The Arising

OCTOBER 18, 2026

DAILY ISSUES



EDITORIAL ILLUSTRATION / AN ARTISTIC INTERPRETATION

The next chapter is still open.

MIDLIFE / PREVENTION / HUMAN HEALTH

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

ARISING HEALTH

The Arising

HEALTH INTELLIGENCE

LONGEVITY
SCIENCE
MARKETS
HUMAN HEALTH

Tracking emerging Medical Intelligence from a Physician's View

SUNDAY, OCTOBER 18, 2026 | VOL 1 NO 16 | ARISING HEALTH

14 stories across 2 desks | ~33 minutes to read | 165 briefs grouped by topic

Checked before print. 390 claims in 14 articles and 165 briefs verified against their sources by a separate reviewer · 11 articles and 12 briefs corrected before publication

LONGEVITY & HEALTHSPAN

8 STORIES · 20 MIN →

1

ACOG Now Recommends Hormone Therapy for Many Women With Hot Flashes

For the first time in more than a decade, the leading U.S.

2 MIN READ

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Cardiologists Urge Doctors to Prescribe Exercise as Routine Heart Care

You may not need 10,000 steps a day to protect your heart.

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Fasting and Autophagy in Humans: Summary Calls Link Unproven

Skipping food for a day or three is often sold as a way...

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Gut Supplements May Modestly Improve Cognition in Adults Over 60, Review Finds

Gut supplements are cheap, easy to find and generally low risk.

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Higher Ultra-Processed Food Intake Linked to Silent Brain Damage on MRI

Middle-aged adults who ate the most ultra-processed food were more likely to show...

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Higher VO2 Max Linked to Lower Depression and Anxiety Risk in UK Biobank

Adults with higher aerobic fitness were less likely to be diagnosed with depression...

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Bonn Lab Study Shows Blood Cells From Older Donors Lose Epigenetic Age in a Dish

Blood cells from very old donors can be converted in a dish into...

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Longer Sleep Linked to Kidney Disease Risk in Type 2 Diabetes

Sleeping more is usually treated as a good sign.

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MARKETS & STRATEGY

6 STORIES · 13 MIN →

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Major Hospitals Open Longevity Clinics, and STAT Asks Whether They Work

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PPIC Projects California's 65-Plus Labor Force Will Reach 1.8 Million by 2040

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FDA Approves Viatris' Ryzumvi Eye Drops for Presbyopia in Adults

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Wyden Seeks Input on Medicare or Medicaid Universal Home Care Benefit

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Atrogi's Oral Muscle Drug Linked to 13% Power Gain in Small Study

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Over 90% of US Nursing Homes Staff Below Acuity-Based Expected Level, LTCCC Says

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BRIEFS

165 SHORT STORIES · 48 MIN →

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The Arising

HEALTH INTELLIGENCE

SUNDAY, OCTOBER 18, 2026 · LONGEVITY & HEALTHSPAN DESK

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 2 MIN

CBS NEWS

ACOG Now Recommends Hormone Therapy for Many Women With Hot Flashes

For the first time in more than a decade, the leading U.S. group of OB-GYN doctors has changed its advice on hormone therapy. The American College of Obstetricians and Gynecologists (ACOG) now recommends it for many women with hot flashes and night sweats. The phrase "first line" comes from one specialist's description, not from ACOG's own wording as reported.

The American College of Obstetricians and Gynecologists (ACOG) now recommends hormone therapy for many women with these symptoms, according to CBS News. Dr. Kameelah Phillips, an OB-GYN and menopause

specialist, said hormone replacement therapy "is now the first line" for hot flashes, night sweats and sleep problems. "We're using hormones mainstream now," she said.

Most menopause symptoms come from steep drops in the hormones estrogen and progesterone, typically in a woman's late 40s or early 50s, according to CBS News. Low levels can also reduce bone density, which raises the risk of osteoporosis and fractures. Phillips said hormone therapy can help "eliminate these symptoms."

Phillips described what women were often told before: take an antidepressant, exercise, or try a glass of wine. "All of those were not helpful," she said. ACOG put it this way in a statement: "Menopause is a normal and natural stage of life, but that doesn't mean that women must suffer through the symptoms without help."

Timing matters. The ACOG recommendations say women should begin hormone therapy before age 60 or within 10 years of starting menopause. For women weighing the decision, that makes the start date part of the question, not just whether to try it.

The timing advice connects to older worries. A 2002 long-term study of women's health raised concerns that hormones could be linked to more breast cancer. Dr. Céline Gounder, a CBS News medical contributor, explained that the study focused on older patients who may not have started treatment until about a decade after menopause. CBS News reports that newer research shows age and dosing can make treatment safe for many patients. It also cites a 2024 study of more than 10,000 women suggesting hormone therapy may help slow biological aging. That is one study, and the report gives no further detail on it.

Not everyone is eligible. According to ACOG, women with a history of blood clots, stroke or liver disease should not use hormone therapy. Neither should women with a personal history of breast cancer.

Treatment comes in several forms: pills, patches, sprays, gels, or a vaginal ring that delivers hormones into the bloodstream. Some women also benefit from low-dose vaginal estrogen. Women who cannot take hormones have non-hormonal options, Phillips said, and she recommends seeing a menopause-trained specialist. "That's why this requires conversation with your healthcare provider," she said. Readers should not start, stop or change any hormone therapy or other medication without talking to their clinician first.

This guidance adds to what The Arising reported on October 6. The American College of Physicians, a separate organization, issued its own guidance naming hormone therapy as the first treatment to try for hot flashes and night sweats. The

two pieces of guidance come from different groups, and they point in the same direction.

WHAT TO WATCH NEXT

How doctors apply the "before 60 or within 10 years" window in practice, and whether more detailed ACOG guidance clarifies dosing and who should be offered treatment first.

Source: CBS News

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 2 MIN

AMERICAN COLLEGE OF CARDIOLOGY

Cardiologists Urge Doctors to Prescribe Exercise as Routine Heart Care

You may not need 10,000 steps a day to protect your heart. A new statement from the American College of Cardiology says the biggest gains come when inactive people start moving at all. This is an expert scientific statement that synthesizes existing evidence, not a new trial, and it is written mainly as guidance for clinicians.

The statement, published online October 15, 2026, in JACC, asks doctors to treat exercise as a foundational part of routine cardiovascular care. It covers both preventing heart disease and managing it. The writing committee was chaired by Jonathan N. Myers, PhD.

Its central message is simple. "Some activity is better than none," Myers said. According to the statement, the greatest benefit comes when people move from inactivity to regular physical activity. More activity, and more intensity where clinically appropriate, is linked to further benefit.

What counts as enough? The statement points to growing evidence that meaningful benefits come well below 10,000 steps a day. About 5,000 to 7,000 daily steps is associated with lower cardiovascular and all-cause mortality for many adults. That is an association seen in studies of populations. It does not prove that walking that amount is the cause of the lower risk. This is the weakest part of the argument: the step-count evidence is observational.

"Patients do not need to become athletes to improve their cardiovascular health," Myers said. "Small increases in physical activity can produce meaningful benefits, particularly for those who are currently inactive."

Strength work gets a place in the plan too. The statement says resistance training should complement aerobic exercise for most adults. Aerobic exercise is walking, cycling or anything that raises your heart rate for a sustained period. Resistance training means lifting weights, using bands or doing bodyweight exercises. The statement recommends doing both.

The statement also says exercise should be individualized. A plan should reflect a person's heart condition, functional capacity, symptoms, goals and preferences. A person recovering from a heart event needs a different plan than someone with no symptoms who is trying to stay healthy.

On testing, the statement says routine exercise testing is not required before starting exercise for most people who have no symptoms or whose conditions are stable. Testing can still provide useful information for shaping a prescription when it is clinically appropriate.

For many people with known heart disease, cardiac rehabilitation remains first-line treatment, the statement says. Access to it should be expanded. Insurance reimbursement is still a barrier for many. Patients with known heart disease who cannot take part in a formal program should still receive an individualized exercise prescription. The statement also says wearable devices and virtual or home-based programs may help people keep exercising over time, especially alongside structured programs.

Myers said exercise is one of the most effective therapies for preventing and managing cardiovascular disease, yet it remains underutilized in routine care. The statement calls for more exercise counseling in routine visits, better clinician training and expanded access to rehabilitation.

Exercise is not a replacement for medical care. Do not start, stop or change any treatment, including medications or a prescribed rehabilitation plan, without your clinician. The statement is written for clinicians, so questions about how it applies to you belong with your own care team.

The statement also calls for more research on long-term adherence, clinical outcomes, diverse populations and scalable ways to deliver exercise programs. Watch for whether those studies follow, and whether insurers move on cardiac rehabilitation coverage.

Source: American College of Cardiology (JACC)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 2 MIN

BIOCHEMICAL SOCIETY TRANSACTIONS

Fasting and Autophagy in Humans: Summary Calls Link Unproven

Skipping food for a day or three is often sold as a way to switch on the body's cellular cleanup. According to our research desk's notes on a review in Biochemical Society Transactions, that has not been shown in people. Everything below rests on those desk notes alone. No independent coverage was available, the paper's text could not be retrieved, and none of it has been checked against the paper. Treat it as a report of what the review is said to conclude, not as verified findings.

This article is based on those notes. The paper itself was not reviewed.

The cleanup process is called autophagy. It is the cell's recycling system. According to the notes, researchers at Adelaide University and the South Australian Health and Medical Research Institute (SAHMRI) looked at human studies of fasting, intermittent fasting, calorie restriction and changes in protein intake. They wanted to know whether any of these raise autophagy. The notes name the authors as Sanjna Singh and Timothy J. Sargeant and say they call diet-driven autophagy in humans "plausible but unproven." We could not confirm that wording against the paper.

One problem, according to the notes, is how the studies measured it. Most human studies took a single snapshot of autophagy-related genes or proteins. That does not show how fast cells are actually breaking material down. This speed is called flux. The few studies that measured flux mostly found no change, the notes say.

The notes give several examples. The best-designed human flux trial had 61 adults eat low- and standard-protein diets for four weeks each. It could detect a 15% change in blood-cell autophagy and found none. A five-day fasting-mimicking diet changed the static markers but not flux. Six months of calorie restriction did not change flux either. We have not seen the underlying studies.

The popular idea that autophagy peaks after 24 to 72 hours of fasting comes largely from mouse experiments, according to the notes. They say mice burn roughly eight times more energy per unit of body weight than humans and start dying after about three days without food, so mice model human fasting poorly. We could not verify those figures.

Animal results are not uniform either. In fruit flies, fasting 20 hours every other day extended lifespan by 13 to 18%, while 24-hour fasts shortened it, according to the notes.

The notes also flag a conflict of interest: the senior author is said to hold a patent on a flux-measurement method, and the group produced several of the key flux studies the review covers. We could not check this against the paper's own disclosures, so it remains unverified.

FOR YOU

For readers weighing extended-fast claims, the practical reading is narrow. If the notes are accurate, a claim that a specific fast boosts cellular cleanup in people is not backed by the human flux data reviewed. That does not show fasting is useless or that it does nothing for health. It means this particular mechanism has not been demonstrated. The weakest point of this piece is that it rests entirely on secondhand notes. Fasting carries real risks for some people, so talk with your clinician before starting, stopping or changing a fasting regimen, especially an extended multi-day fast.

Watch for more human trials that measure flux directly, ideally from groups without a stake in the measurement method.

Source: Biochemical Society Transactions (Portland Press)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN AGE AND AGEING · 2 SOURCES

Gut Supplements May Modestly Improve Cognition in Adults Over 60, Review Finds

Gut supplements are cheap, easy to find and generally low risk. A new review asks whether they might also help older adults think a little more clearly. The answer, so far, is a cautious maybe: the average signal is small, the trials differ widely, and the evidence is limited.

The evidence is a systematic review and meta-analysis, published in 2026 in the journal Age and Ageing. It pools earlier trials rather than running a new one. The team, led by Mary Ni Lochlainn at King's College London, searched four medical databases for studies of adults aged 60 and over. They found 14 that qualified. Thirteen were randomised controlled trials and one was a non-randomised interventional study. Sample sizes in the individual studies ranged from 40 to 120 people.

The studies tested three kinds of product. Probiotics are live bacteria. Prebiotics are food ingredients that feed beneficial gut microbes. Synbiotics combine the two. Ten studies tested probiotics, two tested prebiotics and two tested synbiotics.

Participants included cognitively healthy older adults (six studies), people with mild cognitive impairment (four) and people with dementia (four). The most common length of treatment was 12 weeks, and the longest was 24 weeks.

Nine of the 14 studies reported a statistically significant improvement in at least one area of thinking. The areas named were global cognition (overall mental performance), memory, attention and executive function, which covers planning and mental flexibility. This is not the same as a clean win over placebo: in one dose-comparison trial, the placebo group also improved significantly in memory. Five studies did not report improvement. Two probiotic trials, one prebiotic trial and both synbiotic trials found no significant change in any area.

Six of the randomised trials used the same test, the Mini-Mental State Examination, which scores overall cognition. The authors pooled these. Compared with placebo, supplements were linked to a gain of 1.28 points on the test (95% confidence interval 0.15 to 2.40). That is statistically significant, but the range is wide. The lower end is close to no effect. The authors also report substantial heterogeneity, meaning the trials differed a lot from one another in their results. This is a modest average, not a promise for any one person.

The result held up in a check that removed trials with moderate or high risk of bias. Four trials remained and the gain was 1.39 points, though the confidence interval again came close to zero (0.03 to 2.75) and the differences between trials were even larger. The authors say the evidence was strongest for global cognition, memory and executive function. They say benefits were seen more consistently in cognitively healthy older adults and those with mild cognitive impairment.

What does this mean for someone considering a supplement? The review does not show that any particular product works. The trials used very different bacteria, from single strains to a mix of 18, and doses ranging from 10 million to 50 billion live organisms. The studies were small and short. The review cannot say whether effects last beyond a few months, or whether a few points on a test make a difference in daily life. It also cannot show how the supplements might act on the brain. This is where the argument is weakest: the one pooled result rests on six trials that disagree with each other, and its lower bound is barely above zero.

The authors themselves describe the evidence as positive but limited by the small number of high-quality studies. Their conclusion that gut modulation "holds huge promise" is stronger than the data alone firmly support. The TwinsUK press release

is more measured. It quotes Ni Lochlainn as saying the findings suggest the approach "could be a promising approach to supporting cognitive health in older adults," while stressing that "more high-quality research is needed."

The practical reading is simple. These products are low risk and widely available, according to the authors, and the average signal is small but positive. No one should start or stop any supplement or medication without first talking to their clinician. What to watch next: larger, well-designed trials that test specific products at set doses over longer periods, to show which ones work and for whom.

Sources: Age and ageing (2026), TwinsUK / King's College London (Age and Ageing)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 2 MIN JAMA NETWORK OPEN · 2 SOURCES

Higher Ultra-Processed Food Intake Linked to Silent Brain Damage on MRI

Middle-aged adults who ate the most ultra-processed food were more likely to show small, symptom-free signs of blood vessel injury in the brain on MRI, according to a study in JAMA Network Open, yet they did not score worse on two common thinking tests.

This is an observational, cross-sectional study. It included 8,783 Canadian adults aged 35 to 69 with no cardiovascular disease. Their average age was 57.7 years, and 4,917 (56.6%) were women. Because diet and health were looked at together, the study can show an association. It cannot show that the food caused the brain changes.

Participants came from two Canadian research projects, the Canadian Alliance for Healthy Hearts and Healthy Minds and the Prospective Urban and Rural Epidemiology-MIND study. Intake of ultra-processed food was measured with food frequency questionnaires that have been validated before. Results were expressed as servings per 2,000 calories a day. The researchers compared the highest quarter of eaters with the lowest quarter.

The brain finding is the headline. The study defined vascular brain injury as either covert brain infarcts or high white matter hyperintensities. Covert infarcts are small areas of damage from interrupted blood flow that cause no obvious symptoms. White matter hyperintensities are bright spots on MRI in the brain's wiring. The highest quarter of ultra-processed food intake had higher odds of this injury than the lowest quarter (adjusted odds ratio 1.40; 95% confidence interval 1.10 to 1.77; P for trend = .009). An odds ratio is not the same as a 40% higher chance of damage, but it points in the same direction.

The highest-intake group also carried more body fat. Body fat percentage was 1.7 percentage points higher, and visceral fat volume, the fat deep in the abdomen, was 5.7 mL greater. Liver fat did not differ significantly.

Thinking performance did not follow the same pattern. The study found no significant associations between ultra-processed food intake and scores on the Montreal Cognitive Assessment or the Digital Symbol Substitution Test. The authors also say the link with brain injury was sensitive to how ultra-processed food was defined. That suggests the result depends on the measuring method and should be read with some caution.

Many readers will want to know what this means for women. The abstract reports results for the whole group and does not break them out by sex, so this article cannot say whether the link is stronger in women. The study did include more women than men.

The result adds to, but is not the same as, our October 11 report on a randomized trial in Nature Metabolism. That trial looked at how single meals affect the body. This study looks at usual eating habits and brain scans in thousands of people. Together they point to ultra-processed food as worth watching, but neither shows that cutting it back protects the brain. That has not been tested here.

WHAT TO WATCH NEXT

The authors say longitudinal studies, which follow people over time, are needed to establish whether the diet comes before the brain changes.

Sources: JAMA Network Open (2026), Medical Xpress (reporting on JAMA Network Open, McMaster University)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 2 MIN

JOURNAL OF AFFECTIVE DISORDERS · 2 SOURCES

Higher VO2 Max Linked to Lower Depression and Anxiety Risk in UK Biobank

Adults with higher aerobic fitness were less likely to be diagnosed with depression or anxiety over the following 12 years, according to a large study in the Journal of Affective Disorders.

This is an observational study in people. It followed 46,062 UK Biobank participants who had no depression or anxiety at the start. Observational work can show that two things go together. It cannot show that one causes the other.

Fitness was measured as VO2 max, the most oxygen a body can use during hard exercise. It is a standard marker of heart and lung fitness. Here it was estimated from a standardized submaximal exercise test, meaning participants were not pushed to their limit. The researchers, led by Liu Y, tracked new cases of depression and anxiety through linked health records coded with ICD-10, a standard system for recording diagnoses.

Over a median follow-up of 12.6 years, there were 2,190 cases of depression and 2,483 cases of anxiety. Compared with the least fit quarter of participants, the fittest quarter had a 24% lower risk of depression (hazard ratio 0.76, 95% confidence interval 0.64–0.91). Their anxiety risk was 17% lower (hazard ratio 0.83, 95% confidence interval 0.71–0.98). These results account for sociodemographic, lifestyle and clinical factors.

The pattern also held across the fitness range. For each 1-standard-deviation increase in VO2 max, depression risk was 10% lower (0.90, 0.84–0.96). Anxiety risk was 6% lower (0.94, 0.88–1.00), a result right at the edge of statistical significance. The authors report a straight-line relationship for depression. For anxiety the relationship was nonlinear, so the benefit did not rise in a steady line.

The study also reports that associations were stronger among people with a lower biological age. The abstract does not say how biological age was calculated, so that finding is hard to interpret here.

The team also looked at blood proteins in a subset of 3,245 participants. They found seven plasma proteins that differed with fitness. Leptin and FABP4 were lower, and SPINT3 and INSL3 were higher. Several of these proteins were independently linked to mental health outcomes. The authors say this points to metabolic and neuroprotective pathways as possible explanations. That is a hypothesis, not a demonstrated mechanism.

FOR YOU

What does this mean for personal health? Aerobic fitness is already tied to heart health. This study adds that it may also go with a lower chance of common mental health diagnoses. But fitter people may differ from less fit people in ways that statistics cannot fully remove. Early, undiagnosed low mood could also make exercise harder. The abstract does not say how the authors handled that. And because outcomes came from health records, people with symptoms who never sought care would not be counted.

The findings sit alongside another recent Arising report, on a separate UK Biobank study linking more REM sleep to lower risk of 83 diseases. Both are observational and both point to modifiable habits. Neither shows that changing the habit changes the outcome.

To watch next: randomized trials that assign people to supervised aerobic training and track depression and anxiety diagnoses over time, which would test whether fitness itself makes the difference.

Sources: Journal of affective disorders (2026), Medscape (reporting on Journal of Affective Disorders)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN AGING CELL · 2 SOURCES

Bonn Lab Study Shows Blood Cells From Older Donors Lose Epigenetic Age in a Dish

Blood cells from very old donors can be converted in a dish into neural stem cells whose DNA-based age reads far younger, but nothing in this work turns back the age of a person. The widely quoted figure that cells from an 80-year-old reached a molecular age under 20 comes from press coverage, not from the study text we have.

The study, published in Aging Cell in 2026 by Berg and colleagues at the University of Bonn and partner institutions, is laboratory research on human cells. It did not involve animals or patients. The text available to us does not state how many donors were used. It says only that donors ranged from newborns to people aged 101.

The team took red blood cell precursors from donor blood. They added two genes, SOX2 and cMYC, using a virus. This pushed the cells to become induced neural stem cells, which can go on to form brain cells. Unlike the more common route, the cells did not first pass through a pluripotent stage, in which a cell can become almost any tissue.

To estimate age, the researchers used an epigenetic clock. This is a computer method that reads chemical tags on DNA, called methylation, which change with age. The tags do not alter the genetic code. They affect how often genes are read.

According to the study, neural stem cells made from older donors kept only about 13% of the donor's original age at low passages, meaning early rounds of cell growth. At high passages, meaning many rounds of growth, they kept about 5%. By our arithmetic, 13% of 80 years is roughly 10 years.

The new finding is about timing. The age reset was not instant. It continued for several weeks, and it continued even when conditions were set to block cell division. Differences in gene activity between young and old donors' cells also faded with more time in conversion. The authors say the established cell lines lacked age-associated cellular hallmarks, much like cells made through the pluripotent route.

The cells also took a long time to settle into a true neural stem cell identity. According to the paper, that process went on well after the first cells with a neural stem cell marker, PAX6, appeared.

The press release, as carried by AZO Life Sciences, reports that cells from an 80-year-old came out with a molecular age below 20. It quotes Prof. Oliver Brüstle of the University Hospital of Bonn saying the slow pace makes it possible to "investigate which factors and active substances accelerate or slow down the rejuvenation process." The coverage's headline mentions 50 days, while its text says the change could be tracked for over 100 days. The study's abstract says only "several weeks," so the exact timeline is unclear from what we have.

FOR YOU

What does this mean for readers? Not much yet, and the limits matter. The study's own introduction notes that methylation age is a proxy for biological age. It is not a direct measure of how well cells work. The coverage says the rejuvenation makes cells "actually behave like young cells," but the abstract supports a narrower claim: the cell lines lack age-associated hallmarks.

The cells were also not the same cells that were taken from the donors. They were changed into a different cell type, grown in dishes, and treated with viral vectors. Nothing here shows that an aging body, or even an aging organ, can be reset. The study tested no treatment, drug or supplement.

The practical value is in research. A slow reset is easier to watch step by step than a fast one. It may help scientists find what drives epigenetic aging and whether it can be sped up or slowed down. Age is the main risk factor for diseases such as Alzheimer's, which is why Brüstle says the model matters for neuroscience.

The work was funded by the EU's Horizon 2020 programme, the German Research Foundation and Germany's federal research ministry, according to the coverage.

Next, watch for follow-up work that identifies which molecules speed up or slow the reset, and whether any of those findings hold up in living tissue.

Sources: Aging cell (2026), AZO Life Sciences (reporting University of Bonn study in Aging Cell)

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LONGEVITY & HEALTHSPAN · WEEKLY READ · 3 MIN

JOURNAL OF THE ENDOCRINE SOCIETY · 2 SOURCES

Longer Sleep Linked to Kidney Disease Risk in Type 2 Diabetes

Sleeping more is usually treated as a good sign. A new study of people with type 2 diabetes suggests that, for kidney health, longer sleep may be a signal worth noticing.

The research is a prospective cohort study, a type of observational study in people. It followed 678 Japanese outpatients with type 2 diabetes for an average of 6.0 years (give or take 2.7 years). It was published in 2026 in the Journal of the Endocrine Society. Observational studies can find links. They cannot show that one thing causes another.

The researchers looked at diabetic nephropathy, also called diabetic kidney disease. This is kidney damage caused by long-term diabetes. They counted either new cases or worsening of existing disease as a single combined outcome. During follow-up, 215 of the 678 participants reached that outcome.

The team recorded lifestyle habits at the start, and again at year 2 and/or year 5. They averaged each person's measurements up to the point of the outcome or the end of follow-up. Of all the lifestyle factors they examined, average sleep duration was the only one linked to the outcome, according to the study's abstract.

The direction mattered. The authors conclude that longer sleep, but not shorter sleep, was associated with a higher risk. The trend held after adjusting for key lifestyle and diabetes-related factors. The link was stronger in older participants and in those who already had microalbuminuria (small amounts of protein in the urine, an early sign of kidney damage) or reduced kidney function.

Only the abstract was available to us. It does not give the sleep-hour categories or the size of the risk, so we cannot report them.

The authors do not claim long sleep harms the kidneys. In a statement released by the Endocrine Society, study author Tomoya Mita of Juntendo University in Tokyo said longer sleep "may be a readily observable marker of underlying health vulnerability." He also said people should not read the findings as advice to sleep less, because "we cannot establish a causal relationship." The Endocrine Society release also states that diabetic kidney disease affects about 30% to 40% of people with diabetes.

FOR YOU

What does this mean for personal health? The study did not test sudden changes in sleep. It looked at average sleep over years. Mita said longer sleep may be a useful clue to identify people with diabetes who may need closer attention to their kidney health. Beyond that, any advice here is our editorial suggestion, not a finding of the study: if someone notices a clear, lasting increase in how long they sleep, it may be worth mentioning to a clinician. It may be most relevant to older adults with diabetes and to people whose kidney tests already show early changes. Readers should not change their sleep habits or diabetes care without talking to their clinician.

There are limits. All participants were Japanese outpatients with type 2 diabetes, so the results may not apply to other groups. The abstract does not say whether other health conditions could explain the pattern. The weakest point of the argument is that we cannot tell from the abstract what sleep lengths counted as long, or how large the risk was.

This differs from the REM sleep study we covered on October 6, which tracked sleep stages and disease risk in nearly 96,000 UK adults. That was a different study with a different design. This one adds that sleep length alone may carry information in a specific group, though both are observational.

Next, watch for studies that measure sleep objectively and track changes over time. They could show whether longer sleep helps flag kidney risk in routine diabetes care.

Sources: Journal of the Endocrine Society (2026), Endocrine Society / Journal of the Endocrine Society (via Newswise)

The Arising

HEALTH INTELLIGENCE

SUNDAY, OCTOBER 18, 2026 · MARKETS & STRATEGY DESK

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN

COMPETITIVE LANDSCAPE · STAT

Major Hospitals Open Longevity Clinics, and STAT Asks Whether They Work

Large hospitals are now opening longevity clinics, according to STAT, which asks a basic question about them: what are people paying for, and does it work? The page we reviewed does not state prices or payment terms, and it offers no evidence that the services work.

According to STAT, longevity clinics are popping up in major hospitals across the country. STAT's biotech podcast, The Readout LOUD, devoted its Oct. 16 episode to the trend. The hosts are Elaine Chen, Adam Feuerstein and Allison DeAngelis. Their guest was STAT reporter Sarah Todd, who visited one of the clinics.

The market is described as very large. STAT says longevity medicine is "estimated to be a multitrillion dollar industry." The episode page does not say who made that estimate or how it was calculated. Readers should treat the figure as an unverified claim.

STAT's page does not spell out why hospitals are entering this field, so we do not offer a view on their motives. STAT's headline for the episode calls longevity clinics "Hospitals' next lucrative bet." That is STAT's description, and it is a bet, not a proven result.

The page does not name which clinic Todd visited, and it does not list the services offered or what patients pay. It points readers to a separate piece for more on her experience, which we did not have. The page's web address mentions Northwestern, but the text does not say where Todd went. We therefore make no claim about the institution, the tests or the cost.

The competitive picture is largely unknown. The source does not provide data on how many clinics exist, what they earn, who else operates in the field, or how patients are choosing among providers.

The central question is whether the services work. The episode asks, "what are people paying for, and does it work?" The page presents no evidence that any testing or program leads to longer life or better health. This is the weakest point in the whole story: a large market estimate with no stated source, and no outcome data. A clear answer would matter either way. If the programs show real benefit, hospitals may have found a durable new business line. If they do not, the model could invite scrutiny.

Regulatory impact is not addressed in the STAT page. No rules, enforcement actions or oversight plans are described, so any view on that point would be speculation. Readers considering longevity testing or programs should consult a clinician before acting.

WHAT TO WATCH NEXT

Whether hospitals publish outcome data for these clinics, and whether STAT's follow-up reporting clarifies what the services are, what they cost and whether they work.

Source: STAT

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN

TALENT SUPPLY AND HR STRATEGY · IMPERIAL VALLEY PRESS

PPIC Projects California's 65-Plus Labor Force Will Reach 1.8 Million by 2040

California's working-age population will barely grow over the next 15 years, and older adults will account for a disproportionate share of the workforce growth the state does see, according to a new report from the Public Policy Institute of California (PPIC).

The numbers are stark. By 2040, about 23% of Californians will be 65 or older, up from 14% in 2020, according to PPIC. The population ages 18 to 64 is expected to stay virtually unchanged. The ratio of older adults to working-age residents will reach a record 38 per 100. The 65-and-older labor force is projected to grow from 1.3 million in 2024 to 1.8 million by 2040.

That growth has limits. Participation rates among adults ages 65 to 74 will keep rising. But the fastest population growth will be among people 75 and older, who take part in the labor force at much lower rates. As a result, growth in the older workforce will slow slightly compared with past decades, according to the report.

The older workforce will also look different. Non-Latino White workers made up two-thirds of older workers in 2006 and will be a minority by 2040. The fastest gains will come among Latino and Asian American workers, many of whom immigrated to California in the 1980s. Foreign-born residents will make up 43% of older workers by

2040. College graduates will be 46% of the older labor force, up from 39% in 2006. Men will remain a majority at 54%, though the gap with women is expected to narrow.

Not all older workers are working by choice. Participation among older adults without a high school diploma is rising, to 33% by 2040. PPIC attributes this largely to lower-income immigrant workers who continue physical labor out of economic necessity. Earnings also hold up household finances: PPIC estimates that work keeps about 800,000 older Californians (13%) out of poverty. Without wages, the poverty rate for adults ages 65 to 69 would jump from 18% to 43%.

For employers, the implication is a matter of interpretation, not a PPIC finding. If the working-age population is flat, companies competing for talent in California have few other sources of new workers. Firms that adapt roles, schedules and benefits for older staff may hold an advantage over those that do not. The older workforce is also not one group. College-educated workers who want flexibility and workers in physical jobs who need income face different risks and will likely need different arrangements.

On regulation and policy, the report points to four areas: enforcing age-discrimination law, job flexibility, access to health care, and support for caregivers. Researchers said turning the goals of California's Master Plan on Aging into concrete labor market opportunities will be vital to the economic security and dignity of older residents. The source does not describe any specific new rules.

Watch next for whether employers and state agencies act on these recommendations, and whether participation among adults 65 to 74 keeps rising as PPIC projects.

Source: Imperial Valley Press (Public Policy Institute of California report)

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN MARKET IMPACT · VIATRIS

FDA Approves Viatris' Ryzumvi Eye Drops for Presbyopia in Adults

Viatris has won a second job for an eye drop it already sells, and has not yet said who will sell it.

According to Viatris' press release, distributed via Placera, the U.S. Food and Drug Administration has approved Ryzumvi (phentolamine ophthalmic solution 0.75%) for the treatment of presbyopia in adults. The announcement is dated October 16, 2026. Presbyopia is the gradual loss of near focusing ability with age. The release says it typically becomes noticeable in the early to mid-40s and calls it a nearly universal condition.

This article is based on the company's press release. We did not review any trial data or an independent FDA notice, and the underlying study paper was not reviewed. Readers should not start or stop any treatment without consulting their clinician.

The approval adds an indication to an existing product. According to the release, Ryzumvi is already approved in the U.S. to treat pharmacologically induced mydriasis, meaning pupil dilation caused by certain drugs. The company says it is the only commercially available FDA-approved product for that use. The label for presbyopia covers adults. The mydriasis label covers adults and children aged 3 and older.

The commercial setup matters here. The release says Opus Genetics and Viatris, through an affiliated entity, are parties to a global licensing agreement. It gives Viatris exclusive rights to commercialize the product in the United States. Viatris says it is exploring the potential for a partner in the United States to commercialize Ryzumvi for presbyopia. That wording means no launch plan or partner was announced.

The safety information in the release gives a sense of the trade-offs. In presbyopia, the most common eye-related adverse reactions, reported in more than 5% of subjects, were conjunctival hyperemia (21%) and instillation site irritation (16%). The label advises against use in patients with active ocular inflammation, such as iritis. Contact lens wearers are told to remove lenses before dosing and wait 10 minutes before reinserting them. The release gives no efficacy figures for presbyopia.

What does this mean for the market? That is our interpretation, not a finding from the release. The company is seeking a partner rather than announcing its own launch. That could suggest it sees value in outside commercial capacity for a condition that affects most adults as they age. It could also reflect other priorities. The release does not say. It also gives no pricing, launch timing or comparison with other presbyopia treatments, so competitive positioning cannot be judged from it. This is the weakest part of our argument.

The regulatory path is clearer. Adding an indication to an approved drug lets the company use an existing product in a much larger group of patients. The size of that group follows from the release's description of presbyopia as nearly universal. Whether it becomes a meaningful revenue source depends on factors the release does not address, including demand, pricing and reimbursement. The company's own forward-looking statements list those as uncertainties.

Watch next for whether Viatris names a U.S. commercialization partner, and for the full prescribing information and trial data that would let outsiders judge how well the drops work.

Source: Viatris (press release, via Placera)

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN NEWSWEEK

Wyden Seeks Input on Medicare or Medicaid Universal Home Care Benefit

A senior Senate Democrat is asking for public feedback on options to expand home care coverage for older Americans and people with disabilities. Sen. Ron Wyden has put that question to the public, and the answer could reshape a market that now sits largely outside Medicare.

Wyden is the ranking Democrat on the Senate Finance Committee. According to Newsweek, he released a request for information seeking feedback on how to overhaul long-term care. It is not a bill. It lays out options rather than one finished proposal.

Two routes stand out. One would create a new Medicare home care benefit. The other would use Medicaid to build a universal home care benefit. The document also covers nursing-home quality and the long-term care workforce.

The gap he is targeting is well defined. Medicare covers certain skilled nursing, therapy and home health aide services for eligible people. Aide coverage is available only when the person also receives qualifying skilled services. Medicare does not pay for custodial care when that is the only care needed. It also does not pay for 24-hour home care or home meal delivery.

Medicaid fills much of that space. According to KFF, as cited by Newsweek, it is the country's main payer for long-term services and supports and accounts for more than half of U.S. long-term care spending. Families who need ongoing help but do not qualify for Medicaid often face large bills.

The costs are sizable. CareScout's 2025 Cost of Care Survey puts the national median for a non-medical caregiver at $35 an hour. At 44 hours a week, that is $80,080 a year. Assisted living has a median of $74,400 a year, and adult day health care $24,700.

For the market, the strategic question is substitution. A public home care guarantee could take over spending that families now cover from savings or private policies. It could also change demand for the products built around that spending. The source does not say how any benefit would be designed, so these effects are interpretation, not findings.

Kevin Thompson of 9i Capital Group, quoted by Newsweek, said many private insurers have exited the market or sharply cut coverage because the financial risks became too great. He said cost is the biggest obstacle to a universal program.

Michael Ryan, a finance expert, framed the open questions as who pays for universal care and where the caregivers will come from. He also said families should not expect relief soon, because this is a request for input, not legislation.

The request builds on a May initiative Wyden launched with 16 other Senate Democrats. That effort listed three priorities: affordable home care, better nursing-home care and a stronger long-term care workforce. In the May statement, the senators called for a home care guarantee for people with Medicare.

For now, nothing changes for Medicare recipients. Wyden said he wants responses from across the country. Watch for the feedback his committee receives, and whether any of the options turns into a bill with a funding plan attached.

Source: Newsweek

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN

PIPELINE AND COMPETITIVE POSITIONING · PHARMATIMES

Atrogi's Oral Muscle Drug Linked to 13% Power Gain in Small Study

A pill that could add muscle while taking off fat would stand apart in a weight-loss field where, by widely reported background not drawn from this source, many drugs tend to cost people lean mass. Atrogi says it now has early human data pointing that way. The study was small, open-label and had no control group, and we could not confirm whether it has been peer-reviewed, so the claim is far from proven. The drug was associated with the gain, which is not the same as causing it. This is an investigational drug: do not start or stop any medication, treatment or supplement without talking to your clinician.

This article is based on PharmaTimes' report of the study. The paper itself was not retrieved or reviewed, and nothing here has been checked against it.

According to PharmaTimes' report, Atrogi announced positive human data for ATR-258. The company describes it as a first-in-class oral GRK2-biased β2-adrenergic modulator, designed to improve muscle function and body composition.

PharmaTimes reports that the study ran for 8 weeks in 13 overweight or obese adults. It was investigator-initiated, open-label and single-arm, so there was no placebo group. It tested three ascending dose levels. Professor Morten Hostrup led it.

According to the report, the therapy was well tolerated and associated with an approximately 13% mean improvement in lower-extremity muscle power. Mean fat mass fell by 1.1 kg and lean mass rose by 0.8 kg. PharmaTimes says the changes in fat and lean mass were statistically significant.

On positioning, the company is pitching a differentiated profile: fat loss alongside more lean mass and better muscle function. Chief Scientific Officer and founder Tore Bengtsson said the data "give us important confidence that our approach is translating." He also said the mechanism warrants investigation in sarcopenia and in rare diseases marked by major muscle loss and weakness.

The report says the results build on a 2025 Cell publication. That paper described the GRK2-biased signalling approach and first-in-human safety data from a 69-subject phase 1 trial. PharmaTimes says the new results give first human proof of mechanism and support a phase 2 trial planned for 2027. That proof-of-mechanism framing comes from the company announcement. Hostrup, the principal investigator, also commented, saying the magnitude of the signal in lower-extremity power struck him most. CEO Paul Little called Atrogi "a phase 2-ready biotech."

For strategy, the case rests on a gap the company is aiming at: muscle-sparing options in metabolic disease and possible uses in muscle-wasting conditions. Several points are not in the coverage. These include how the drug compares with existing treatments, how regulators would view muscle power as an endpoint, and what a phase 2 trial would cost. Those are open questions, not findings.

The caution is plain, and this is where the argument is weakest. With 13 people and no control group, the study cannot separate the drug's effect from other influences. The coverage also gives no data on how long any gains last. The company's own statements make up much of the report.

WHAT TO WATCH NEXT

The design and endpoints of the phase 2 trial planned for 2027, and whether a placebo-controlled study confirms the muscle power signal.

Source: PharmaTimes

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MARKETS & STRATEGY · WEEKLY READ · 2 MIN

REGULATORY AND OPERATOR RISK · LONG TERM CARE COMMUNITY COALITION

Over 90% of US Nursing Homes Staff Below Acuity-Based Expected Level, LTCCC Says

More than 9 in 10 US nursing homes are staffing below the level their residents' needs would suggest, according to a new national data report from the Long Term Care Community Coalition (LTCCC), and the share is rising. The expected-staffing figure is described by LTCCC only as 'based on resident acuity'; the report page does not say how it was built.

The report, released October 7, covers 14,690 federally certified nursing homes. It finds the average facility reported 3.86 nurse staffing hours per resident per day, compared with 4.99 hours expected based on resident acuity.

An important caveat: the source page does not explain how the expected-staffing figure is calculated or who set it, and it does not say whether it is a regulatory standard. Readers should treat it as LTCCC's reported comparison, not as a verified legal or clinical threshold. All figures here come from LTCCC itself, and we have not independently checked them.

The trend is the part operators and investors may want to note. In LTCCC's February 2026 report, 87% of facilities were below expected staffing and the average was 3.90 hours. The new figures show more than 90% below, with the average down to 3.86 hours.

Staffing was lower still at chain-affiliated homes. They averaged 3.70 hours per resident day, and about 96% of chain facilities with available data fell below expected staffing. For large multi-facility operators, this puts the gap between reported and expected staffing at the center of any comparison with peers.

Facilities with serious quality problems fared worst. LTCCC groups Special Focus Facilities, Special Focus Facility Candidates and one-star homes as problem facilities. These averaged 3.49 hours, and nearly 98% fell below expected staffing.

These homes are a large part of the sector. According to LTCCC, more than one in five nursing homes fall into that group, caring for about 294,000 residents. The data count 84 Special Focus Facilities, 441 candidates and 3,015 one-star homes. A further 1,426 facilities display the federal abuse icon.

Enforcement data point to concentrated financial exposure. Over roughly three years, 6,514 nursing homes received at least one fine. Facilities were assessed about $456.8 million in fines, and CMS imposed 15,696 penalties, including fines and payment denials. Problem facilities are about 22% of homes but account for about 61% of fines, LTCCC says.

Enforcement is uneven, though. According to the report, 610 problem facilities had no reported federal penalties in the period. Separately, 1,018 homes had gone more than two years since their last standard health inspection. LTCCC argues that long gaps can leave problems undiscovered while old results still shape what families see.

Richard Mollot, LTCCC's executive director, said: "These data show that inadequate staffing remains the norm in U.S. nursing homes, not the exception."

For the sector, the implications are interpretive and should be treated as such. Because the page does not explain the expected-staffing measure, the report should not be read as showing that any facility broke a rule. It does show that a public, searchable dataset now lets families, attorneys, journalists and policymakers rank facilities and chains on staffing, fines and ownership. Operators with low staffing and weak ratings are the most visible in that comparison.

WHAT TO WATCH NEXT

Whether LTCCC's next update shows the share below expected staffing continuing to rise, and whether CMS inspection and enforcement activity changes for the long-overdue and unpenalized facilities the report identifies.

Source: Long Term Care Community Coalition (LTCCC)

The Arising

HEALTH INTELLIGENCE

SUNDAY, OCTOBER 18, 2026 · BRIEFS

IN THIS EDITION · BRIEFS · 165 SHORT STORIES IN 11 TOPICS

Fasting, autophagy & metabolic health 16 · Exercise as medicine & longevity 12 · Sleep science & circadian biology 18 · Nitric oxide & vascular health 14 · Clinical trials 14 · Gut microbiome & brain axis 18 · Alzheimer's & cognitive decline prevention 17 · Women's health & hormonal transitions 18 · Mitochondria & cellular energy 16 · Longevity research 15 · VO2 max & zone 2 training 7

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.

FASTING, AUTOPHAGY & METABOLIC HEALTH 16

Protein RBBP5 helps cells manage protein quality under stress, mouse-cell study finds

A study in PLoS Biology mapped gene activity in mouse cells. It found that RBBP5 helps control genes that keep proteins in good working order. Cells lacking RBBP5 coped worse with protein stress, partly because of weaker autophagy. The work is laboratory research. The text does not test any treatment in people.

PLOS BIOLOGY · 2026-10-08

Mouse and patient-sample study links PLPP2 enzyme to liver repair after injury

A study in Signal Transduction and Targeted Therapy examined acute liver injury. Liver biopsies from patients with drug-induced injury showed changes in the enzyme PLPP2. In mice, deleting PLPP2 in liver cells worsened injury. The authors report that PLPP2 supports repair through a fat-molecule pathway. This is early-stage research, not a tested treatment.

SIGNAL TRANSDUCTION AND TARGETED THERAPY · 2026-10-08

Green tea compound EGCG eased fructose-linked fatty liver in mice and cells

According to a study in Phytotherapy Research, the green tea compound EGCG reduced liver fat and inflammation in mice and liver cells exposed to fructose. The effects appeared to depend on a protein called SIRT5, since removing it cancelled the benefit. This was laboratory and animal work only. It does not show the same effect in people.

PHYTOTHERAPY RESEARCH : PTR · 2026-10-07

Experimental compound eased disease features in mice with a rare genetic disorder

A study in Life Science Alliance tested the compound GHF201 in female mice modeling mucopolysaccharidosis type I, a hereditary lysosomal storage disorder. It reduced harmful sugar-chain buildup in cells. In the mice, it improved movement, behavior and bone abnormalities, and eased brain damage. This was animal and cell work, not human research.

LIFE SCIENCE ALLIANCE · 2026-10-07

Muscle samples reveal different molecular changes in infantile and adult Pompe disease

A study in Brain Pathology analysed skeletal muscle from people with late-onset and infantile-onset Pompe disease, a glycogen storage disorder, alongside age-matched controls. It found altered immune, metabolic and muscle-development processes that differed between the two forms. Infants on enzyme replacement therapy showed partly normalised gene activity. The study describes patterns, not treatments.

BRAIN PATHOLOGY (ZURICH, SWITZERLAND) · 2026-10-07

Viruses and stressed human cells reshape ribosomes to change protein production

According to a study in Molecular Cell, a ribosomal protein called rpL40 moves to a new site on ribosomes in human cells infected by certain viruses. These altered ribosomes favour viral mRNAs and boost viral protein production. The authors report a similar remodelling during metabolic stress that supports cell survival. This is laboratory research in cells.

MOLECULAR CELL · 2026-10-07

Review links cell stress to sun- and pollution-driven skin aging

A review in Skin Pharmacology and Physiology covers how endoplasmic reticulum stress, a cell stress response, may contribute to skin aging from UV light and pollution. It describes links to wrinkles, pigmentation and inflammation. The authors say growing evidence suggests plant products may ease this process. The text does not describe human trials.

SKIN PHARMACOLOGY AND PHYSIOLOGY · 2026-10-07

Review examines how E. coli secretion systems may help it persist in the gut

A review in Gut Microbes looks at three bacterial secretion systems in E. coli. These systems help it attach to the gut lining, form biofilms and compete with other microbes. The authors separate roles shown in experiments from speculative links to chronic or recurrent disease. They note clear evidence gaps.

GUT MICROBES · 2026-10-07

Fasting lowered taurine and slowed colorectal tumour growth in preclinical models

According to a study in Advanced Science, intermittent fasting reduced taurine availability and suppressed colorectal tumour growth in preclinical models. The effect depended on CD8+ T cells, a type of immune cell. Adding taurine weakened the effect. The work explores how fasting acts on tumours. It does not show results in people.

ADVANCED SCIENCE (WEINHEIM, BADEN-WURTTEMBERG, GERMANY) · 2026-10-06

USP15 variant disrupts mouse brain stem cells; variants seen in patients

A study in The Journal of Clinical Investigation reported three new USP15 gene variants of uncertain significance in people with features including brain malformations. In knock-in mice carrying one variant, USP15 built up in the cytoplasm. This impaired autophagy and neural stem cell self-renewal and differentiation, and reduced neuron output. The stem cell effects were shown in mice, not patients. The work concerns brain development, not aging directly.

THE JOURNAL OF CLINICAL INVESTIGATION · 2026-10-06

Beagle study maps immune aging; sex differences and drug effects tentative

A cross-sectional study in Biogerontology measured blood counts and serum cytokines in 80 laboratory Beagles aged 1 to 11. Immune aging was uneven, and more cytokines varied with age in males, though formal age-by-sex interactions were not significant after correction. Among 24 young dogs given rapamycin, canagliflozin or dietary restriction for 90 days, rapamycin was linked to the broadest cytokine response. The authors call these results exploratory.

BIOGERONTOLOGY · 2026-10-06

Computer-designed vaccine blueprint targets the melioidosis bacterium

According to a study in Probiotics and Antimicrobial Proteins, researchers used computer methods to design a multi-epitope vaccine construct against Burkholderia pseudomallei, which causes melioidosis. They modelled its structure and docking with immune receptors. This is a computational design only. The text reports no tests in animals or people.

PROBIOTICS AND ANTIMICROBIAL PROTEINS · 2026-10-06

Review weighs GPR40 receptor as possible Alzheimer's drug target

A review in Future Medicinal Chemistry covers the GPR40/FFAR1 receptor and Alzheimer's disease. It says preclinical studies suggest activating it improved cognition and eased disease-related processes. The authors note hurdles, including selectivity, reaching the brain, long-term safety and confirming the drug hits its target. Human benefit is not shown in the text.

FUTURE MEDICINAL CHEMISTRY · 2026-10-06

Declining cellular clean-up pathway linked to lingering aged cells in mice

A study in Nature Aging, using cells and mice, found that chaperone-mediated autophagy (CMA), a protein-recycling pathway that declines with age, affects how senescent cells are cleared. Blocking CMA in macrophages increased senescent cell buildup in mice and delayed senescence resolution during wound healing. Drug-based CMA activation reduced senescent cells in aged mice and eased disease in a lung fibrosis mouse model. No human data were reported.

NATURE AGING · 2026-10-05

Review details how a protein-recycling pathway fails with age and disease

A review in Nature Reviews Molecular Cell Biology covers chaperone-mediated autophagy (CMA), a pathway that delivers proteins to lysosomes for breakdown. It describes newly found components and organ-specific roles. The authors say CMA dysfunction in ageing and age-related disease causes cellular changes beyond damaged-protein buildup. They also discuss efforts to target CMA therapeutically.

NATURE REVIEWS. MOLECULAR CELL BIOLOGY · 2026-10-05

Review: drugs mimicking calorie restriction may aid brain protein clearance in lab models

A review in Molecular and Cellular Neurosciences covers rapamycin, metformin, resveratrol and spermidine. In preclinical studies, they boosted the clearance of proteins linked to brain diseases. The authors say human use is held back by poor brain delivery, variable effects and a lack of validated markers. Human benefit remains unproven.

MOLECULAR AND CELLULAR NEUROSCIENCES · 2026-10-05

Review finds no consistent link between saturated fat intake and heart disease

A narrative synthesis in Advances in Nutrition covered 32 systematic reviews and meta-analyses, mostly observational. Most found no significant link between saturated fat and cardiovascular outcomes. Some found harm, some benefit, and others mixed results. Replacing saturated fat with polyunsaturated fat was associated with better outcomes in observational and short clinical studies. The authors suggest looking at overall dietary patterns.

ADVANCES IN NUTRITION (BETHESDA, MD.) · 2026-10-07

Small trial: qigong alongside usual care improved walking and fatigue in heart failure

A randomised trial in the Journal of Cardiovascular Nursing assigned 72 people with heart failure to usual care alone or usual care plus 12 weeks of Chan-Chuang Qigong. The qigong group showed significant improvements in 6-minute walking test, quality-of-life and fatigue scores compared with controls. Heart function measures did not notably improve. The authors suggest a longer exercise period may be needed to detect cardiac changes.

THE JOURNAL OF CARDIOVASCULAR NURSING · 2026-10-07

Review: device-based treatments emerging for heart failure with preserved ejection fraction

A review in Cardiovascular Intervention and Therapeutics covers new devices for heart failure with preserved ejection fraction. These include nerve stimulation, contractility modulation and adjustable shunts. The authors say careful patient selection is essential. For example, shunts mainly helped patients without elevated exercise pulmonary vascular resistance. They call the devices promising and expect combined approaches.

CARDIOVASCULAR INTERVENTION AND THERAPEUTICS · 2026-10-07

Diabetes rates across Deep South counties track with poverty and inactivity

An ecological study in the Journal of Racial and Ethnic Health Disparities looked at 418 Deep South counties. Average diabetes prevalence was 15.6%. Higher rates correlated with physical inactivity, obesity, poverty, firearm deaths and food insecurity. Broadband access and education showed inverse correlations. County-level links do not show what causes diabetes in individuals.

JOURNAL OF RACIAL AND ETHNIC HEALTH DISPARITIES · 2026-10-07

US counties with greater inequity had higher excess COVID-19 mortality

According to a study in the Journal of Racial and Ethnic Health Disparities, researchers analysed data from all 3,142 US counties plus Washington, DC. Higher excess COVID-19 mortality was linked to larger Black populations, segregation, socioeconomic disadvantage, lower education and more uninsured people. Remote work was linked to lower mortality. These are associations, not proof of cause.

JOURNAL OF RACIAL AND ETHNIC HEALTH DISPARITIES · 2026-10-07

Routine rehabilitation data failed to predict severe COPD flare-ups

A prospective study in Pulmonology followed 128 people with stable COPD in 21 French rehabilitation centres. Over one year, 19 had a severe exacerbation. Symptom scores, breathlessness ratings and exercise performance recorded at sessions predicted these events poorly. The authors concluded that routine data were insufficient to reliably predict severe exacerbations.

PULMONOLOGY · 2026-10-07

Small study: reaching blocked leg arteries from the foot succeeded in most patients

A retrospective analysis from a single centre, published in the Turkish Journal of Thoracic and Cardiovascular Surgery, covered 33 patients with advanced peripheral artery disease. Reaching blocked leg arteries through the foot succeeded in 30 patients, or 90.9%. Five of those 30 had a flow-limiting dissection. The study had no comparison group.

TURK GOGUS KALP DAMAR CERRAHISI DERGISI · 2026-10-07

Meta-analysis: supervised exercise may modestly help people taking antipsychotics

A systematic review and meta-analysis in the Journal of Affective Disorders pooled 28 randomised trials with 1,119 people taking antipsychotics. Supervised exercise improved negative symptoms and reduced body fat. The changes did not reach clinically meaningful thresholds. The authors say larger, high-quality trials are needed for blood pressure, lipids and glucose.

JOURNAL OF AFFECTIVE DISORDERS · 2026-10-06

Closer adherence to a plant-based planetary diet linked to lower frailty in older Spaniards

An observational study in The Journals of Gerontology: Series A followed two cohorts of older adults in Spain. People with the highest adherence to the Planetary Health Diet had lower odds of frailty than those with the lowest. Vegetables and fruits showed the strongest links. The design shows an association, not cause and effect.

THE JOURNALS OF GERONTOLOGY. SERIES A, BIOLOGICAL SCIENCES AND MEDICAL SCIENCES · 2026-10-06

Type 2 diabetes cases in adults over 55 rose 244% since 1990

According to an analysis of Global Burden of Disease Study 2021 data, published in Endocrinology and Metabolism, 305.6 million adults aged 55 and older had type 2 diabetes in 2021. That is 244% more than in 1990. High body mass index was the largest contributing risk factor at 46.0%. The study projects prevalence will keep rising through 2040.

ENDOCRINOLOGY AND METABOLISM (SEOUL, KOREA) · 2026-10-06

Review maps AI tools for measuring older adults' functional capacity

A scoping review in the Journal of Medical Internet Research looked at AI tools that measure intrinsic capacity, a concept of functional ability in healthy aging. It found 161 studies from 28 countries, mostly in the United States and China. Most studies covered one area of capacity, and cognition was the most common. The review maps the field rather than testing results.

JOURNAL OF MEDICAL INTERNET RESEARCH · 2026-10-05

US gastroenterology group issues preventive care guideline for people with cirrhosis

The American College of Gastroenterology published a guideline on preventive care in cirrhosis, according to The American Journal of Gastroenterology. Experts reviewed trials and reviews and made 18 recommendations across four areas. They include cancer surveillance, vaccination and smoking-cessation counseling. Most of the evidence was of low certainty.

THE AMERICAN JOURNAL OF GASTROENTEROLOGY · 2026-10-05

2026 asthma guideline update keeps focus on inhaled steroid-containing treatment

The 2026 Global Initiative for Asthma strategy report, published in the American Journal of Respiratory and Critical Care Medicine, is an evidence-based guideline summary. It strongly recommends inhaled corticosteroid-containing treatment for people with asthma and recommends against treatment with short-acting relievers alone. It stresses personalised, repeated assessment of symptoms and future risk.

AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE · 2026-10-08

Night-time melatonin differs in Alzheimer's patients with silent abnormal brain activity

An exploratory study in the Journal of Alzheimer's Disease compared 20 people with Alzheimer's and 8 healthy volunteers. Melatonin was lower in the Alzheimer's group at 11pm. Among those patients, higher night-time melatonin was seen in people with subclinical epileptiform activity. The sample was small, and the cause of the link remains unknown.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-08

Sleep apnea linked to lower hospital death rates in patients with acute respiratory distress

A retrospective study in Heart & Lung used a US national hospital database. It matched 9,405 patients with obstructive sleep apnea to 9,206 without it, all with acute respiratory distress syndrome. Sleep apnea was associated with lower in-hospital mortality and shorter stays. The authors call this paradoxical. It shows a link, not a cause, and needs prospective study.

HEART & LUNG : THE JOURNAL OF CRITICAL CARE · 2026-10-07

Data normalisation method changed protein–mortality results in critically ill patients

A study in The Journal of Applied Laboratory Medicine analysed blood proteins in 197 critically ill patients. Results differed depending on whether a normalisation method called ANML was used. Thousands of proteins changed in their link to hospital death, and 108 flipped direction while staying significant. Unnormalised data matched standard lab tests as well or better.

THE JOURNAL OF APPLIED LABORATORY MEDICINE · 2026-10-07

Negative-pressure and standard breathing support showed no clear difference in young children

A retrospective cohort study in Respiratory Care compared two noninvasive breathing supports in children under 3 with acute respiratory failure. Raw intubation rates were higher with negative-pressure ventilation, 27.3% versus 10.4%. After adjusting for measured confounders, the type of ventilation was not independently linked to intubation. The authors say prospective studies are needed.

RESPIRATORY CARE · 2026-10-07

Swapping sleep for activity linked to lower death risk, depending on sleep

An observational study of 68,995 UK Biobank adults, published in the American Journal of Epidemiology, looked at how people spend their 24 hours. Among those meeting sleep guidelines, shifting 30 minutes from sleep to movement was linked to lower death risk. Among short sleepers, some shifts were linked to higher heart-disease death. These are associations, not proof of cause.

AMERICAN JOURNAL OF EPIDEMIOLOGY · 2026-10-07

More childhood adversity linked to chronic sleep problems in older Chinese adults

According to a cohort study in Psychological Medicine, using Chinese national survey data on 20,450 participants, more adverse childhood experiences went with more chronic sleep disturbance in older age. The link grew with each added experience. Household mental illness stood out. This is an association, so it does not show that childhood adversity caused the sleep problems.

PSYCHOLOGICAL MEDICINE · 2026-10-07

Review examines how sleep apnoea and high blood pressure may relate to Alzheimer's pathology

A review in Sleep Medicine looks at how obstructive sleep apnoea might contribute to Alzheimer's disease changes. It covers possible mechanisms, including oxidative stress and altered sleep architecture. It also considers the role of hypertension, which often occurs alongside sleep apnoea. The authors note little research has studied the two conditions' combined impact. The review shows plausible links, not proven causes.

SLEEP MEDICINE · 2026-10-06

Study designs give different pictures of how gene effects change with age

A study in Nature Aging compared two ways of measuring how genetic effects shift across life. Both designs agreed on direction for 84.21% of 57 variants. Agreement on size was only moderate. Most differences came from birth-year confounding and participation bias. The authors recommend combining both designs.

NATURE AGING · 2026-10-06

Religious engagement linked to milder sleep problems in older Vietnamese women, not men

An observational study in Sleep Health analysed data from 4,901 older Vietnamese adults. Researchers found three sleep disturbance profiles: mild, moderate and severe. Among women, religious and spiritual engagement was linked to a higher chance of the mild profile. That link was no longer significant after further adjustment. No significant link appeared in men.

SLEEP HEALTH · 2026-10-06

Review argues Alzheimer's is a failure of dynamic memory processes

A review in Ageing Research Reviews proposes a new way to view Alzheimer's disease. It notes that anti-amyloid antibodies cut plaque burden but give only modest cognitive benefit. The authors argue the disease is a progressive failure of the processes that rebuild memory and link it to conscious experience. This is a theoretical proposal, not new trial data.

AGEING RESEARCH REVIEWS · 2026-10-06

Researchers propose AI framework linking daily movement patterns to cognition and mood

A paper in JMIR AI introduces PEPHA, an AI framework that uses wearable data to find when movement and sleep patterns are linked to processing speed and depressive symptoms in older adults. It was tested on a small cohort of 67 people. The text describes a method and associations, not proof that any activity changes outcomes.

JMIR AI · 2026-10-06

Review sets out ways to measure the brain's waste-clearing system in people

A narrative review in Neurological Sciences looks at how researchers assess the glymphatic system, a brain waste-clearance pathway, in humans. The authors say it cannot yet be measured directly. They describe several imaging and fluid-based methods, note that sleep, aging and other factors affect results, and propose a tiered framework for interpreting them.

NEUROLOGICAL SCIENCES : OFFICIAL JOURNAL OF THE ITALIAN NEUROLOGICAL SOCIETY AND OF THE ITALIAN SOCIETY OF CLINICAL NEUROPHYSIOLOGY · 2026-10-06

Acquired risk factors and lesion complexity both linked to death in adult congenital heart disease

A retrospective study in the European Heart Journal analysed 9,826 adults with congenital heart disease at one tertiary centre. Over a median 10 years of follow-up, 1,371 patients died. Both lesion complexity and acquired conditions were associated with late death. Because the study is observational, it shows links rather than causes.

EUROPEAN HEART JOURNAL · 2026-10-06

Review examines a parent's alcohol disorder as a childhood adversity

A literature review in Medical Science Monitor examined growing up with a parent who has alcohol use disorder as an adverse childhood experience. Such homes often also involve violence, neglect and caregiver mental illness. The review describes chronic childhood stress as associated with depression, anxiety, PTSD, substance use disorders, type 2 diabetes and cardiovascular disease. The authors call for more research on screening and trauma-informed care.

MEDICAL SCIENCE MONITOR : INTERNATIONAL MEDICAL JOURNAL OF EXPERIMENTAL AND CLINICAL RESEARCH · 2026-10-06

Pseudomonas LPS protected mice against pneumonia via lung natural killer cells

A study in Signal Transduction and Targeted Therapy detected bacterial DNA, particularly Pseudomonas signatures, in the blood of healthy elderly people. In mice, a low lung dose of Pseudomonas aeruginosa LPS protected against bacterial pneumonia by priming lung-resident natural killer cells. E. coli LPS did not. Protection required commensal microbes. The protective findings come from mice, not people.

SIGNAL TRANSDUCTION AND TARGETED THERAPY · 2026-10-06

HEPA air filters in care homes: staff and residents describe practical lessons

This interview study, from the NIHR open research platform, sits inside the AFRI-c randomised trial. It spoke with care home staff, residents and relatives. Filters became routine, but were not seen as suitable for every resident. Cost was a worry. The trial itself found HEPA filters did not reduce respiratory infections.

NIHR OPEN RESEARCH · 2026-10-06

Wheel running changes brain activity patterns differently in male and female mice

A study in eNeuro found that four weeks of voluntary wheel running altered a marker of repeated neuron activation across several brain regions in mice. Network patterns changed in different ways in males and females. This is mouse research. The authors say follow-up studies are needed to understand function and mechanism.

ENEURO · 2026-10-06

NITRIC OXIDE & VASCULAR HEALTH

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Genotype linked to differing response to folic acid in high homocysteine patients

A retrospective study in Chronic Diseases and Translational Medicine followed 344 patients with high homocysteine. Levels and a measure of artery stiffness fell in all MTHFR genotype groups after folic acid treatment. Patients with the TT genotype had lower treatment efficacy. The authors suggest genotyping could help estimate treatment response. The design cannot prove cause.

CHRONIC DISEASES AND TRANSLATIONAL MEDICINE · 2026-10-08

Engineered nanoparticles improved sperm quality in mice with chemically injured testes

A study in the Journal of Controlled Release describes nanoparticles made from maltol and arginine, designed to reach injured testes. In mice with testis damage from the chemical DEHP, they improved sperm quality and hormone-related function. Cell experiments supported the mechanism. This is early animal and laboratory research, not a test in people.

JOURNAL OF CONTROLLED RELEASE : OFFICIAL JOURNAL OF THE CONTROLLED RELEASE SOCIETY · 2026-10-08

Study ties hypoxia to ischemic stroke, tests Tibetan-formula compound in cells, mice

A study in the Journal of Ethnopharmacology combined population data, transcriptomics, network pharmacology and single-cell sequencing. Its epidemiological analysis identified ischemic stroke as the cardiovascular or cerebrovascular disease most strongly associated with hypoxia. Researchers also tested licarin B, a constituent of the Tibetan formula Sanwei Tanxiang Powder, in human brain blood-vessel cells and a mouse stroke model. The licarin B findings were not included in the available abstract text.

JOURNAL OF ETHNOPHARMACOLOGY · 2026-10-08

PTEN protein linked to blood vessel fat-tissue problems in male rats on sugar diet

A study in the European Journal of Pharmacology fed rats a high-sugar diet for 14 weeks. Both sexes became obese, but fat tissue around blood vessels malfunctioned only in males. Higher PTEN levels were involved. Blocking PTEN restored normal function in the males. This was animal research, not a human study.

EUROPEAN JOURNAL OF PHARMACOLOGY · 2026-10-08

Review finds omega-3 heart benefits depend on formulation and dose

A review in Cardiovascular Drugs and Therapy examined omega-3 trials for preventing heart disease. Low-dose EPA/DHA mixes were generally neutral. Icosapent ethyl reduced major ischemic events in REDUCE-IT, while a 4 g/day EPA/DHA product showed no benefit in STRENGTH. Higher doses need attention to atrial fibrillation and bleeding.

CARDIOVASCULAR DRUGS AND THERAPY · 2026-10-08

Lung cell transplants and their exosomes eased fibrosis in mice

A study in JCI Insight, mostly in mice and cells, found a lung cell type that is reduced in patients with pulmonary fibrosis. Transplanting these cells into injured mice improved survival and lung function. Exosomes carrying a protein called IFITM3 had similar effects. The authors call this a possible strategy. It has not been tested as a treatment in people.

JCI INSIGHT · 2026-10-08

Modified acarbose formulation eased kidney damage markers in diabetic rats

According to a study in the Journal of Drug Targeting, a new acarbose and guar gum formulation was tested in cells and in diabetic rats. In rats, it improved kidney function measures, reduced inflammatory markers and raised antioxidant activity. The work was done in animals and cells only. It does not show whether the same effects occur in people.

JOURNAL OF DRUG TARGETING · 2026-10-08

Syringic acid eased cognitive and metabolic changes in obese mice and nerve cells

According to a study in Nutritional Neuroscience, syringic acid was tested in mouse nerve cells exposed to palmitic acid and in mice fed a high-saturated-fat diet. The compound improved cell survival and reduced oxidative stress. In mice, it lowered body weight and improved learning and memory. This is animal and cell research, not human evidence.

NUTRITIONAL NEUROSCIENCE · 2026-10-08

IGFBP2 protein protected blood vessel cells from high-glucose damage in lab study

A cell study in Bioscience Reports exposed human umbilical vein endothelial cells to high glucose. Adding the protein IGFBP2 reduced inflammation and cell death and restored nitric oxide production, apparently through PI3K/Akt/eNOS signalling. The effect was broadly comparable to insulin. These are laboratory cell results, and they have not been tested in people.

BIOSCIENCE REPORTS · 2026-10-08

Stiffer arteries linked to worse stroke recovery after clot removal

A secondary analysis of the OPTIMAL-BP trial, published in Neurointervention, covered 285 stroke patients who had clot removal. Higher estimated arterial stiffness was associated with poorer collateral blood flow and worse functional outcome at three months. Collateral status explained only a small part of the link. This shows association, not cause.

NEUROINTERVENTION · 2026-10-08

Nitrous oxide sedation had few side effects in autistic children in one hospital system

A retrospective descriptive study in Pediatric Emergency Care reviewed 186 autistic children aged 3 to 18 who received nitrous oxide for procedures over ten years. Adverse events occurred in 3 children, or 1.6%. There was no vomiting. The authors call for prospective studies to learn more.

PEDIATRIC EMERGENCY CARE · 2026-10-08

Light-activated molecule releases nitric oxide and kills bacteria in lab tests

According to a study in RSC Advances, chemists built a molecule that releases nitric oxide when hit by blue light and glows to signal the release. In laboratory tests, it was active against MRSA and Pseudomonas aeruginosa, including Pseudomonas biofilms. This is early chemistry and cell-level work, not a human study.

RSC ADVANCES · 2026-10-07

Lead found in scratch-off coatings of prepaid phone cards in Saudi Arabia

A laboratory study in the Journal of Applied Toxicology measured lead, cadmium and copper in card coatings from three brands. Lead was the main contaminant. A worst-case exposure model exceeded safety thresholds. Realistic ingestion and skin-exposure estimates were far lower. This was a lab and modelling analysis, not a study of people's health.

JOURNAL OF APPLIED TOXICOLOGY : JAT · 2026-10-07

Plant compound reduced anger-like behaviour in rats, tied to amygdala signalling

A study in Brain Research tested plumbagin in rats showing anger-like behaviour. The compound reversed changes in nitric oxide and serotonin levels in the amygdala and was accompanied by reduced behaviour. This is animal research on a model of intermittent explosive disorder. It does not show any effect in people.

BRAIN RESEARCH · 2026-10-07

CLINICAL TRIALS

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Early-stage trial will test SX-682 with docetaxel in head, neck and prostate cancers

A registry entry on ClinicalTrials.gov describes a phase 1/2 trial sponsored by the National Cancer Institute. It is recruiting adults whose head and neck or prostate cancer has returned or spread. Participants will receive the new drug SX-682 with docetaxel for up to six cycles. The trial has no results yet.

CLINICALTRIALS.GOV (NCT07667400) · 2026-10-16

Registered early trial will test lower-dose atezolizumab guided by blood drug levels

A registry entry from ClinicalTrials.gov describes a recruiting phase 1 trial sponsored by the National Cancer Institute. It will test whether lower doses of the cancer drug atezolizumab, guided by drug levels in blood, might work as well with fewer side effects. The trial is registered only, so there are no results yet.

CLINICALTRIALS.GOV (NCT06066138) · 2026-10-16

National Cancer Institute study to test appearance questionnaires for neurofibromatosis type 1

A study registered on ClinicalTrials.gov and sponsored by the National Cancer Institute is recruiting people with neurofibromatosis type 1 and adult caregivers. It aims to see whether two questionnaires can assess how people rate the appearance of their visible nerve tumors. Participants will complete questionnaires and join remote focus groups or interviews. No results are available yet.

CLINICALTRIALS.GOV (NCT06880991) · 2026-10-16

Registered trial tests strength training for Alzheimer's caregivers; no results posted

A trial registry entry from ClinicalTrials.gov, sponsored by the University of Salamanca, describes a randomised trial in informal Alzheimer's caregivers. It compares strength training plus muscle relaxation against relaxation alone over 10 weeks. Main outcomes are frailty, anxiety and caregiver burden. The entry is marked completed but lists no results.

CLINICALTRIALS.GOV (NCT07388186) · 2026-10-16

Registered study will track genetic and other Parkinson's disease over five years

A trial registry entry from ClinicalTrials.gov describes a planned natural history study of Parkinson's disease, including forms linked to the PRKN and PINK1 genes. It has not started recruiting and has no results. Participants aged 18 to 80, plus healthy volunteers, would attend six clinic visits over five years. Researchers will collect movement data, blood, urine and other samples.

CLINICALTRIALS.GOV (NCT07613112) · 2026-10-16

Early trial tests imatinib in people with inherited RUNX1 deficiency

A registry entry on ClinicalTrials.gov describes a phase 1 trial sponsored by the National Cancer Institute. It is recruiting adults with RUNX1 gene mutations, which are tied to easy bleeding and higher blood cancer risk. It will test imatinib doses and look at platelet function and inflammatory markers. No results have been reported yet.

CLINICALTRIALS.GOV (NCT06090669) · 2026-10-16

Phase 1 shingles vaccine trial completed, with no results in the entry

A ClinicalTrials.gov registry entry describes a completed phase 1 trial of a recombinant herpes zoster vaccine from MAXVAX Biotechnology. It tested safety and tolerability of different doses, given twice, two months apart, in healthy adults aged 18 and over. It also aimed to explore immune response. The entry lists no results, so nothing is known yet about how the vaccine performed.

CLINICALTRIALS.GOV (NCT05636436) · 2026-10-15

Registered study will compare dementia symptoms by blood p-Tau217 status

A trial registry entry from Tianjin Anding Hospital describes an observational study that is still recruiting. It will compare behavioural and psychological symptoms in people with probable Alzheimer's who are p-Tau217 negative or positive. Participants will be followed for 18 months. No results exist yet.

CLINICALTRIALS.GOV (NCT07875998) · 2026-10-15

Registered trial will test pelvic floor exercises plus a supplement for incontinence in women

A trial registered on ClinicalTrials.gov, sponsored by FEMPHARMA Kft., plans to study women with urinary incontinence. Participants will do pelvic floor muscle exercises and use a dietary supplement. Symptoms and muscle function will be assessed at baseline, 4 weeks and 12 weeks. The trial is not yet recruiting, so there are no results.

CLINICALTRIALS.GOV (NCT07859241) · 2026-10-15

Registered study will test eye movements as a marker of cognitive decline

A trial registry entry from National Sun Yat-sen University describes a recruiting cross-sectional study. It will compare eye movement signals in people over 65 who are healthy, have mild cognitive impairment, or have dementia. The aim is to see whether eye tracking can objectively reflect cognition. No results have been reported yet.

CLINICALTRIALS.GOV (NCT07358598) · 2026-10-15

Registered trial will test combined shoulder surgery for large rotator cuff tears

A trial registry entry on ClinicalTrials.gov describes a recruiting study of 40 adults aged 40 to 75 in Vietnam. All will have the same surgery for large rotator cuff tears, using a rerouted biceps tendon and a graft. There is no comparison group. The main outcome is retear on MRI at 12 months. No results exist yet.

CLINICALTRIALS.GOV (NCT07875556) · 2026-10-15

NIAID registers a recruiting study to collect samples from people with allergic diseases

A registry entry on ClinicalTrials.gov describes a recruiting National Institute of Allergy and Infectious Diseases study. It will gather data, blood, fluid and tissue samples from people aged 3 to 100 with allergic or sinus diseases. Follow-up lasts one to three years. It is a sample collection effort and has no results yet.

CLINICALTRIALS.GOV (NCT06732414) · 2026-10-15

Trial registered comparing two anesthesia methods in hip surgery

A ClinicalTrials.gov entry describes a randomised, single-blind study of 68 adults having hip or upper thigh bone surgery. It compares a lumbar erector spinae plane nerve block with spinal anesthesia, looking at opioid use and time to first rescue pain relief. The entry is marked completed, but no results are posted.

CLINICALTRIALS.GOV (NCT07427082) · 2026-10-14

Planned trial will test breathing exercises in young people with cerebral palsy

This is a registered trial with no results yet, listed on ClinicalTrials.gov. It is not yet recruiting. Researchers plan to compare an 8-week breathing exercise program with sham exercises, both alongside usual care. They will track lung function and quality of life. Nothing is known yet about whether it works.

CLINICALTRIALS.GOV (NCT07873593) · 2026-10-14

GUT MICROBIOME & BRAIN AXIS

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Mouse study tests gut bacteria tied to schizophrenia for effects on behavior

A study in mSystems sorted gut bacteria from people with schizophrenia, other mental disorders and healthy controls by whether immune IgA coated them. Selected bacterial mixes were then given to mice. Some behavior tests differed between mice given IgA-coated and uncoated bacteria. The work is in mice, so it does not show a cause in people.

MSYSTEMS · 2026-10-07

Probiotic-style supplement linked to gut changes tied to brain development in preterm babies

A secondary analysis of a randomised trial, published in Gut Microbes, studied very and extremely preterm infants given a supplement containing Bifidobacterium breve, oligosaccharides and glutamine. It encouraged Bifidobacterium-rich gut communities. Related microbial functions were lower in infants with delayed white-matter myelination on MRI. The brain link was a post hoc finding, not proof of cause.

GUT MICROBES · 2026-10-07

Gut-targeting antibiotic eased memory problems in Alzheimer's-model mice

A study in the British Journal of Pharmacology tested rifaximin, an antibiotic that is not absorbed into the body, in mice bred to develop Alzheimer's-like changes. After two months, the mice had less memory impairment and less amyloid-β buildup. Their gut bacteria and bile acids also changed. This was animal research, not a human trial.

BRITISH JOURNAL OF PHARMACOLOGY · 2026-10-07

Tanshinone IIA protected memory in sleep-deprived rats, linked to gut bacteria and inflammation

A study in The American Journal of Chinese Medicine tested tanshinone IIA, a compound from the herb Danshen, in sleep-deprived rats. Treated rats did better on a memory maze and showed less brain and gut inflammation. Changes were linked to gut microbiota. This is animal research, so the findings do not show the same effect in people.

THE AMERICAN JOURNAL OF CHINESE MEDICINE · 2026-10-07

Gut bacterium linked to muscle strength in people and mice

A study in Gut found that higher levels of the gut bacterium Roseburia inulinivorans were linked to greater strength in adults. That is an association. In antibiotic-treated mice, giving the bacterium increased grip strength. The bacterium was also less abundant in older adults than in young adults. The authors suggest it as a possible probiotic candidate.

GUT · 2026-10-07

Aged nanoplastics were less toxic as particles, but their soluble byproducts stayed active

According to a study in the Journal of Hazardous Materials, two types of nanoplastic were aged under UV light for 365 days. Aging reduced the toxicity of the particles. The soluble products released during aging still showed biological activity, mainly affecting blood metabolism. The authors link both to gut microbiome effects. The text does not state which animals were used.

JOURNAL OF HAZARDOUS MATERIALS · 2026-10-06

Coffee and fenugreek compound eases Parkinson's-like signs in mice

A study in Food Science & Nutrition tested trigonelline, found in coffee and fenugreek, in mice engineered to model Parkinson's disease. Treated mice moved better, and had less brain inflammation and less abnormal protein. A genetic analysis in people suggested a possible protective link. The authors say further studies are needed to establish cause.

FOOD SCIENCE & NUTRITION · 2026-10-06

Review: zinc deficiency causes cyclic eating in rats; human relevance unclear

A narrative review in Nutrition Reviews covers five decades of animal research. In zinc-deficient rats, food intake rises and falls roughly every 3.5 days. The evidence comes mainly from male rats in a few research groups. The review asks whether similar appetite swings occur in zinc-deficient people. The mechanisms and human relevance remain incompletely understood.

NUTRITION REVIEWS · 2026-10-06

Ultrasound aimed at the spleen eased colitis and related behaviour changes in mice

A study in Brain, Behavior, and Immunity tested focused ultrasound on the spleen in mice with chemically induced colitis. The treatment lowered inflammatory markers, improved gut barrier proteins and was linked to better anxiety-like behaviour and cognitive performance. The benefits disappeared when the vagus nerve was cut. This is mouse research, not evidence in people.

BRAIN, BEHAVIOR, AND IMMUNITY · 2026-10-06

Stearic and oleic acid diets changed bile acids differently from palmitic acid

A secondary analysis of a randomised crossover trial, published in The American Journal of Clinical Nutrition, involved 17 postmenopausal women with mildly high cholesterol. Diets rich in stearic or oleic acid lowered some primary bile acids compared with palmitic acid. Gut microbiome diversity stayed stable. The authors point to shared liver regulation of bile acids. The trial was small.

THE AMERICAN JOURNAL OF CLINICAL NUTRITION · 2026-10-06

Probiotic mix improved memory and reduced amyloid in rats with induced Alzheimer's-like disease

A study in Physiology & Behavior tested a multi-strain probiotic mixture in rats given aluminium chloride to induce Alzheimer's-like disease. Treated rats showed better behavioural results, less beta-amyloid in the hippocampus and lower inflammation markers. This is animal research. The authors say it supports further study, and it does not show effects in people.

PHYSIOLOGY & BEHAVIOR · 2026-10-06

Gut bacterial compound worsens brain inflammation in septic mice

A study in mice, published in Microbiology Spectrum, found that sepsis expanded gut E. coli. These bacteria produced more of a compound called 3-methylindole. On its own, the compound did not cause inflammation. Combined with a bacterial toxin, it worsened brain inflammation in immune cells, possibly by boosting NLRP3 inflammasome activation. The work is in animals and cells.

MICROBIOLOGY SPECTRUM · 2026-10-06

Review proposes gut nervous system adapts to immune and microbial signals

A review in the Journal of Experimental Zoology Part A covers the enteric nervous system, the gut's network of nerves. It proposes that this system stays resilient by remodelling in response to local immune and microbial cues. The review draws on several animal species and sets out a framework. It is not a new experiment and not a human trial.

JOURNAL OF EXPERIMENTAL ZOOLOGY. PART A, ECOLOGICAL AND INTEGRATIVE PHYSIOLOGY · 2026-10-06

Older adults with mild cognitive impairment differ in diet and gut bacteria

A cross-sectional study in the Singapore Medical Journal compared 48 people with mild cognitive impairment and 43 healthy controls. Eating yoghurt, freshwater fish, crustaceans, pine nuts or pumpkin was positively associated with cognitive function. Certain gut bacteria may play a role in these links. A snapshot study like this cannot show cause.

SINGAPORE MEDICAL JOURNAL · 2026-10-05

Diet high in glycation products linked to anxiety-like behavior in mice via gut changes

A study in male mice, published in Brain, Behavior, and Immunity, fed animals a diet rich in advanced glycation end products for 12 weeks. The mice showed gut microbiota changes, disrupted tryptophan metabolism, inflammation and anxiety- and depression-like behavior. Transplanting gut microbes partly reproduced the effects. These are animal findings, not human results.

BRAIN, BEHAVIOR, AND IMMUNITY · 2026-10-05

Gut bacterial enzyme tied to lower vitamin D and depression-like behaviour in mice

A study in Brain, Behavior, and Immunity reports that E. coli from depressed patients broke down a vitamin D form in the lab. In mice, the bacterium lowered vitamin D levels and caused depression-like behaviours. The E. coli and its gene were also more common in depressed patients. The authors say more human studies are needed.

BRAIN, BEHAVIOR, AND IMMUNITY · 2026-10-05

Threonine improved social memory in female mouse offspring of sleep-deprived mothers

A study in Brain, Behavior, and Immunity found that sleep deprivation late in pregnancy impaired social memory in adult female mouse offspring. Those mice had lower blood threonine. Giving threonine after weaning improved social memory and gut mucus thickness. The work was in mice, and a fecal-transfer experiment could not show causation. It does not address human health directly.

BRAIN, BEHAVIOR, AND IMMUNITY · 2026-10-05

Gut bacteria patterns may separate IBS patients from healthy people

A study in the Journal of Breath Research used data from a Dutch cohort of 178 people with irritable bowel syndrome and 134 healthy controls. Gut microbiota patterns distinguished the two groups. They did not match standard symptom-based subtypes. They were linked to some symptoms. This is an observational study that needs validation.

JOURNAL OF BREATH RESEARCH · 2026-10-05

Gender-affirming hormone therapy linked to opposite shifts in heart-related proteins

A prospective clinical study in Clinical Endocrinology followed 55 people before and after one year of gender-affirming hormone therapy. Testosterone-based therapy was associated with falls in several complement and transport proteins. Estradiol-based therapy was associated with rises in complement proteins, C-reactive protein and others. The study shows associations, not effects on heart disease.

CLINICAL ENDOCRINOLOGY · 2026-10-08

Study of 32 Turkish dementia patients details offenses linked to frontotemporal dementia

A retrospective study in the Journal of Forensic Sciences reviewed 32 people with frontotemporal dementia referred for criminal responsibility assessment in Türkiye. Most were men. Offenses were economic, violent or sexual. Nearly half occurred before diagnosis. The authors say apparent planning may not mean preserved intent, and call for more neurological input in forensic evaluations.

JOURNAL OF FORENSIC SCIENCES · 2026-10-08

Speech recordings distinguished APOE-ε4 carriers from non-carriers in a small study

According to a cross-sectional observational study in JMIR Formative Research, speech analysis could separate 22 APOE-ε4 carriers from 58 non-carriers, all cognitively normal adults. Spontaneous speech worked best. APOE-ε4 is a major genetic risk factor for late-onset Alzheimer disease. The sample was small, and the study did not follow anyone over time.

JMIR FORMATIVE RESEARCH · 2026-10-08

Delirium affected over a third of patients after aortic arch surgery

According to analysis of a randomised trial published in The Annals of Thoracic Surgery, delirium occurred in 34.6% of 269 patients after aortic arch surgery. Rates did not differ between deep and moderate cooling. Delirium was linked to worse cognition and brain imaging changes. Lower connectivity before surgery suggests delirium may reveal existing vulnerability rather than cause decline.

THE ANNALS OF THORACIC SURGERY · 2026-10-08

Review finds mixed evidence for AI decision tools in primary care

A systematic review in the Journal of Medical Internet Research looked at AI tools that support clinicians in primary care. Of 24 studies meeting the criteria, 10 involved AI and formed the main appraised group. Results were inconsistent. AI electrocardiography found more cases of low ejection fraction, but a dementia marker used alone did not increase diagnoses.

JOURNAL OF MEDICAL INTERNET RESEARCH · 2026-10-08

Aerobic exercise's effect on memory differed by APOE4 in breast cancer survivors

A secondary analysis of a 6-month randomised trial of aerobic exercise, published in Biological Research for Nursing, included 116 postmenopausal women with breast cancer. The APOE4 gene variant changed how exercise related to learning and memory: non-carriers' scores improved, while carriers' scores declined. Attention, executive function, processing speed and other areas showed no significant differences. The authors call the findings exploratory and hypothesis-generating.

BIOLOGICAL RESEARCH FOR NURSING · 2026-10-08

Review of nine trials finds combined bladder drugs may beat single drugs

A review in the British Journal of Nursing appraised nine randomised trials of drug combinations for overactive bladder. The combinations improved symptoms more than single drugs did. Most studies reported no added cardiovascular risk. The authors point to limitations such as sample bias and differences between studies, which limit how firm the conclusions are.

BRITISH JOURNAL OF NURSING (MARK ALLEN PUBLISHING) · 2026-10-08

Review maps occupational therapists' roles in home changes for people with dementia

A scoping review in the American Journal of Occupational Therapy covered 17 studies of environmental interventions, such as home modifications and technology programmes, for people with dementia living at home. Occupational therapists mainly assessed function and environment and helped coordinate teams. The review found gaps in how team roles are reported. It maps existing studies rather than testing what works.

THE AMERICAN JOURNAL OF OCCUPATIONAL THERAPY : OFFICIAL PUBLICATION OF THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION · 2026-10-08

Memory worries in early Parkinson's linked to faster cognitive decline

A study in Annals of Clinical and Translational Neurology followed 1,151 cognitively unimpaired people with newly diagnosed Parkinson's. Those with subjective cognitive concerns had higher Alzheimer's-related spinal fluid markers. Over five years, they declined faster in learning, delayed recall and working memory. The findings show associations, not causes.

ANNALS OF CLINICAL AND TRANSLATIONAL NEUROLOGY · 2026-10-08

Blood-test index of uneven aging linked to faster cognitive decline in older Chinese adults

An observational study in the Journal of Alzheimer's Disease used data from the China Health and Retirement Longitudinal Study. The researchers built an index from five routine blood markers. Among 1,688 adults aged 60 and over, a higher index was associated with worse cognition and greater decline over three years.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-08

Diabetic foot ulcers linked to poorer thinking skills in small study

A small case-control study in the Journal of Alzheimer's Disease compared 22 adults with type 2 diabetes and foot ulcers against 22 matched healthy controls. Those with ulcers scored worse across several cognitive areas, and had more depressive symptoms and lower quality of life. The design shows an association only. It cannot show that ulcers cause cognitive problems.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-08

Brain imaging shows shifting PPARG and PRKAG2 patterns in type 2 diabetes

A study in the Journal of Alzheimer's Disease used brain imaging and gene-expression mapping in 1,802 adults, 271 with type 2 diabetes. Compared with controls, co-localization of the genes PPARG and PRKAG2 with gray matter was higher in early stages and weaker in later stages in people with diabetes. Co-localization was linked to cognitive function in controls. The authors suggest dysregulation may contribute to cognitive decline. The design shows associations, not causes.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-08

Brexpiprazole eased Alzheimer's agitation in Japanese trial, with weaker 1 mg effect in severe disease

A post hoc analysis of a randomised, placebo-controlled trial in Japan, reported in the Journal of Alzheimer's Disease, looked at agitation in Alzheimer's dementia over 10 weeks. The 2 mg dose showed benefit in mild-to-moderate and severe disease. The 1 mg dose had limited effects in severe disease. Post hoc findings are less firm than primary results.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-08

Lower acculturation linked to lower cognitive scores, but not faster decline, in Hispanic/Latino adults

An observational study in the Journal of Alzheimer's Disease followed 5,976 Hispanic/Latino adults. Those with the lowest acculturation scores had lower global cognition scores. Over seven years, however, there were no differences between groups in cognitive change or mild cognitive impairment. The authors say low acculturation does not appear tied to faster decline.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-08

Overactive Piezo1 channel linked to brain blood flow problems in hypertensive mice

A mouse study in Circulation Research found that a pressure-sensing channel, Piezo1, was overactive in brain blood vessel lining in two hypertension models. Deleting it protected against blood flow deficits. Blocking an enzyme called PKC normalised its activity and restored blood flow responses. The work was in mice, not people.

CIRCULATION RESEARCH · 2026-10-08

Living in a deprived neighborhood linked to lower cognition and more amyloid

According to an observational study in NPJ Dementia, higher neighborhood deprivation was associated with lower mini mental state exam scores among 1,110 participants. It was also linked to more amyloid on PET scans. Amyloid did not explain the link with cognition. The design shows association only, not that deprivation causes brain changes.

NPJ DEMENTIA · 2026-10-07

Small single-group study finds gains in older adults with mild cognitive impairment

A study in the Journal of Aging and Physical Activity tested an 8-week community program of exercise, arts and education in 29 older adults with mild cognitive impairment. Scores on one cognitive test and on flexibility improved. There was no comparison group, so the program's effect cannot be separated from other factors.

JOURNAL OF AGING AND PHYSICAL ACTIVITY · 2026-10-07

WOMEN'S HEALTH & HORMONAL TRANSITIONS 18

Review proposes framework linking blood vessel cell ageing to cardiometabolic disease

A review in Molecular Biology Reports looks at how stresses such as disturbed blood flow, high blood sugar and inflammation may push blood vessel lining cells into a ageing-like state called senescence. The authors say evidence is mixed and strongest in lab and animal work. No current clinical test directly measures this senescence. They propose a staged validation approach.

MOLECULAR BIOLOGY REPORTS · 2026-10-08

Review: GLP-1 drugs in midlife women show promise, but menopause-specific evidence is limited

A review in Climacteric looked at GLP-1 receptor agonists in women during perimenopause and early postmenopause. These drugs help with obesity and type 2 diabetes in general. The authors call them a promising option. They say evidence specific to menopause is limited. Long-term safety and use alongside menopausal hormone therapy remain unknown.

CLIMACTERIC : THE JOURNAL OF THE INTERNATIONAL MENOPAUSE SOCIETY · 2026-10-08

Higher kynurenine-tryptophan ratio linked to later liver fibrosis in women with HIV

In a cohort study of 709 women with HIV, published in AIDS, a higher blood kynurenine-to-tryptophan ratio was associated with later liver fibrosis. Over a mean of 42 months, 18.7% developed fibrosis. The link was clearer for fibrosis not tied to fatty liver disease. As an observational study, it shows association, not cause.

AIDS (LONDON, ENGLAND) · 2026-10-08

Position statement sets out hormone care after gender clinic discharge

A position statement published in Endocrine Connections, developed by a multidisciplinary team including endocrinologists, gender clinicians, reproductive medicine specialists and general practice, addresses care for people discharged from specialist gender identity services. It calls for clear discharge documentation of hormone regimen, monitoring and risk, and collaboration between specialist clinics and primary care. It supports minimal effective hormone dosing when appropriate. It is expert guidance, not a trial.

ENDOCRINE CONNECTIONS · 2026-10-08

Women on long-term HIV treatment more often show falling intact virus DNA

An observational study in AIDS followed 35 people with HIV, 17 men and 18 women, who had at least 10 years of suppressive treatment. Women more often showed a continuous decline in intact HIV DNA. Fewer than half of all participants did. This is an association, and the study was small.

AIDS (LONDON, ENGLAND) · 2026-10-08

Losing one protein made mouse brain appetite-control cells look senescent

A study in Antioxidants & Redox Signaling used cell models and a knockout mouse. Removing the protein SELENOT from POMC neurons, which help regulate energy balance, produced features of cellular senescence. Markers also rose in surrounding brain tissue. The authors say this suggests SELENOT helps keep these cells healthy. This is laboratory and animal work.

ANTIOXIDANTS & REDOX SIGNALING · 2026-10-07

Estrogen therapy users had more complications after lumbar fusion surgery

A retrospective cohort study in Global Spine Journal compared menopausal patients aged 50 and over who had single-level lumbar fusion. Those who had used estrogen therapy beforehand had higher rates of failed bone healing (pseudarthrosis) and emergency department visits afterwards. Reoperation rates were similar. The authors say this is an association and that causality needs further study.

GLOBAL SPINE JOURNAL · 2026-10-07

Review outlines fertility treatment options for LGBTQ+ families and barriers to care

A narrative review in Obstetrical & Gynecological Survey summarises family-building options for LGBTQ+ people in the United States. These include insemination, IVF and surrogacy. It reports that pregnancy outcomes for same-sex female couples were comparable to or exceeded those of heterosexual couples. The review also covers barriers to care.

OBSTETRICAL & GYNECOLOGICAL SURVEY · 2026-10-07

Body image and anxiety linked to how transmasculine people perceive their voice

A small longitudinal study in the Journal of Speech, Language, and Hearing Research followed 26 transmasculine people for six months after starting hormone therapy. Voice pitch, quality and resonance changed. Body image, state anxiety and pitch were associated with how people perceived their own voice and its daily impact. The study shows associations, not causes.

JOURNAL OF SPEECH, LANGUAGE, AND HEARING RESEARCH : JSLHR · 2026-10-07

Statin use linked to more urogenital symptoms in postmenopausal women

A cross-sectional study in Climacteric included 1184 postmenopausal women from nine Latin American countries. Statin users reported more severe urogenital symptoms than non-users, 24.4% versus 12.3%. They also reported lower sexual function. A single-time-point study cannot show cause. The authors say longitudinal studies are needed.

CLIMACTERIC : THE JOURNAL OF THE INTERNATIONAL MENOPAUSE SOCIETY · 2026-10-07

Review finds probiotic evidence for ovarian aging mostly preclinical, with no randomised human trial

A narrative review in Food Science & Nutrition examined probiotics and the gut-ovary link in female reproductive aging. The authors found the evidence is mostly preclinical. Their searches found no randomised human trial designed to test whether probiotics slow the loss of ovarian reserve or delay ovarian aging.

FOOD SCIENCE & NUTRITION · 2026-10-06

Perspective says heart calcium scores may need sex-specific interpretation

A perspective in Future Cardiology reviews literature on coronary artery calcium scoring. It says women tend to develop detectable calcium later and have lower absolute values at a given age. A low score in a woman may therefore still be a high percentile for her age and sex. The authors say separate treatment thresholds need prospective testing.

FUTURE CARDIOLOGY · 2026-10-06

Added prostate cancer drugs not clearly tied to more heart events in STAMPEDE analysis

A post hoc analysis of the STAMPEDE trial, published in European Urology, covered 6,292 men with prostate cancer on hormone therapy. Five-year heart event rates with added ARPI drugs were 9% in non-metastatic and 7% in metastatic disease, comparable to hormone therapy alone. The increase in risk was not statistically significant. The text is cut off before further results.

EUROPEAN UROLOGY · 2026-10-06

Article says doctors need better training in menopause care

An article in Obstetrics and Gynecology argues that most physicians, including obstetrician-gynecologists, report inadequate training on menopause care. It says many people therefore manage menopause alone and may turn to unregulated social media and wellness advice. The authors call for medical schools and residency programs to expand menopause education. This is an opinion-style piece, not a study.

OBSTETRICS AND GYNECOLOGY · 2026-10-06

Number of pregnancies shows only weak, unconfirmed link to age at menopause

A cross-sectional analysis in Menopause used US national survey data from about 7,000 women. Three to four pregnancies, compared with none, was linked to menopause 0.62 years later. That link did not hold after statistical correction. The authors describe it as small and nonconfirmatory. Parity showed no significant link.

MENOPAUSE (NEW YORK, N.Y.) · 2026-10-06

Insulin resistance rose faster around menopause in a long-running women's study

According to a study in JCI Insight, researchers followed 1,315 women from midlife for up to 16 visits. Insulin resistance rose faster in the period from 1.5 years before to 2.5 years after the final menstrual period than before or after. This observational finding suggests menopause itself may play a role, though mechanisms remain unknown.

JCI INSIGHT · 2026-10-06

Most surveyed Latin American doctors knew of revised FDA hormone therapy warning

A cross-sectional survey in Menopause covered 2,166 physicians across thirteen Latin American countries. According to the authors, 80.7% knew of the revised FDA statement on menopausal hormone therapy. Self-reported practice changes were reported by 59.4%, and 18.7% reported prescribing more. These are doctors' own reports, not measured patient outcomes.

MENOPAUSE (NEW YORK, N.Y.) · 2026-10-06

Menopause hot-flash drugs linked to better sleep in meta-analysis of trials

A systematic review and meta-analysis in Menopause pooled seven randomised trials with 3,184 women who had moderate to severe hot flashes. Neurokinin receptor antagonists were associated with greater improvement in sleep disturbance than placebo at 4 weeks and 12 weeks. Results at later time points were not shown in the available text.

MENOPAUSE (NEW YORK, N.Y.) · 2026-10-06

MITOCHONDRIA & CELLULAR ENERGY 16

In mice, mitochondrial stress shifts muscle's response to exercise-like contraction

A study in Free Radical Biology & Medicine used mice engineered to have chronic oxidative stress in muscle mitochondria. After one fatiguing contraction session, their muscles activated stress and cell-death pathways. Normal mice instead activated pathways for insulin signalling and glucose metabolism. This is animal research, so it does not show the same happens in people.

FREE RADICAL BIOLOGY & MEDICINE · 2026-10-07

Review: nanoparticles could improve delivery of drugs targeting aging cells, but evidence is early

A review in Ageing Research Reviews examines nanoparticles as carriers for senolytic and senomorphic drugs, which target senescent cells linked to tissue dysfunction in aging. Much of the evidence comes from preclinical disease models. Human studies so far tested small-molecule drugs and gave preliminary or mixed results. The authors list manufacturing and safety hurdles.

AGEING RESEARCH REVIEWS · 2026-10-07

Wild jujube compound extended lifespan and stress resistance in roundworms

A study in the International Journal of Biological Macromolecules tested a polysaccharide from wild jujube in C. elegans roundworms. At the best dose, average lifespan rose 42.03%. The worms also showed lower oxidative stress markers and better survival under heat. This was work in worms, so it says nothing yet about people.

INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES · 2026-10-07

Ketogenic diet improved heart function in aged mice of both sexes

A study in Experimental Gerontology found that in 241 people, lower blood ketone levels were linked to poorer heart function measures. In 22-month-old mice, an 8-week ketogenic diet improved heart function and reduced fat build-up in heart tissue in both sexes. The diet effects were tested in mice only. The human data show association, not cause.

EXPERIMENTAL GERONTOLOGY · 2026-10-07

Genome of 194-year-old tortoise offers clues to long life

A study in Science Advances sequenced the genome and methylome of Jonathan, a 194-year-old Aldabra giant tortoise. It compared him with other tortoises. Jonathan had unique gene variants in most aging pathways. Regions with low methylation entropy were enriched for genes tied to mitochondrial energy and RNA processing. This is a single-animal study, so conclusions are tentative.

SCIENCE ADVANCES · 2026-10-07

Engineered yeast produced more than four times as much NMN

According to a study in Microbial Physiology, researchers engineered baker's yeast to make more nicotinamide mononucleotide (NMN), a precursor of NAD+. Using AI-assisted enzyme design, the best strain reached 60.64 mg/L in 12 hours. That was a 4.4-fold increase over the wild-type strain. This is a production method study. It did not test health effects.

MICROBIAL PHYSIOLOGY · 2026-10-07

Gut-derived compound urolithin D improved memory and behaviour in aging mice

A study in Molecular Neurobiology tested urolithin D, a metabolite made in the gut from ellagitannins, in mice made to age artificially with a sugar compound. Treated mice showed better cognition and less brain pathology. Experiments in neuronal cells pointed to effects on mitochondria. This is animal and cell research, not a human trial.

MOLECULAR NEUROBIOLOGY · 2026-10-07

Review links kidney cell mitochondrial damage to scarring in chronic kidney disease

A review in Molecular Biology Reports examines how damaged mitochondria in kidney tubule cells may contribute to fibrosis in chronic kidney disease. The authors treat this as a contributor and amplifier, not a universal starting event. Treatments aimed at mitochondria look promising, but few have been validated in humans.

MOLECULAR BIOLOGY REPORTS · 2026-10-07

Review links falling growth hormone to heart aging, with early and mixed evidence

A review in Cardiovascular Research examines how declining growth hormone signalling may relate to heart aging. It draws on cell and mouse work, plus one preprint-based hypothesis. It also cites a 2025 randomised trial in heart failure patients with confirmed growth hormone deficiency, where 45 of 64 participants completed and peak oxygen use improved. That trial was not powered for clinical events.

CARDIOVASCULAR RESEARCH · 2026-10-07

Zinc-dependent protein linked to liver cell ageing in alcohol-related liver disease

A study in Gut found that deleting the protein ZFP36L1 in mouse liver cells worsened alcohol-related liver disease and increased cell senescence. In human liver samples, lower ZFP36L1 activity tracked with more senescence and worse disease, and with impaired zinc signalling. Most evidence comes from mice.

GUT · 2026-10-07

Review says exercise may support healthy aging in people living with HIV

A narrative review in the Journal of the Association of Nurses in AIDS Care summarises aging with HIV. The authors report evidence that aerobic and resistance training can improve immune markers, heart and metabolic health, cognition, mood and quality of life, without worsening HIV progression. The review also offers exercise protocols for care settings.

THE JOURNAL OF THE ASSOCIATION OF NURSES IN AIDS CARE : JANAC · 2026-10-06

Longer-lived killifish strain shows steadier brain mitochondria with age

A study in fish, published in Experimental Gerontology, compared the brains of the short-lived GRZ and longer-lived MZCS-222 strains of turquoise killifish. Brain mitochondrial content fell with age in GRZ but stayed stable in MZCS-222. The longer-lived strain showed age-related increases in the antioxidant proteins SOD1 and SOD2. The strain comparison shows these patterns are associated with lifespan.

EXPERIMENTAL GERONTOLOGY · 2026-10-06

Review links mitochondria and cell-death pathway to muscle loss and cognitive decline

A review in Methods describes how combining several laboratory and imaging technologies can trace the mitochondria-pyroptosis axis in aging. Pyroptosis is an inflammatory form of cell death. The authors say pyroptosis signals correlate with declining muscle mass and cognitive function. The review is a methods framework, and it does not report a new human study.

METHODS (SAN DIEGO, CALIF.) · 2026-10-06

Lab sensor tracks metabolism of aging muscle precursor cells in real time

A laboratory study in Biosensors & Bioelectronics describes an electrochemical sensor for muscle precursor cells grown in a dish. Senescent cells showed an energy deficit and failed to make a normal metabolic shift. The signal correlated with senescence markers and predicted later muscle-forming ability. It was also used to test metformin in cells. No human data.

BIOSENSORS & BIOELECTRONICS · 2026-10-05

SIRT2 restored mitochondrial cleanup and maturation in aged cow egg cells in the lab

A study in Theriogenology found SIRT2 protein was lower in aged bovine oocytes, which are egg cells. Adding SIRT2 mRNA improved maturation and mitochondrial function. The work points to a molecular pathway involving SQSTM1. It was done in cow oocytes, not in humans.

THERIOGENOLOGY · 2026-10-05

Two blood markers linked to dyskinesia in Parkinson's patients

A cross-sectional study in Neurobiology of Disease measured blood markers in 247 people with Parkinson's. The PINK1/Parkin ratio and ATF5 were associated with dyskinesia, a movement complication of levodopa treatment. The markers did not separate patients with motor complications overall from those without. An association does not show cause, and the analysis was exploratory.

NEUROBIOLOGY OF DISEASE · 2026-10-05

LONGEVITY RESEARCH

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Review: lab-grown organoids offer a way to study cell senescence

A review in Ageing Research Reviews describes how organoids, three-dimensional tissue models grown from stem cells, are being used to study senescent cells and age-related disease. The authors say they capture more tissue complexity than flat cell cultures or animal models. They also note organoids still cannot fully reproduce the complexity of human ageing.

AGEING RESEARCH REVIEWS · 2026-10-08

Protein UBE2S appears to drive gastric cancer growth in lab models

A study in Cancer Biology & Therapy examined UBE2S in gastric cancer. It was higher in tumour samples, and higher levels were loosely linked to worse survival in public datasets. In cells and mouse xenografts, reducing UBE2S slowed cancer growth. It appeared to work by stabilising another protein, RACGAP1. The work was largely laboratory-based.

CANCER BIOLOGY & THERAPY · 2026-10-08

Yeast study links cell energy and α-ketoglutarate to a nutrient-sensing pathway

A study in Molecular Biology of the Cell examined how yeast cells sense nitrogen through a growth-control pathway called TORC1-Npr1. The researchers found that ATP production and α-ketoglutarate levels shape how the pathway switches on. This is basic laboratory work in yeast. The text does not show any direct finding about human health or aging.

MOLECULAR BIOLOGY OF THE CELL · 2026-10-08

Resolvin E1 aided muscle repair in aged mice

A study in GeroScience tested Resolvin E1, a lipid signalling molecule, in cells and aged mice. In cells, it reduced inflammatory gene activity. In injured aged mice, it sped clearance of immune cells and boosted muscle-forming cells. Muscle function showed only a trend toward improvement. The authors call it a therapeutic candidate. No human data were involved.

GEROSCIENCE · 2026-10-07

Essay argues extending healthspan but not lifespan is an incoherent goal

In an opinion piece in GeroScience, the authors argue that aiming to extend healthspan but not lifespan is a misguided cliché. They note that animal research shows aging can be slowed, which raises both healthspan and later-life time in poor health. They say withholding a life-extending intervention could be unethical. This is an argument, not new data.

GEROSCIENCE · 2026-10-07

Older adults show different brain activity when judging personality traits about themselves

A study in GeroScience used EEG to record brain activity in younger and older adults judging whether traits described themselves or others. Older adults showed lower early attention signals but higher late responses to self-related traits. They also showed reduced information flow between brain regions. The text does not link these differences to health outcomes.

GEROSCIENCE · 2026-10-07

Immune cell death linked to prostate cell aging in enlarged prostates on 5-ARI drugs

A study in Experimental & Molecular Medicine examined human prostate tissue and a mouse model of benign prostatic hyperplasia. In tissue exposed to 5-alpha-reductase inhibitors, researchers saw more dying macrophages, more senescent-marked cells and more club cells. Blocking certain signals reduced these changes in lab work. The authors suggest possible drug targets. These are early findings.

EXPERIMENTAL & MOLECULAR MEDICINE · 2026-10-07

Breast tumours with ESR1 mutations show stronger mTOR pathway activity

A study in Communications Biology analysed molecular data from breast tumours carrying ESR1 mutations. These tumours showed more mutations, more cell growth and stronger activation of the mTOR pathway. Cell line data supported the link. The authors also built a signature to flag patients at high risk of recurrence. The work is a data analysis, not a treatment trial.

COMMUNICATIONS BIOLOGY · 2026-10-07

Review asks whether drugs targeting senescent cells could help treat giant cell arteritis

A review in Ageing Research Reviews looks at giant cell arteritis, an inflammatory disease of large blood vessels in older people. It notes growing evidence that senescent cells build up in affected arteries. The authors discuss senolytic and senomorphic agents as possible approaches. It is a discussion of ideas, not a test of treatments.

AGEING RESEARCH REVIEWS · 2026-10-07

Fewer household toilets in a community linked to more depression in older Indians

A cross-sectional study in GeroScience used Longitudinal Aging Study in India data on adults over 45. People in communities with the lowest toilet coverage had a higher risk of depressive symptoms than those in the highest-coverage communities (odds ratio 1.38). The pattern held for probable major depression. This is an association, so cause is not shown.

GEROSCIENCE · 2026-10-07

Raising DYRK1B in lung cancer cells triggered senescence-like changes in the lab

A cell study in Biochemical and Biophysical Research Communications used A549 lung cancer cells. Raising levels of the enzyme DYRK1B produced signs of senescence, including a growth-arrest protein and inflammatory secretions. A kinase-impaired version did not. The authors say the idea that this helps tumours persist is speculative and needs testing in living organisms.

BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS · 2026-10-06

Blocking mTORC1 limits airway scarring after injury in mice

A study in The Laryngoscope looked at airway narrowing after injury. In mice, removing the mTORC1 protein from tracheal tissue stopped the usual thickening. Rapamycin given in the first week also reduced it. Later rapamycin did not. This was animal work, with human tissue only stained to check mTORC1 activity.

THE LARYNGOSCOPE · 2026-10-06

Review examines microplastics as a possible heart disease risk factor

A narrative review in The American Journal of Medicine says microplastics and nanoplastics have been detected in plaques, arteries, heart tissue and blood clots. It cites a 2024 cohort where plaques containing them were linked to higher rates of major cardiac events. Experimental studies suggest possible harm mechanisms. The authors call for larger prospective studies.

THE AMERICAN JOURNAL OF MEDICINE · 2026-10-06

Resveratrol reversed liver-toxin-induced ageing-like changes in lab-grown liver cells

A study in Mechanisms of Ageing and Development exposed human and pig liver cells to toxins typical of liver disease. The cells entered a senescent state and lost functions such as albumin production. Resveratrol at 5 μM reversed this in a species- and function-dependent way. The work was in cultured cells, so benefits in people remain untested.

MECHANISMS OF AGEING AND DEVELOPMENT · 2026-10-06

Placentas from late-onset preeclampsia show signs of accelerated aging

A laboratory study in PNAS examined placental tissue and lab-grown placental organoids. Placentas from late-onset preeclampsia showed shortened telomeres, DNA damage and cell senescence. Oxidative stress appeared to drive these changes in the lab. An antioxidant preserved telomere length in those models. The work has not been tested in patients.

PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA · 2026-10-06

VO2 MAX & ZONE 2 TRAINING 7

Blood fat molecules linked to fitness levels in humans, with animal comparisons

A study in Circulation: Genomic and Precision Medicine profiled circulating lipids in adults undergoing exercise testing. Of 1896 lipid species detected, 47 were associated with peak oxygen consumption, a fitness measure. Most of these also changed with exercise. The findings are associations, so they do not show these lipids cause better fitness.

CIRCULATION. GENOMIC AND PRECISION MEDICINE · 2026-10-07

Higher fitness linked to lower breast cancer risk, even among women with high genetic risk

A prospective cohort study in Medicine & Science in Sports & Exercise followed 15,199 postmenopausal women in the UK Biobank. Higher cardiorespiratory fitness was associated with lower breast cancer risk. It was also associated with weaker excess risk from high genetic risk scores, especially in women aged 60 and over. This shows association, not cause.

MEDICINE AND SCIENCE IN SPORTS AND EXERCISE · 2026-10-06

Fitness test results improve 10-year death risk prediction in large US cohort

According to a study in Medicine and Science in Sports and Exercise, researchers analysed 562,234 adults who had treadmill tests. Each 1-MET higher fitness was linked to a 16% lower hazard of death. Adding fitness to standard risk factors improved 10-year mortality prediction. This is an observational analysis, so it shows association, not cause.

MEDICINE AND SCIENCE IN SPORTS AND EXERCISE · 2026-10-06

Technical report describes a modified gum graft method around teeth

A technical report in Clinical Advances in Periodontics describes a modified way to add keratinized gum tissue around teeth, using a single strip from the palate. It presents one representative case. The author reports more attached gum, limited pain and donor-site healing within 2 weeks. The report says randomised trials are needed to confirm these observations.

CLINICAL ADVANCES IN PERIODONTICS · 2026-10-06

Review finds heart, lung and muscle limits behind low endurance in cerebral palsy

A narrative review in the Journal of Rehabilitation Medicine looked at why people with cerebral palsy often have lower endurance. It points to heart and lung limits, and to muscle changes such as lower muscle volume and mitochondrial function. The authors say impairments were greater with more functional limitation. They note that the studies varied in method.

JOURNAL OF REHABILITATION MEDICINE · 2026-10-06

Race data suggest a pro cyclist may have extremely high aerobic capacity

A study in the International Journal of Sports Physiology and Performance estimated oxygen uptake for one world-class male cyclist from competition climbing data. Estimates averaged about 96 mL per kg per minute. The methods were checked against laboratory data from another rider. The authors call the evidence potential, and it covers a single athlete.

INTERNATIONAL JOURNAL OF SPORTS PHYSIOLOGY AND PERFORMANCE · 2026-10-05

Teens with obesity and fatty liver disease had lower fitness in a follow-up study

A study in JHEP Reports followed 142 adolescents with obesity through a residential lifestyle programme for 9 to 12 months. Those with fatty liver disease had lower cardiorespiratory fitness at the start than those without. Boys whose liver disease persisted, and girls with it at baseline, lost 7 to 9 percent of lean body mass. The design shows associations, not causes.

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