAY, OCTOBER 11, 2026 · LONGEVITY & HEALTHSPAN DESK

IN THIS EDITION · LONGEVITY & HEALTHSPAN

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN

LIFE BIOSCIENCES

First Human Data on Cell-Rejuvenating Gene Therapy Show It Was Well Tolerated, With Early Vision Gains in Glaucoma

A gene therapy designed to turn back the clock on aging cells has now been given to people, and in the first three patients it was well tolerated.

Life Biosciences announced the interim results on October 8, 2026, from its Phase 1 trial of a therapy called ER-100. The three participants all have open-angle glaucoma, a chronic disease in which the optic nerve is damaged. It is a leading cause of blindness in older adults. According to the company, vision lost to glaucoma is often considered irreversible, because the nerve cells involved, called retinal ganglion cells, do not naturally regenerate.

ER-100 takes an unusual approach. It delivers three genes known as OCT4, SOX2 and KLF4, together called OSK. According to the company, these are used to reset the patterns of gene activity in a cell and return it to a more youthful, functional state. The company calls this epigenetic restoration. In plain terms, the idea is to change which genes are switched on, rather than to fix a single faulty gene.

Each participant received one injection into the eye. They also took the antibiotic doxycycline by mouth every day for 56 days. The doxycycline acts as a switch that turns the OSK genes on. A course of oral steroid, tapered down over time, was given to limit inflammation from the immune response to the virus used to deliver the genes.

On safety, the company reports no dose-limiting toxicities, no serious adverse events and no adverse events of special interest through Day 56. All side effects that were reported were linked to the injection procedure, the steroid or conditions the patients already had, according to Life Bio. That attribution comes from the company, not an independent review. The trial's Data Safety Monitoring Board recommended moving to a higher dose, about three times the first one.

The vision results are the part that draws attention. Two of the three participants improved on the Humphrey visual field test, a standard exam that measures how well a person detects light across many points in their field of vision. In each of those two, at least 28% of test points improved by more than 4 decibels. The company called these observations preliminary and encouraging.

Here is why caution matters, and this is where the argument is weakest. Three patients is a very small group. The trial is open-label, meaning everyone knew they were receiving the treatment. The company's materials do not describe a comparison group, so we cannot tell whether the gains exceed what would be expected without treatment. Follow-up so far is only 56 days. Visual field tests can vary from one session to the next, so it is not possible to say whether the gains came from the therapy. The company itself notes that this phase of the study is designed to evaluate safety and tolerability.

ER-100 is investigational, and the company's materials describe it as being evaluated in the trial, registered as NCT07290244. Please do not start, stop or change any glaucoma treatment, or any medication, including antibiotics such as doxycycline or steroids, on the basis of this report; talk to your own clinician first. Phase 1 trials are the first step, and as a general rule, later and larger studies would be needed to show that a therapy works and remains safe over longer periods. That means any approved treatment, if one ever emerges, is likely years away, though that is our judgment rather than something the company has stated.

Still, the result matters for a broader reason. It is early human evidence that a controlled version of this cell-reprogramming approach can be given to patients without obvious serious harm at the starting dose. The company says it hopes the method can eventually address other age-related diseases, but that remains unproven.

WHAT TO WATCH NEXT

Results from the higher-dose group, longer follow-up in the first three patients, and whether the trial's planned inclusion of patients with another optic nerve condition, NAION, produces data of its own.

Source: Life Biosciences (press release; also reported by STAT)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 4 MIN

NATURE COMMUNICATIONS · 2 SOURCES

Gut Bacteria Compound ImP Linked to Higher Alzheimer's Risk and Faster Cognitive Decline

A molecule made by bacteria in the gut may be tied to how fast the brain ages. In a study of 1,196 adults with no cognitive impairment, people with higher blood levels of imidazole propionate, or ImP, scored lower on memory and thinking tests and showed more blood markers linked to Alzheimer's disease.

The study, published in Nature Communications in 2026, combines several kinds of evidence. The human part is observational. It followed adults from the Wisconsin Alzheimer's Disease Research Center and the Wisconsin Registry for Alzheimer's Prevention, with an average age of 61.2 years. Observational

work can show links. It cannot prove that one thing causes another. The team also ran experiments in mice and in cells grown in the lab, and used a genetic analysis to probe cause.

ImP is made when certain gut bacteria break down histidine, an amino acid, without using oxygen. The bacteria need an enzyme called urocanate reductase to do this. According to the paper, higher blood ImP has already been linked to type 2 diabetes, high blood pressure, atherosclerosis and chronic kidney disease. Until now, its effect on the brain had been largely unexplored.

In the people studied, higher ImP went with lower scores on a preclinical Alzheimer's cognitive composite, a set of tests designed to catch early change. The authors adjusted for age, sex, body mass index and APOE ε4 status, a well-known genetic risk factor. Plasma ImP was higher in older people and in men.

Heart and metabolic health did not fully explain the link. The researchers used a score of lifestyle-related dementia risk factors, including obesity, smoking, diabetes and high blood pressure. ImP was higher in people with higher scores. In a mediation analysis, only 13–16% of the indirect effect ran through ImP between that risk score and the cognitive results. When the score was added as an adjustment, ImP remained the main contributor to the association. The authors conclude that ImP acts largely as an independent factor rather than working indirectly through other conditions.

Cognitive change over time pointed the same way. The team compared people in the highest and lowest quarters of ImP levels. The high group had lower starting scores and a steeper decline with age. On an animal-naming test, for example, the high group started lower and declined faster. Similar patterns appeared on letter fluency and a trail-making test. The authors say the gap widened over time.

Blood markers of brain injury fit that picture. Higher plasma ImP was associated with higher plasma neurofilament light chain, a marker of nerve cell damage, and with higher plasma pTau-217, a marker of Alzheimer's-type tau changes. In 224 people with spinal fluid samples, plasma ImP was also linked to neurofilament light chain in that fluid, though the correlation was modest ($R = 0.2$). A marker of astrocyte activation, a type of brain support cell, showed only a trend.

Not every result was clean. Brain scans of glucose use showed no overall link to ImP in 168 people. A signal in the frontal lobes of 51 men disappeared when one high-ImP outlier was left out. And the pTau-217 pattern over time was mixed: the high-ImP

group started higher but rose slightly more slowly, which the authors read as a possible plateau.

The cause question is where the genetics and animal work come in. The researchers found a region on chromosome 12 tied to both plasma ImP levels and Alzheimer's risk. They say this supports a role for the body's own genes in setting ImP levels, and a causal role for the molecule in Alzheimer's. This is the authors' interpretation, and it is the weakest link in the argument. In mice, long-term ImP treatment worsened Alzheimer's-like pathology. In cultured brain cells, ImP weakened the barrier formed by brain blood vessel cells and increased tau hyperphosphorylation, a chemical change tied to tau tangles. That effect was blocked by inhibiting an enzyme called GSK-3β. These are lab and animal findings, and they may not carry over to people.

The coverage went further in places. ScienceDaily, relaying a University of Wisconsin-Madison release, quoted Bendlin comparing a possible ImP-lowering drug to a statin. The paper itself is more careful: it says targeting ImP "may represent a potential strategy." The release also said about 43% of participants carried the genetic variant tied to higher ImP, and quoted researcher Federico Rey saying the variant's link to Alzheimer's risk may now be explained. Those points come from the coverage, not the passages of the paper available to us.

So what does this mean for daily life? Not much yet. Histidine is found in many protein-rich foods and is essential to humans. Study co-leader Barbara Bendlin told ScienceDaily that avoiding eggs or red meat is not the answer, because "you need histidine, and it's all over the place." Diet has not been tested as a way to lower ImP or dementia risk here. The study did not test whether lowering ImP in people protects the brain.

WHAT TO WATCH NEXT

Whether other groups confirm the link in more varied populations, whether a reliable ImP blood test emerges, and whether any drug that lowers ImP is shown to slow cognitive decline in a human trial.

Sources: Nature communications (2026), ScienceDaily (University of Wisconsin-Madison, Nature Communications)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 2 MIN NATURE MEDICINE · 2 SOURCES

Menopause Leaves a Blood Protein Signature Linked to Brain Aging and Dementia Risk

Menopause leaves a measurable pattern in the blood, and that pattern lines up with how the brain ages and with dementia risk later in life, according to a new study in Nature Medicine.

This is an observational study in people. It measured many proteins in blood samples and looked for links. It can show that two things go together. It cannot show that one causes the other. The work began with 80 women aged 43 to 58, carefully staged as pre-, peri- or postmenopausal using a standard clinical system known as STRAW+10.

In those 80 women, spontaneous menopause was marked by changes in inflammatory, synaptic, metabolic and Alzheimer's disease biological processes. Synaptic refers to the connections between brain cells. The authors report that these

changes tracked more strongly with hormone levels than with age.

The team then checked whether the pattern held up elsewhere. In 2,814 age-matched women, measured with a different blood-protein method, the same shifts appeared. The larger group also showed a broader rise in inflammatory and catabolic (breakdown) processes. It also showed accelerated aging of organs and cells, including the brain.

The third step looked at older women. In four independent groups, with average ages from 60.7 to 72.1 and 11,925 women in total, a higher menopause proteomic score was consistently linked to cognitive aging and dementia risk. In plain terms, women whose blood showed more of the menopause-related protein pattern tended to have worse brain aging outcomes.

There are limits. Only the study's abstract was available to us, so details beyond it are not reported here. Discover Magazine's coverage cites further figures, including a specific percentage of added Alzheimer's risk, that the abstract does not give. We have left them out. Kaitlin Casaletto of the University of California, San Francisco, a co-senior author, explained, according to Discover, that menopause does not cause dementia directly. Measuring certain molecules during menopause may instead help predict risk.

FOR YOU

For personal health, the message is about timing rather than alarm. Discover reports that Alzheimer's-related changes begin years, possibly decades, before symptoms and often start in midlife. "Midlife is a critical window for both men and women where we can really set up the brain to be more resilient or more vulnerable to dementia in later life," Casaletto said in a statement quoted by Discover. First author Madeline Wood Alexander added: "We don't want it to be viewed as a bad thing, but as an opportunity to better understand and maybe modify the biology of brain aging in women."

No blood test based on this work is available for routine use. The authors say only that the molecular signatures may help select biomarkers or treatment targets for brain health in midlife women. Whether acting on them changes outcomes is unknown.

WHAT TO WATCH NEXT

Studies that follow women from midlife forward, to test whether these protein patterns predict dementia in the same individuals and whether any intervention can shift them.

Sources: Nature medicine (2026), Discover Magazine (reporting on Nature Medicine study from UCSF and University of Toronto)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN

THE NEW ENGLAND JOURNAL OF MEDICINE · 2 SOURCES

Hidden Artery Plaque Found in More Than Half of Healthy Adults, Including 1 in 13 Under 30

Artery plaque was found in 57.1% of adults who had no known heart disease, and it was present in the youngest group studied, aged 18 to 29, according to a large study in The New England Journal of Medicine.

The work is a prospective cohort study, which means researchers enrolled people and measured them at the start. It is observational, not a trial. It enrolled 16,808 adults aged 18 to 70 in Denmark and Spain. None had known atherosclerotic cardiovascular disease. The average age was 45, and 51.4% were women. The study is called REACT, and the Novo Nordisk Foundation funded it.

Atherosclerosis is the buildup of plaque inside artery walls. It can stay silent for decades before it shows up as heart disease. The authors note that silent plaque is linked to heart events and death even after accounting for traditional risk factors. What was less clear was how common it is at each age, in each sex, and in which arteries.

To find out, the team scanned three areas. They used three-dimensional ultrasound on the carotid arteries in the neck and the femoral arteries in the legs. They used coronary CT angiography, a heart scan, on the coronary arteries. Participants were enrolled in five set age groups, with balanced numbers of women and men.

Overall, 57.1% had silent atherosclerosis (95% confidence interval, 56.3 to 58.0). Among those aged 18 to 29, plaque was present in 8.7% of men and 6.7% of women. ScienceDaily, which covered the study, put this at about 1 in 13 young adults.

Prevalence rose with age. Women showed a later, steeper rise in midlife. ScienceDaily reported that about 9 in 10 people aged 60 to 70 had plaque. That figure is not in the study's abstract, which is the only part of the paper we had. The same coverage said men's pattern ran five to ten years ahead of women's, and linked women's sharp rise at ages 40 to 60 to the menopausal transition. Those details also go beyond the abstract. The abstract does not explain the cause of the midlife rise in women.

The pattern of disease changed with age. In younger groups, plaque was most often in the peripheral arteries, meaning the neck or legs, and confined to one area. With age, plaque volume grew exponentially, and plaque in several areas became more common. Plaque limited to the coronary arteries alone was uncommon at every age: no more than 9.3% of men and 5.0% of women.

The study does not say that every person with plaque will have a heart attack or stroke. ScienceDaily notes that having plaque does not mean disease is inevitable. This study took one snapshot at enrollment. It did not test whether finding plaque and acting on it improves health.

ScienceDaily also reported that standard risk scores, including SCORE2, identified only a small share of people with silent plaque. It also said most people with coronary plaque had plaque in the neck or leg arteries too. The abstract does not give these results, so they should be treated as the press account for now.

The personal point is modest. The study shows artery changes can be detected in early adulthood, in the 18 to 29 group, years before symptoms would be expected. Our own view, which the study does not test, is that this is a reason to take blood

pressure, cholesterol, smoking and activity seriously before middle age. Readers should discuss screening or any change in risk-factor management with their clinician rather than act on their own. The study also raises the question of whether direct imaging could add something to risk scores. It does not answer that.

Dr. Borja Ibáñez, a lead researcher, told ScienceDaily the aim is a model in which "the disease is detected directly through imaging before it causes symptoms." That is a proposal, not a result. According to ScienceDaily, a second phase, REACT-PROTECT, is planned for 2027 through 2032 if funding is granted. Watch for whether it shows that acting on early plaque improves outcomes.

Sources: The New England journal of medicine (2026), ScienceDaily (reporting on The New England Journal of Medicine)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN NATURE METABOLISM · 2 SOURCES

Ultra-Processed Meals Linked to Higher Insulin, and Food Images to Different Brain Reward Responses, Even When Nutrients Match

Two meals can match on calories, carbohydrates, fat, protein, water and salt, and the body can still respond to them differently. That is the central finding of a new Virginia Tech study in Nature Metabolism, and it challenges the idea that a nutrition label tells the whole story.

The paper, "Ultraprocessed foods evoke distinct metabolic and neural responses," was published in Nature Metabolism in 2026. We could read only its abstract. The abstract says the researchers measured acute metabolic responses to ultra-processed foods and looked at how the brain encodes food value, both nutritional and monetary. It does not give the study design, the results or the participant numbers. Those details below come from Newsweek's coverage, which

describes an acute, single-meal human feeding study in just under 60 healthy adults aged 18 to 45, plus a separate brain-imaging task using food images. Whether participants were randomised is not stated in the abstract or the coverage we read.

According to Newsweek, participants fasted overnight and then ate one of two meals. The highly processed meal included a small piece of peanut butter and jelly sandwich, deli turkey, vegetable chips, a cookie, cereal and instant mashed potatoes. The minimally processed meal was sliced banana, dried cranberries, cheese and a hard-boiled egg. Newsweek reports the meals were matched within 1 percent for calories, carbohydrates, fats, proteins, water and salt.

Researchers then measured blood sugar and insulin several times over a few hours. Insulin is the hormone that helps move sugar from the blood into cells. Newsweek reports that the highly processed meal produced a much higher insulin response, and that blood sugar stayed elevated for longer.

Alex DiFeliceantonio, the Virginia Tech associate professor whose lab led the work, told Newsweek, "The insulin result was the most surprising to us, I didn't expect it at all." She noted that long-term ultra-processed food intake is associated with insulin resistance, and that this meal may transiently create a similar state of higher insulin.

The brain results are separate, and they did not come from eating the meals. Newsweek reports that participants, still fasted, had functional MRI scans while viewing images of both kinds of food. They were also asked whether they would pay for each food. Brain regions involved in motivation and reward responded differently to the two categories of images. DiFeliceantonio told Newsweek this suggests "the brain is encoding the value of these foods differently."

The limits matter. This was a single meal in healthy, relatively young adults. Newsweek quotes DiFeliceantonio as saying, "we don't know if these short term, immediate changes are what leads to the poor health outcomes associated with ultraprocessed foods." Dr. Dariush Mozaffarian of Tufts told Newsweek the long-term effects are "not well established." The study does not show that ultra-processed food causes disease.

The meals also contained different foods, not the same food in two forms. So this work does not test a simple swap, such as one brand of cereal for a less-processed alternative. This is the weakest point for any everyday takeaway: we cannot say whether the differences come from processing itself or from the particular foods in each meal.

What does it mean for everyday choices? Calories and macronutrients may not capture everything that matters. Mozaffarian told Newsweek the study adds to evidence that "processing matters, with effects on insulin, metabolism, and the brain beyond macronutrients alone." The study cannot yet say how much, if at all, this changes long-term metabolic health, and it offers no tested dietary advice.

Watch for follow-up studies that test repeated meals over longer periods. DiFeliceantonio said her team hopes to follow up on the insulin finding, and Dr. Lu Qi of Tulane told Newsweek that validation studies are needed.

Sources: Nature Metabolism (2026), Newsweek (reporting on a Virginia Tech study in Nature Metabolism)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN

CURRENT GENE THERAPY · 3 SOURCES

Foundation Reports First Human Doses of Partial Epigenetic Reprogramming Gene Therapy, Given Outside Formal Trials

A small group of people has reportedly received a gene therapy meant to make aged cells behave younger, and it was done outside any formal clinical trial. That is a milestone for the field, but it is not evidence that the treatment works.

The science behind it comes mostly from lab work. A 2019 review in Current Gene Therapy, by Lehmann and colleagues, summarises research on partial reprogramming. It is a review, not a trial in people. We could read only its abstract, which does not give participant or animal numbers.

Here is the idea. Reprogramming uses a set of genes, known as the Yamanaka factors (OCT4, SOX2, KLF4 and c-MYC, together called OSKM), that can turn ordinary cells back into stem-like cells. Full reprogramming erases a cell's identity. Partial reprogramming switches the genes on only briefly, so the cell keeps its identity.

According to the review, this approach has turned fibroblasts into heart cells, neural progenitors and neural stem cells. It also says rejuvenation by cyclic partial reprogramming has been achieved in living transgenic mice and in cultured cells. In both, the OSKM genes were controlled by a regulatable promoter, a switch that can be turned on and off. The authors conclude that the method "emerges" as a powerful tool. That is the review's own wording, and it describes a promising direction, not a proven human therapy.

Now the human news. According to Fight Aging!, the KHL Foundation, founded by Kenneth Scott and Helga Sands, says a small number of people have received an experimental therapy developed through a Triple Helix Science initiative led by Patrick Sewell, MD. It is described as an 11-gene therapy that includes OCT4, SOX2 and KLF4, delivered by adeno-associated viral vectors. One recipient, Christine Scott, was treated on March 11, 2026. The dose was given submucosally, with cognitive function as the main target.

The coverage says the treatment is switched on with the antibiotic doxycycline. A 2021 paper in Molecular Biology of the Cell, by De Boeck and Verfaillie, shows why that detail matters to scientists. It is a methods paper about lab experiments, not about patients. The authors say doxycycline can itself impair mitochondrial function and change cell growth in mammalian cells, and it can confound results. They describe the problem as a caution for interpreting experiments. It says nothing direct about the safety of this therapy in people.

The foundation is careful about its own claims. Its quoted statement reads: "This is not an announcement that we have proved that OSK reverses cognitive decline. It is an announcement that human application has begun." It also says it has found no earlier public record of human OSK dosing but is still reviewing the timeline before claiming a worldwide first.

The coverage also notes that this work belongs to the medical tourism sector, which tends not to produce peer-reviewed data. This is the central point for personal health. A first dose is not a result. Without a control group, set outcome measures and independent review, any change a recipient notices cannot be tied to the treatment.

The Fight Aging! page also carries text saying a Life Biosciences trial reported positive vision results in two patients on October 8, and that partial reprogramming is therefore "safe and effective." That text sits below the article, apparently as a reader comment, and the article itself does not make it. We could not verify it. Neither the 2019 review nor the foundation's statement supports a claim of safety or effectiveness in people.

For the general reader, the practical takeaway is simple, and it is our own view rather than something the sources establish. The sources give no human safety data for this therapy, so its risks are unknown. Readers should not start or stop any treatment or medication, including doxycycline, without consulting their clinician. If you are weighing an offshore longevity treatment, it is reasonable to ask what published human data exist and whether it is part of a regulated trial. This is the weakest part of our argument: it is a suggestion, not a finding.

WHAT TO WATCH NEXT

Any published data from the KHL recipients, and peer-reviewed results from Life Biosciences' regulated trial in optic neuropathy.

Sources: Current gene therapy (2019), Molecular biology of the cell (2021), Fight Aging!

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN

JOURNAL OF THE NATIONAL CANCER INSTITUTE · 2 SOURCES

A Year of Remote Exercise Slowed Biological Aging in Breast Cancer Survivors

Breast cancer survivors who followed a year-long exercise program delivered remotely showed slower biological aging in their blood than survivors in a comparison wellness program, according to a new randomized trial analysis.

The work appeared in the Journal of the National Cancer Institute in 2026. It is a secondary analysis of a randomized controlled trial, which is the strongest design for testing whether an intervention works. The analysis covered 124 participants who had complete data. Because it looks at a subset of a larger trial, it is best read as a promising signal, not a final answer.

Cancer and its treatments are linked to faster biological aging and to problems with thinking among survivors, the authors write. Biological aging here means a measure taken from the blood, not a birthday count. Researchers read chemical tags on DNA, called methylation, and feed them into formulas known as epigenetic clocks. These clocks estimate how old the body appears to be. Higher readings have been tied to greater risk of illness and early death.

The participants were breast cancer survivors who were sedentary and within five years of diagnosis. They were randomly assigned to one of two groups. One group received an exercise program delivered remotely. The other received a health and wellness program matched for the amount of contact. That matching helps ensure that any difference is not simply due to getting more attention.

Blood samples and thinking tests were collected at the start, at 6 months and at 12 months.

Over the 12 months, the exercise group showed slower epigenetic aging than the wellness group on two clocks. On the GrimAge2 clock the difference was statistically significant at P = .02. On the DNAmFitAge clock it was significant at P = .002. GrimAge2 was built to predict mortality and illness risk, according to the paper that introduced it, which tested it in 13,399 blood samples across nine cohorts of mostly older adults.

The study also linked clock changes to changes in thinking. Survivors whose epigenetic aging sped up more tended to show greater decline in attention and in self-reported cognition. That means how well people felt they were thinking, as they described it themselves. This is an association. It does not show that faster aging caused the decline, or the reverse.

The researchers also scanned the blood epigenome and found sites where methylation differed between the groups. Some of those sites sit in genes tied to BDNF signaling. BDNF is brain-derived neurotrophic factor, a protein involved in brain cell health. This points to a possible pathway, but the abstract does not show that it explains the results.

The authors conclude that a 12-month exercise program was associated with slower epigenetic aging. They suggest biological aging may be one way exercise supports cognitive health after cancer. That is their interpretation, and the study design does not prove it.

Some limits matter for readers. The abstract does not report how many years of epigenetic age separated the two groups, only that the difference was statistically significant. The sample is modest. The blood clocks are estimates, and they are not the same as measured health outcomes such as disease or survival. The abstract also does not say whether thinking test scores themselves differed between the groups.

A commenter on the Fight Aging! site raised a similar point. The commenter noted that DNAmFitAge is trained on measures of physical fitness, so an exercise group moving on it is less surprising. The commenter called GrimAge2 the more meaningful result and said the P value of .02 in a small subsample is fragile. These are the commenter's views, not findings from the study. The commenter also said they are an AI agent.

The same page also described cancer survivors as carrying more senescent cells, which are aging cells that stop dividing, and suggested exercise may help by supporting cellular cleanup. That is the coverage's context. The abstract does not test that idea.

For cancer survivors, the practical message is cautious but encouraging. A program delivered remotely was linked to a healthier blood aging profile over a year. The weakest point is that the abstract does not give the size of the difference or show that thinking scores changed. Do not start or stop anything, including a new exercise routine or any change to cancer treatment or follow-up care, without talking with your clinician first.

WHAT TO WATCH NEXT

The full paper's numbers on the size of the clock difference, and larger trials that test whether these blood changes translate into better thinking and health outcomes.

Sources: Journal of the National Cancer Institute (2026), Journal of the National Cancer Institute (via Fight Aging!)

IN THIS EDITION · LONGEVITY & HEALTHSPAN

1. First Human Data on Cell-Rejuvenating Gene Therapy Show It Was Well Tolerated, With Early Vision Gains in Glaucoma
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8. **Semaglutide Extends Lifespan in Older Mice, Outperforming Calorie Restriction on Some Measures**

LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN NATURE · 3 SOURCES

Semaglutide Extends Lifespan in Older Mice, Outperforming Calorie Restriction on Some Measures

A weight-loss drug started late in life helped old mice live longer, and it did some things that eating less did not. That is the finding of a new study in Nature on semaglutide, the drug sold as Ozempic and Wegovy.

This is mouse research, not a human trial. The team, led by Danica Chen at the University of California, Berkeley, worked with female C57BL/6 mice that were 20 months old, which is late in a mouse's life. The mice received a daily injection of either semaglutide or a vehicle (an inactive control). The study text we reviewed does not give the number of animals per group, so we cannot report it here.

Why compare the drug with dieting? Calorie restriction, eating less without malnutrition, is one of the best-studied ways to slow ageing and extend lifespan in animals. The authors note it is hard to keep up. They set out to test whether a GLP-1 drug could act as a "calorie restriction mimetic", meaning something that captures its benefits without the diet.

The lifespan result came first. In the group treated for the rest of their lives, median lifespan was 834 days with semaglutide, against 742 days for controls. That is a gap of 92 days. The causes of death were similar in both groups. The authors say death was delayed across several categories unrelated to tumours, which fits a broad slowing of age-related decline.

A separate group was treated for three months and tested. Semaglutide cut food intake by 24%. The weight lost came mostly from body fat, with a higher share of lean mass. Treated mice moved and explored more in a new environment, did better on a memory maze, and performed better on balance, grip and treadmill tests. After adjusting for body weight, the grip result held. They also cleared blood sugar more effectively.

Tissue and gene analyses pointed the same way. Treated mice showed lower inflammation, fewer markers of cellular senescence (ageing cells that stop dividing), less DNA damage and better signs of mitochondrial function. Blood stem cells looked younger, and the brain region involved in memory showed more new neurons. Gene activity changes overlapped with those seen under calorie restriction, including lower inflammation and lipid-metabolism signals.

The direct comparison matters most for scientific relevance. In a longitudinal test against matched calorie restriction, semaglutide preserved baseline function and copied many of the diet's benefits by limiting age-related decline. It also produced gains above baseline, and better trajectories than the diet, in exploratory drive, spatial memory and glucose control. According to the ScienceDaily coverage, the mice were compared over five months, and metabolic rate stayed largely unchanged on the drug while it slowed on the restricted diet. The authors conclude the drug has effects beyond those explained by eating less.

Chen, quoted by ScienceDaily, said these differences "point to the possibility that GLP-1 drugs tap into a biological pathway independent of calorie restriction." Rafael de Cabo of the National Institute on Aging, who wrote a commentary, said that if these drugs slow ageing, "a wide range of clinical benefits is exactly what you'd expect to see." The NIH funded the work, according to the coverage.

Humans are a different matter. The study used only female mice, and the results do not show that these drugs extend human life. One early human signal comes from a small, separate study in npj Aging. It was a post hoc look at 41 people with HIV and fatty liver disease who took semaglutide for 24 weeks, with no control group. Across the group, the epigenetic ageing measures did not clearly improve. For example, the median change in the DunedinPACE pace-of-ageing score was slightly upward. Those whose score fell had greater liver fat reduction ($p = 0.024$). The authors call the results exploratory and say the group-wide changes cannot be attributed to the drug.

For now, the takeaway is modest. The mouse data suggest the benefits of GLP-1 drugs may go beyond weight loss and beyond simple calorie cutting. Whether that holds in people, and in healthy older adults without obesity or diabetes, is untested. Chen told ScienceDaily that future clinical studies may look at that group. Watch for those trials, and for work in male animals, which will show how far these results can be pushed. Readers should not start, stop or change any medication without talking to their clinician.

Sources: Nature (2026), npj Aging (2026), ScienceDaily (UC Berkeley study in Nature)

The Arising

SUNDAY, OCTOBER 11, 2026 · MARKETS & STRATEGY DESK

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4. U.S. Nursing Home Operating Capacity Fell 5% Since 2019, Twice the Drop in Licensed Beds, Study Finds
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MARKETS & STRATEGY · WEEKLY READ · 3 MIN

MARKET IMPACT · NATURE MEDICINE · 2 SOURCES

Lilly and Novo Report GLP-1 Drugs Reduced Biological Age on Molecular Aging Clocks

Two of the world's biggest drugmakers say their weight-loss drugs slow the molecular clocks used to estimate biological age. The claim matters commercially only if those clocks mean what the companies say they mean, and the science behind the clocks is the place to test that.

Protein-based clocks come from observational research, not from drug trials. One example is a study published in Nature medicine in 2024. Researchers used blood samples from 45,441 UK Biobank participants, measuring 2,897

plasma proteins. They built a model from 204 proteins that predicts chronological age closely (Pearson r = 0.94). The study did not test any drug, and neither source we reviewed says Novo used this particular clock.

The paper shows what such a clock can and cannot say. Its "proteomic age gap" is the difference between protein-predicted age and actual age. A larger gap was associated with 18 major chronic diseases, multimorbidity and all-cause mortality. It was also linked to frailty, telomere length and reaction time. These are associations. The study does not show that changing the gap changes disease risk.

The authors also checked the clock in other populations. In China (3,977 people) and Finland (1,990 people), age prediction was similar (r = 0.92 and r = 0.94). In the UK data, people in the top 5% of the age gap were about 6.3 years "older" than their actual age. Those in the bottom 5% were about 6 years "younger". That is a mean difference of roughly 12.3 years between the two groups.

Now the commercial claim. According to MIT Technology Review, Novo Nordisk and Eli Lilly presented data at the Aging Research & Drug Discovery conference. Novo took blood from 10,052 people, half on semaglutide and half on placebo, and measured protein clocks. Lilly ran a smaller study of tirzepatide using clocks based on DNA changes. These results were described in conference presentations as reported by the magazine. We have not seen them in a peer-reviewed paper, and the coverage does not give the full study design beyond the placebo comparison. We cannot say from it whether the data came from randomised, placebo-controlled trials.

According to the magazine, Novo's Nikolaj Roed put the difference at about two to three years. The reduction reached as much as four years on a clock based on heart proteins. Lilly's Kevin Duffin said the clocks tell "a consistent story" of lower age, but added that "it's not like we're going to reverse age by 30 years." Steve Horvath of UCLA, credited with inventing aging clocks, called two years "a pretty strong effect, in my book."

The 2024 study sets the limit on how far to read this. It shows that a protein clock tracks risk in people who are not on treatment. It does not show that a drug-driven shift in the clock lowers risk. The paper also notes that the 204 proteins span many functions, including inflammation and immune response. A drug could move some of them without changing the underlying risk. The company readouts go further than the study supports if they are read as proof of slower aging. This is the weakest point in the commercial case.

Even so, the strategic stakes are clear. According to the magazine, tirzepatide earned Lilly more than $36 billion last year, with semaglutide a close second. A credible aging claim could widen the case for these drugs beyond obesity and diabetes. It would also give aging-clock makers the validation they have sought. The commentary was careful, though. Vadim Gladyshev of Harvard, who assisted Novo, said: "In an unhealthy population, I do think it's an anti-aging drug. But in a healthy population, no one knows." Horvath said he had not seen enough evidence that thin people would benefit. Several people at the meeting also noted side effects, including muscle loss. Asked whether a reasonable person should start taking semaglutide, a Novo scientist said he was not a physician and could not answer. Readers should not start or stop any medication without talking to their clinician.

Regulation is the gate. According to MIT Technology Review, ARPA-H committed $38 million in January to a Texas study of whether semaglutide has anti-aging effects in healthy people over 60. It will look at cognition, mobility and the senses, and aims to help define a regulatory path for anti-aging drugs. A clock reading alone is not a clinical outcome. Full peer-reviewed data from Novo and Lilly have not yet appeared. The magazine reports that early answers from the ARPA-H study could come in a year or two.

Sources: Nature medicine (2024), MIT Technology Review

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MARKETS & STRATEGY · WEEKLY READ · 3 MIN

REGULATORY PATHWAY AND MARKET IMPACT · LIFESPAN.IO

FDA Adds Aging and Longevity to Its Regulatory Science Agenda and Outlines Possible Approval Routes

Senior FDA officials said this month that aging and longevity will appear in the agency's next regulatory science agenda. That gives companies working on aging therapies a clearer signal about how the agency is thinking, though it is not yet a path to approval.

According to Lifespan.io, the remarks came at the 2026 Aging Research and Drug Discovery Meeting (ARDD) in Boston. The panel was titled "Matching Clinical Trials of Therapeutics & Regulatory Mandates." It included four FDA officials and was moderated by Andrew Brack of ARPA-H.

The most concrete news was about the agency's Focus Areas of Regulatory Science (FARS). Steven Kozlowski, the FDA's Chief Scientist, said the document sets out "high-level principles on areas that are very, very important to us; aging and longevity will be one of those topics." He gave a tentative release target of fiscal year 2027, which began on October 1. The previous version came out several years ago.

Lowell Zeta, Deputy Commissioner for Strategic Initiatives, called the moment "a defining moment, an inflection point for the future of FDA." He said the topic matters to the agency and to the wider Department of Health and Human Services.

The panel did not announce a dedicated approval pathway for aging itself. It described how sponsors might show broader effects. Jeffrey Siegel, Director of the Office of Drug Evaluation Sciences, outlined two approaches. One is to build evidence that a treatment benefits several age-related conditions. The other draws on the idea of intrinsic capacity. It would measure decline across multiple physical and mental capacities in a defined population and show that treatment slows it.

For companies, the practical point is what comes first. Justin Penzenstadler, Acting Associate Director of the Office of Cardiology, Hematology, Endocrinology, and Nephrology, expects early trials that could support approval to focus on age-related comorbidities or mortality. Collecting functional measures alongside those outcomes could help set metrics for later trials. A strategic reading is that early programs may be judged on conventional disease or survival endpoints, not on aging as such. That is our interpretation, not an FDA statement.

There is a clear limit on claims. A broader aging claim needs evidence beyond a drug's established benefits. Penzenstadler said that if a cardiometabolic drug extends survival through its known cardiovascular effects, that alone does not show broader geroprotective activity. Companies hoping to market a drug as slowing aging will need data that goes further.

Safety also shapes who gets enrolled. Penzenstadler said, "We're thinking about potentially treating somebody for thirty years to derive a couple-year benefit." He therefore favors initial trials in older, higher-risk groups, where the benefit-risk balance "is a bit more straightforward." For developers, that points to older populations as the likelier starting point.

Biomarkers could shorten trials, but only if they are shown to reliably reflect benefit. Siegel drew a line between prognostic biomarkers, which predict future risk, and surrogate endpoints. In his words, a surrogate "may also be prognostic, but it has the additional feature that it changes with treatment, and that change reflects the clinical benefit downstream." The panel discussed collecting both clinical outcomes and candidate biomarkers in trials to build that evidence.

Penzenstadler's top recommendation was a pre-competitive consortium to develop "a cookbook of biomarkers" for use in trials. If companies agree on compatible designs up front, they can pool results and build the case for validation. He called it

"probably the number one thing that is actionable." His second suggestion was regular, structured meetings among regulators, researchers and industry.

Lifespan.io noted that some existing efforts fit the two approaches Siegel described. The proposed TAME trial would examine multiple age-related diseases. XPRIZE Healthspan focuses on muscle, cognitive and immune function. The Biomarkers of Aging Consortium reflects the same need for shared measurement.

The panel also named a contact point. Penzenstadler said his clinical review office is responsible for aging as an indication. He encouraged sponsors to submit actual protocols and supporting evidence through the Investigational New Drug (IND) process, so the FDA has something specific to assess and respond to.

For the market, the near-term effect is clarity of process, not a change in rules. Companies that can run trials in older, higher-risk groups, and that collect biomarker data alongside clinical outcomes, appear best placed to use this opening. Shared biomarker work could also favor groups willing to cooperate before they compete. These are our readings of the panel, and the FDA has not committed to them.

WHAT TO WATCH NEXT

The release of the updated FARS document, targeted for fiscal year 2027, and whether any sponsor submits an aging-focused protocol through the IND process.

Source: Lifespan.io

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN

COMPETITIVE LANDSCAPE · LIFE BIOSCIENCES ; ALSO REPORTED BY STAT

Life Biosciences Reports First Human Data for Cellular Reprogramming Drug ER-100 in Glaucoma

Life Biosciences says the first three people to receive its cellular reprogramming drug ER-100 tolerated it through Day 56, and two of them showed early gains on a standard vision test, according to the company's October 8, 2026 press release.

This article is based on that press release, which STAT also reported. The underlying study was not available as a paper, and the paper itself was not reviewed.

According to the release, all three participants have open-angle glaucoma. Each received a single injection into the eye at the first dose level (2×10^{11} vg), plus daily oral doxycycline. The doxycycline switches on three genes, OCT4, SOX2 and KLF4, known together as OSK. The company says these genes reset cells to a more youthful state. An oral prednisolone taper is given to limit inflammation from the viral vector.

On safety, the release reports no dose-limiting toxicities, no adverse events of special interest and no serious adverse events. The company says every reported adverse event was related to the procedure, the steroid or a pre-existing condition, not to ER-100 itself.

On vision, the release reports improvement on Humphrey visual field testing in two of the three participants at Day 56. In each, at least 28% of test points improved by more than 4 dB. The company calls these preliminary observations. It describes the trial as an open-label Phase 1 study designed to test safety and tolerability. The release describes no comparison group.

The dose-escalation decision matters most for strategy, though it is a safety-review step, not a regulatory approval. According to the release, the Data Safety Monitoring Board, the trial's safety oversight group, recommended moving to Dose Level 2 (6×10^{11} vg), and the trial is ongoing (NCT07290244). The company also lists non-arteritic anterior ischemic optic neuropathy (NAION) as a target. The release says no treatments are currently approved for it. The Phase 1 trial began in the first quarter of 2026.

Our analysis: the release names no competitors and gives no financing details, so it cannot show where Life Bio stands against other developers. What it does show is a company-reported safety signal at the lowest dose, in three patients, over eight weeks. That is early. Any investor or rival will want to know whether the vision signals persist, whether they appear at higher doses, and whether a controlled study confirms them. The weakest point is the vision result: with three patients, no comparison group and an open-label design, it cannot be separated from chance or test variability.

ER-100 is an investigational treatment, and this article is not medical advice. Readers should not start or stop any medication or treatment, including doxycycline or prednisolone, without consulting their clinician.

Watch next for results from Dose Level 2 and for longer follow-up on the first three participants.

Source: Life Biosciences (press release); also reported by STAT

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MARKETS & STRATEGY · WEEKLY READ · 3 MIN

MARKET IMPACT · JAMA INTERNAL MEDICINE · 2 SOURCES

U.S. Nursing Home Operating Capacity Fell 5% Since 2019, Twice the Drop in Licensed Beds, Study Finds

The part of the U.S. nursing home sector that matters most for patients is shrinking faster than the official bed count suggests. A new study in JAMA Internal Medicine finds that operating capacity at skilled nursing facilities fell 5.0% between 2019 and 2024, twice the 2.5% drop in licensed beds.

The evidence is a cross-sectional, observational analysis. The researchers, led by McGarry and including David Grabowski and Michael Barnett, used 2018–2024 patient census data from the Centers for Medicare & Medicaid Services Payroll-Based Journal. The abstract does not state how many facilities were included. Only the abstract was available to us, so details beyond it are unverified. Because the design is observational, it shows associations, not causes.

The gap between the two measures is the central finding. Licensed beds are what a facility is approved to hold. Operating capacity is an estimate of what it actually runs. The authors say the larger fall in operating capacity is potentially due to

staffing shortages. That is their interpretation, not a proven cause.

The losses were uneven. One in four counties saw operating capacity fall by 15.1% or more, according to the study. The largest declines were more common in rural counties.

The staffing link is measurable but modest. In county-level analyses, a 1-percentage-point decline in SNF capacity was associated with a 0.20-percentage-point increase in the frequency of reported staffing shortages (95% CI, 0.11–0.29). The abstract does not say which came first, so the direction of the relationship is not established.

The study also points to costs downstream. Hospitals near facilities that lost more capacity saw larger increases in mean length of stay, in the share of stays lasting 28 days or more, and in the median distance patients traveled to the SNF that admitted them. The authors write that this suggests lost operating capacity may be impairing access to care.

For operators, hospitals and investors, the strategic read is that licensed-bed counts and headline occupancy may overstate usable supply. Hospital systems that rely on timely discharge to postacute care may face longer stays and more distant placements where local capacity has dropped. Those are the study's findings. Any financial effect on hospitals or facilities is not measured in the abstract.

KFF Health News, in its coverage by Paula Span, adds context that goes beyond the study. It reports that Medicaid pays less than the daily cost of care, according to Clif Porter of the American Health Care Association. It also reports a median aide wage of $20.67 an hour, with about 40% of aides relying on public assistance, according to PHI. Those figures come from the coverage, not the study.

The coverage also cites experts who expect federal immigration and Medicaid policy to worsen supply. Grabowski told KFF Health News, "We're seeing a serious problem and it's heading in the wrong direction." Porter said the national effect of immigration changes is not yet significant, though it is felt in Florida, New York and Massachusetts. The study itself does not test any policy effect.

The coverage also notes other forces that may reduce demand for nursing homes, including assisted living and a shift toward home-based Medicaid services. Advocate Sam Brooks argued that poor quality drives people away. The study abstract does not address these explanations, so their weight is unknown.

WHAT TO WATCH NEXT

Whether the capacity declines continue into 2025 data, and whether future research can separate staffing limits from financial pressure and falling demand as the cause.

Sources: JAMA internal medicine (2026), KFF Health News (via The Philadelphia Inquirer)

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN

COMPETITIVE LANDSCAPE · REINSURANCE NEWS

Manulife Closes $3.2 Billion Long-Term Care Reinsurance Deal With Munich Re

Manulife has handed a large slice of its long-term care risk to Munich Re, and it did so without giving up a single asset.

According to Reinsurance News, the deal between Munich Re's US life reinsurance arm, Munich American Reassurance Company (Munich Re Life US), and Manulife Financial Corporation is now in force. Munich Re Life US assumes the biometric risk on a USD 3.2 billion block of Manulife's long-term care policies. Biometric risk covers how long people live and how much care they need. The risk transfer does not include any asset transfers, the report says.

The deal is the third long-term care reinsurance transaction for Manulife. It is the first on a standalone long-term care block, according to the company. Manulife said the deal fits its ongoing effort to reduce the risk profile of its in-force portfolio. Counting its earlier deals, the company says its cumulative sensitivity to long-term care morbidity is now 24% lower.

The financial effects are small by design. Manulife described the agreement as largely capital-neutral. It expects an immaterial impact on core earnings. The impact on net income attributable to shareholders is about USD 30 million in the first year, declining over time.

Pricing is a point worth noting. The transaction was priced similarly to Manulife's prior deals. It includes a modest negative 5% cede. Manulife said this further validates its reserves and assumptions. That is the company's own reading. The source does not give an independent assessment of those reserves.

For the wider market, the deal shows that reinsurers are willing to take on long-term care risk at a repeatable price. The report also points to a second example. Fortitude Re recently signed a USD 3.8 billion long-term care reinsurance transaction between its subsidiary, Fortitude Reinsurance Company Ltd., and Unum Life Insurance Company of America, a subsidiary of Unum Group. Two large deals in a short span suggest that insurers are looking for ways to move this risk off their books, and that more than one reinsurer is ready to take it. The source does not say whether this marks a lasting trend.

Interpretation, kept separate from the reported facts: long-term care policies are hard to price because claims can run for many years. Insurers that sell reinsurance on this business compete on their view of that long-term risk. Manulife's repeated use of similar pricing suggests a standard approach is taking shape, but the source does not confirm this.

WHAT TO WATCH NEXT

Whether other long-term care insurers announce similar transactions, and whether Manulife signs further deals to extend its 24% reduction in morbidity sensitivity.

Source: Reinsurance News

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN COMPETITIVE LANDSCAPE · STAT

Prestigious Nonprofit Health Systems Move Into Cash-Pay Longevity Clinics, With One Northwestern-Affiliated Package at $5,500 a Year

Some of the nation's most prestigious hospital systems are now selling longevity checkups, and one of them costs $5,500 a year.

According to STAT, reporter Sarah Todd went through assessments at hospital longevity clinics in two states. One was a clinic affiliated with Northwestern University in Chicago. Its annual package costs $5,500. Todd reports that the tests measured the health trajectories of her heart, brain, lungs, eyes and ears, along with her strength and fitness.

The centerpiece she describes is the VO2 max test. It shows how efficiently the body uses oxygen. STAT calls it medicine's most accurate measure of cardiorespiratory fitness. Todd walked on a steep treadmill wearing a mask while an assistant periodically asked her to rate her exertion on a 1-to-10 scale. The goal was to reach 10, the top of that scale.

STAT reports that these health systems promise a rigorous scientific approach to helping people keep their vigor as long as they can. Their pitch is that the assessments give a more detailed picture of current condition and aging trajectory than a typical doctor's visit.

That pitch puts hospitals into a market that has long drawn costly and questionable practices. STAT points to examples ranging from 1920s doctors who grafted monkey testicles to Bryan Johnson's since-abandoned blood transfusions from his teenage son. A hospital name offers something those earlier efforts lacked: an established clinical brand.

The competitive logic is easy to see, though it is our interpretation and not a finding from the STAT excerpt. A hospital affiliation may lend credibility in a field where trust is hard to earn. A cash-pay package also does not depend on insurer reimbursement.

Critics raise two concerns, according to STAT. The first is how to reconcile high out-of-pocket costs with hospitals' nonprofit status and charitable missions. The second is that, in the push to attract paying customers, clinics may offer tests without enough evidence that they improve people's health.

Those questions matter for strategy as well as ethics. If scrutiny of nonprofit status grows, premium programs could draw attention from regulators and the public. If evidence for the tests remains thin, the clinics' scientific positioning may be hard to sustain. The excerpt does not say how either issue might play out.

This is the first part of STAT's series Selling Longevity, which examines the science and the risk of getting ahead of research in search of profit. What to watch next: whether more health systems open similar programs, and whether the evidence on these tests catches up with the prices.

Source: STAT

The Arising

SUNDAY, OCTOBER 11, 2026 · BRIEFS

IN THIS EDITION · BRIEFS · 187 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.

EPIGENETIC REPROGRAMMING & AGE REVERSAL 12

Blood cell DNA methylation age resets when cells become stem cells

A study in PLoS One took blood cells from 99 healthy people and reprogrammed them into induced stem cells. Epigenetic clocks, which estimate age from DNA methylation, largely reset to an early age after reprogramming. The researchers also found that each cell type has its own set of methylation sites shaped by genetic variation in the population.

PLOS ONE · 2026-09-08

Review links polystyrene nanoplastics to male reproductive harm, mostly in animal and cell studies

A review in Reproductive Toxicology combined human, rodent and cell evidence on polystyrene nanoplastics. Plastic particles have been found in human semen and testicular tissue. Rodent studies show the particles reach the testes and disrupt sperm development. The authors call for stronger monitoring and policy. The human evidence shows presence, not proven harm.

REPRODUCTIVE TOXICOLOGY (ELMSFORD, N.Y.) · 2026-09-08

Marital status linked to pace of aging, with differences by gender

An observational study in Frontiers in Aging used data from 762 US adults. Being married, compared with being separated or divorced, was linked to slower aging on one epigenetic clock, DunedinPACE. Never marrying was linked to faster aging on two clocks in men but not women. The design cannot show that marital status causes these differences.

FRONTIERS IN AGING · 2026-09-07

Foreign-born Hispanic/Latino adults showed lower epigenetic aging on one clock

An observational study in Psychoneuroendocrinology followed 961 Hispanic and Latino adults in the US, measuring epigenetic age from blood. Foreign-born status was associated with lower GrimAge acceleration, notably in those who arrived as adults. People who arrived as children showed no difference. The study shows an association only. The causes are unclear and need more research.

PSYCHONEUROENDOCRINOLOGY · 2026-09-07

Pigs with altered mitochondrial DNA develop thicker backfat

Researchers writing in Mitochondrion created pigs combining one breed's nuclear genome with another's mitochondrial DNA. These pigs had thicker backfat at 5 months, and their offspring did too. Body weight did not differ significantly. Cell and tissue tests showed mitochondrial dysfunction, more oxidative stress and altered DNA methylation. The study was in pigs, not people.

MITOCHONDRION · 2026-09-05

Two inhibitors improved development of cloned cow embryos in lab study

A laboratory study in Theriogenology tested two compounds, RK-701 and GSK-126, on cow embryos made by somatic cell nuclear transfer. Treated embryos had lower levels of two repressive histone marks. They also showed higher expression of genes tied to early development and better developmental rates than untreated cloned embryos. The work was in bovine embryos, not people.

THERIOGENOLOGY · 2026-09-04

Review: blocking two gene-silencing enzymes may help melanoma treatment in lab models

A review in Frontiers in Pharmacology covers two enzymes, G9a and EZH2, that help melanoma evade the immune system and resist treatment. Preclinical studies found that inhibiting both can turn immune-excluded "cold" tumours into more responsive "hot" ones. The evidence described comes from laboratory and animal models, not human trials.

FRONTIERS IN PHARMACOLOGY · 2026-09-03

Review maps how egg and sperm precursor cells are specified in mice and humans

A review in Biology of Reproduction summarises what is known about primordial germ cells, the embryonic precursors of eggs and sperm. These cells form in a narrow developmental window, so they are hard to study. The review covers signalling, gene networks and epigenetic reprogramming. It says this knowledge matters for making gametes in the lab.

BIOLOGY OF REPRODUCTION · 2026-09-03

Contact with the justice system linked to faster biological aging markers

A systematic review in Neuroscience and Biobehavioral Reviews covered 22 US studies. Sixteen reported findings consistent with accelerated biological aging in people with criminal legal system contact. All seven epigenetic studies found accelerated epigenetic aging. Evidence on inflammation, allostatic load and telomeres was less consistent. These are associations, not proof of cause.

NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS · 2026-09-03

Review proposes epigenetic clock as a gauge of shoulder tendon healing

A review in Biomedicines covers aging biology that affects how tendon heals to bone after rotator cuff repair. The authors propose the DNA-methylation epigenetic clock as a possible measure of healing capacity. They state this is a hypothesis, not an established mechanism. They cite a twin study linking faster epigenetic aging to fracture and osteoporosis risk.

BIOMEDICINES · 2026-09-02

Review: fathers' environment may leave epigenetic marks in sperm

A review in BMB Reports covers how sperm carry non-genetic information, including DNA methylation and small RNAs. In animal models, paternal diet and stress can alter these marks. In humans, exposures are linked to sperm changes and offspring health. But most human evidence is observational and may be confounded by genetics and shared environments.

BMB REPORTS · 2026-09-02

Older epigenetic age on some clocks linked to faster functional decline

A study in The Journals of Gerontology Series A tested 12 epigenetic clocks in 4,018 Health and Retirement Study participants with up to 12 years of follow-up. Older epigenetic age on the Hannum and DNAmGrimAge clocks was associated with faster cognitive decline; higher DNAmGrimAge was also linked to faster declines in grip strength and walking speed. The associations are retrospective and observational, not proof of cause.

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

GUT MICROBIOME & BRAIN AXIS

11

Review links antibiotic-driven gut imbalance to lower short-chain fatty acids and health risks

A review in Frontiers in Immunology describes how antibiotics, especially broad-spectrum ones, disrupt gut bacteria. This lowers short-chain fatty acids, which the review links to a leakier gut, more inflammation and weaker immune regulation. It connects these shifts to diarrhea, and to long-term risks such as obesity, allergies and asthma. This is a mechanistic review, not a new trial.

FRONTIERS IN IMMUNOLOGY · 2026-09-07

Review finds small, mixed trials of gut-targeted treatments for alcohol use disorder

A systematic review in Metabolism Open covered eleven clinical studies of gut-focused treatments for alcohol use disorder. Microbiome therapies were associated with benefits for craving, drinking and liver measures, but studies were small and results varied. Of five GLP-1 drug trials, three showed reduced alcohol use. Data on ghrelin were limited.

METABOLISM OPEN · 2026-09-07

Review outlines possible space radiation harms to blood, brain and gut

A review in Frontiers in Public Health examined space radiation and astronauts' blood-forming, nervous and digestive systems. Human spaceflight data suggest links to immune changes. Animal studies point to memory problems and gut damage, but these are not yet confirmed in astronauts. The authors say cumulative effects, sex differences and individual susceptibility are poorly understood.

FRONTIERS IN PUBLIC HEALTH · 2026-09-07

Review finds mixed gut microbiome changes in stress-focused trials

A systematic review in Nutrients covered 29 randomised trials in adults. Interventions included psychobiotic supplements, diets and other lifestyle approaches. Microbiome responses varied widely. No single microbial or diversity pattern consistently matched better stress outcomes. Some recurring shifts did appear in certain bacterial groups, including Bifidobacterium and Lactobacillus. The trials differed a lot in methods.

NUTRIENTS · 2026-09-04

Review links gut microbe byproducts and cell receptors to neurodegeneration

A review in Neuroscience discusses how gut microbial metabolites, such as short-chain fatty acids and bile acids, signal through receptors called GPCRs. The authors say growing evidence ties imbalances in these signals to diseases including Alzheimer's and Parkinson's. They describe mechanisms and possible microbiome-targeted strategies. The evidence is described as growing, not settled.

NEUROSCIENCE · 2026-09-04

Review: gut bacteria and the brain may develop together during adolescence

A review in Nutrients argues that adolescence is a second sensitive period for the gut microbiome and brain. Microbial changes appear to parallel brain development events. Diet, stress, antibiotics and physical activity may influence both. Much of the evidence compares rodents and humans, and the authors note staging inconsistencies make translation difficult.

NUTRIENTS · 2026-09-03

Review: acupuncture may influence gut-brain pathways in depression, based on preclinical evidence

A review in Neuropsychiatric Disease and Treatment looks at how acupuncture might act on the gut-brain axis in major depressive disorder. It cites preclinical evidence that acupuncture may reduce inflammation, restore stress-hormone feedback and repair the gut barrier. The text describes these as proposed mechanisms, not proven effects in patients.

NEUROPSYCHIATRIC DISEASE AND TREATMENT · 2026-09-03

Review links gut inflammation to low brain iron in restless legs syndrome

A review in Frontiers in Aging Neuroscience looks at restless legs syndrome. Many patients have normal iron in the blood but disrupted iron handling in the brain. The authors propose that gut imbalance and inflammation may trap iron, upsetting brain chemicals tied to symptoms. This is a proposed mechanism, not a proven one.

FRONTIERS IN AGING NEUROSCIENCE · 2026-09-03

Review links gut bacteria to brain aging and cognitive decline

A review in Biomedicines gathers research on biomarkers of biological aging and cognition. It reports that changes in gut microbiota with age are increasingly tied to inflammation, blood-brain barrier problems and cognitive decline. The authors hypothesise that gut microbes may be a central regulator of brain aging. They also discuss microbiome-based approaches as possibilities, not proven treatments.

BIOMEDICINES · 2026-09-02

Review looks at plant compounds and diet in late-life depression

A narrative review in Frontiers in Nutrition summarises research on plant-derived compounds, such as polyphenols and terpenoids, and late-life depression in people over 60. It describes proposed neuroprotective mechanisms and dietary patterns. The authors say future trials are needed. The review itself offers a theoretical basis, not proof of treatment benefit.

FRONTIERS IN NUTRITION · 2026-09-02

Review examines how gut microbiome imbalance may relate to aging and frailty

A review in the World Journal of Gastrointestinal Pathophysiology surveys published research on the gut microbiome and aging. It covers links to frailty, sarcopenia, health span and lifespan. The authors discuss factors that may drive age-related gut imbalance. They also suggest future research directions for finding therapeutic targets. It reports no new data of its own.

WORLD JOURNAL OF GASTROINTESTINAL PATHOPHYSIOLOGY · 2026-09-01

Review: exercise helps hypertensive heart disease, but heart remodeling benefits remain unproven

A narrative review in the Journal of Cardiovascular Development and Disease looked at exercise training in hypertensive heart disease. It concludes exercise is a beneficial add-on to blood pressure drugs. Fitness, blood pressure and blood vessel function improve. Effects on heart structure and clinical events are not yet proven, and the review calls for better-designed trials.

JOURNAL OF CARDIOVASCULAR DEVELOPMENT AND DISEASE · 2026-09-07

Mouse and cell study ties DHCR24 to vessel-cell ageing via S1P

A study in Biogerontology used mice lacking the DHCR24 gene in blood vessel lining cells and aged human cells. Loss of DHCR24 lowered cells' internal levels of S1P, a fat-related signalling molecule; boosting an S1P-making enzyme reversed senescence, a state of cellular ageing, in lab cells. Knockout mice had more S1P in their blood. In people, higher plasma S1P correlated with stiffer arteries, an association that does not show cause.

BIOGERONTOLOGY · 2026-09-07

Review finds short sitting breaks tend to improve leg blood flow

A systematic review in Frontiers in Cardiovascular Medicine analysed 24 studies on breaking up prolonged sitting. Interruptions generally improved blood flow and shear rate, especially in the legs. Effects on flow-mediated dilation, a measure of artery function, varied by artery and participants. Breaks of 2-3 minutes every 20-30 minutes appeared most consistently helpful for blood flow.

FRONTIERS IN CARDIOVASCULAR MEDICINE · 2026-09-04

Planned trial will test yoga's effect on blood vessel health in type 2 diabetes

A study protocol in BMJ Open describes a randomised trial that has been planned but has no results yet. It will enroll 248 adults with type 2 diabetes. Three yoga-based groups will be compared with standard care alone over 12 weeks. The main outcome is blood vessel function, with vascular ageing markers among the secondary measures.

BMJ OPEN · 2026-09-02

Review: non-invasive vascular tests may help track Fontan circulation

A review in the European Journal of Clinical Investigation covers non-invasive ways to assess blood vessel function and arterial stiffness in people with Fontan circulation, a surgically rebuilt circulation in complex congenital heart disease. The authors say these tests may help monitor progression and risk. They note that longer-term studies are needed to confirm their value.

EUROPEAN JOURNAL OF CLINICAL INVESTIGATION · 2026-09-01

Pooled trials link cocoa flavanols to small drops in blood pressure

A systematic review and meta-analysis in The Journal of Nutrition, Health & Aging pooled 25 randomised trials with 1,167 participants. Cocoa flavanol intake was linked to small average falls in systolic and diastolic blood pressure. It was also linked to better flow-mediated dilation and pulse wave velocity. Ankle-brachial index showed no significant change, based on only two studies.

THE JOURNAL OF NUTRITION, HEALTH & AGING · 2026-09-01

Review finds gut microbiome link to artery disease plausible but unproven

A narrative review in Clinical Cardiology examined how gut microbes relate to atherosclerosis, acute coronary syndrome and peripheral arterial disease. Microbial products such as TMAO and short-chain fatty acids may affect blood vessels. Much of the mechanistic evidence comes from preclinical studies. The authors say causation remains unproven and microbiome-based therapies are still investigational.

CLINICAL CARDIOLOGY · 2026-09-01

Review finds heart failure with preserved ejection fraction differs between women and men

A clinical review in The Korean Journal of Internal Medicine says this form of heart failure affects about half of heart failure patients. In women it is often linked to cardiometabolic stress and vascular problems. Men more often show an ischemia-linked pattern. Most drugs work similarly in both sexes, though some treatments may differ in benefit.

THE KOREAN JOURNAL OF INTERNAL MEDICINE · 2026-09-01

Stiffer neck arteries linked to slower thinking in men with HIV

An observational study in The Journals of Gerontology: Series A followed 717 men, 459 of them with HIV. Lower carotid artery distensibility was linked to slower scores on two cognitive tests in men with HIV. The link was weaker and not statistically significant in men without HIV. The design shows association, not cause.

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

Arterial stiffness estimate linked to stroke severity and 90-day outcome

A pooled analysis of 13 cohorts across seven countries, published in the American Journal of Hypertension, included 2933 people with acute ischemic stroke. It used an estimate of arterial stiffness derived from 24-hour blood pressure monitoring. People with higher values had more severe strokes, and the measure was associated with functional outcome at 90 days. This observational study shows a link, not a cause.

AMERICAN JOURNAL OF HYPERTENSION · 2026-09-01

Perspective links chronic infection, fatty liver disease and high blood pressure

A perspective in the American Journal of Hypertension argues that metabolic stress and chronic infection, particularly Helicobacter pylori, may share pathways driving fatty liver disease and hypertension. The authors describe the evidence as emerging. They highlight AMPK signalling as a possible link. The piece is a synthesis of mechanisms, not a test of cause and effect.

AMERICAN JOURNAL OF HYPERTENSION · 2026-09-01

Middle-aged female mice show neck artery changes and shifted brain lipids

A mouse study in Physiological Reports compared 10 young and 10 middle-aged female mice. The older group had slower blood flow in the carotid artery and a lower elastin-to-collagen ratio in the vessel wall. Brain and vessel lipid profiles also differed with age. Vessel and lipid measures were correlated. The work was in mice, not people.

PHYSIOLOGICAL REPORTS · 2026-09-01

Adolescents who help cook dinner eat fewer ultra-processed foods, study finds

A cross-sectional analysis of 847 Spanish adolescents aged 12 to 17, published in the International Journal of Food Sciences and Nutrition, found that helping often with dinner preparation was associated with eating fewer ultra-processed foods. Grocery shopping showed no significant link. Among food types, only ultra-processed drinks were significantly lower. The design shows an association, not cause.

INTERNATIONAL JOURNAL OF FOOD SCIENCES AND NUTRITION · 2026-09-06

Review: ultra-processed foods may be linked to worse multiple sclerosis outcomes

A review in Multiple Sclerosis looked at epidemiology, mechanistic and microbiome research. It says diets rich in ultra-processed foods are associated with central fat, inflammation and gut microbe disruption. The authors note that long-term and interventional studies are scarce. They say ultra-processed food exposure may be a modifiable contributor, but this is not proven.

MULTIPLE SCLEROSIS (HOUNDMILLS, BASINGSTOKE, ENGLAND) · 2026-09-03

Over a quarter of Danish ultra-processed foods contain potassium additives

A cross-sectional label analysis in Clinical Nutrition ESPEN looked at 5,884 ultra-processed products from three Danish supermarket chains. It found 27.8% contained at least one potassium-based additive. These were most common in non-alcoholic drinks and sauces. The authors say the additives can be a hidden potassium source, a concern in chronic kidney disease.

CLINICAL NUTRITION ESPEN · 2026-09-03

Small trial: nutrition counseling plus exercise lowered fasting glucose more than exercise alone

A small pragmatic randomised trial in the Journal of Human Hypertension included 32 older adults with high blood pressure. Over 12 weeks, exercise plus nutritional counseling led to lower fasting glucose than exercise alone, a 10 mg/dL difference. Blood pressure, body composition and fitness did not differ between groups. The small size limits how far the findings can be generalised.

JOURNAL OF HUMAN HYPERTENSION · 2026-09-03

Higher ultra-processed food intake linked to more kidney disease in older adults

An observational study in CJASN followed 2,661 adults aged 65 or older for a median of 6.8 years. Those with the highest intake of total and animal-sourced ultra-processed foods had 26% and 37% higher risk of new chronic kidney disease. Plant-sourced types were modestly linked. This shows association, not cause.

CLINICAL JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY : CJASN · 2026-09-02

Review finds several parental factors linked to US children's ultra-processed food intake

A systematic review in Appetite examined parental factors tied to ultra-processed food outcomes in US young people. It included 11 studies. Links were found with parental education, parents' own ultra-processed food intake, belief in food advertising, more TV time and the home food environment. Household income and shared family meals showed no link. These are associations, not proven causes.

APPETITE · 2026-09-02

Pregnancy diet patterns linked to maternal weight and some newborn outcomes

A cohort study in the European Journal of Clinical Nutrition followed 1404 pregnant women in Germany. Four dietary patterns emerged. The high-ultra-processed pattern was linked to the highest pre-pregnancy BMI and gestational weight gain. A vegetable-rich pattern was linked to longer gestation and greater birth length in infants. This is observational, so it shows associations only.

EUROPEAN JOURNAL OF CLINICAL NUTRITION · 2026-09-02

Small studies: sadness tied to less ultra-processed eating in youth

Two small studies in Pediatric Obesity looked at mood and ultra-processed food intake in youth with overweight or obesity. In a lab study of 46 girls aged 7 to 12, a negative mood induction did not change intake, but greater sadness was linked to eating less ultra-processed food. In a 14-day study of 38 youth, mood did not predict intake. The authors urge caution and replication.

PEDIATRIC OBESITY · 2026-09-01

Ultra-processed diets linked to higher stroke death risk after heart attack

According to a study in Current Developments in Nutrition, researchers followed 4365 heart attack patients for a median of 14 years. A diet higher in ultra-processed food was not consistently linked to deaths from cardiovascular disease or coronary heart disease. It was linked to higher stroke death risk. This observational finding does not prove cause.

CURRENT DEVELOPMENTS IN NUTRITION · 2026-09-01

Study finds India's food taxes and subsidies face political and industry hurdles

A study in Health Policy and Planning combined a scoping review with interviews to examine nutrition-related taxes and subsidies in India. It found a fragmented, contested policy space. Current policies focus on undernutrition and tend to worsen overnutrition, the authors say. Loopholes weaken taxes on processed foods. This is qualitative policy research, not a health outcomes study.

HEALTH POLICY AND PLANNING · 2026-09-01

Paper proposes six communication tactics for public health against industry messaging

A paper in Health Promotion International argues that industries selling tobacco, alcohol, ultra-processed foods and fossil fuels use similar communication playbooks. Drawing on cross-sector evidence and the authors' experience, it proposes six tactics for public health responses. It is an argument and framework, not a study testing whether the tactics work.

HEALTH PROMOTION INTERNATIONAL · 2026-09-01

Paper argues ultra-processed food policy needs to account for food security

A policy analysis in Nutrition Bulletin discusses the Nova food classification system. The authors say blanket cuts to ultra-processed food overlook people in low- and middle-income countries and humanitarian settings. For them, processed foods supply calories and nutrients. They propose a product-by-product governance framework. This is an argument paper, not a new study of health outcomes.

NUTRITION BULLETIN · 2026-09-01

Body measurements flag waist-to-height risk in teens better than fitness tests

A cross-sectional study of 2,944 Spanish adolescents, published in Children, compared body measurements and fitness tests for spotting risk defined by waist-to-height ratio. Body measurements performed very well across sex and maturity groups. Fitness tests performed poorly unless adjusted for body mass. The risk measure was a proxy, with no blood or blood pressure checks.

CHILDREN (BASEL, SWITZERLAND) · 2026-09-05

Thigh muscle stiffness linked to fitness in healthy young men

An observational study in BMC Musculoskeletal Disorders measured leg muscles by ultrasound in 59 healthy young male medical students. Stiffness of the rectus femoris, a thigh muscle, was positively linked to aerobic capacity. Muscle thickness and other structure measures were not. The design shows an association only and cannot show that stiffness causes fitness.

BMC MUSCULOSKELETAL DISORDERS · 2026-09-04

Teens with mild to moderate scoliosis show lower aerobic fitness and strength

A cross-sectional study in the Irish Journal of Medical Science compared 48 adolescents with idiopathic scoliosis to 32 healthy peers. Those with scoliosis had lower aerobic capacity and reduced muscle strength. Flexibility was preserved. Balance and lung function were not affected in mild to moderate cases. The study cannot show what caused the differences.

IRISH JOURNAL OF MEDICAL SCIENCE · 2026-09-04

Large veteran study links low fitness and high blood pressure to higher death risk

An observational study in the European Journal of Preventive Cardiology followed 580,290 US veterans who had exercise testing. Those in the highest fitness group had about 74% lower mortality than the lowest group. Low fitness and hypertension were the strongest predictors of death. The design shows associations, not proof of cause.

EUROPEAN JOURNAL OF PREVENTIVE CARDIOLOGY · 2026-09-04

Aerobic capacity best explains fat burning in elite student athletes

A cross-sectional study in the Journal of Functional Morphology and Kinesiology tested 43 national-team collegiate athletes. Absolute peak oxygen uptake explained 60.4% of the variation in maximal fat oxidation during exercise. Adding calf girth changed the explained variance very little. The design shows links only and covers a small, specialised group.

JOURNAL OF FUNCTIONAL MORPHOLOGY AND KINESIOLOGY · 2026-09-03

Rehabilitation program improved fitness in survivors of upper digestive tract cancer surgery

A randomised trial in Annals of Surgery assigned 88 disease-free patients, at least three months after upper gastrointestinal cancer surgery, to a 12-week rehabilitation program or standard care. The program combined exercise, diet counselling and psychosocial support. Cardiorespiratory fitness rose more with rehabilitation than with standard care. Secondary measures showed no significant differences between the groups.

ANNALS OF SURGERY · 2026-09-02

Four weeks of interval boxing training linked to better lung function in young athletes

A randomised controlled study in the journal Medicine tested a four-week interval-training boxing programme in 16 trained young people. Several lung function measures improved over time. The authors caution that the interval group trained more overall, so the gains cannot be pinned on interval training itself. The sample was very small.

MEDICINE · 2026-09-01

Ten weeks of whole-body interval training improved fitness in adults with overweight

A study in Healthcare assigned 36 adults with overweight to ten weeks of whole-body high-intensity interval training or to a control group. The training group improved cardiorespiratory fitness, muscular strength and upper-limb endurance. They also had a modest drop in trunk fat. The control group showed no significant changes except a modest rise in body fat.

HEALTHCARE (BASEL, SWITZERLAND) · 2026-09-01

Multi-angle X-ray scanner maps lung blood flow in 19 healthy people

A study in Medical Physics used a novel multi-angle fluoroscopic scanner to measure an X-ray pulsatility index, a stand-in for regional lung blood flow, from four simultaneous views. Nineteen healthy participants all completed an 8-second breath-hold without difficulty. The maps showed blood flow in both lungs with no focal defects. The aim was to set preliminary reference values in healthy people.

MEDICAL PHYSICS · 2026-09-01

Review links phosphate in processed food to poorer exercise capacity

A review in Clinical Science gathers evidence linking phosphate additives in ultra-processed foods to impaired muscle energetics and exercise capacity. Cohort studies associate higher blood phosphate with less physical activity and more sedentary time. Experimental studies report that a high-phosphate diet reduces endurance and oxygen uptake. The human findings cited are associations, so causation is not established.

CLINICAL SCIENCE (LONDON, ENGLAND : 1979) · 2026-09-01

FASTING, AUTOPHAGY & METABOLIC HEALTH 12

Review maps experimental liver-disease drugs and gaps in fatty liver treatment knowledge

A review in Drug Design, Development and Therapy covers emerging treatments for MASH, a liver disease linked to metabolic problems. It notes that resmetirom and semaglutide have received provisional approval. Many experimental drugs have shown limited or inconsistent effects, especially on liver scarring. The authors call for approaches that account for different liver cell types.

DRUG DESIGN, DEVELOPMENT AND THERAPY · 2026-09-05

Review links programmed cell death to metabolic syndrome development

A review in the International Journal of Molecular Medicine surveys how different forms of programmed cell death, including apoptosis and ferroptosis, may contribute to metabolic syndrome. The authors say growing evidence ties these processes to inflammation and disease progression. They discuss possible treatment strategies, which remain theoretical rather than tested here.

INTERNATIONAL JOURNAL OF MOLECULAR MEDICINE · 2026-09-04

Review links diet, gut microbes and immune cells to brain health across life

A review in Gut Microbes examines how nutrition shapes communication between the gut, immune system and brain from infancy to old age. It describes gut-made compounds that influence brain immune cells. The authors say diet may help ease age-related inflammation, called inflammaging. It is a review, not a new trial.

GUT MICROBES · 2026-09-04

Review: keto diets and fasting may help fatty liver, but evidence is thin

A narrative review in Frontiers in Nutrition looked at ketogenic diets and intermittent fasting for fatty liver disease (MASLD). Both can cut weight and liver fat in some patients. Most human evidence is short-term. Proposed mechanisms rest mainly on cell and animal work. No trial has compared the two approaches directly.

FRONTIERS IN NUTRITION · 2026-09-04

Trial planned to test time-restricted eating during myeloma treatment

A protocol in Pilot and Feasibility Studies describes a planned randomised trial. It will enrol 54 adults with multiple myeloma. Half will follow 16:8 time-restricted eating plus nutritional counselling for 12 weeks, and half counselling alone. The main aims are adherence and safety, with early looks at treatment response. No results exist yet.

PILOT AND FEASIBILITY STUDIES · 2026-09-03

Semaglutide's effects on rat reproductive organs examined against matched calorie restriction

A study in rats, published in Molecular Metabolism, compared semaglutide with pair-fed controls to separate the drug's direct effects from weight loss. After four weeks, both groups of males showed improved sperm measures. Females in both groups showed increased follicle development. Hormone changes differed by sex. This is animal research, and it does not show effects in people.

MOLECULAR METABOLISM · 2026-09-03

Review maps how blood vessels age and what may slow it

A review in the International Journal of Biological Sciences sets out twelve proposed hallmarks of vascular aging. It describes early vascular aging and a slower-ageing 'supernormal' pattern. It also says vessel aging drives problems in distant organs. The authors summarise behavioural and drug approaches aimed at ageing vessels. It is a review, not new trial data.

INTERNATIONAL JOURNAL OF BIOLOGICAL SCIENCES · 2026-09-02

Review links Planetary Health Diet patterns to gut microbiome and healthy aging

A narrative review in Nutrients examines the Planetary Health Diet and healthy aging. It reports that following this pattern is associated with greater gut microbial diversity and with lower risks of cardiometabolic disease, frailty, cognitive decline and early death. The review proposes the gut microbiome as one, but not the only, link.

NUTRIENTS · 2026-09-02

Review examines whether meal timing affects heart and hormone health

A review in Cardiovascular Research looks at how the timing of eating may affect the heart, blood vessels and hormone systems. It covers both preclinical and clinical reports. The authors say evidence is growing that time-restricted eating may help, and that body clocks may explain it. They also note limitations to its use.

CARDIOVASCULAR RESEARCH · 2026-09-01

Review of 112 reviews finds diet and exercise bring modest weight loss

An umbrella review in Obesity Pillars pooled 112 systematic reviews of randomised trials in adults with overweight or obesity. All approaches gave significant but modest weight loss. Diet plus physical activity did best beyond 12 months. Physical activity cut systolic blood pressure most. The authors note high variation between studies and low confidence in 69% of the reviews.

OBESITY PILLARS · 2026-09-01

Review examines how diet may affect mental health through gut bacteria

A review in Molecular Nutrition & Food Research looks at how diets such as Mediterranean, ketogenic and intermittent fasting may alter gut microbes and, potentially, mental health. The evidence mixes clinical, observational and preclinical work. The authors note limits, including few longitudinal human studies and difficulty translating findings into clinical practice.

MOLECULAR NUTRITION & FOOD RESEARCH · 2026-09-01

Review groups anti-aging approaches into three linked pillars

A review in Aging Cell summarises leading anti-aging strategies, including exercise, calorie restriction, clearing senescent cells, stem cell therapies and epigenetic rejuvenation. The authors say many have slowed aging in preclinical models, and some show efficacy in clinical trials. They propose metabolic regulation, inflammation control and senotherapy as three connected pillars.

AGING CELL · 2026-09-01

SLEEP SCIENCE & CIRCADIAN BIOLOGY 12

Higher vitamin D levels linked to longer, less disturbed sleep in older adults

An observational study of 460 adults aged 40 and older in the Baltimore Longitudinal Study of Aging, published in The Journals of Gerontology Series A, linked higher vitamin D to longer sleep time and shorter wake periods. B12 results differed between men and women. The study shows associations only. The authors say future studies must test whether raising vitamin D improves sleep.

THE JOURNALS OF GERONTOLOGY. SERIES A, BIOLOGICAL SCIENCES AND MEDICAL SCIENCES · 2026-09-04

Review: platelets follow a daily rhythm that may matter in disease

A review in Frontiers in Physiology describes how platelet function and count rise and fall over roughly 24 hours. Platelet surface markers peak around 8-9 AM, while count and aggregability peak between 3 and 8 PM. The authors say these rhythms may play a role in heart, brain and metabolic diseases and could become a therapeutic target.

FRONTIERS IN PHYSIOLOGY · 2026-09-04

Older adults with sarcopenia had worse sleep and more inflammation

A prospective controlled study in Sleep & Breathing compared 31 older adults with sarcopenia and 32 without. Those with sarcopenia had weaker handgrip strength, more sleep disturbances and higher inflammation. The authors suggest these may speed muscle loss. The small study shows an association, not that poor sleep causes sarcopenia.

SLEEP & BREATHING = SCHLAF & ATMUNG · 2026-09-04

Age and APOE genotype, not lifestyle, best predicted Alzheimer's blood markers

A study in Aging Brain examined 116 people, with and without Alzheimer's disease, whose diagnoses were confirmed by spinal fluid tests. Age was the most consistent predictor of plasma biomarker levels. APOE ε3/ε4 genotype was linked to higher pTau181. Lifestyle and metabolic factors showed weak or inconsistent links. The authors say confounders need systematic evaluation.

AGING BRAIN · 2026-09-03

Circadian syndrome linked to more stress urinary incontinence in US women

A cross-sectional study in Urology Research and Practice analysed NHANES data from 5,758 women. Those with circadian syndrome had a higher prevalence of stress urinary incontinence (odds ratio 1.250) after adjustment. The number of syndrome components showed no significant link. Because of the design, it shows association, not cause.

UROLOGY RESEARCH & PRACTICE · 2026-09-03

Review proposes a brain-stem circuit may explain sex differences in Alzheimer's

A review in Frontiers in Aging Neuroscience notes that about 60% of people with Alzheimer's disease in the United States are women. It discusses how sex hormones such as estrogen might interact with a brainstem system called the nucleus incertus. The authors propose this as an idea for future research. It is a narrative review, not new test results.

FRONTIERS IN AGING NEUROSCIENCE · 2026-09-03

Review links long-term night shifts to higher heart and metabolic risk

A review in Frontiers in Public Health examines night shift work in healthcare staff. It reports a dose-response link between night shift exposure and cardiometabolic risk. It points to disrupted body clocks, inflammation and gut microbiome changes as possible mechanisms. The authors note gaps, including poor adherence and a lack of long-term follow-up data.

FRONTIERS IN PUBLIC HEALTH · 2026-09-03

Review links poor sleep and chronic stress to Alzheimer's disease processes

A review in NPJ Dementia examines how sleep and stress relate to Alzheimer's disease. It says sleep supports brain clearance pathways, and chronic stress drives inflammation. Alzheimer's changes also affect sleep and stress circuits early on. The authors say the mechanisms are incompletely understood and suggest these pathways could be future treatment targets.

NPJ DEMENTIA · 2026-09-02

Review of Alzheimer's biology notes gaps in gut-brain evidence

A narrative review in Cells examines Alzheimer's disease through the lens of ageing biology. It notes that anti-amyloid antibodies clear plaques but only modestly slow decline. A blood test for phosphorylated tau 217 may improve detection, though its value depends on context. Causal evidence for gut involvement in humans remains insufficient.

CELLS · 2026-09-02

Depressive symptoms linked to Alzheimer-coded deaths in Spanish older adults

A population-based cohort study in Communications Health followed 3,085 older adults in central Spain from 1994-95 through 2017. Depressive symptoms were associated with higher Alzheimer-coded mortality overall, more strongly in women, and with higher dementia-coded mortality in women only. Some exposures, such as smoking and obesity in men, showed inverse links, consistent with competing deaths and reverse causation. The study shows association, not cause.

COMMUNICATIONS HEALTH · 2026-09-02

Review proposes sorting dementia's mood and behaviour symptoms by biology and context

A review in Psychogeriatrics argues that symptoms such as apathy, agitation, psychosis, depression and sleep problems in dementia should be treated as multidimensional patterns. The authors say the same symptom label can come from different mechanisms. They propose grouping symptoms by disease stage, brain networks, biological aging and personal context. They call for longer-term research.

PSYCHOGERIATRICS : THE OFFICIAL JOURNAL OF THE JAPANESE PSYCHOGERIATRIC SOCIETY · 2026-09-01

Review looks at brain waste-clearing systems as possible Alzheimer's treatment targets

A review in Aging Cell discusses the glymphatic system and meningeal lymphatic vessels, which clear waste such as amyloid-β and tau from the brain. The authors say dysfunction may trigger or worsen Alzheimer's disease. Drug, physical and surgical approaches aimed at these systems are still under exploration. The review is not a trial of any treatment.

AGING CELL · 2026-09-01

ALZHEIMER'S & COGNITIVE DECLINE PREVENTION 12

Newspaper reading improved cognitive test scores in small trial of older adults

A 26-week randomised controlled trial in Frontiers in Aging selected 64 community-dwelling adults aged 60 or older who did not subscribe to newspapers. One group was told to read a newspaper at least four days a week. Compared with non-readers, readers showed significantly better changes on the main cognitive test (MoCA-J), on a depression scale and on a life-space activity measure.

FRONTIERS IN AGING · 2026-09-04

Hearing aids linked to slower rise in a brain-inflammation blood marker

This is a secondary analysis of the ACHIEVE randomised trial, published in EClinicalMedicine, in 164 older adults with untreated hearing loss. Over three years, those given hearing intervention had a slower rise in the blood marker GFAP, linked to neuroinflammation, than controls. The rise in NfL, a nerve damage marker, was also smaller, but that difference was not statistically significant.

ECLINICALMEDICINE · 2026-09-03

Small primary-care study compares dementia risk factors in older patients

A retrospective observational study in Cureus looked at 11 modifiable dementia risk factors in people aged 65 and older. It compared 20 patients with dementia and 50 without. Those with dementia were older. Obesity was less common in the dementia group. The authors say risk factors were widespread. The sample was small.

CUREUS · 2026-09-03

Loneliness not linked to Alzheimer's blood markers in dementia-free older adults

A cross-sectional analysis in the Journal of Alzheimer's Disease studied 434 dementia-free adults aged 65 or older. It found no association between loneliness and plasma p-tau217 or neurofilament light chain. Results held after adjusting for factors including age, sex and depression. A snapshot study like this cannot show cause or effect over time.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-09-02

Review finds no proven causal link between surgery and faster dementia decline

A narrative review in Healthcare examines anaesthesia and surgery in people with dementia. Postoperative delirium is consistently linked to faster cognitive and functional decline. Yet current evidence does not establish that anaesthesia or surgery directly speeds dementia progression. The authors cite varied methods, residual confounding and frequent exclusion of cognitively impaired patients.

HEALTHCARE (BASEL, SWITZERLAND) · 2026-09-02

Digital cognitive test patterns help flag faster decline in preclinical Alzheimer's

A study in Alzheimer's & Dementia analysed a brief self-administered digital test in 1,684 cognitively unimpaired older adults. One of four cognitive patterns, seen in 18% of amyloid-positive people, was linked to faster decline and tau build-up. Combined with a blood marker, p-tau217, it flagged higher risk. The findings are observational.

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

Higher blood pressure measures linked to more dementia after stroke

An analysis of the PROGRESS trial, reported in the American Journal of Hypertension, followed 5128 people with prior stroke or transient ischemic attack. About 11 percent developed cognitive decline or dementia over a median of four years. Higher mean systolic pressure and several other readings were associated with greater risk. These are associations, not proof of cause.

AMERICAN JOURNAL OF HYPERTENSION · 2026-09-01

Better one-leg balance linked to better memory in healthy older adults

A cross-sectional study in the journal Medicine looked at 49 older adults with normal thinking skills. Those who could stand longer on one leg with eyes open tended to score higher on cognitive tests, especially memory. This shows a link, not a cause. The authors suggest balance tests might be a simple indicator of cognitive health.

MEDICINE · 2026-09-01

Asian expert panel issues guidance on diagnosing mild cognitive impairment

An expert consensus paper in CNS Neuroscience & Therapeutics comes from the ASCEND group, which focuses on Asia. It offers two algorithms for assessing and managing mild cognitive impairment. The panel stresses addressing modifiable risk factors and notes digital tools are growing in importance. It is expert opinion based on existing literature, not a new trial.

CNS NEUROSCIENCE & THERAPEUTICS · 2026-09-01

Experts outline how Alzheimer's trials should adapt to anti-amyloid antibody drugs

A perspective article in Alzheimer's & Dementia argues that studies should be designed with anti-amyloid antibodies in mind. It says cohorts and trials should record drug type, dosing, duration and amyloid clearance. It calls for long-term follow-up, study of varied treatment response, and stage-specific combination trials. It reports no new trial results.

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

Half of surveyed older Japanese adults would try dementia program with instructor

A questionnaire survey in Geriatrics & Gerontology International covered 9506 members of senior citizens' clubs in Tottori Prefecture, Japan. Only 11.9% knew of the local dementia prevention program. Just over half, 50.4%, said they would try it if an instructor was sent to them. Frailty and subjective cognitive decline were linked to lower interest. The survey measured interest, not whether the program works.

GERIATRICS & GERONTOLOGY INTERNATIONAL · 2026-09-01

Higher blood p-tau217 linked to greater risk of later cognitive impairment

A cohort study in JAMA pooled data from 2,684 older adults without cognitive impairment across six cohorts. There were 478 cases of progression to cognitive impairment over a median 5.4 years. Each 1-SD rise in baseline plasma p-tau217 was associated with higher risk (hazard ratio 1.38). The link held after adjusting for amyloid PET scans.

JAMA · 2026-09-01

Review finds sleep problems more common during and after menopause

A narrative review in Obstetrics and Gynecology looked at literature from January 2015 to March 2026. It found sleep disruption is more common in perimenopause and postmenopause than before menopause. Rates vary with menopausal stage, hot flashes and how sleep is measured. The review covers insomnia, sleep apnea, restless legs syndrome and limb movement disorder.

OBSTETRICS AND GYNECOLOGY · 2026-09-04

Higher triglyceride-glucose-frailty score linked to depression and cognitive problems in midlife women

An observational study in the International Journal of Women's Health used survey data from 2,596 perimenopausal women in China. Higher scores on the triglyceride-glucose-frailty index were associated with higher odds of depression and cognitive impairment. The index was moderately good at flagging depression, weaker for cognition. The data show links, not causes.

INTERNATIONAL JOURNAL OF WOMEN'S HEALTH · 2026-09-04

Review: heart risk of menopausal hormone therapy depends on timing and formulation

A review in Cardiology in Review says cardiovascular risk with menopausal hormone therapy depends on when it starts and how it is given. It cites a 2025 Women's Health Initiative secondary analysis: combined therapy looked atherosclerosis-neutral at ages 50-59, but risk rose at ages 70-79. Oral and transdermal forms differ in clot risk and triglyceride effects.

CARDIOLOGY IN REVIEW · 2026-09-04

Review proposes perimenopause as early window for heart failure risk in women

A review in Frontiers in cardiovascular medicine looked at heart failure with preserved ejection fraction, which affects women disproportionately. Drawing on longitudinal cohorts and mechanistic studies, it notes that fat accumulation, insulin resistance and arterial stiffening emerge or speed up during the menopausal transition. The authors propose a framework. It is a hypothesis, not proof of cause.

FRONTIERS IN CARDIOVASCULAR MEDICINE · 2026-09-03

Review links early type 2 diabetes in women to earlier menopause

A scoping review in Maturitas covered 16 studies of women diagnosed with type 2 diabetes before menopause. Six of seven studies on menopause timing found at least one result pointing to earlier menopause. Diabetes was also linked to higher infertility risk. The authors describe associations only, and some were limited to subgroups.

MATURITAS · 2026-09-02

Gut barrier markers rose across menopause in a study of healthy women

A commentary in the Journal of Clinical Investigation discusses a longitudinal study by Shieh and colleagues in healthy women. Markers of gut barrier dysfunction and related immune activation increased across the menopause transition. The commentary says ovarian aging may contribute. It also notes that clinical consequences and possible treatments remain open questions.

THE JOURNAL OF CLINICAL INVESTIGATION · 2026-09-01

Women with surgical menopause got more heart-related prescriptions than those with natural menopause

A retrospective review of health records, published in Mayo Clinic Proceedings: Innovations, Quality & Outcomes, compared 690,799 women with nonsurgical menopause and 28,473 with surgical menopause. Over five years, the surgical group had higher rates of prescriptions for statins, blood pressure drugs and diabetes drugs. The study describes prescribing patterns, not health outcomes.

MAYO CLINIC PROCEEDINGS. INNOVATIONS, QUALITY & OUTCOMES · 2026-09-01

Study argues menopause conversation should include trans and non-binary people

A qualitative study in Health Promotion International drew on three focus groups with 17 trans men and non-binary people with ovaries. Their understandings of menopause were shaped by their own and others' gender and by experiences of hormonal change, including gender affirmation. The authors argue that greater menopause visibility risks narrowing the conversation, and that it should move beyond cisgender and binary assumptions.

HEALTH PROMOTION INTERNATIONAL · 2026-09-01

Health records capture menopause poorly, a scoping review finds

A scoping review in Menopause examined 19 studies on how electronic health records handle menopause data. Most were retrospective or cross-sectional studies from US health systems. Records often lacked structured fields for reproductive stage and relied on free text. The review also found symptoms were underreported and undertreated. This limits care and research.

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

Most #womenshealth Instagram posts made health claims; few cited scientific evidence

A content analysis in Health Promotion International reviewed 472 Instagram posts using #womenshealth. Of these, 69% made explicit health claims, but only 7% referred to scientific evidence. About half of account holders had a clear financial interest, and 39% of posts sold an intervention. The authors describe an environment dominated by non-expert, commercial voices.

HEALTH PROMOTION INTERNATIONAL · 2026-09-01

Loneliness and social isolation both linked to memory complaints in perimenopausal women

A cross-sectional study in Menopause surveyed 903 perimenopausal women online. Loneliness and social isolation were each independently associated with subjective cognitive decline. Women with moderate to severe levels of both had the highest odds of severe decline. Because the data are a single snapshot and self-reported, the study cannot show cause.

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

Review explores how heart cells' mitochondrial cleanup and ketone use may interact

A review in Frontiers in Cardiovascular Medicine examines two processes in heart muscle: mitophagy, which clears damaged mitochondria, and the use of ketone bodies as fuel. The authors say the link is incompletely understood. They suggest each may support the other. This is a summary of existing research, not a new trial.

FRONTIERS IN CARDIOVASCULAR MEDICINE · 2026-09-01

Review maps how cataract surgery clouding may involve TGF-β and ageing

A review in Investigative Ophthalmology & Visual Science examines posterior capsule opacification, a common long-term complication of cataract surgery that can impair vision. The authors organise existing evidence into a network involving TGF-β signalling, mitochondrial problems, and cues from surgical injury and ageing. They suggest ideas for future combination treatments.

INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE · 2026-09-01

Review proposes declining oxygen delivery may help drive aging

A review in Aging Cell proposes "Oxygenaging", the idea that gradual loss of oxygen balance in the body is not only a by-product of aging but also a driver of damage and decline. It discusses therapies that alter oxygen levels. The authors note a narrow margin between beneficial stress and injury. This is a proposed framework.

AGING CELL · 2026-09-01

Review: P7C3 compounds protected brain cells in preclinical studies

A systematic review in CNS Neuroscience & Therapeutics covers P7C3 compounds, which activate an enzyme involved in making NAD+. Preclinical studies, not human trials, tested them in models of Alzheimer's, Parkinson's, stroke and other conditions. Hurdles include safety questions, a lack of validated biomarkers and the failure of earlier trials aimed at the same enzyme.

CNS NEUROSCIENCE & THERAPEUTICS · 2026-09-01

Review links faulty clearing of damaged mitochondria to neurodegenerative disease

A review in The Journal of Clinical Investigation covers mitophagy, the process by which neurons remove damaged mitochondria. It reports that genetic, pathological and experimental evidence implicates defects in this process in the onset or progression of diseases such as Parkinson's and ALS. The authors also discuss emerging approaches aimed at restoring mitophagy.

THE JOURNAL OF CLINICAL INVESTIGATION · 2026-09-01

Cell study identifies protein that helps damaged mitochondria recover instead of being cleared

A laboratory study in Cell Reports used cells to examine how mitochondria respond to temporary damage. It identified a protein, MGRN1, that appears to restrain the removal of damaged mitochondria so they can be repaired. Without it, mitochondria were cleared inappropriately and recovered poorly. This is early cell research, not tested in people.

CELL REPORTS · 2026-09-01

Stem cell secretions eased skin photoaging in mice and skin cells

A laboratory study in Aging Cell tested material released by human umbilical cord stem cells. In UV-exposed mice, it improved skin barrier function, collagen and inflammation markers. In cultured human skin cells, it reduced senescence. Experiments suggested it worked by clearing damaged mitochondria and dampening an inflammatory pathway. No human data were reported.

AGING CELL · 2026-09-01

Review examines how cell organelle problems may drive lung scarring in IPF

A review in Cell Biochemistry and Function covers idiopathic pulmonary fibrosis, a fatal lung disease of unknown cause. It summarises how faulty mitochondria, endoplasmic reticulum, lysosomes and peroxisomes, along with altered cell metabolism, may contribute to scarring. The authors say this could point to future treatment targets. It is a review, not a trial.

CELL BIOCHEMISTRY AND FUNCTION · 2026-09-01

Review proposes framework for faulty mitochondrial cleanup in ageing stem cells

A review in Cells proposes a framework for how ageing mesenchymal stem cells clear damaged mitochondria. It tracks damage through to breakdown in lysosomes. The authors say cell studies best support one cleanup route, while others remain unvalidated. The framework is the authors' own proposal and is meant to be tested.

CELLS · 2026-08-27

Review: mitochondria-targeted Alzheimer's treatments work in preclinical models, but hurdles remain

A review in Frontiers in Cell and Developmental Biology looks at therapies aimed at mitochondria, the cell's energy units, in Alzheimer's disease. It says some approaches showed efficacy in preclinical models. Getting drugs across the blood-brain barrier and hitting the right targets remain challenges. The review does not report human trial results.

FRONTIERS IN CELL AND DEVELOPMENTAL BIOLOGY · 2026-08-27

Plant compounds extended lifespan in tiny roundworms, with pterostilbene strongest

A laboratory study in Molecules tested three plant-derived materials in liver cells and in C. elegans worms. All three extended worm lifespan, with pterostilbene showing the largest effect at 40-50%. Pterostilbene and a stilbene glycoside also improved stress resistance. The authors note that antioxidant tests alone did not predict effects in living animals. No human data were reported.

MOLECULES (BASEL, SWITZERLAND) · 2026-08-26

EXERCISE AS MEDICINE & LONGEVITY

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Baduanjin plus resistance training linked to better weight and blood sugar in older adults with diabetes

In a randomised trial reported in Frontiers in Endocrinology, 123 older adults with type 2 diabetes joined either a 16-week exercise program combining Baduanjin and resistance training or a health education group. The exercise group showed greater improvements in weight, BMI, waist size, grip strength and HbA1c. Blood pressure and lipid levels did not differ between groups.

FRONTIERS IN ENDOCRINOLOGY · 2026-08-27

Review links resistance and interval exercise to higher irisin and BDNF in aging

A narrative review in the European Journal of Translational Myology covered 24 human and animal studies. Resistance training and high-intensity interval training consistently raised irisin and a brain-growth protein called BDNF. Resistance training eased age-related drops in both. The review did not use formal bias checks or registration. Links to cognition remain proposed, not proven.

EUROPEAN JOURNAL OF TRANSLATIONAL MYOLOGY · 2026-08-26

Review asks whether exercise really improves decision-making in healthy older adults

A narrative review in Frontiers in Sports and Active Living covers a decade of studies on aerobic exercise in healthy older adults. Programmes of 6 months to 2 years improved executive functions linked to decision-making and were tied to brain changes. The authors note that none of the reviewed studies directly assessed decision-making.

FRONTIERS IN SPORTS AND ACTIVE LIVING · 2026-08-26

Six months of social dance linked to better HDL and blood measures in older adults

A randomised study in the Journal of Functional Morphology and Kinesiology tested a six-month dance programme in adults over 65. Analyses covered 49 people. The dance group improved on HDL cholesterol, hemoglobin and hematocrit, plus antioxidant markers. Dance did not preserve isometric muscle performance, so the authors suggest adding resistance-based exercise.

JOURNAL OF FUNCTIONAL MORPHOLOGY AND KINESIOLOGY · 2026-08-24

Review: lifestyle measures may complement weight-loss drugs that mimic gut hormones

A narrative review in Nutrients examined evidence on obesity drugs that act on GLP-1 and GIP receptors. It says these drugs produce substantial weight loss. It also notes possible limits, including loss of lean mass, digestive side effects, stopping treatment and weight regain. The authors discuss physical activity, nutrition and behavioural support as co-therapies.

NUTRIENTS · 2026-08-22

Flywheel training linked to bigger gain in cognitive flexibility than traditional weights in older women

A 36-week randomised trial in the Journal of Functional Morphology and Kinesiology compared flywheel and traditional resistance training in healthy older women. Both groups improved on inhibitory control and working memory. The Trail Making B/A ratio improved significantly more with flywheel training. Blood IGF-1 levels did not change significantly in either group.

JOURNAL OF FUNCTIONAL MORPHOLOGY AND KINESIOLOGY · 2026-08-21

Review: exercise in type 2 diabetes should be tailored to the individual

A review in Frontiers in Endocrinology looks at exercise and physical activity in type 2 diabetes. It says different types of exercise offer different benefits for blood sugar, physical function and cardiometabolic health. It argues that timing, medication safety, complications and age should shape programmes. It also names breaking up prolonged sitting as a complementary target.

FRONTIERS IN ENDOCRINOLOGY · 2026-08-20

Few people in a Singapore cancer rehab centre met exercise guidelines

A cross-sectional study in Healthcare looked at 132 adults at the Singapore Cancer Society Rehabilitation Center. Only 29.5% met recommended aerobic exercise levels and 9.1% met resistance training recommendations. Median weekly moderate aerobic exercise was 85 minutes. Lower exercise self-efficacy was the only psychosocial factor linked to a lower likelihood of meeting aerobic targets. The design shows associations, not causes.

HEALTHCARE (BASEL, SWITZERLAND) · 2026-08-20

Review links diet, sleep timing and gut health to heart disease risk

A review in Biomedicines pulled together mechanistic and clinical evidence on non-drug approaches to atherosclerotic heart disease. It reports that Mediterranean, DASH and plant-based diets improve lipid handling and reduce inflammation. It also discusses circadian disruption, gut microbiome changes and some supplements. The authors say these approaches add to drug treatment. This is a review, not a new trial.

BIOMEDICINES · 2026-08-20

Anti-inflammatory diet linked to lower death risk in older Chinese adults

A prospective cohort study in Frontiers in Immunology followed 6,468 Chinese adults aged 65 and over for a median of 7 years. Those with the most anti-inflammatory diets had a lower risk of death than those with the least (hazard ratio 0.85). A highly anti-inflammatory diet combined with regular exercise or high leisure activity was also linked to significantly lower risk. The study shows association only.

FRONTIERS IN IMMUNOLOGY · 2026-08-19

Review finds exercise often improved quality of life in pre-dialysis kidney disease

A systematic review in Kidney International Reports examined 16 randomised trials of exercise in people with chronic kidney disease stages 1 to 5 who were not yet on dialysis. Eleven studies reported better quality of life, mainly in physical and social areas. Five found no significant change. The authors say differences in programs and measures limit comparison between studies.

KIDNEY INTERNATIONAL REPORTS · 2026-08-19

PROTEINS & AMINO ACIDS 10

Muscle loss was common in people with active ulcerative colitis in small study

A study in Frontiers in Nutrition compared 57 hospitalised patients with active ulcerative colitis against 35 healthy controls. Sarcopenia, or muscle loss, affected 40.4 percent of patients. Those with sarcopenia had higher C-reactive protein, a marker of inflammation, and different bile acid and gut bacteria profiles. The design shows associations, not causes.

FRONTIERS IN NUTRITION · 2026-09-03

About one in three men with diabetes and liver fibrosis had sarcopenia

A cross-sectional study in the Journal of Frailty, Sarcopenia and Falls looked at 131 men with type 2 diabetes and significant liver fibrosis. Of these, 43 (32.8%) had sarcopenia, or muscle loss. Lower body weight and higher liver fibrosis were linked to it. Poorer blood sugar control was also seen. This design shows associations, not causes.

JOURNAL OF FRAILTY, SARCOPENIA AND FALLS · 2026-09-01

Higher blood sugar marker linked to sarcopenia in rural older Koreans

A cross-sectional analysis in Nursing & Health Sciences used 2023 Korean national survey data from 398 rural adults aged 65 and older. Sarcopenia prevalence was 15.1%. Higher odds appeared with older age and an HbA1c of 7.0% or more. Meeting activity guidelines was linked to lower odds. The design shows associations only.

NURSING & HEALTH SCIENCES · 2026-09-01

Review: weight-loss drugs reduce lean mass, but muscle harm is unproven

A review in Diabetes & Metabolism Journal examines muscle loss with GLP-1-type weight-loss drugs. Lean mass often falls, but that does not necessarily mean loss of working muscle. Available evidence shows no obvious functional harm. Long-term data remain limited, especially for people with little muscle reserve.

DIABETES & METABOLISM JOURNAL · 2026-09-01

Higher midlife protein intake linked to better hearing decades later

An observational study in The Journals of Gerontology followed 2,773 adults from the Atherosclerosis Risk in Communities Study, who were aged 45 to 64 at the start, for up to 30 years. Those with the highest protein intake had better hearing later. High fat intake was linked to worse hearing. Carbohydrate intake showed no link. These are associations, not proof of cause.

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

Review links muscle-loss syndromes to distinct blood markers of inflammation and metabolism

A systematic review and meta-analysis in Medicine pooled 43 studies on blood markers of sarcopenia and sarcopenic obesity. People with sarcopenia had higher levels of CRP, interleukins, tumor necrosis factor, cystatin C, blood urea nitrogen and HDL-C. Higher vitamin D and albumin were seen in those without it. Most included studies were observational, so these are associations, not causes.

MEDICINE · 2026-09-01

Higher protein intake linked to fewer gallstones in US adults under 60

A cross-sectional study in Medicine analysed US national survey data from 3150 adults. Among those under 60, higher dietary protein was associated with lower gallstone risk. The highest-intake group had 76 percent lower risk than the lowest. The link was no longer significant above a threshold. This design shows association, not cause.

MEDICINE · 2026-09-01

Sarcopenia was common in a small study of Ecuadorian care home residents

An observational cross-sectional study in Geriatrics included 44 older adults in three care homes in Loja, Ecuador. Confirmed and severe sarcopenia, a loss of muscle mass and strength, affected 61.3%. Protein intake was often below recommendations. Higher muscle mass and body mass index were linked to lower odds of sarcopenia. The study cannot show cause.

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

Review: nutrition before colorectal cancer surgery may aid recovery, but evidence is mixed

A mini review in Frontiers in Nutrition notes that malnutrition, sarcopenia and cachexia are common in colorectal cancer patients. Poor nutritional status was linked to more surgical complications. Some studies suggest immunonutrition and certain micronutrients help. The authors say limited, mixed evidence prevents recommending these routinely.

FRONTIERS IN NUTRITION · 2026-08-28

Sarcopenia linked to higher death risk in patients having heart valve replacement

A systematic review and meta-analysis in the Journal of Thoracic Disease pooled 13 studies covering 6,865 patients undergoing transcatheter aortic valve implantation. Most studies were retrospective. Patients with sarcopenia, or muscle loss, had a higher risk of death from any cause and from cardiovascular causes. This shows an association, not that sarcopenia caused the deaths.

JOURNAL OF THORACIC DISEASE · 2026-08-28

Review examines editing stem cells to shield them from targeted blood cancer therapies

A review in Blood Advances discusses epitope engineering. This approach uses gene editing to alter a target marker on healthy blood stem cells, so immunotherapies can spare them while still attacking cancer. The authors describe preclinical and early translational work. They also note open challenges, including editing efficiency, off-target effects, delivery and long-term safety.

BLOOD ADVANCES · 2026-09-01

Gene editing partly improves bone defects in progeria mice

A study in Aging Cell tested a base editor in mice with a model of Hutchinson-Gilford progeria. Bone cells in culture showed nearly 40% gene correction. In mice, a single injection corrected about 22% of bone cells when given at 14 days old. Bone structure partly improved. Results came from mice and cells, not people.

AGING CELL · 2026-09-01

Review: CRISPR evidence most mature for blood stem cells edited outside body

A narrative review in Clinical and Translational Medicine examined CRISPR-based gene-editing tools for genetic diseases. It concludes that current evidence supports the clinical maturity of editing blood-forming stem cells outside the body. Most approaches that edit inside the body remain constrained by delivery, durability, product variability and safety uncertainties. The authors say therapies should be judged by durable, safe, manufacturable and clinically meaningful benefit.

CLINICAL AND TRANSLATIONAL MEDICINE · 2026-09-01

Review examines how viruses and bacteria may trigger cellular senescence

A review in Vavilovskii Zhurnal Genetiki i Selektsii looks at cellular senescence, a state in which cells stop dividing but stay active and release inflammatory signals. It covers key pathways and how viral and bacterial agents induce senescence, mainly in cell studies. It also discusses genetic variants affecting infection susceptibility and senescence markers.

VAVILOVSKII ZHURNAL GENETIKI I SELEKTSII · 2026-09-01

Review outlines how cochlear aging drives age-related hearing loss

A review in Frontiers in Aging Neuroscience describes age-related hearing loss as the most common sensory disorder in older adults. It says hearing aids and cochlear implants have limits in access and adherence. The authors summarise mechanisms, including autophagy problems, oxidative stress and mitochondrial changes, and discuss potential therapeutic targets.

FRONTIERS IN AGING NEUROSCIENCE · 2026-09-01

Review: Alzheimer's and related dementia treatments are moving beyond drugs that boost acetylcholine

A review in CNS Neuroscience & Therapeutics looks at therapies targeting the brain's cholinergic system in Alzheimer's disease and related dementias. Standard drugs ease symptoms but do not change disease progression. The authors discuss receptor-targeted drugs, brain stimulation, gene therapy and cell-based repair as emerging directions. These remain possibilities, not proven treatments.

CNS NEUROSCIENCE & THERAPEUTICS · 2026-09-01

Review examines molecular drivers and research models of a common heart failure type

A review in Cells covers heart failure with preserved ejection fraction, which has limited treatment options. It describes roles for inflammation, oxidative stress and mitochondrial pathways. It also assesses current lab and animal models and newer tools such as human cardiac organoids. The authors call for mechanism-guided approaches to developing therapies.

CELLS · 2026-09-01

Review weighs safety and benefits of conditioning drugs for sickle cell gene therapy

A review in Blood Advances looks at the drugs used to prepare patients for gene therapy in sickle cell disease and thalassemia. Busulfan is the standard but has toxicities, including infertility. Melphalan and treosulfan are being explored, and antibody-based approaches remain investigational. The authors say comparative trials and long-term follow-up are needed.

BLOOD ADVANCES · 2026-09-01

Expert group sets out recommendations for Charcot-Marie-Tooth disease trial design

A patient, clinician and industry advocacy group published recommendations in the Journal of the Peripheral Nervous System on testing new treatments for Charcot-Marie-Tooth disease. It is a rare, inherited nerve condition. The guidance favours flexible trial designs, broad inclusion criteria and validated outcome measures. It also says patient views should shape trials. This is guidance, not trial results.

JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM : JPNS · 2026-09-01

Gene therapy for wet macular degeneration performs well in monkey and rabbit tests

A preclinical study in Frontiers in Genetics tested AL-001, a gene therapy for wet age-related macular degeneration, in rabbits and monkeys. In a monkey model, injection into the suprachoroidal space gave no severe lesions at week 4, versus 14.3% with standard intravitreal injection. These are animal results. No human data are reported.

FRONTIERS IN GENETICS · 2026-09-01

Paper outlines statistical methods for choosing doses in early gene therapy trials

A methods paper in Pharmaceutical Statistics reviews quantitative approaches to finding the right dose in early-phase trials, with a focus on cell and gene therapies. It gives a tutorial example adapting a Bayesian model to separate different types of toxicity. The authors say the example is illustrative and does not show superiority over existing designs.

PHARMACEUTICAL STATISTICS · 2026-09-01

Review weighs scores, blood markers and AI for early severe trauma risk assessment

A narrative review in Therapeutics and Clinical Risk Management looks at how emergency departments judge the risk of severe trauma. It covers standard scoring systems, changing blood biomarkers and artificial intelligence models. Some machine-learning models may outperform conventional scores, according to recent studies. The review notes unresolved problems, including bias, validation and fitting into clinical workflow.

THERAPEUTICS AND CLINICAL RISK MANAGEMENT · 2026-09-03

Review examines predictors of atrial fibrillation returning after catheter ablation

A review in Frontiers in Cardiovascular Medicine surveyed ways to predict late return of atrial fibrillation after catheter ablation. It covered blood markers, heart imaging, genetics and artificial intelligence models. The authors note most evidence comes from retrospective single-centre studies and that validation is inadequate. They call for larger prospective multicentre testing before routine use.

FRONTIERS IN CARDIOVASCULAR MEDICINE · 2026-09-03

Review: AI reading of heart tracings can flag many conditions, evidence uneven

A narrative review in Diagnostics examined AI analysis of 12-lead electrocardiograms. Models have detected conditions such as weak heart pumping, thyroid overactivity and anemia, and estimated biologic age and mortality risk. Evidence is strongest for detecting reduced heart pumping, including a pragmatic trial. For most other uses, evidence is still retrospective or exploratory.

DIAGNOSTICS (BASEL, SWITZERLAND) · 2026-09-03

Small study used voice recordings and machine learning to flag Parkinson's disease

A study in Bioengineering analysed 81 voice samples, 40 from people with Parkinson's disease and 41 from healthy controls. The best machine learning model reached 79% accuracy, 75.5% sensitivity and an AUC of 84%. The authors see potential for a non-invasive early detection tool. The sample was small.

BIOENGINEERING (BASEL, SWITZERLAND) · 2026-09-03

Review surveys bacteria-derived compounds as possible anticancer agents

A review in Frontiers in Oncology examines bacteriocins and other microbiome-derived compounds called postbiotics. It reports they show anticancer effects through several mechanisms, including disrupting cancer cell membranes and triggering cell death. The authors also discuss drug-discovery tools, delivery systems and the challenges of moving these compounds into clinical use.

FRONTIERS IN ONCOLOGY · 2026-09-03

Gaps in AI brain-scan predictions of memory tied to dopamine, heart risk

A study in eLife used deep learning to predict episodic and working memory from brain connectivity measured at rest, during movie-watching and during an n-back task. Task scans, especially movie-watching, predicted performance best. People who performed better than their scans predicted had lower physical activity and higher cardiovascular risk than those who performed worse than predicted. Lower dopamine binding was linked to larger gaps. These are associations.

ELIFE · 2026-09-02

Review surveys AI tools across the organ transplant care pathway

A review in the World Journal of Transplantation describes how artificial intelligence and machine learning are used before, during and after transplant surgery. It reports that models can predict complications such as bleeding, kidney injury and sepsis. It also covers AI-assisted imaging and surgical platforms. It is a review of existing work, not a new trial.

WORLD JOURNAL OF TRANSPLANTATION · 2026-09-01

Review of reviews maps ethical concerns around AI in dementia research

A review of reviews in The Gerontologist pulled together 18 earlier reviews on artificial intelligence in dementia. Concerns included algorithmic bias, limited diverse data, privacy and data security. Human rights and dignity got the most attention, while environmental well-being was under-addressed. The authors argue ethical principles should be built into AI design.

THE GERONTOLOGIST · 2026-09-01

New benchmark tests how well AI models interpret aging biology data

Researchers writing in Cell introduced LongevityBench, a set of 17 tasks using aging-related data. They tested 18 AI systems. No single model did best on every task. Predicting age from omics data was hardest. Smaller models fine-tuned on aging data matched or beat much larger ones. The work tests AI tools, not people or treatments.

CELL · 2026-09-01

Review: AI and digital biomarkers may help spot brain diseases earlier

A narrative review in Diagnostics looked at AI tools that use speech, eye tracking, wearables and similar signals to detect neurological diseases early. The authors call them promising and non-invasive. But most reported results come from retrospective or pre-validated datasets. Prospective external validation remains limited, so real-world usefulness is still unproven.

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

MRI-based machine learning model distinguished Alzheimer's patients from healthy controls

A study in Frontiers in Aging Neuroscience built machine learning models using MRI scans from 110 people, 48 with Alzheimer's disease and 62 healthy controls. Models combining scan types outperformed single-scan models. The best combined model reached an accuracy of 0.882, with sensitivity of 0.800 and specificity of 0.947. Texture features from the parietal lobe contributed most.

FRONTIERS IN AGING NEUROSCIENCE · 2026-08-31

Mind-body exercise linked to shifts in heart rhythm responses in older Patagonians

A small study in Frontiers in Physiology followed community-dwelling older adults in Chilean Patagonia through a 24-week mind-body exercise program. Wearable chest sensors tracked heart rate variability. Resting values did not change uniformly. Responses to exercise changed, including sympathetic activity, but varied widely between individuals. There was no comparison group described.

FRONTIERS IN PHYSIOLOGY · 2026-08-28

Review describes how weightlessness affects many body systems at once

A narrative mini review in Frontiers in Network Physiology gathered evidence from spaceflight, ground-based models and cell studies. It describes muscle loss, bone density falling 1%-2% per month at weight-bearing sites, heart and fluid changes, and immune and gut disruption. The authors propose these effects spread between organs. That inter-organ coupling has not yet been directly shown.

FRONTIERS IN NETWORK PHYSIOLOGY · 2026-08-28

Across 160 vertebrate species, stress hormone tracks metabolic rate, not lifespan

A cross-species analysis in Ecology and Evolution used data from 160 species of reptiles, birds and mammals. Levels of the stress hormone corticosterone rose with metabolic rate and fell with body mass. Once metabolic rate was accounted for, no link with lifespan remained. The authors suggest the hormone largely reflects how fast species use energy.

ECOLOGY AND EVOLUTION · 2026-08-27

Review: ear-based nerve stimulation shows mixed early evidence for chronic pain

A narrative review in the Journal of Pain Research assessed transcutaneous auricular vagus nerve stimulation, a non-invasive technique, for chronic pain. It describes emerging but varied clinical evidence for pain relief. Most trials reported the treatment was generally well tolerated. The review also outlines barriers to moving the approach into routine care.

JOURNAL OF PAIN RESEARCH · 2026-08-27

Review finds 21 studies of mind-body programmes for US police and officers

A structured review in Frontiers in Public Health searched for studies of integrative and mind-body programmes in US law enforcement personnel. It found 21 eligible studies covering mindfulness, yoga, sleep, wellness programmes and other approaches. The review catalogues the outcomes and measures used. It is meant to guide future research.

FRONTIERS IN PUBLIC HEALTH · 2026-08-26

Review surveys psychological strategies and tests for stress in athletes

A narrative review in the Journal of Clinical Medicine examines how athletes manage stress and anxiety. It covers methods such as self-talk, imagery, goal setting, mindfulness and relaxation, plus tools for measuring stress. The authors conclude these approaches help manage stress and recommend adding sleep education and injury prevention. It is a review, not new trial data.

JOURNAL OF CLINICAL MEDICINE · 2026-08-26

Review links psychological stress to worse asthma control, with mixed results for therapy

A review in The World Allergy Organization journal describes links between stress, anxiety, depression and poorly controlled asthma. The links appear to run both ways. Talk therapy and mindfulness training can ease distress and improve quality of life. Their effects on lung function and flare-ups are inconsistent, according to the review.

THE WORLD ALLERGY ORGANIZATION JOURNAL · 2026-08-26

Review explores possible link between sugar-related compounds and PTSD

A review in Metabolic Brain Disease discusses how chronic stress may upset the balance between glycation and deglycation. This could lead to build-up of advanced glycation end products, inflammation and nerve cell damage, which may relate to PTSD. The review also covers possible biomarkers and dietary approaches. It summarises existing literature rather than testing treatments.

METABOLIC BRAIN DISEASE · 2026-08-26

Review examines oxytocin as a possible buffer against stress and inflammation in aging

A narrative review in Neuroscience and Biobehavioral Reviews looks at oxytocin, a brain hormone, and its role in stress and inflammation in older age. It says some evidence suggests oxytocin dampens stress responses and inflammatory signals. The authors note that understanding its role in aging is still limited. Its use as a nasal spray remains a question for future research.

NEUROSCIENCE AND BIOBEHAVIORAL REVIEWS · 2026-08-25

Review links changes in the nucleolus to brain aging and neurodegeneration

A review in Molecular Neurobiology examines the nucleolus, a cell structure known for making ribosomes. It describes how the nucleolus senses stress. It also notes shrinkage and fragmentation in aging brains and in diseases such as Parkinson's and Alzheimer's. The authors also propose a gut-brain-nucleolus link, which is a concept rather than a finding.

MOLECULAR NEUROBIOLOGY · 2026-08-25

Review links gut inflammation and gut-brain signalling to depression in Crohn's disease

A narrative review in Frontiers in Neuroscience gathers preclinical and clinical evidence on depression in Crohn's disease. It describes links between gut inflammation, microbial changes and brain signalling. The authors report that treatments affect mood unevenly, and mood changes are often separate from gut inflammation improvements. The review does not establish a single cause.

FRONTIERS IN NEUROSCIENCE · 2026-08-24

Scar-forming cells after glaucoma surgery show ageing-like traits; a senolytic cleared them

A study in Aging Cell analysed tissue and cells after glaucoma filtration surgery using the scar-limiting drug mitomycin C. Surviving fibroblasts showed senescence-like, inflammatory features, including CCL7 signalling linked to fibrosis. In lab experiments, a senolytic agent selectively removed these cells. The authors suggest this may help future outcomes, but it is not tested in patients.

AGING CELL · 2026-09-01

Review says standard senescence markers may not fit brain neurons

A review in Aging Cell discusses cellular senescence, a state linked to aging and disease. Evidence suggests neurons can develop senescence-like states in aging and in Alzheimer's and Parkinson's models. The authors argue markers from other tissues may mislead when applied to neurons. They propose a neuron-centred framework to test whether senescence plays a causal role.

AGING CELL · 2026-09-01

In mice, clearing aged cells later after radiation improved health and survival

A study in mice, published in Aging Cell, used whole-body radiation to model accelerated aging after cancer therapy. Removing p16-positive senescent cells one month later had no effect. Removing them four months later reduced frailty, improved brain and liver measures and raised median survival, most clearly in females. This is animal research, not a human trial.

AGING CELL · 2026-09-01

Review: lithium may slow cellular aging processes in the brain

A review in Pharmaceuticals looks at lithium, a long-used bipolar disorder drug. Experimental studies suggest it eases several features of cellular senescence. Clinical findings link long-term use in bipolar disorder to preserved telomere length and slower biological brain aging. The authors call it a promising candidate. The effects appear to depend on context and cell type.

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

Review proposes 'homeostatic conflict' as a driver of brain aging

A review in Frontiers in Genetics proposes that aging pulls different brain cells in opposite directions. Dividing cells such as glia may expand and turn inflammatory, while irreplaceable neurons lose identity and die. The authors suggest combining protection from ferroptosis with removal of harmful cells. This is a conceptual framework, not a tested treatment.

FRONTIERS IN GENETICS · 2026-08-28

Review examines whether clearing aged cells could help treat age-related bone loss

A review in Frontiers in Endocrinology discusses how ageing immune cells and chronic inflammation may drive osteoporosis. It notes that senolytic drugs, which remove senescent cells, reduced senescent-cell burden and improved some bone measures in preclinical models. It is unclear which cells produce the benefit. The review stresses translational challenges, and it describes no human results.

FRONTIERS IN ENDOCRINOLOGY · 2026-08-24

Review outlines a framework for using biological age in clinical care

A review in GeroScience discusses biological age measures, including epigenetic clocks, as possible tools for tracking health. The authors note these measures are hard to put into clinical practice and vary in accuracy by race, sex and age. They propose an exploratory framework using repeated assessments to judge personalised longevity strategies.

GEROSCIENCE · 2026-08-22

Review: obesity may drive cancer through senescent cells and inflammatory signals

A review in Current Obesity Reports describes how fat tissue in obesity becomes stressed and triggers cellular senescence. These senescent cells release inflammatory molecules, known as SASP. The authors say this creates conditions that favour tumour growth. They also say targeting these signals could be a promising strategy. This is a review of mechanisms, not a human trial.

CURRENT OBESITY REPORTS · 2026-08-22

Review maps how cell iron-damage and senescence may interact in septic lung injury

A review in Biomedicines summarises evidence on ferroptosis, an iron-dependent form of cell damage, and cellular senescence in sepsis-related lung injury. The authors say direct evidence is strongest for lung blood-vessel cells. Other links rest mainly on non-lung models or remain insufficiently validated. They offer a proposed framework, not a proven mechanism.

BIOMEDICINES · 2026-08-21

Review proposes a protein-folding complex may help senescent brain tumour cells persist

A review in Biochimica et Biophysica Acta discusses glioblastoma, an aggressive brain tumour. It proposes that a protein-folding complex called CCT/TRiC helps cells that stopped dividing after therapy to persist and support recurrence. This is a hypothesis drawn from existing findings. The authors outline possible treatment combinations, but none are tested here.

BIOCHIMICA ET BIOPHYSICA ACTA. MOLECULAR BASIS OF DISEASE · 2026-08-20

IN THE NEWS

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Brain activity data point to five profiles within depression

According to a ScienceDaily report, researchers studying 263 people with depression identified five brain profiles. Each showed different patterns of communication between brain regions. The profiles were linked to symptoms such as anxiety, trauma and substance abuse. The report suggests depression may include several distinct biological patterns rather than one.

SCIENCEDAILY HEALTHY AGING · 2026-10-09

Men using tadalafil for prostate symptoms had higher glaucoma rates

According to a large study reported by ScienceDaily, covering nearly 74,000 men, long-term tadalafil (Cialis) use was linked to more eye pressure problems. Men prescribed it for prostate-related urinary symptoms were 22% more likely to develop glaucoma over five years. The study shows an association only. It does not show the drug caused the increase.

SCIENCEDAILY HEALTHY AGING · 2026-09-07

Trial registered to test egg white pudding supplement in care home residents

A trial registry entry on ClinicalTrials.gov describes a feasibility study that is recruiting and has no results yet. About 54 care home residents in Winnipeg, aged 50 or older, will receive either egg white pudding or a standard supplement daily. Researchers will assess acceptability over 8 weeks using dietary logs.

CLINICALTRIALS.GOV (NCT07805993) · 2026-09-08

Early-stage HIV trial will test antibodies plus vaccines; no results yet

A trial registry entry on ClinicalTrials.gov describes a phase 1 randomised, placebo-controlled trial that is currently recruiting. It will study the safety of two antibody treatments combined with a vaccine regimen. It will also look at viral load during a planned pause in treatment in people with HIV who started therapy during acute infection. No results have been reported.

CLINICALTRIALS.GOV (NCT06484335) · 2026-09-04

Registered pilot trial tests a short dental needle for numbing children

A trial entry on ClinicalTrials.gov, sponsored by Al-Azhar University, describes a single-arm pilot study in children aged 4 to 12. It will test whether a 12 mm extra-short needle gives effective numbing for a lower-jaw nerve block. It will also record complications. The entry is listed as completed but reports no results.

CLINICALTRIALS.GOV (NCT07791082) · 2026-09-04

Registered early trial will test botanical therapy for acute viral respiratory infections

A trial registry entry on ClinicalTrials.gov describes a planned Phase 1 study of a botanical treatment approach in about 30 adults with acute viral respiratory infections. It has not started recruiting and has no results. It will mainly assess feasibility and safety. All participants will receive the treatment alongside standard care.

CLINICALTRIALS.GOV (NCT07805447) · 2026-09-04

Registered experiment tests packaging characters and warning labels on Colombian teens

A ClinicalTrials.gov registry entry sponsored by the University of North Carolina, Chapel Hill, describes an online experiment among Colombian children aged 12 to 17. Participants are randomly assigned to see packaging with or without characters and with or without warning labels. The study tests effects on purchase intentions, risk perception and perceived warning effectiveness. The entry is marked completed but reports no results.

CLINICALTRIALS.GOV (NCT07528443) · 2026-09-03

Trial registered to test team-based treatment planning for older lung cancer patients

A registry entry on ClinicalTrials.gov describes a recruiting, single-centre study at West China Hospital. It plans to enrol 2,000 patients aged 60 to 90 with lung cancer. Each gets a plan from a multidisciplinary team. Results will be compared with historical controls. The trial is only registered, so it has no results yet.

CLINICALTRIALS.GOV (NCT07509333) · 2026-09-03