The Arising

OCTOBER 17, 2026

DAILY ISSUES



EDITORIAL ILLUSTRATION / AN ARTISTIC INTERPRETATION

Rest belongs in the story.

SLEEP / METABOLISM / HEALTHSPAN

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

SATURDAY, OCTOBER 17, 2026 | VOL 1 NO 15 | ARISING HEALTH

10 stories across 2 desks | ~24 minutes to read | 184 briefs grouped by topic

Checked before print. 292 claims in 10 articles and 184 briefs verified against their sources by a separate reviewer · 8 articles and 24 briefs corrected before publication

LONGEVITY & HEALTHSPAN

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Helping Others Linked to Slower Memory Decline in High-Risk Gene Carriers

Among older adults who carry the best-known genetic risk factor for late-onset Alzheimer's...

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Big Dogs Age Faster Epigenetically, Science Study of 894 Dogs Finds

Big dogs die younger than small ones.

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BRIEFS

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The Arising

HEALTH INTELLIGENCE

SATURDAY, OCTOBER 17, 2026 · LONGEVITY & HEALTHSPAN DESK

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LONGEVITY & HEALTHSPAN · STANDARD READ · 3 MIN

THE JOURNALS OF GERONTOLOGY. SERIES A, BIOLOGICAL SCIENCES AND MEDICAL SCIENCES · 2 SOURCES

Napping Most Days Linked to 48% Higher Dementia Hazard in Older Adults

Older adults who napped most days had a 48% higher hazard of developing dementia over the next decade than those who rarely or never napped. Falling asleep without meaning to carried a separate, slightly smaller 39% higher hazard. That is the finding of a new study in The Journals of Gerontology: Series A. It is an association, not proof of cause. Our own view, which the study does not test, is that frequent or unplanned daytime sleep may be worth raising with a doctor, not only changing as a habit.

This is an observational study in people. It cannot show that napping causes dementia. Researchers at the Johns Hopkins Bloomberg School of Public Health used data from the National Health and Aging Trends Study, a survey

of U.S. Medicare beneficiaries aged 65 and older. The analysis included 995 participants who showed no sign of possible or probable dementia in 2013. They were followed up to 2023.

In 2013, participants answered questions about their napping. Those who said they napped "never" or "rarely" were counted as non-nappers. Those who napped "some days" were infrequent nappers. Those who napped "most days" or "every day" were frequent nappers. Participants were also asked whether naps were planned or whether they fell asleep without meaning to. They were asked how long naps usually lasted, either 30 minutes or less, or more than 30 minutes.

Dementia was identified at each yearly round by a validated algorithm, not by a clinical exam. The outcome was "possible or probable" dementia. Possible dementia meant impairment in one area of thinking. Probable dementia meant a reported diagnosis, an informant report of dementia, or impairment in at least two areas.

Compared with non-nappers, frequent nappers had 1.48 times the hazard of developing possible or probable dementia (95% confidence interval 1.14 to 1.94). Unintentional napping was also linked to higher risk (hazard ratio 1.39; 95% CI 1.06 to 1.81). Infrequent napping and intentional napping showed no association.

The results for length were less clear. Naps of 30 minutes or less were linked to higher risk (hazard ratio 1.40; 95% CI 1.06 to 1.85). Naps longer than 30 minutes were not clearly linked once the analysis also adjusted for sleep factors (hazard ratio 1.28; 95% CI 0.96 to 1.69). So the study does not show that short naps are worse than long ones.

The analysis adjusted for age, sex, race and ethnicity, education, smoking, body mass index, number of health conditions, depressive and anxiety symptoms, nighttime sleep duration, daytime sleepiness and risk of obstructive sleep apnea, a breathing disorder that disrupts sleep.

The authors also tried to address reverse causation, meaning that early brain changes might cause the napping rather than the reverse. They excluded dementia cases in the first five years of follow-up. According to Neuroscience News, which covered the study, the associations for frequent and unintentional napping held steady. The coverage went further than the study in saying this shows napping changes emerge years before diagnosis. The paper itself describes napping as possibly a risk factor "if supported by further evidence."

The paper notes that napping may reflect disease rather than drive it. For example, damage to wake-promoting brain cells linked to tau pathology can cause excessive daytime sleepiness. "More frequent napping could be a marker of changes in the brain, rather than a cause of brain changes that lead to dementia," senior author Adam Spira told Neuroscience News.

FOR YOU

What does this mean for personal health? The study does not show that cutting back on naps lowers dementia risk. The paper notes that naps can result from disturbed nighttime sleep, including undiagnosed sleep disorders. Our suggestion, not a finding of the study, is that falling asleep without meaning to, or a new pattern of napping most days, is worth raising with a doctor, who can look for causes such as sleep apnea or other health problems. The study did not test any such steps, and this is the weakest link in the argument.

The study has limits. Napping was self-reported at one point in 2013. Dementia was classified by algorithm. The sample was limited to those who answered the sleep module, and those left out of the main analysis were older, had lower education and more depressive and anxiety symptoms. The authors call for studies with more detailed napping measures and longer follow-up.

Lead author Kening Jiang said, according to Neuroscience News, that monitoring napping could be an early and accessible marker of higher risk. The study was supported in part by the National Institute on Aging. What to watch next: studies that track napping with wearable sensors and test whether treating poor sleep changes cognitive outcomes.

Sources: The journals of gerontology. Series A, Biological sciences and medical sciences (2026), Neuroscience News (Johns Hopkins Bloomberg School of Public Health study)

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LONGEVITY & HEALTHSPAN · STANDARD READ · 3 MIN

ALZHEIMER'S & DEMENTIA : THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

Helping Others Linked to Slower Memory Decline in High-Risk Gene Carriers

Among older adults who carry the best-known genetic risk factor for late-onset Alzheimer's disease, those who took up and kept up volunteering lost memory and thinking skills more slowly than carriers who did not. The finding comes from a large observational study in Alzheimer's & Dementia, the journal of the Alzheimer's Association.

This was not an experiment. Researchers Sae Hwang Han and Jessica Faul analyzed more than two decades of survey data (1998 to 2020) from the Health and Retirement Study, a US panel of adults aged 51 and older. The final sample was 17,972 people, who contributed 139,777 interviews. Because the study observed people rather than assigning them to volunteer, it shows an association, not cause and effect.

The gene in question is APOE ε4. People carry zero, one or two copies. One or more copies raises the risk of Alzheimer's disease. Two copies are linked to markedly faster decline, often becoming clear in a person's 70s, according to the paper. The authors note that few drugs or behaviors reliably counter this faster decline.

Their reasoning was that APOE ε4 acts partly through inflammation, blood vessel problems and the body's stress response. Prosocial helping, they write, has been linked to healthier stress regulation, lower inflammation and reduced cardiovascular risk. That points in the opposite direction. The study did not measure any of these biological pathways, so this remains a hypothesis.

Cognition was scored at each interview with a 27-point test. It covers word recall, serial subtraction and backward counting. Genes were read from saliva samples collected between 2006 and 2012. Only people who gave DNA could be included.

Helping was measured in two ways. Formal volunteering meant unpaid work for religious, educational, health-related or other charitable groups in the past year. Informal helping meant unpaid help for friends, neighbors or relatives who did not live with the person. The models tracked changes within each person over time, which helps reduce some biases common in this kind of research.

The main result: adopting and sustaining formal volunteering was linked to a smaller accelerated decline among ε4 carriers. Protective associations appeared at modest levels, up to 4 hours a week. Informal helping was protective in a narrower group, Hispanic older adults. The authors say this highlights the role of cultural context.

The effect looked specific to APOE ε4. It did not extend to a broader genetic risk score for Alzheimer's that excluded the APOE region. The authors read that as consistent with helping acting on the pathways through which ε4 works.

The paper's own wording is cautious: it says prosocial helping "may be" a feasible, scalable strategy for slowing APOE ε4-driven cognitive decline. That is a hypothesis the study cannot confirm, because it observed people rather than testing an intervention.

There are limits. People who feel well and sharp may be more able to volunteer, although the team lagged its controls and modeled changes in helping to address this. Unmeasured factors could remain. Only people who gave DNA were included, so the sample is a selected subset of the larger survey. The study covered non-Hispanic White, non-Hispanic Black and Hispanic adults.

For families worried about Alzheimer's, the practical message is modest. The association appeared at up to 4 hours a week of formal volunteering, so the data do not point to a need for heavy time commitments, but they cannot show that volunteering causes the difference. The authors call for studies that add biomarkers, brain imaging and physiological measures, which they say will help clarify

mechanisms, and for culturally tailored programs. The weakest point of the argument is causation: this design cannot rule out that healthier people simply volunteer more.

Source: Alzheimer's & dementia : the journal of the Alzheimer's Association (2026)

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LONGEVITY & HEALTHSPAN · STANDARD READ · 2 MIN SCIENCE · 2 SOURCES

Big Dogs Age Faster Epigenetically, Science Study of 894 Dogs Finds

Big dogs die younger than small ones. A new study suggests their cells show it well before the end: larger dogs, and male dogs, appear to age faster at the molecular level.

The work was published in Science. It is an observational study, not an experiment. The researchers measured DNA methylation, a chemical tag on DNA, in 1,640 samples from 894 dogs. They then compared the patterns with each dog's age, size and sex. The authors are part of the Dog Aging Project Consortium. According to GEN, which covered the paper, the team was led by Arizona State University.

The question matters beyond dogs. Epigenetic clocks are popular tools that estimate biological age from methylation patterns. A common doubt is whether they track real aging or just reflect a statistical pattern. Dogs offer a test. Their lifespans vary widely by body size. If a clock tracks real aging, it should run faster in groups that tend to die sooner.

That is what the authors report. They built an epigenetic clock for dogs, and it predicted mortality. They also found that epigenetic aging is fastest early in life. The study found that larger and male dogs, which are shorter lived, show accelerated molecular aging. This is an association. The study does not show that faster methylation change causes earlier death.

The patterns behind size and sex differed. Sex-dependent methylation changes were concentrated on the X chromosome. Size-associated changes were especially pronounced at transposable elements, or TEs. GEN describes these as stretches of DNA that can influence genome stability and gene regulation. They are often called jumping genes. They are normally kept quiet by tags such as methylation.

GEN quotes the authors as saying larger dogs show greater methylation loss at TEs with age, "consistent with increased immune remodeling and genomic instability." The abstract itself is more cautious. It says TEs are a potential mediator of size-associated lifespan. That is a hypothesis to test, not a finding that TEs shorten life.

What might this mean for people? The abstract offers two links. At dog counterparts of human age-associated genes, methylation changed with age in concordant ways. The authors say this points to conserved remodeling of immune pathways. That suggests dog and human aging share some biology. The study did not test people, and it does not show that keeping TEs silent would extend human life or health.

FOR YOU

For readers following biological-age tests, the takeaway is measured. Here, a clock tied to mortality also separated groups with different expected lifespans. That is modest support for the idea that such clocks capture something real. The abstract gives no detail on how accurate the clock is for any one animal, and the same may be true for individual people. Group-level patterns do not guarantee a reliable personal score.

GEN also reports that small breeds can live nearly twice as long as large ones. That figure comes from the coverage, not the abstract we reviewed.

Next, watch for tests of whether TE methylation changes occur in people and whether they predict health outcomes, and for any trial that checks whether altering them changes aging in dogs.

Sources: Science (New York, N.Y.) (2026), GEN (Genetic Engineering & Biotechnology News), reporting on a study in Science

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LONGEVITY & HEALTHSPAN · STANDARD READ · 3 MIN

BMJ OPEN DIABETES RESEARCH & CARE · 2 SOURCES

Low-Fat Vegan Diet Linked to Less Liver Fat in Type 2 Diabetes

Adults with type 2 diabetes who ate as much as they wanted of a low-fat, plant-based diet for 16 weeks lost about 6 kilograms and about a third of their liver fat, without counting a single calorie. That is the finding of a small, single-arm trial in BMJ Open Diabetes Research & Care. The changes were associated with the diet, not shown to be caused by it, and the blood sugar figures come from press coverage rather than the paper's abstract. The trial leaves one big question open: was it the food, or just the weight loss?

This was a single-arm clinical trial. Twenty-five adults with type 2 diabetes all followed the same diet, and there was no comparison group. It ran in Washington, DC, between January 2024 and November 2025. Without a control group, the results show what changed, not what caused the change.

Participants were asked to eat vegetables, grains, legumes and fruit, and to avoid animal products and added fats. The target mix was about 75% of energy from carbohydrate, 15% from protein and 10% from fat. No meals were provided. A registered dietitian gave weekly group support and individual counseling. Participants were told to eat until full, not to hit a calorie target. They took vitamin B12, kept their usual exercise habits and stayed on their usual medicines unless their own doctors changed them.

The researchers used scans to measure fat inside the liver and muscle, a type of fat stored in places where it does not belong. Fat in these organs is linked to insulin resistance, when the body responds poorly to insulin. According to the paper, average body weight fell by 6.0 kg, or 6.6%. Visceral fat, the fat around internal organs, fell. Liver fat dropped by 33.0% (95% confidence interval, 17.3 to 48.7 percentage points of relative change).

Other measures moved the same way. Fasting and after-meal measures of insulin resistance and insulin sensitivity improved. So did several measures of beta-cell function, which describes how well the pancreas cells that make insulin respond to rising glucose. Advanced glycation end products, or AGEs, also fell in the skin. AGEs are compounds that form when sugars react with proteins and are linked to inflammation.

Lifespan.io, which covered the study, reported further numbers. Average HbA1c, a marker of blood sugar over about three months, fell from 7.6% to 6.6%. Fasting glucose fell from 155 to 116 mg/dL. Participants reported eating about 346 fewer calories a day. LDL cholesterol fell, but HDL cholesterol fell too, and triglycerides did not change significantly. Lifespan.io also said five of the 16 metformin users cut their dose and two stopped it.

Those medication changes matter. They make it harder to say how much of the blood sugar improvement came from the diet itself. The calorie drop matters too. Even without a target, people ate less and lost weight, and weight loss alone can improve blood sugar and liver fat.

The authors say this directly. Because there was no control group, the changes cannot be attributed to the diet's makeup apart from the lower energy intake and weight loss. They call for randomized trials with comparison groups matched for weight loss or given standard care.

The people studied were also a specific group. They had HbA1c between 6.5% and 10.5% and a body mass index between 26 and 40. They were not using insulin, sulfonylureas or weight-loss drugs, including incretin-based therapies. Lifespan.io noted that some lean mass was lost as well.

FOR YOU

For readers, the practical point is modest. A food-based approach that does not require tracking portions may be associated with weight loss and better metabolic markers in some people with type 2 diabetes. This is our own suggestion, not a finding of the study: do not start this diet, and do not start, stop or change any medication, including reducing or stopping metformin, without talking to your clinician first, since doses may need adjusting. Study lead Hana Kahleova said, per Lifespan.io, that the results show a shift toward plants can reduce liver fat by a third "without anyone having to count a single calorie." The trial design supports the first part of that more firmly than any claim about cause.

The next step to watch is a randomized trial that compares this diet with another approach producing the same weight loss, which would show whether the food itself adds anything.

Sources: BMJ open diabetes research & care (2026), Lifespan.io (study in BMJ Open Diabetes Research & Care)

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LONGEVITY & HEALTHSPAN · STANDARD READ · 2 MIN ADVANCED SCIENCE · 2 SOURCES

Old Bone Marrow Drains NAD+ From Bone-Building Cells, Preclinical Study Finds

Taking a precursor of NAD+ may not be enough if the surrounding tissue is busy breaking it down. A new preclinical study suggests that is what happens in aging bone marrow, where immune cells appear to use up the raw material that bone-building cells need. The species is not named in the abstract; Lifespan.io, which covered the study, describes the work as done in mice.

The work is by Li and colleagues, published in 2026 in the journal Advanced Science. It is preclinical research, meaning lab and animal models, not a trial in people. Only the study's abstract was available to us, and it does not state how many animals were used. Lifespan.io calls the study small.

Some background helps. Bone is constantly rebuilt. Bone marrow mesenchymal stem cells can become bone-forming cells, but with age the marrow fills with fat cells and inflammation. NAD+ is a molecule cells use in energy production. NMN is a building block cells use to make it.

According to the abstract, the chain starts with fat cells that accumulate in marrow. They release a protein called soluble DPP4. This protein acts on a receptor, TLR4, on marrow macrophages, a type of immune cell. Working together with the macrophages' own mitochondrial DNA, it switches on an inflammatory pathway called STING.

The authors report that STING activation raises an enzyme called CD38. This increases inflammation. It also breaks down NMN outside the cells. That leaves less NMN for neighboring stem cells, which the authors say reduces their capacity to form bone.

The timing matters. The abstract says that removing STING from these macrophages was harmful during early bone development and maturation. From middle age onward, though, it protected against age-related bone loss. The authors call this an age-dependent dual role.

The authors then combined a drug that blocks STING with NMN supplementation. They report that this attenuated bone loss in preclinical models. According to Lifespan.io, the STING blocker was H-151, given to mice from 12 to 18 months of age. Lifespan.io also reports that bone improvements were largely similar to those from alendronate, an established osteoporosis drug used as a comparison.

What does this mean for people taking NAD+ boosters? That is interpretation, not a finding. If the marrow environment destroys NMN, a supplement alone may do less there than hoped. Lifespan.io reports that NMN only partly restored energy production in old bone-precursor cells, and did so less well next to old or activated macrophages. The abstract does not say how NMN alone performed in the animal experiments.

The limits are clear. Lifespan.io notes the small size and says that combining two treatments makes it hard to separate the effect of STING blocking from that of NMN. No human data were reported, so the findings give no basis for changing supplement or osteoporosis treatment. Readers should not start or stop any medication or supplement without talking to their clinician.

The next thing to watch is whether STING blockers, tested alone and alongside NMN, hold up in larger studies and in early human trials.

Sources: Advanced Science (2026), Lifespan.io (reporting on Li et al., Advanced Science, 2026)

The Arising

HEALTH INTELLIGENCE

SATURDAY, OCTOBER 17, 2026 · MARKETS & STRATEGY DESK

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3. England's Adult Social Care Workforce Grows at Slowest Rate in Four Years
4. BioAge and Deep Origin Launch Multi-Target AI Drug Discovery Collaboration
5. Neko Health Brings $500 Body Scans to US With 300,000-Person Waitlist

MARKETS & STRATEGY · STANDARD READ · 2 MIN

CLINICAL TRIALS ARENA

Arrowhead Reports Its Tau-Silencing Drug Lowers Spinal Fluid Tau by Up to 73%

Arrowhead Pharmaceuticals says its tau-silencing drug lowered tau in the fluid around the brain and spine by an average of up to 73% in healthy volunteers. These are company-reported interim figures in healthy people, measured in spinal fluid rather than brain tissue, and they come to us secondhand. They put a different kind of drug into a race where rival approaches have reportedly stumbled.

We could not retrieve the Clinical Trials Arena page or the underlying study. This article rests on research desk notes that summarize the Clinical Trials Arena coverage, and nothing here has been checked against that report or against any paper. Every figure below should be read as reported, not verified.

According to the desk notes, the data are interim results from a Phase I/IIa trial (NCT07221344) of ARO-MAPT, presented at an Arrowhead R&D webinar on October 14, 2026. The drug is described as an RNA interference therapy injected under the

skin. It silences the MAPT gene, which makes tau, and is said to lower all six forms of the protein.

The notes report average reductions in spinal fluid tau at day 105 of 40%, 69% and 73% across three dose groups. The best single participant fell 85%. The doses were 2.1 or 6.4 mg/kg on days 1, 8 and 15, or 12.8 mg/kg on days 1 and 15. Tau is said to have stayed lower 90 days after the last dose. Arrowhead says this supports dosing every three months or less often. Most side effects were reportedly mild, Grade 1, and the drug was described as generally well tolerated. We have not seen the safety data.

These results come from healthy volunteers. They suggest the drug reaches its target. They do not show that it helps patients. Arrowhead is now testing it in people with early Alzheimer's in the second part of the trial, which reportedly plans to enroll up to 64 healthy volunteers and 48 patients. CEO Christopher Anzalone is quoted as describing the results as "deep and durable reductions of tau expression in the brain." That is the company's characterization, and we could not verify it against the original coverage.

On the competitive context, the notes say antibody drugs aimed at tau have had setbacks. J&J reportedly dropped posdinemab after a Phase IIb failure. Biogen's anti-tau drug reportedly missed its main goal at AAIC 2026. Eisai's etalanetug is reportedly in Phase II/III. We have not confirmed these details independently.

The strategic point is our interpretation, not a finding. Antibodies try to clear tau outside cells. Arrowhead's approach lowers how much tau is made in the first place. Whether that difference leads to better clinical outcomes is unknown, and the early data do not answer it. This is the weakest link in the argument: lower spinal fluid tau in healthy people is a biomarker result, and it may not translate into any benefit for patients.

WHAT TO WATCH NEXT

The patient data from the early Alzheimer's part of the trial, and whether lower tau translates into any measurable clinical benefit. This article is not medical advice. Do not start or stop any medication or treatment without speaking to your clinician.

Source: Clinical Trials Arena (page not retrieved; summarized via research desk notes)

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MARKETS & STRATEGY · STANDARD READ · 1 MIN

MARKET IMPACT · EUROPEAN MEDICINES AGENCY

EU Drug Committee Backs Lilly's Daily Weight-Loss Pill Foundayo

Europe is one step from authorising a once-daily GLP-1 tablet from Eli Lilly for weight loss and type 2 diabetes. The European Medicines Agency's human medicines committee, the CHMP, recommended Foundayo (orforglipron) at its 12–15 October 2026 meeting, according to the agency. Readers should not start or stop any medication, including GLP-1 drugs, without consulting their clinician.

The committee recommended a marketing authorisation for adults, for weight management and for the treatment of type 2 diabetes. Foundayo is an oral GLP-1 receptor agonist taken as one tablet a day. The EMA describes it as an alternative to injectable and other oral GLP-1 receptor agonists. The applicant is Eli Lilly Nederland B.V.

This is a recommendation, not a final approval. The EMA lists the European Commission's decision on Foundayo as pending. Until the Commission acts, the drug cannot be marketed in the EU on the strength of this opinion.

The market implications below are our analysis, not the EMA's findings. The EMA's wording shows that regulators see a place for a daily tablet alongside injections and existing pills. If the Commission confirms the opinion, Lilly could compete for European patients who prefer not to inject. How much share it wins will depend on price, reimbursement and supply. The EMA announcement does not address any of these, and this is the weakest part of our argument.

The wider meeting was favourable for new drugs. The CHMP recommended six new medicines and issued no negative opinions on new medicines this month. For 2026 so far, the EMA's figures show 72 positive and 8 negative opinions on new medicines. Other recommendations included Rasonque (daraxonrasib) for metastatic pancreatic cancer and Fovlussea, a ranibizumab biosimilar for wet age-related macular degeneration and other eye conditions.

WHAT TO WATCH NEXT

The European Commission's decision on Foundayo, and then whether national health systems agree to pay for it. Patients should discuss any questions about GLP-1 treatment with their own clinician.

Source: European Medicines Agency

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MARKETS & STRATEGY · STANDARD READ · 2 MIN HEALTHCARE LEADER

England's Adult Social Care Workforce Grows at Slowest Rate in Four Years

England's adult social care workforce is still growing, but at the slowest pace in four years. According to Skills for Care, the number of filled posts rose by 1.4%, down from a peak of 4.9% between 2022/23 and 2023/24.

The finding comes from the organisation's annual report on the state of the adult social care workforce in England, as reported by Healthcare Leader. The report says staffing numbers have now grown for four years in a row. It also says vacancies are at their lowest level in a decade.

That is a mixed picture for providers and investors. Lower vacancies suggest staffing is more stable. Slower growth suggests it will be harder to add capacity. Skills for Care also reported fewer British workers in the sector, while international recruitment has fallen significantly. The report describes this as an ongoing challenge for employers.

The most useful finding for operators is about retention. According to the report, turnover among care workers fell from 34.3% to 15.3% at employers that combined competitive pay, guaranteed hours, training, qualifications and full-time employment opportunities. Turnover also fell from 28.3% to 20.6% as the experience of registered managers increased. The source does not give the cost of these measures, so the net effect on operating costs cannot be judged from this report alone.

The report also links workforce conditions to quality. Higher staffing ratios and pay, more training, greater uptake of the care certificate standards and lower vacancy rates were associated with stronger Care Quality Commission ratings. The report describes an association, not proof of cause. For providers, the link may matter because quality ratings are likely to bear on how they are viewed, though the source does not say so.

Younger workers are a weak point. Young people make up 7% of the workforce in 2025/26, compared with 12% of England's economically active population. Turnover among workers under the age of 25 was 35.5% between March 2025 and March 2026, the highest of any age group. Skills for Care warned that attracting younger workers will matter more as growth slows and international recruitment declines.

Policy may shape the next phase. The report was published weeks after Prime Minister Andy Burnham set out plans for a National Care Service. Health secretary Yvette Cooper has said an adult social care workforce plan will be released by the end of the year. Skills for Care chief executive Professor Oonagh Smyth said: "there can be no sustainable reform of care without a sustainable, skilled and valued workforce." She also called for scaling up the Care Workforce Pathway, a career framework launched in 2024. According to the report, 26% of employers polled use it.

Sir Ciarán Devane, chief executive of the NHS Alliance, said the government must make sure social care is "a great place to work" as it plans a better funded, universal national care service. The source gives no details on funding or pay terms.

WHAT TO WATCH NEXT

The government's adult social care workforce plan, due by the end of the year, and whether it sets out pay, training and recruitment measures for providers.

Source: Healthcare Leader (reporting Skills for Care's State of the Adult Social Care Sector report)

IN THIS EDITION · MARKETS & STRATEGY

1. Arrowhead Reports Its Tau-Silencing Drug Lowers Spinal Fluid Tau by Up to 73%
2. EU Drug Committee Backs Lilly's Daily Weight-Loss Pill Foundayo
3. England's Adult Social Care Workforce Grows at Slowest Rate in Four Years
4. **BioAge and Deep Origin Launch Multi-Target AI Drug Discovery Collaboration**
5. Neko Health Brings $500 Body Scans to US With 300,000-Person Waitlist

MARKETS & STRATEGY · STANDARD READ · 2 MIN DEAL FLOW · CONTRACT PHARMA

BioAge and Deep Origin Launch Multi-Target AI Drug Discovery Collaboration

BioAge Labs and AI drug discovery company Deep Origin have launched a multi-target collaboration that already reached its first milestone: Deep Origin's software produced lab-confirmed drug hits against a new BioAge target in under three months. Financial terms were not disclosed beyond Deep Origin's eligibility for milestone payments.

The companies announced the collaboration on October 14, 2026, according to Contract Pharma. BioAge is a clinical-stage company that develops treatments for cardiometabolic diseases by targeting the biology of human aging. Deep Origin supplies computational drug discovery.

The first milestone is concrete. Deep Origin's platform delivered several structurally distinct small-molecule hits against the target. BioAge's wet lab then validated them. BioAge is now moving that target into hit-to-lead optimization, the stage where chemists refine early hits into more drug-like molecules.

According to Contract Pharma, the collaboration relies on hybrid AI and physics-based models, which lets the companies focus on novel targets, meaning those with little known chemistry to start from.

Deep Origin CEO Michael Antonov described the fit this way: "BioAge finds its targets in human data, from people followed for decades." He said many of those targets are novel, with little known chemistry, which is the problem Deep Origin's virtual screening was built to address. He also said BioAge set a high bar for the molecules its chemists would take forward.

BioAge CEO Kristen Fortney said, "AI can help shorten the path from human biology to new medicines." She said the collaboration showed potential to speed early small-molecule discovery, and that BioAge looks forward to extending the work to additional targets.

On the business side, Deep Origin is eligible for milestone payments based on the success of the collaboration. Contract Pharma did not report an upfront payment, a total deal value or how many targets are planned. Because those terms were not disclosed, readers should not assume there are no upfront or access fees, and the size of the commitment is hard to judge.

For the market, the deal is a modest but useful data point. Many companies now sell AI-driven discovery, and the open question is whether it delivers usable starting molecules on hard, unprecedented targets. Milestone payments linked to the collaboration's success may suggest some confidence on both sides, but that is our reading, and the source does not say how the payments are set or what else Deep Origin is paid.

Some caution applies. Hits are an early step. The announcement does not say whether any molecule will become a clinical candidate, and the timeline claim comes from the companies themselves. Early discovery speed matters only if later stages also succeed.

WHAT TO WATCH NEXT

Whether BioAge names additional targets under the agreement, and whether the first target produces optimized lead compounds from the hit-to-lead work.

Source: Contract Pharma

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MARKETS & STRATEGY · STANDARD READ · 2 MIN

MARKET ENTRY AND PRICING · TECHCRUNCH

Neko Health Brings $500 Body Scans to US With 300,000-Person Waitlist

Neko Health, the Swedish startup behind a one-hour preventive body scan, has opened in New York with a price tag of $500 and a global waitlist the company says tops 300,000 people.

The company was co-founded by Spotify's Daniel Ek and Hjalmar Nilsonne. According to TechCrunch, it has raised nearly $1 billion in total. The scan screens for issues in the blood, skin and metabolism, and it uses computer vision as part of the process.

The pricing model is the key strategic detail. The $500 fee is not covered by insurance. According to TechCrunch, it should qualify as an acceptable expense for people with health savings accounts, or HSAs. That means Neko is selling directly to consumers, not to insurers or health systems. It avoids the slow work of winning coverage, but it also limits the market to people who can pay up front or use pre-tax health funds.

Farooq Abbasi of Preface Ventures, an investor in the company, argues the U.S. is a natural target. He told TechCrunch that people use preventive care less in the U.S. because of cost concerns. He said, "I think preventative care and healthcare should be cheap and accessible." Whether $500 meets that description is a fair question. The source does not say how Neko's price compares with other preventive services.

The product is also changing. Abbasi said his first scan included a blood test with 15 biomarkers. His most recent scan covered 55. He has been scanned twice and said he loves it. He said, "I think there should be Neko clinics everywhere." As an investor, he has a stake in the company's success, so his view should be read in that light.

Abbasi rejects the idea that Neko is another wellness fad. He says it gives people "actionable insights to make their lives better." The source offers no data on health outcomes, accuracy or cost savings. Those claims remain untested in the reporting.

The competitive and regulatory picture is still open. TechCrunch notes that Neko has a long way to go in the U.S., especially on scaling and regulatory approval. The company is eyeing expansion across the country. The source does not name specific regulators, rivals, new locations or timelines.

The waitlist figure is a company claim and covers a global audience. It shows demand for the concept, but it does not show how many people will pay $500, or how many will return for repeat scans. That repeat rate will matter for the business, since a one-time scan is a thin base for a clinic network.

WHAT TO WATCH NEXT

Whether Neko names its next U.S. cities, how it handles regulatory approval, and whether it publishes evidence that its scans lead to better health outcomes.

Source: TechCrunch

The Arising

HEALTH INTELLIGENCE

SATURDAY, OCTOBER 17, 2026 · BRIEFS

IN THIS EDITION · BRIEFS · 184 SHORT STORIES IN 18 TOPICS

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

FASTING, AUTOPHAGY & METABOLIC HEALTH 13

Review argues CD133 cancer marker's function depends on its molecular state

A review in Biomarker Research looks at CD133, a widely used cancer stem cell marker. The authors say past findings conflict because CD133-positive cells are not all alike. Splicing, chemical modifications and location in the cell may shape its role. They propose therapies should target harmful CD133 states, not simply CD133-positive cells. This is a proposal, not trial evidence.

BIOMARKER RESEARCH · 2026-10-09

Review describes metabolic enzymes that also act as protein kinases and phosphatases

A review in Trends in Biochemical Sciences describes a subset of metabolic enzymes that also work as protein kinases or phosphatases. These extra roles link a cell's metabolic state to its signalling. The authors say they influence processes such as autophagy, the cell cycle and immune responses, with implications for health and disease.

TRENDS IN BIOCHEMICAL SCIENCES · 2026-10-09

Arsenic exposure shortens lifespan in roundworms and affects their offspring

A study in Ecotoxicology and Environmental Safety exposed C. elegans roundworms to sodium arsenite. The worms had shorter lifespans, weaker movement and more oxidative stress, and offspring were affected too. Changes in insulin signalling and autophagy genes were seen. Rapamycin eased the effects. This is worm research, so it does not show the same effects in humans.

ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY · 2026-10-09

Review argues rapamycin does enter the brain despite absence in spinal fluid

A narrative review in the Journal of Alzheimer's Disease challenges the belief that rapamycin cannot reach brain tissue. It cites human and mouse evidence of activity in the brain. It says spinal fluid is a poor measure. The authors note that direct measurement of the drug in intact human brain tissue at therapeutic doses is still lacking.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-09

PARP inhibitor olaparib eased lung injury in young mice and cells

A study in The Kaohsiung Journal of Medical Sciences tested olaparib, a clinically approved PARP inhibitor, in immune cells and in juvenile mice with induced acute lung injury. The drug reduced lung damage, inflammation and swelling. Its protective effects weakened when the AMPK pathway was blocked. These are preclinical findings, and no children were treated.

THE KAOHSIUNG JOURNAL OF MEDICAL SCIENCES · 2026-10-09

Review explores how exercise may act through a protein modification called lactylation

A review in Molecular Medicine Reports examines how exercise may influence lactylation, a process where lactate attaches to proteins and changes how they work. The authors say evidence suggests exercise can regulate lactylation, which may affect cell signalling and metabolism. The review also discusses possible clinical uses. It does not present new trial data.

MOLECULAR MEDICINE REPORTS · 2026-10-09

Mouse study links autophagy to liver glucose production via Foxo1

A study in Diabetes, Obesity & Metabolism, using mice and mouse liver cells, found that blocking autophagy reduced glucose production by the liver. It also lowered levels of the protein Foxo1, and the effects were much weaker in mice lacking Foxo1. The findings come from animal and cell experiments, not people.

DIABETES, OBESITY & METABOLISM · 2026-10-09

Intermittent fasting reduced early liver lesions in a rat cancer model

A study in the Journal of Histochemistry and Cytochemistry extended a standard rat model of early liver cancer development by three weeks. This made advanced precancerous lesions easier to study. Rats that underwent intermittent fasting had fewer lesions and better preserved liver structure. This was a study in rats, not in people.

THE JOURNAL OF HISTOCHEMISTRY AND CYTOCHEMISTRY : OFFICIAL JOURNAL OF THE HISTOCHEMISTRY SOCIETY · 2026-10-08

Research on trace elements and diabetic kidney disease has grown, analysis finds

A bibliometric analysis in Renal Failure counted 373 papers on trace elements and diabetic kidney disease published from 1981 to 2025. Output peaked in 2025 with 70 publications, mostly from Asia, especially China. Topics include oxidative stress and newer ideas such as ferroptosis. It maps research trends and does not test health effects.

RENAL FAILURE · 2026-10-08

AI-guided screen finds berberine boosts a prostate cancer drug in lab cells

A laboratory study in Advanced Science used a language-model tool and a 3D cell culture to screen 3,592 natural products. It found that berberine combined with enzalutamide re-sensitized drug-resistant prostate cancer cells in vitro. The authors describe it as proof of concept at an early discovery stage. It has not been tested in patients.

ADVANCED SCIENCE (WEINHEIM, BADEN-WURTTEMBERG, GERMANY) · 2026-10-08

Small study: 16 weeks of low-fat vegan diet in type 2 diabetes

In BMJ Open Diabetes Research & Care, 25 adults with type 2 diabetes were asked to follow a low-fat vegan diet for 16 weeks. The source describes no comparison group. Mean body weight fell by 6.0 kg. The authors report less visceral and liver fat, better insulin sensitivity, lower tissue AGEs and improved beta-cell function.

BMJ OPEN DIABETES RESEARCH & CARE · 2026-10-08

Review explores whether intermittent fasting could affect Alzheimer's disease via BDNF

A review in Physiology & Behavior discusses intermittent fasting and the brain protein BDNF, which is lower in Alzheimer's disease. Preclinical studies suggest fasting raises BDNF and eases some Alzheimer's-related changes. The authors note that human studies linking fasting, BDNF and Alzheimer's are limited. More research is needed.

PHYSIOLOGY & BEHAVIOR · 2026-10-08

Yeast study links unstable chromatin to overactive nutrient-sensing pathway

A study in PLoS Genetics, done in yeast, examined how chromatin, the packaging of DNA, interacts with the nutrient-sensing TORC1 pathway. A histone mutation caused histone loss, overactive TORC1 and mitochondrial problems. The cells became toxic-stressed when TORC1 was blocked. The findings show two-way communication between chromatin and TORC1. No human data were reported.

PLOS GENETICS · 2026-10-08

SLEEP SCIENCE & CIRCADIAN BIOLOGY 14

Review finds little evidence on cannabis for sleep in older adults

A review in the Journal of Cannabis Research says cannabis use for sleep is rising among people over 50. Evidence on whether it works and is safe in this group remains limited. Most experiments involved younger adults. Felt improvements in sleep were often not backed by objective sleep measurements. The authors call for randomised trials in older adults.

JOURNAL OF CANNABIS RESEARCH · 2026-10-09

Irregular sleep and rest-activity patterns linked to higher death risk in cardiovascular-kidney-metabolic syndrome

An observational study in Sleep Health used wrist-worn activity data from 3,061 US adults with cardiovascular-kidney-metabolic syndrome. Fragmented daily rhythms and variable sleep timing were associated with higher all-cause mortality. Longer sleep, higher sleep efficiency and stronger rhythm amplitude were linked to lower mortality. The authors say this does not establish causality.

SLEEP HEALTH · 2026-10-09

Review: harmful Tau changes may be a stuck version of normal stress response

A review in Neuron synthesises findings from human, rodent and fly brains and cell models. Tau phosphorylation occurs in normal states like sleep and in stress, and is usually reversible. Aging, repeated stress and amyloid-β stress may make it persistent. The authors propose Alzheimer's-related Tau changes reflect a dysregulated adaptive response. This is a proposal, not a proven mechanism.

NEURON · 2026-10-09

AI analysis of overnight sleep-study ECGs predicts long-term heart risk

A study in Sleep applied a deep-learning model to single-lead ECGs recorded during sleep studies, plus sleep stage data. It was trained on 15,809 patients and tested on two other hospital groups. Model output was strongly associated with 10-year risks of atrial fibrillation, stroke, heart attack, heart failure and death.

SLEEP · 2026-10-09

Diabetes linked to weaker liver scarring improvement after weight-loss surgery

In a small study of 27 Japanese people with severe obesity, published in the Journal of Diabetes Investigation, sleeve gastrectomy improved liver fat, inflammation and scarring on biopsy one year later. Improvement in scarring was smaller in people with diabetes. The authors suggest blood sugar status may affect whether scarring can reverse. The design cannot prove cause.

JOURNAL OF DIABETES INVESTIGATION · 2026-10-09

Birth month and health: review finds mostly weak links, strongest for schizophrenia

An umbrella review in the Journal of Global Health pooled 10 meta-analyses covering 614 associations between birth month or season and health outcomes. Only 45 were statistically significant. None met the top evidence grade. Winter births were linked to a modest rise in schizophrenia risk (odds ratio 1.05). Most other links were graded weak. These are associations, not proof of cause.

JOURNAL OF GLOBAL HEALTH · 2026-10-09

Sedative and opioid dispensing fell after hip fracture in Ontario older adults

A retrospective cohort study in the Journal of the American Geriatrics Society analysed 114,055 Ontario adults aged 66 and older admitted for hip fracture from 2008 to 2024. Benzodiazepine dispensing fell from 33.7% to 13.3%. Opioid dispensing peaked at 55.8% in 2015 and fell to 44.6% in 2024. Dispensing of both drugs together also declined.

JOURNAL OF THE AMERICAN GERIATRICS SOCIETY · 2026-10-09

Most sleep-related infant deaths in Cook County involved unsafe sleep settings

A registry analysis in Injury Epidemiology looked at 208 sleep-related infant deaths in Cook County, Illinois, from 2019 to 2023. Deaths peaked at 1-2 months of age. Most involved a sleep surface other than a crib or bassinet, and 93% involved soft bedding. Rates differed sharply by race and ethnicity. This is a descriptive case review, not a test of cause.

INJURY EPIDEMIOLOGY · 2026-10-08

COPD flare-up prediction tool recalibrated by country gives more accurate risk estimates

A study in Diagnostic and Prognostic Research updated a tool that predicts 12-month flare-ups of chronic obstructive pulmonary disease. It used data from 5,181 patients in 18 countries. The earlier version overpredicted risk. After adjusting for country, predictions matched observed rates much more closely, while its ability to rank risk stayed similar.

DIAGNOSTIC AND PROGNOSTIC RESEARCH · 2026-10-08

Stress modestly linked to later pre-diabetes and type 2 diabetes in Dutch cohort

A prospective cohort study in BMJ Open Diabetes Research & Care followed 152,861 Dutch adults without diabetes. Overall stress scores showed limited links to diabetes. Moderate financial strain was associated with both pre-diabetes and type 2 diabetes. The authors describe the associations as modest and selective. The design cannot show that stress causes diabetes.

BMJ OPEN DIABETES RESEARCH & CARE · 2026-10-08

Heat pulse resets disrupted body clocks in mouse cartilage tissue

A laboratory study in Osteoarthritis and Cartilage used cartilage samples taken from mice. A 60-minute pulse at 43 °C reset weakened daily rhythms in tissue from young and aged mice. It also countered disruption caused by an inflammatory signal. The authors say this supports more work in osteoarthritis models. It was not tested in people.

OSTEOARTHRITIS AND CARTILAGE · 2026-10-08

In kidney cancer trial data, early symptom changes tracked with survival

A post hoc analysis of the phase 3 CheckMate 9ER trial, reported in Advances in Therapy, examined quality-of-life data in advanced kidney cancer. Early worsening of bone pain and sleep quality was associated with higher risk of death. Patients with limited symptoms at week 13 were generally less likely to see disease progression.

ADVANCES IN THERAPY · 2026-10-08

Repeated sleep restriction worsened memory and brain barrier leakiness in aging female rats

A study in Neurochemical Research restricted sleep in female rats for 10 days every three months, from 6 to 18 months of age. It increased blood-brain barrier permeability and hippocampal inflammatory markers. It also accelerated age-related memory decline. Senescence markers showed no clear effect. These are findings in rats, not people.

NEUROCHEMICAL RESEARCH · 2026-10-08

Sleep-study AI heart risk models may mostly track age and sex

A perspective in the journal Sleep questions AI models that predict cardiovascular disease from sleep studies. The authors found that simple age-sex and traditional risk-factor models predicted six heart outcomes about as well as AI models, including SleepFM. They suggest the AI may be learning proxies for demographics. They call for stronger comparison standards.

SLEEP · 2026-10-08

CLINICAL TRIALS

Early trial of ADCT-701 for neuroendocrine tumours is recruiting, no results yet

A trial registry entry on ClinicalTrials.gov, sponsored by the National Cancer Institute, describes a phase 1 study of a drug called ADCT-701. It is open to adults with neuroendocrine neoplasms, which are rare cancers. The trial is recruiting and has no results yet. It will test the drug given by vein in 21-day cycles.

CLINICALTRIALS.GOV (NCT06041516) · 2026-10-16

Trial registered to test team therapy for children's feeding disorders

A registry entry on ClinicalTrials.gov describes a pilot randomised trial in Italy that is recruiting and has no results yet. It will test whether a psychologist, speech therapist and neuropsychomotor therapist working together can widen food variety and reduce difficult mealtime behaviour in children with neurodevelopmental disorders.

CLINICALTRIALS.GOV (NCT07431671) · 2026-10-16

Planned trial will test phone peer support for older adults with serious mental illness

A trial registered on ClinicalTrials.gov, run by Dartmouth-Hitchcock Medical Center, has not yet started recruiting. It will randomly assign adults aged 50 and older with serious mental illness in supportive housing to a 12-week phone peer support programme or usual peer support. There are no results yet.

CLINICALTRIALS.GOV (NCT07878169) · 2026-10-16

Recruiting phase 1 trial to test baricitinib in Job syndrome

A trial registry entry describes a recruiting phase 1 study sponsored by the National Institute of Allergy and Infectious Diseases. It will test baricitinib, a drug approved for other immune diseases, in people aged 12 and older with Job syndrome, a genetic immune disorder, plus lupus-like disease or skin rash. After a 3-month lead-in, participants take daily tablets for 6 months. No results exist yet.

CLINICALTRIALS.GOV (NCT07262983) · 2026-10-16

Trial of dream-yoga-style virtual reality training registered, with no results yet

A trial registered on ClinicalTrials.gov and run by Northwestern University is recruiting. It will test a Dream-Yoga-inspired programme using virtual reality and home sleep technology against an active control. It will look at lucid dreaming, sleep physiology and cognition. Anxiety is an exploratory outcome only. There are no results yet.

CLINICALTRIALS.GOV (NCT07408206) · 2026-10-16

Early-stage trial is testing a HER2 vaccine plus drugs in endometrial cancer

A registry entry on ClinicalTrials.gov describes a phase 1/2 trial from the National Cancer Institute. It will test a personalised HER2-targeting vaccine and a drug called N-803, alongside two approved cancer drugs. Participants have HER2-positive endometrial cancer that returned or worsened. The trial is recruiting and has no results yet.

CLINICALTRIALS.GOV (NCT06253494) · 2026-10-16

Completed trial compared two orthodontic bracket types and bone thickness

A ClinicalTrials.gov entry, sponsored by Future University in Egypt, describes a randomised trial comparing self-ligating and conventional braces in 20 adults aged 18 to 25 with moderately crowded lower front teeth. It measures the thickness of bone covering the lower incisor roots on CBCT scans before treatment and after alignment. The entry lists the trial as completed but reports no results.

CLINICALTRIALS.GOV (NCT07878234) · 2026-10-16

Phase 2 trial of OVX836 flu vaccine is registered as completed

A ClinicalTrials.gov entry lists a completed phase 2 trial from the sponsor Osivax. It tests one dose of the OVX836 influenza vaccine in healthy adults aged 18 to 59. The aim is to assess efficacy, immune response and safety. The entry shows no results, so nothing is known yet about how well it works.

CLINICALTRIALS.GOV (NCT05569239) · 2026-10-16

Trial registered to test wearable biofeedback for swallowing after stroke or Parkinson's

A ClinicalTrials.gov entry describes a recruiting phase 2 trial from the University of Illinois at Urbana-Champaign. It will test whether a wearable muscle-sensor biofeedback device added to standard swallow therapy improves swallowing in people with stroke or Parkinson's disease. It will also compare telehealth with in-person therapy. No results exist yet.

CLINICALTRIALS.GOV (NCT06638944) · 2026-10-16

Early trial to test engineered T cells against blood cancers with TP53 or RAS mutations

A registry entry on ClinicalTrials.gov, sponsored by the National Cancer Institute, lists a recruiting phase 1 trial. It will test a person's own T cells, modified to target mutation-linked markers on blood cancer cells. The trial is only registered and has no results yet. Participants would be followed for many years.

CLINICALTRIALS.GOV (NCT06904066) · 2026-10-16

Registered phase 1 trial tests new drug combination for relapsed neuroblastoma

A registry entry on ClinicalTrials.gov describes a phase 1 trial, run by the National Cancer Institute, of rhIL-15 plus standard drugs. It is recruiting children and young adults aged 3 to 35 with neuroblastoma that returned or did not respond to treatment. The trial has no results yet, so nothing is known about whether it works.

CLINICALTRIALS.GOV (NCT06995872) · 2026-10-16

Commentary: mid-lobule liver cells sense mechanical stress via PIEZO1

A commentary in Cell Regeneration discusses a Science study by Zhang and colleagues. The study identifies DPP4-positive liver cells in the mid-lobule zone that sense mechanical stress. Activating a sensor called PIEZO1 in these cells sets off signals that link tissue mechanics to cell proliferation and regeneration. The commentary says this pathway might be enhanced with drugs to speed liver repair.

CELL REGENERATION (LONDON, ENGLAND) · 2026-10-10

Greater dizziness handicap linked to lower walking capacity in vestibular hypofunction

In the Journal of Neurologic Physical Therapy, researchers studied 36 people with inner-ear vestibular hypofunction, with an average age around 70. After adjusting for age and sex, higher self-reported dizziness handicap was associated with a shorter 2-minute walk. Objective vestibular tests showed no such link. This was an association study, so it cannot show cause.

JOURNAL OF NEUROLOGIC PHYSICAL THERAPY : JNPT · 2026-10-09

Kidney disease patients with diabetes had lower fitness and heart rate variability

A study in The Journal of Sports Medicine and Physical Fitness compared 72 people with stage 3-4 chronic kidney disease and 22 age-matched controls. Those who also had diabetes had worse heart rate variability and lower cardiorespiratory fitness. However, heart rate variability was not linked to fitness. The authors say other factors may be involved.

THE JOURNAL OF SPORTS MEDICINE AND PHYSICAL FITNESS · 2026-10-09

Review explains why heart transplant recipients have lower aerobic capacity

A review in Experimental Physiology says heart transplant recipients keep reduced exercise tolerance despite training. The authors gather evidence on lung gas exchange, anaemia, heart denervation, muscle blood vessels and more. They hypothesise that several combined limits in oxygen transport, not one main cause, explain the persistent reduction.

EXPERIMENTAL PHYSIOLOGY · 2026-10-09

Evening-type pregnant women had lower fitness and attended fewer prenatal exercise sessions

A study in Birth drew on pregnant women in two randomised exercise trials. Women who described themselves as evening types had lower cardiorespiratory fitness and lower attendance at the exercise sessions than other groups. This is an association, not proof of cause. Findings on cholesterol changes were exploratory and need larger studies.

BIRTH (BERKELEY, CALIF.) · 2026-10-08

Early keratoconus shows distinct corneal surface-layer thickness patterns versus regular astigmatism

A cross-sectional study in BMC Ophthalmology compared 96 eyes from 55 people using eye scans. Early keratoconus showed relative thickening of the top part of the cornea's outer layer and a weaker top-to-bottom gradient than regular astigmatism. The differences held after adjusting for overall corneal thickness. The authors call diagnostic performance moderate, so the scans are an add-on.

BMC OPHTHALMOLOGY · 2026-10-08

Higher fitness linked to lower depression and anxiety risk in UK Biobank

A prospective cohort study in the Journal of Affective Disorders followed 46,062 UK Biobank participants for a median of 12.6 years. Those in the highest fitness quartile had a 24% lower depression risk and a 17% lower anxiety risk than the lowest quartile. This is an association. Blood protein analysis pointed to possible metabolic links.

JOURNAL OF AFFECTIVE DISORDERS · 2026-10-08

Higher fitness before a cancer diagnosis linked to lower risk of death

In a prospective UK Biobank cohort study in Mayo Clinic Proceedings, 10,462 people who later developed cancer were followed. Higher estimated cardiorespiratory fitness was associated with lower mortality, and the link was stronger than for handgrip strength. Grip strength was also linked to survival at low levels. This observational work shows association, not cause.

MAYO CLINIC PROCEEDINGS · 2026-10-08

App-guided exercise improved fitness and mental quality of life after COVID-19 in small trial

A randomised trial in Medicine and Science in Sports and Exercise enrolled 77 inactive adults recovering from COVID-19. Over six months, those using an eHealth exercise tool improved peak oxygen uptake and mental quality of life more than those given standard advice. Fitness was assessed in only 33 people. Physical quality of life did not differ.

MEDICINE AND SCIENCE IN SPORTS AND EXERCISE · 2026-10-08

Review: exercise, protein and GLP-1 drugs may help heart failure patients' muscle and weight

A narrative review in Current Heart Failure Reports looked at ways to improve muscle and body weight in heart failure with preserved ejection fraction. It reports that combined endurance and resistance exercise improved fitness and quality of life. GLP-1 medicines may bring greater weight loss. Evidence for bariatric surgery in this group is limited. The authors call for more trials.

CURRENT HEART FAILURE REPORTS · 2026-10-08

Review of 72 trials links aerobic exercise to better blood vessel function

A systematic review and meta-analysis in Sports Medicine - Open pooled 72 randomised controlled trials with 3357 participants. Aerobic exercise improved blood vessel function, measured by brachial-artery flow-mediated dilation. Gains in fitness, body composition, blood pressure and insulin regulation appeared to account for some of the improvement. The text does not give full results for every marker.

SPORTS MEDICINE - OPEN · 2026-10-08

Review finds limited, mixed evidence for hyperbaric oxygen in older adults

A systematic review in the Journal of Aging and Physical Activity covered seven studies with 502 people aged 51 to 85. Two high-quality studies in healthy older adults reported cognitive and fitness gains. Studies in patients were of moderate quality. Reported side effects were mostly mild. Follow-up was short, so lasting effects are unclear.

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

Review maps why lymphoma cells resist BTK inhibitor drugs

A review in the International Journal of Oncology covers resistance to BTK inhibitors in diffuse large B-cell lymphoma. Response to these drugs varies by molecular subtype. Resistance can arise from gene mutations and from adaptive changes in cell signalling and the tumour environment. Newer drug approaches are being investigated to overcome it.

INTERNATIONAL JOURNAL OF ONCOLOGY · 2026-10-09

Review proposes how fluoride may damage brain cells through several organelles

A review in Chemico-Biological Interactions pulls together existing evidence on fluoride and the nervous system. The authors propose that fluoride disrupts mitochondria, the endoplasmic reticulum and lysosomes, with oxidative stress amplifying the damage. They note the evidence relies on high-dose experimental models. It is a proposed framework, not a new human trial.

CHEMICO-BIOLOGICAL INTERACTIONS · 2026-10-08

Review: long-term critical illness linked to lasting metabolic changes

A narrative review in Nutrition looked at patients with chronic critical illness, who need prolonged organ support. It reports persistent metabolic problems, including mitochondrial dysfunction and reduced ketone production. These may contribute to muscle wasting and slow recovery. The authors note much of the mechanistic evidence comes from preclinical or acute-phase studies, and confirmation in these patients is limited.

NUTRITION (BURBANK, LOS ANGELES COUNTY, CALIF.) · 2026-10-08

Dogs' epigenetic aging runs faster in larger, male animals, which live shorter lives

A study in Science analysed 1640 methylomes from 894 dogs. Researchers built an epigenetic clock that predicted mortality. Larger and male dogs, which are shorter lived, showed faster molecular aging. Size-linked changes were notable at transposable elements. The authors say these elements are potential mediators of size-related lifespan. This is an observational study in dogs.

SCIENCE (NEW YORK, N.Y.) · 2026-10-08

Review suggests long COVID may speed aging and heart risks in younger adults

A review in Ageing Research Reviews synthesised 110 studies on adults aged 25 to 55 with long COVID. It reports signs of faster biological aging, though epigenetic clock results varied from no difference to slight acceleration. It also notes higher cardiovascular risks. The authors say long COVID may be an emerging driver, not a proven one.

AGEING RESEARCH REVIEWS · 2026-10-07

Mouse study maps how immune cells are reprogrammed to help colorectal tumours

A study in Nature Cancer, using mouse models and cell profiling, describes how a protein called GSK3β in gut lining cells drives tumour-associated neutrophils, a type of immune cell, toward a state that helps tumours evade immunity. In preclinical colorectal cancer models, the drug tideglusib reduced this shift and boosted checkpoint immunotherapy. It has not been tested in people here.

NATURE CANCER · 2026-10-06

Review proposes lactic acid may help drive low-oxygen zones in tumours

A Perspective article in Communications Biology proposes that lactic acid made by cancer cells may help create and sustain low-oxygen areas in tumours. This would form a self-reinforcing loop. The authors suggest the loop could be disrupted by targeting lactic acid production or transport. This is a proposed framework, not new experimental data.

COMMUNICATIONS BIOLOGY · 2026-10-06

In aging mice, inflammation markers track with blood-based epigenetic age

A study in Experimental Gerontology measured blood samples from mice aged 12 to 33 months. Three inflammatory signals, TNF-α, CCL2 and IL-6, were positively associated with epigenetic age. TNF-α showed the strongest independent link. The work was done in mice and shows association only, so it does not establish cause or apply directly to people.

EXPERIMENTAL GERONTOLOGY · 2026-10-06

Review links vascular aging to tumour-like changes in artery wall cells

A review in Ageing Research Reviews examines how aging blood vessels may push smooth muscle cells toward tumour-like behaviour in atherosclerosis. It discusses DNA damage, epigenetic changes, clonal expansion and abnormal small vessel growth in plaques. The authors note this is not true cancer. The treatment ideas discussed are mechanistic proposals.

AGEING RESEARCH REVIEWS · 2026-10-06

Perspective proposes brain 'autophagy-epigenome' loop may help explain why obesity persists

A perspective article in Experimental and Clinical Endocrinology & Diabetes offers a working hypothesis, not a finding. It suggests that overeating dampens cell-cleaning processes and silences related genes in appetite-controlling brain neurons. This may help explain weight regain after stopping GLP-1 drugs. The authors say important knowledge gaps remain before any treatment could follow.

EXPERIMENTAL AND CLINICAL ENDOCRINOLOGY & DIABETES : OFFICIAL JOURNAL, GERMAN SOCIETY OF ENDOCRINOLOGY [AND] GERMAN DIABETES ASSOCIATION · 2026-10-05

Review: rare prostate cancer types tend to be aggressive and biologically distinct

A narrative review in The Oncologist examined uncommon prostate cancer histologies. These types are individually rare but are consistently associated with advanced stage and poorer survival. The review links some subtypes to specific genetic features, such as BRCA2 changes in cribriform disease, and describes emerging targeted treatment strategies.

THE ONCOLOGIST · 2026-10-05

GUT MICROBIOME & BRAIN AXIS 13

Two probiotic strains eased IBS-like symptoms in rats

According to a study in Probiotics and Antimicrobial Proteins, two probiotic strains were tested for 14 days in rats with induced IBS-like symptoms. One strain consistently reduced gut hypersensitivity. Both lowered blood IgE, an immune marker. The authors call this preliminary preclinical evidence. The study did not involve people.

PROBIOTICS AND ANTIMICROBIAL PROTEINS · 2026-10-09

Review links gut microbiome changes to immune activity in multiple sclerosis

A review in the Journal of Translational Medicine examined how gut bacteria may relate to multiple sclerosis. Across studies, microbial imbalance was associated with weaker immune regulation and barrier disruption. The authors say some regional findings come from one small pilot cohort and need validation. Microbiome-based treatments remain investigational, not established therapies.

JOURNAL OF TRANSLATIONAL MEDICINE · 2026-10-08

Bone-health trial of a gut-microbiome food in older women reports recruitment data

Contemporary Clinical Trials describes the design of an 18-month randomised, placebo-controlled trial of a synbiotic medical food in women aged 60 and over. It aims to enrol 220 women and measure spine bone density. This report covers recruitment only: 42 were enrolled by July 2025. No results on bone health are reported.

CONTEMPORARY CLINICAL TRIALS · 2026-10-08

Mouse model of dystonia shows gut microbiome changes alongside worsening movement problems

A study in Experimental Neurology followed the gut microbiome of mice carrying a dystonia-linked gene variant. The mice showed early, lasting shifts in gut bacteria and signs of a weakened gut barrier. These coincided with progressive motor problems. The work shows an association, not a cause, and was done in mice.

EXPERIMENTAL NEUROLOGY · 2026-10-08

Review finds overlapping brain-damage pathways in heavy metal exposure and repeated head injury

A review in Experimental Neurology examines how long-term exposure to heavy metals and repeated mild head injury affect the brain. Both involve oxidative stress, inflammation and tau-related changes. The authors suggest metal exposure may reduce resilience to head injury. They note that direct evidence of the two interacting remains limited.

EXPERIMENTAL NEUROLOGY · 2026-10-08

Gut bacteria differ in two brain-based subtypes of pre-Parkinson's sleep disorder

An observational study in EBioMedicine analysed gut microbes and brain scans from 167 people, including those with isolated REM sleep behaviour disorder, an early sign of some brain diseases. Both subtypes had fewer short-chain fatty acid-producing bacteria. The subtype with brain shrinkage showed more gut changes, linked to that shrinkage. The study shows associations, not cause.

EBIOMEDICINE · 2026-10-08

Review links autism risk to shared biology in the first 1000 days

A brief narrative review in Neuropsychiatrie summarises evidence on how genetics, environment, epigenetics, inflammation and gut microbes may shape neurodevelopment in the first 1000 days of life. The authors discuss early prevention opportunities aimed at modifiable risk factors. As a review, it synthesises existing work rather than testing any intervention.

NEUROPSYCHIATRIE : KLINIK, DIAGNOSTIK, THERAPIE UND REHABILITATION : ORGAN DER GESELLSCHAFT OSTERREICHISCHER NERVENARZTE UND PSYCHIATER · 2026-10-08

Severe lysine shortage linked to impaired brain-cell growth in young rats

A study in rats, published in Nutritional Neuroscience, fed adolescent males diets with moderate or severe lysine deficiency for four weeks. Both levels reduced the proliferation of hippocampal neural stem cells. Severe deficiency was also linked to altered behaviour and changes in gut bacteria. The findings are from animals and may not apply to people.

NUTRITIONAL NEUROSCIENCE · 2026-10-08

Perspective: gut problems may be central to Parkinson's, but treatments remain unproven

A perspective in Movement Disorders reviews the role of the gut in Parkinson's disease. Gut microbiome changes are reproducibly associated with the disease. Diet, medication and reverse causation complicate interpretation. Trials of probiotics, fecal transplants and diets have been inconsistent and have not shown they change the disease course.

MOVEMENT DISORDERS : OFFICIAL JOURNAL OF THE MOVEMENT DISORDER SOCIETY · 2026-10-08

Review links gut bacteria imbalance to insulin resistance in polycystic ovary syndrome

A narrative review in Reproductive Sciences examines how gut microbiota imbalance may feed inflammation, insulin resistance and excess androgens in polycystic ovary syndrome. The authors say preclinical fecal transplant work points to a causal role for the microbiome. They also survey diet, probiotics and metformin. The review itself is not a new trial.

REPRODUCTIVE SCIENCES (THOUSAND OAKS, CALIF.) · 2026-10-07

Review proposes fermentation-derived compounds may influence obesity via the gut

A narrative review in Nutrition Reviews synthesised experimental, mechanistic and preclinical studies on fermented foods and obesity. It concludes that anti-obesity effects come less from transient microbial colonisation than from fermentation-derived metabolites such as short-chain fatty acids, conjugated linoleic acid and indole derivatives. These may act through the gut-brain axis, immunometabolic pathways and epigenetic regulation. The review reports no new data of its own.

NUTRITION REVIEWS · 2026-10-07

Review explores how gut bacteria and diet may relate to dementia

A review in Annals of Geriatric Medicine and Research summarises research linking gut microbiota imbalance to neuroinflammation and cognitive decline. It describes microbial metabolites that may influence brain inflammation. The authors suggest fibre-rich, anti-inflammatory diets may support gut health. The text frames these as possible links and targets, not proven causes.

ANNALS OF GERIATRIC MEDICINE AND RESEARCH · 2026-10-07

Review: anesthetic drugs affect the immune system in varied ways

A review in the European Journal of Pharmacology examines how anesthetic drugs influence immunity. It finds the effects are not uniformly suppressive. They vary by drug, dose, timing and clinical setting. Volatile anesthetics, propofol and ketamine each show different immune effects. The authors say ideas like personalised anesthesia remain promising directions, not established practice.

EUROPEAN JOURNAL OF PHARMACOLOGY · 2026-10-07

ALZHEIMER'S & COGNITIVE DECLINE PREVENTION 12

Enlarged brain spaces linked to later bleeding lesions in amyloid-positive older adults

A secondary analysis of a phase 3 trial, published in Annals of Neurology, followed 932 older adults with amyloid but no memory problems. Among those with severe enlarged perivascular spaces on MRI, 33.7% developed small bleeding-related lesions, versus 13.6% of others. The authors say the finding predicts these lesions. It shows a link, not a cause.

ANNALS OF NEUROLOGY · 2026-10-09

Trial plan: cerebellar magnetic stimulation tested in mild-to-moderate Alzheimer's disease

A paper in Trials describes the protocol for a planned randomised, sham-controlled trial. It will enroll 100 people with mild-to-moderate Alzheimer's disease at four centres in China. Participants will get cerebellar theta-burst stimulation or sham stimulation for 12 weeks. The primary outcome is change in a dementia rating score. No results exist yet.

TRIALS · 2026-10-09

Dementia advisors and care staff weigh in on remote end-of-life wishes tool

In Geriatric Nursing, researchers held focus groups with community advisors representing people living with dementia (6), care partners (8) and nursing home staff (9). They discussed adapting Me & My Wishes, a video approach for recording residents' daily and end-of-life care preferences, for remote use. Themes covered feasibility, alignment and measurement. This was qualitative work, not a test of whether the tool works.

GERIATRIC NURSING (NEW YORK, N.Y.) · 2026-10-09

APOE-ε4 and female sex link to more temple-region tau, partly through amyloid

According to a neuropathology study in Acta Neuropathologica, using brain tissue from 2550 participants in two cohorts, APOE-ε4 and female sex were each associated with more tau in the medial temporal lobe. After accounting for amyloid-β there and globally, the APOE-ε4 link was no longer significant. The female-sex link remained. These are associations.

ACTA NEUROPATHOLOGICA · 2026-10-09

Fine-particle pollution from traffic and industry linked to higher dementia risk

A study in the European Archives of Psychiatry and Clinical Neuroscience found that higher fine-particle (PM2.5) pollution from domestic, transport and industry sources was associated with higher dementia risk. Over a median 11.9 years of follow-up, 5,648 dementia cases were identified. People with both high exposure and high genetic risk had the greatest risk. This shows a link, not proof of cause.

EUROPEAN ARCHIVES OF PSYCHIATRY AND CLINICAL NEUROSCIENCE · 2026-10-09

Benzodiazepine use linked to only modestly higher dementia risk after adjustment, Korean study finds

A matched cohort study in the Journal of Alzheimer's Disease compared 132,805 benzodiazepine users with the same number of controls in Korea. Users had higher dementia rates, but after full adjustment the hazard ratio fell from 1.43 to 1.15. The authors attribute this largely to users' greater illness burden. Use was not linked to faster progression to severe dementia.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-09

Interviews with people with Parkinson's point to key walking measures

A study in the Journal of Parkinson's Disease interviewed 72 people with Parkinson's about mobility symptoms. Shuffling gait, slowness of movement and balance problems were most common and bothersome. Twelve experts then judged walking speed, stride length and turn duration as the most relevant digital measures. The work is qualitative and consensus-based.

JOURNAL OF PARKINSON'S DISEASE · 2026-10-09

Review surveys remote tools for tracking swallowing and speech in Parkinson's

A review in the Journal of Parkinson's Disease summarises technologies for remotely assessing swallowing and speech problems in Parkinson's. These include wearable sensors, smartphone voice analysis, biofeedback devices and artificial intelligence tools. The authors discuss challenges such as data quality, usability and security, and point to gaps in evidence that future research must fill.

JOURNAL OF PARKINSON'S DISEASE · 2026-10-09

Short group programme for dementia caregivers linked to lower stress in small study

A study in the Journal of Applied Gerontology tested a four-session group programme combining education, mindfulness and emotional support for 52 dementia caregivers in an acute psychiatric hospital. Participants acted as their own controls through a waiting period, with no separate control group. Perceived stress fell and general functioning improved at follow-up. Depressive symptoms and well-being did not change significantly.

JOURNAL OF APPLIED GERONTOLOGY : THE OFFICIAL JOURNAL OF THE SOUTHERN GERONTOLOGICAL SOCIETY · 2026-10-09

Commentary: Chilean cohort's cognitive complaints reflect mood, medication and possible decline

A commentary in the Journal of Alzheimer's Disease discusses a study by Leniz and colleagues in the semi-rural Chilean MAUCO cohort. Baseline objective test performance did not predict new subjective cognitive complaints. Benzodiazepine use and depressive symptoms did. Yet the complaints predicted later cognitive impairment. The commentary authors argue the complaints have at least two components: one affective or medication-related, and one degeneration-related.

JOURNAL OF ALZHEIMER'S DISEASE : JAD · 2026-10-09

Lower blood BDNF linked to more depressive symptoms soon after stroke

A prospective cohort study in Neurologia i Neurochirurgia Polska followed 110 stroke patients and 33 matched controls. One week after stroke, lower blood levels of the protein BDNF were associated with higher depression scores. This is an association and does not show that BDNF causes depression. The text shown does not complete the other findings.

NEUROLOGIA I NEUROCHIRURGIA POLSKA · 2026-10-09

Many US patients with atrial fibrillation lacked documented blood-thinner prescriptions

A study in Circulation: Population Health and Outcomes used health records from 7 US systems covering 161,295 high-stroke-risk patients with atrial fibrillation. Some 57.4% had a documented anticoagulant prescription at diagnosis. Among them, 45.6% had none documented over the next year. Dementia and prior major bleeding were associated with lower odds of prescribing.

CIRCULATION. POPULATION HEALTH AND OUTCOMES · 2026-10-09

WOMEN'S HEALTH & HORMONAL TRANSITIONS 12

Sleep apnoea severity linked to insulin resistance markers in children with Prader-Willi

A small retrospective study in the European Journal of Pediatrics looked at 31 children with Prader-Willi syndrome. Worse obstructive sleep apnoea was associated with markers of poorer insulin sensitivity. The authors call the findings hypothesis-generating. They say larger independent groups are needed to confirm the results. The study shows an association only.

EUROPEAN JOURNAL OF PEDIATRICS · 2026-10-09

In mice, estradiol's memory benefits depended on protein breakdown in the hippocampus

A study in The Journal of Neuroscience used female mice with their ovaries removed. Blocking the proteasome, which breaks down proteins, in the hippocampus stopped estradiol from improving object recognition memory. It also reduced some estradiol-linked changes in neuron spine structure. This is animal research, not a study in people.

THE JOURNAL OF NEUROSCIENCE : THE OFFICIAL JOURNAL OF THE SOCIETY FOR NEUROSCIENCE · 2026-10-09

Women with breast pain who report more pain tend to view complementary medicine more favourably

A cross-sectional study in Complementary Therapies in Medicine surveyed 105 women with mastalgia, or breast pain. Higher sensory and affective pain were associated with more favourable attitudes toward complementary medicine. Higher sensory pain was also linked to using more practices. Such a design shows associations only, not cause. It is not specifically about aging.

COMPLEMENTARY THERAPIES IN MEDICINE · 2026-10-09

Review links immune aging and inflammation to ovarian aging

A review in Human Reproduction Update synthesises published evidence on how the immune system relates to ovarian aging. It describes immune aging and chronic low-grade inflammation as drivers of ovarian decline. It also notes premature ovarian insufficiency often occurs alongside autoimmune disorders. The authors suggest immune-targeting strategies may be worth exploring.

HUMAN REPRODUCTION UPDATE · 2026-10-09

Post-menopausal women show larger brain volume in some regions in UK Biobank scans

A UK Biobank imaging study in Brain Structure & Function compared brain scans of 4,098 women. Post-menopausal women had greater gray matter volume in temporal and occipital regions, and thicker cortex in the frontal lobe. The authors say this may reflect compensation. They note the study is cross-sectional and call for longitudinal research.

BRAIN STRUCTURE & FUNCTION · 2026-10-09

Higher body roundness linked to more menopausal symptoms in Chinese women

A cross-sectional study in Climacteric included 1,795 women aged 40 to 69 at a Chinese menopause clinic. A higher body roundness index was associated with higher odds of menopausal symptoms, and the link grew stronger above a threshold. Because the design captures one point in time, it cannot show cause. The authors say prospective validation is needed.

CLIMACTERIC : THE JOURNAL OF THE INTERNATIONAL MENOPAUSE SOCIETY · 2026-10-09

Review finds link between menopause and lung disease still unclear

A narrative review in Climacteric looks at how falling sex hormones may change airway function, inflammation and lung tissue. These changes offer a biological basis for links to asthma, chronic obstructive pulmonary disease and lung cancer. But the authors say existing evidence is inconclusive. The effects of menopausal hormone therapy on the lungs are also not clearly defined.

CLIMACTERIC : THE JOURNAL OF THE INTERNATIONAL MENOPAUSE SOCIETY · 2026-10-09

About 61% of French women with bipolar disorder reported effective contraception

A survey study in BMC Psychiatry covered 796 women aged 18 to 50 with bipolar disorder, recruited through psychiatrists in France. About 61% reported using effective contraception. Social and demographic factors were mainly the ones linked to its use. The authors say contraceptive counselling should be routinely provided. This is a cross-sectional survey, so it shows links only.

BMC PSYCHIATRY · 2026-10-09

Estrogen therapy not linked to more clots after hip fracture surgery

A retrospective cohort analysis in OTA International used a large health records network covering 39,631 patients with femoral neck fractures treated with hip replacement. Only 330 had been prescribed estrogen. After matching, the researchers found no statistically significant difference in deep vein thrombosis or pulmonary embolism. This shows an association, not proof of safety.

OTA INTERNATIONAL : THE OPEN ACCESS JOURNAL OF ORTHOPAEDIC TRAUMA · 2026-10-08

Small pilot links T-cell patterns to steroid response in nephrotic syndrome

A small prospective pilot study in the Journal of International Medical Research followed 11 patients with nephrotic syndrome and 14 healthy volunteers. Certain T-cell patterns, especially cells carrying a protein called TIM-3, differed by how patients responded to steroids. The authors call the results preliminary evidence of possible laboratory markers, not proof of cause.

THE JOURNAL OF INTERNATIONAL MEDICAL RESEARCH · 2026-10-08

More childbirths and earlier menopause linked to spinal alignment differences

A single-centre cross-sectional study in the European Spine Journal looked at 239 postmenopausal women. Higher parity and earlier menopause were associated with differences in spine and pelvis alignment, especially the gap between pelvic incidence and lumbar lordosis. A cross-sectional design shows links only. It cannot show that either factor causes back pain or alignment changes.

EUROPEAN SPINE JOURNAL : OFFICIAL PUBLICATION OF THE EUROPEAN SPINE SOCIETY, THE EUROPEAN SPINAL DEFORMITY SOCIETY, AND THE EUROPEAN SECTION OF THE CERVICAL SPINE RESEARCH SOCIETY · 2026-10-08

Pilot trial tests short exercise 'snacks' for perimenopausal women's strength training

A study protocol in Contemporary Clinical Trials describes a pilot randomised trial of 90 perimenopausal women. It compares a remote strength program split into short "snacks" with once-daily sessions, and simple versus detailed tracking. The main outcome is adherence over 12 weeks. Data collection has ended, but analyses are ongoing, so there are no results yet.

CONTEMPORARY CLINICAL TRIALS · 2026-10-08

MITOCHONDRIA & CELLULAR ENERGY 13

Chemical tributyl phosphate linked to liver aging signs in rats and cells

A study in Ecotoxicology and Environmental Safety treated rats and rat liver cells with tributyl phosphate. The chemical induced signs of cellular aging, including cell cycle arrest, higher β-galactosidase activity and raised oxidative stress markers. The authors report it increased fumarate levels, which drove mitochondrial DNA escape and activated a receptor called FPR2. This is animal and cell work, not human data.

ECOTOXICOLOGY AND ENVIRONMENTAL SAFETY · 2026-10-09

Natural compound honokiol improved bone in osteoporotic mice, with SIRT3 involved

A study in Pharmaceutical Biology tested honokiol in mouse cells and in mice. Honokiol raised SIRT3 levels. In ovariectomized mice it improved bone microarchitecture and femoral strength and reduced marrow fat. In a separate femoral fracture model it improved callus formation and healing. Reducing SIRT3 weakened these benefits, especially for bone formation. The work was in cells and animals, so effects in people are unknown.

PHARMACEUTICAL BIOLOGY · 2026-10-09

Lab study links lamin B1 loss to impaired bone formation in aging

A laboratory study in Advanced Science examined bone marrow stem cells in senile osteoporosis. It reports that age-related loss of lamin B1 triggers a chain of events that disrupts mitochondria and impairs bone formation. Through virtual screening, the authors identified the FDA-approved drug naldemedine as an inhibitor of this pathway and report therapeutic potential. Benefit in human patients has not been shown.

ADVANCED SCIENCE (WEINHEIM, BADEN-WURTTEMBERG, GERMANY) · 2026-10-08

Long-read sequencing detects small mitochondrial DNA variations accurately in lab tests

A methods study in BMC Genomics tested long-read sequencing of mitochondrial DNA using prepared mixtures of two DNA types. Accuracy scored 1.0 at mixture levels from 5% to 1% and 0.91 at 0.1%. A small proof-of-principle in cells from five people carrying a Parkinson's-linked variant was also run. It is not a clinical finding.

BMC GENOMICS · 2026-10-08

Mouse study links ANGPTL8 protein to aging of blood stem cells

According to a study in Biogerontology, using mouse models and cell experiments, the protein ANGPTL8 appeared to drive aging of blood-forming stem and progenitor cells. Mice lacking it showed fewer signs of cellular senescence in several tissues. The protein seemed to act by dampening the PI3K/AKT pathway through a receptor called PirB. No human data were reported.

BIOGERONTOLOGY · 2026-10-08

Commentary: muscle antioxidant regulator NRF2 tied to metabolism and healthy aging

A commentary in Trends in Endocrinology and Metabolism discusses work by Xirouchaki and colleagues. It says activating NRF2, a master regulator of antioxidant signalling, in skeletal muscle helps regulate metabolic balance and healthy aging. It also notes that evolutionary changes boosting NRF2 signalling in horses point to a role in muscle function and metabolism.

TRENDS IN ENDOCRINOLOGY AND METABOLISM: TEM · 2026-10-08

PDE4-inhibiting drugs extend worm lifespan and slow cell ageing in lab

According to a study in Free Radical Biology & Medicine, two PDE4 inhibitors, roflumilast and rolipram, extended the lifespan of C. elegans worms. Roflumilast also slowed senescence in mouse embryonic cells grown in the lab. The authors link the effects to improved mitochondrial function and less oxidative stress. These are worm and cell findings, not human data.

FREE RADICAL BIOLOGY & MEDICINE · 2026-10-08

Kinetin partly reversed induced thymus aging changes in rats

A study in the American Journal of Veterinary Research used rats given D-galactose to mimic aging. Kinetin partly restored thymic immune cell proliferation and mitochondrial function. It also shifted cell-death gene markers toward a less pro-death pattern. This was an animal study of induced aging, and the authors call for further research.

AMERICAN JOURNAL OF VETERINARY RESEARCH · 2026-10-08

Golgi-derived vesicles help mitochondria fuse, and their loss is tied to heart failure in mice

According to a study in Science, vesicles from the Golgi, a cell structure, help mitochondria fuse together. Cells lacking two enzymes that make a lipid in these vesicles showed fragmented mitochondria. Mice lacking both enzymes in heart muscle cells also had fragmented mitochondria and heart failure. The work was done in cells and mice.

SCIENCE (NEW YORK, N.Y.) · 2026-10-08

Mouse and cell study links red light to reduced skin-cell aging signs

A study in eLife, done in mice and skin cells, found that periodic red light exposure raised a gene-regulating marker called H3K9ac in the tissues of aged mice. Red light lowered a protein called SIRT4 in skin cells, which activated fat metabolism. The authors report that this eased cellular aging in the skin cells. The work has not been tested in people.

ELIFE · 2026-10-08

Lab-tested fat particles deliver genes into senescent human stem cells

A laboratory study in Drug Delivery tested two niosome formulations, which are tiny lipid carriers, in senescent stem cells from umbilical cord tissue taken from four donors. One formulation, DP20CQ, produced the highest gene expression and beat a commercial reagent without harming cell viability. The work was done in cells, not people.

DRUG DELIVERY · 2026-10-08

Review examines rabies-derived peptide for carrying drugs into the brain

A review in Naunyn-Schmiedeberg's Archives of Pharmacology looks at RVG29, a peptide from a rabies virus protein. It is used to help tiny drug carriers cross the blood-brain barrier. The review reports improved brain delivery and neuroprotection with these carriers. It is a review of existing work, not a new human trial.

NAUNYN-SCHMIEDEBERG'S ARCHIVES OF PHARMACOLOGY · 2026-10-08

Review links aging brain immune cells' fat handling to post-surgery cognitive problems

A narrative review in Reviews in the Neurosciences looks at why older patients are prone to cognitive problems after surgery. It proposes that age-related changes in how brain immune cells handle fats play a role. The authors say some of the support comes from aging, neurodegeneration or injury studies, not surgery. Causal experiments are still needed.

REVIEWS IN THE NEUROSCIENCES · 2026-10-08

ULTRA-PROCESSED FOOD & ULTRA-PROCESSED DIET 6

Nutrition workshops in Brazilian quilombola communities linked to more vegetables and less sugar

A non-randomised community trial in the Journal of Racial and Ethnic Health Disparities studied six nutrition workshops in four communities in Rio Grande do Sul, Brazil. Vegetable intake rose significantly and sugar intake fell compared with the control group. Traditional food energy rose, but not significantly. Interviews suggested greater appreciation of traditional foods.

JOURNAL OF RACIAL AND ETHNIC HEALTH DISPARITIES · 2026-10-09

Small study finds many groceries bought by kidney disease patients contain additives

According to an observational study in Seminars in Nephrology, 13 adults with chronic kidney disease shared grocery receipts over four weeks. Of 429 processed foods identified, 11.9% had potassium additives only, 28.0% had phosphorus additives only, and 7.9% had both. The sample was very small, so the findings may not apply widely.

SEMINARS IN NEPHROLOGY · 2026-10-08

Review: sugar-damaged proteins and their receptor may drive several chronic diseases

A review in Nature Reviews Endocrinology covers advanced glycation end products, which form with high blood sugar and aging. It says their interaction with the RAGE receptor accelerates conditions including atherosclerosis and diabetic kidney disease. Drugs targeting these products showed no statistically significant benefit in clinical trials, so the authors suggest broader approaches are needed.

NATURE REVIEWS. ENDOCRINOLOGY · 2026-10-07

Trial protocol will test whether cutting ultra-processed food alters blood sugar

A study protocol in BMJ Open describes a randomised trial enrolling 50 healthy Korean adults aged 20 to 39 whose ultra-processed food intake is at least 25% of daily energy. One group gets one-on-one counselling to reduce ultra-processed food. The other gets standard dietary counselling. The main outcome is after-meal glucose measured by continuous monitors. No results are reported yet.

BMJ OPEN · 2026-10-06

About one in seven Ethiopian adolescents buys unhealthy food daily, survey finds

A cross-sectional survey in PLoS ONE covered 475 adolescents aged 10 to 19 in Dire Dawa, Ethiopia. Daily unhealthy food purchase was reported by 14.7%. It was associated with high food availability, vendor and peer influence, poor nutrition knowledge and higher family income. The design shows links only. The study did not include sugary drinks.

PLOS ONE · 2026-10-06

Randomised crossover trial: ultraprocessed meals trigger different metabolic and brain responses than matched meals

In a randomised crossover trial in Nature Metabolism, 57 healthy-weight adults ate nutritionally matched ultraprocessed and non-ultraprocessed meals. The ultraprocessed meals produced larger insulin and energy responses and lower carbohydrate oxidation. Brain responses linked to food valuation also differed. The authors suggest processing affects responses beyond calories and macronutrients alone.

NATURE METABOLISM · 2026-10-05

EXERCISE AS MEDICINE & LONGEVITY 13

Mediterranean-style lifestyle linked to lower death risk across income and education levels

An observational study in The American Journal of Clinical Nutrition followed 105,812 adults in the Lifelines cohort for a median of 13.25 years. People with the highest Mediterranean lifestyle scores had a lower risk of death than those with the lowest scores. The link appeared at all income and education levels. It shows association, not cause.

THE AMERICAN JOURNAL OF CLINICAL NUTRITION · 2026-10-09

Steep exercise blood pressure rise linked to death or heart failure admission

A study in the Journal of Hypertension followed 970 people with high blood pressure, 34% of whom had heart failure. Those whose systolic pressure rose steeply relative to oxygen use during exercise had more adverse heart remodelling and vascular dysfunction, despite well controlled resting pressure. Over a median 24 months, a steeper rise was associated with higher risk of death or heart failure hospitalisation. This is observational.

JOURNAL OF HYPERTENSION · 2026-10-09

Chronic diseases and injuries caused 43% of deaths in Cameroon in 2019

A report in the Journal of Global Health draws on global burden data and a literature review for Cameroon's national poverty commission. It finds non-communicable diseases and injuries accounted for 43% of all deaths in 2019. The authors say they heavily affect working-age people and call for rebalancing financing and including prioritised services in universal health coverage.

JOURNAL OF GLOBAL HEALTH · 2026-10-09

About 1 in 15 South African adults surveyed reported clinically important breathlessness

An online cross-sectional survey in the Journal of Global Health covered 2,828 South African adults. Clinically important breathlessness was reported by 189 people, or 6.7%. It was associated with poorer perceived health, lower quality of life and higher disability scores. The data are self-reported, so the survey shows links, not causes.

JOURNAL OF GLOBAL HEALTH · 2026-10-09

Estimated small dense LDL cholesterol linked to heart attack in dialysis patients

A nationwide cohort study in Annals of Medicine followed 21,671 adults on long-term dialysis. Higher estimated small dense LDL cholesterol was associated with more heart attacks after adjustment, but not with ischemic stroke. Adding it to prediction models improved accuracy only slightly. It did not differ significantly from models using standard cholesterol measures.

ANNALS OF MEDICINE · 2026-10-09

Single session of peripheral stimulation linked to better balance in Parkinson's

A small randomised crossover trial in Movement Disorders Clinical Practice tested one session of automated mechanical peripheral somatosensory stimulation in 18 people with Parkinson's disease. Compared with a sham session, the active session improved a balance score and gait velocity. It also changed some heart rate variability measures. The effects were measured only right after a single session.

MOVEMENT DISORDERS CLINICAL PRACTICE · 2026-10-09

Rural heart programme added mental health checks, with mixed completion rates

An evaluation in Preventing Chronic Disease looked at adding mental health components to a Colorado rural heart health programme run by community health workers. Workers completed 8,077 visits with 5,559 participants. Early on, 78.6% to 87.5% completed the assessments, but only 8.2% completed the coaching. The study assessed feasibility, not health outcomes.

PREVENTING CHRONIC DISEASE · 2026-10-08

Frequent mental distress rose among US young adults from 2012 to 2024

A CDC report in MMWR used national survey data on adults aged 18 to 29. Frequent mental distress rose from 12.7% to 21.3% between 2012 and 2024. Physical inactivity rose from 15.9% to 16.8%. Both fell in recent years. This is a survey of trends over time, so it cannot show that one drives the other.

MMWR. MORBIDITY AND MORTALITY WEEKLY REPORT · 2026-10-08

Review summarises exercise and nutrition evidence across lung cancer care

A narrative review in Clinical & Translational Oncology looks at exercise and nutrition for people with lung cancer. It reports clinical studies supporting benefits for function, symptoms and quality of life in selected patients. Evidence that Mediterranean-style eating improves outcomes after diagnosis remains limited. The review separates direct clinical evidence from preclinical and indirect evidence.

CLINICAL & TRANSLATIONAL ONCOLOGY : OFFICIAL PUBLICATION OF THE FEDERATION OF SPANISH ONCOLOGY SOCIETIES AND OF THE NATIONAL CANCER INSTITUTE OF MEXICO · 2026-10-08

Survey links vaccine confidence and perceived risk to HPV vaccine willingness

A cross-sectional survey reported in Human Vaccines & Immunotherapeutics found that perceived severity, perceived vulnerability and vaccine confidence were linked to greater willingness to receive the HPV vaccine. Complacency was linked to lower willingness. Willingness in turn mediated links to vaccination behaviour. Vaccine recommendations and information sources strengthened some relationships. A survey like this shows associations, not cause.

HUMAN VACCINES & IMMUNOTHERAPEUTICS · 2026-10-08

Exercise and diet habits link to health differently in men and women

A study in Social Science & Medicine used data from the Survey on Health Ageing and Retirement. Low physical activity was more strongly associated with poorer health in men. Infrequent fruit and vegetable intake was more strongly associated with poorer health in women. These are associations in survey data, so they do not prove cause.

SOCIAL SCIENCE & MEDICINE (1982) · 2026-10-07

In older Thai adults, rising depression linked to lower expected lifespan

A study in Archives of Gerontology and Geriatrics followed 5,259 older adults in Thailand across five waves from 2015 to 2024. Increases in depressive symptoms were associated with later declines in how long people expected to live. Expected lifespan did not predict later exercise, disability or skipped meals. This is observational, so it shows association, not cause.

ARCHIVES OF GERONTOLOGY AND GERIATRICS · 2026-10-07

Loneliness was not linked to physical activity in adults aged 40 to 70

An observational study in the Journal of Health Psychology followed 291 adults aged 40 to 70 in committed relationships. Researchers combined repeated self-reports of loneliness with activity trackers over eight days. Loneliness was unrelated to physical activity across person, daily and momentary analyses. The authors say this may be a true null result or reflect the sample.

JOURNAL OF HEALTH PSYCHOLOGY · 2026-10-07

PROTEINS & AMINO ACIDS 11

Swallowing problems and poor oral health tied to stool bacteria profile after stroke

A cross-sectional study in Clinical Nutrition ESPEN looked at 156 older stroke inpatients. Poorer swallowing and greater oral health problems were each associated with a lower score for oral-associated bacteria in stool. The authors call the findings exploratory. They do not show causation, an oral origin for the bacteria, or clinical usefulness.

CLINICAL NUTRITION ESPEN · 2026-10-09

Frailty and low muscle mass linked to worse recovery after heart surgery

According to a prospective cohort study in The Journal of Nutrition, Health & Aging, 566 older adults had open-heart surgery. Frailty, sarcopenia (muscle loss), or both were associated with higher odds of worsening disability or death within three months. The odds were highest in those with both conditions. The study shows association, not cause.

THE JOURNAL OF NUTRITION, HEALTH & AGING · 2026-10-09

Lower wearable-measured sleep efficiency linked to weaker grip in older outpatients

A cross-sectional study in JMIR Formative Research followed 165 older outpatients, median age 77, with a wrist-worn sleep tracker. Those with low grip strength had lower sleep efficiency, 58.0% versus 62.7%. Sleep efficiency was not linked to frailty, low muscle mass or slow walking. The design shows an association, not cause.

JMIR FORMATIVE RESEARCH · 2026-10-09

Protein structure helps predict which tuberculosis mutations cause antibiotic resistance

A study in eLife analysed mutations from over 31,000 Mycobacterium tuberculosis isolates alongside protein structures. Mutations in resistance-related proteins clustered in 3D space. A classifier using distance to known resistance sites scored an F1 of 96.5% on held-out test data. This is a computational study, not a clinical test.

ELIFE · 2026-10-09

Low muscle mass on CT linked to major complications after colon surgery

A retrospective study in the Journal of Surgical Research looked at 51 patients who all had complications after elective right hemicolectomy. Low muscle mass (sarcopenia) seen on CT was associated with major rather than minor complications. Twelve patients had major complications. Low psoas muscle index best distinguished the two severity levels. No measure was linked to length of hospital stay. These are associations only.

THE JOURNAL OF SURGICAL RESEARCH · 2026-10-08

Stronger handgrip linked to lower death risk in dialysis patients

A multicenter prospective cohort study in Kidney360 followed 307 hemodialysis patients for three years. Higher handgrip strength was associated with lower all-cause mortality, especially in those whose metabolic age exceeded their chronological age. Handgrip strength was a poor predictor in other groups. The study shows an association, not a cause.

KIDNEY360 · 2026-10-08

Higher carbohydrate-to-fat ratio linked to more frailty in older Japanese adults

A cross-sectional study in the European Journal of Nutrition analysed 5,679 Japanese adults aged 65 or older. Those with the highest carbohydrate-to-fat energy ratio had higher odds of frailty than those with the lowest. The link looked similar across protein intake levels. This is an association at one point in time and cannot show cause.

EUROPEAN JOURNAL OF NUTRITION · 2026-10-07

Pro-inflammatory diets linked to higher sarcopenia risk in older adults and weaker aged mice

A study in Food & Function looked at 1,048 older adults. Higher dietary inflammation scores were associated with more sarcopenia, the loss of muscle mass and strength. In aged mice, a 10-week pro-inflammatory diet reduced grip strength and lean mass and changed gut bacteria. The human link is an association. It does not show cause.

FOOD & FUNCTION · 2026-10-07

Review: muscle loss during GLP-1 weight-loss drugs remains uncertain

A review in Diabetes, Obesity & Metabolism examines lean mass changes with GLP-1-based drugs. It notes that lean mass includes water, organs and other tissue, so its loss is not the same as muscle loss. These drugs mainly reduce fat mass. How much true muscle is lost, and what that means long term, remains uncertain.

DIABETES, OBESITY & METABOLISM · 2026-10-07

Lab study finds aged Liupao tea contains nanoparticles with varying antioxidant activity

A laboratory study in Food Chemistry analysed tiny particles in infusions of Liupao tea of different ages. Smaller particles, linked to certain flavonoids, amino acids and potassium, showed higher antioxidant activity in the tests. Larger particles showed lower activity. The work was chemical analysis only and did not test any effect on human health.

FOOD CHEMISTRY · 2026-10-06

Review links saliva flow to swallowing, but evidence is inconsistent

A systematic review in Dysphagia looked at studies measuring both saliva and swallowing. Most were cross-sectional. In healthy adults, higher saliva flow was often linked to more frequent spontaneous swallowing. Links to specific swallowing measures were not consistent. Lower levels of substance P were also associated with swallowing difficulty, though results varied between studies.

DYSPHAGIA · 2026-10-03

MRNA & GENE THERAPY

Hospital readmission risk after diabetic kidney disease varies by diabetes type, age and insurance

A nationwide analysis in International Urology and Nephrology covered 1,291,033 US hospitalisations for diabetic kidney disease in 2018. Overall, 15.96% of patients were readmitted within 30 days. The rate was higher in type 1 than type 2 disease. The authors say risk was driven mainly by other conditions, such as end-stage kidney disease and heart failure.

INTERNATIONAL UROLOGY AND NEPHROLOGY · 2026-10-09

Gene-silencing nanoparticle eases brain inflammation in mice after repeated head injury

A study in Molecular Therapy, done in mice and cell cultures, examined repeated traumatic brain injury. Researchers silenced two inflammation-related genes, CCL20 and CCR6, using a dendrimer-delivered shRNA. Treated mice showed less inflammation, less loss of synaptic proteins, and better motor, anxiety-related and cognitive outcomes. The work is early and has not been tested in people.

MOLECULAR THERAPY : THE JOURNAL OF THE AMERICAN SOCIETY OF GENE THERAPY · 2026-10-09

Review proposes a better way to read liver tests after AAV gene therapy

A clinical practice review in Clinical Biochemistry looks at liver test changes after AAV gene therapy. The authors say raised enzymes can have many causes and are hard to interpret. They argue standard injury rules can misjudge them. They propose a baseline-anchored approach that tracks enzyme trends alongside other liver markers.

CLINICAL BIOCHEMISTRY · 2026-10-08

Lab testing reclassifies unclear OTOF gene variants, widening gene therapy eligibility for deafness

A study in Cell Reports Medicine built a pipeline combining mouse and splicing tests to reclassify uncertain OTOF gene variants. It gave definitive diagnoses for 38 patients. Seven eligible patients received gene therapy and showed hearing improvement. One reached near-normal hearing, sustained for 1.5 years. The patient numbers are small.

CELL REPORTS. MEDICINE · 2026-10-07

Lab-grown blood vessel model shows fibroblasts worsen progeria vascular disease

Researchers reporting in Science Advances built three-layer engineered blood vessels from human cells to model vascular disease in Hutchinson-Gilford progeria, a rapid-aging disorder. Progeria fibroblasts substantially worsened several disease features. Correcting the mutation with base editing returned many features to healthy levels. This is laboratory work in cells, not a human trial.

SCIENCE ADVANCES · 2026-10-07

Review: neurofilament light chain may help track hereditary ataxias in trials

A review in Brain Communications examines blood and spinal fluid markers in cerebellar ataxias. Neurofilament light chain was consistently raised and tracked with disease severity, progression and imaging findings. It also rose before symptoms in spinocerebellar ataxias. The authors suggest it could help select and monitor trial participants. Other markers are also discussed.

BRAIN COMMUNICATIONS · 2026-10-06

Ultrasound-opened blood-brain barrier lowered neuromelanin in monkeys modelling early Parkinson's changes

According to a study in Brain, researchers used focused ultrasound with microbubbles to open the blood-brain barrier in non-human primates. These animals had been engineered to build up neuromelanin, a pigment linked to Parkinson's disease. Treated animals showed a marked drop in neuromelanin inside and outside cells. This was an animal study, not a human trial.

BRAIN : A JOURNAL OF NEUROLOGY · 2026-10-05

AI BIOLOGY & DIAGNOSTICS 4

Perspective proposes adaptive light-based sensors feeding digital twins for monitoring older people

A perspective article in The Analyst outlines a proposed framework, not tested results. It combines flexible nanophotonic sensors, artificial intelligence and personalised digital models for continuous health monitoring in older and disabled people. The authors say current wearable sensors struggle with signal drift, wear and fouling. They describe the approach as prospective.

THE ANALYST · 2026-10-07

Brain scans show older-looking brains in several psychiatric and dementia conditions

A study in Psychological Medicine trained a brain-age model on MRI scans from 25,425 healthy people. It then compared 1,737 patients with 1,793 controls. Brain-predicted age was higher in schizophrenia, frontotemporal dementia, Alzheimer's disease, bipolar disorder, depression and chronic substance use, but not ADHD. The model's average error was about 5 to 7 years.

PSYCHOLOGICAL MEDICINE · 2026-10-07

Machine-learning aging index predicts death risk in cardiovascular-kidney-metabolic syndrome

A retrospective cohort study in PLoS Medicine used data from 6,896 US adults in the NHANES survey. Researchers built a machine-learning aging index for cardiovascular-kidney-metabolic syndrome. They report it predicted mortality better than PhenoAge, KDM and the cardiometabolic index. It is a prediction tool, and the text shown does not establish causes.

PLOS MEDICINE · 2026-10-06

Review covers how multi-omics tools are advancing study of cell state change

A review in Nature Reviews Genetics discusses how single-cell and spatial omics, plus computational methods, are advancing research on epithelial-mesenchymal transition. This cell programme is involved in development, tissue repair, ageing, cancer and fibrosis. The authors outline analytical issues, current challenges and possible future uses in biomarker discovery.

NATURE REVIEWS. GENETICS · 2026-10-05

Reef fish near urban Okinawa coasts show gene activity signs of chronic stress

A study in Nature Communications analysed gene activity in a coral reef fish sampled at 18 coastal sites in Okinawa, Japan. Fish from urbanised sites showed shifts in metabolic, immune and inflammatory pathways. Their pattern resembled well-fed fish, which the authors suggest means a rich diet alongside chronic stress.

NATURE COMMUNICATIONS · 2026-10-09

Copper nanoparticle feed linked to better fertility markers in heat-stressed bulls

A study in Animal Reproduction Science tested copper nanoparticles in the diet of 18 breeding bulls under summer heat stress. Supplemented bulls showed better heat tolerance, semen quality and oxidative stress markers than controls. Their semen also produced more embryos in laboratory fertilisation. The study involved animals, not people, and was small.

ANIMAL REPRODUCTION SCIENCE · 2026-10-07

Higher testosterone linked to fewer aches in adolescents, especially after puberty

An observational longitudinal study in Psychoneuroendocrinology followed 9th-grade students who gave daily diaries and saliva samples. Higher testosterone was associated with lower likelihood of headache, backache and stomachache. Higher cortisol was linked to more backache. The testosterone link held in late or post-puberty. These are associations, not proof of cause.

PSYCHONEUROENDOCRINOLOGY · 2026-10-07

Masculine body traits not linked to biological aging in middle-aged men

A study in Aging of 176 healthy men averaging about 54 years found that masculine body traits were not associated with markers of accelerated biological aging. Unadjusted links between fat-free mass and lower inflammation, and between waist-to-chest ratio and higher inflammation, disappeared after adjusting for body fat. The authors say body composition and adiposity appear to play a more prominent role.

AGING · 2026-10-06

Ear nerve stimulation shifts heart measures in older women; walking test unchanged

A small randomised crossover trial in Clinics tested one 30-minute session of ear-based vagus nerve stimulation in 17 healthy older women. Heart rate fell and heart rate variability changed, suggesting more parasympathetic activity. The main outcome, six-minute walk distance, did not change significantly. The authors call the results preliminary and say larger trials are needed.

CLINICS (SAO PAULO, BRAZIL) · 2026-10-06

Review links failing mitochondria to cell senescence and age-related inflammation

A review in GeroScience examines how declining mitochondrial function relates to cellular senescence and chronic inflammation in ageing, often called inflammaging. The authors conclude the evidence supports a model where damaged mitochondria both start and amplify these processes. They suggest this could help identify future treatment targets. It is a review, not a new trial.

GEROSCIENCE · 2026-10-09

Blocking a splicing-linked gene may restore breast cancer drug sensitivity in cells

According to a study in Science Advances, drug-resistant breast cancer cells showed higher levels of a gene called SUV39H2, driven by a splicing change. Targeting it with antisense molecules or an inhibitor overcame resistance to CDK4/6 inhibitors in cells. Higher levels of the splicing change also correlated with poorer prognosis in patients. The experiments were laboratory-based.

SCIENCE ADVANCES · 2026-10-09

Two-step nanoparticle treatment curbs cancer spread in mice

A study in Science Advances tested nanoparticles coated in membranes from senescent tumour cells, using 4T1 tumour cells and tumour-bearing mice. One loaded drug, ribociclib, first induced senescence; a second, brefeldin A, then triggered stress in the endoplasmic reticulum. The authors report strong endoplasmic reticulum accumulation and antimetastatic effects in the mice. No human results are described.

SCIENCE ADVANCES · 2026-10-09

Review of lab studies links curcumin to anticancer effects in ovarian cancer models

A systematic review in Medical Oncology looked at 21 preclinical studies of curcumin in ovarian cancer. Curcumin may affect several cell-signalling pathways. These effects were linked to more cell death, less growth and better response to chemotherapy drugs. Nanoformulations improved absorption. The authors say clinical studies are needed to confirm any benefit in patients.

MEDICAL ONCOLOGY (NORTHWOOD, LONDON, ENGLAND) · 2026-10-09

Yeast study finds Bck2 protein matters for cell size when food changes

According to a study in The Journal of Cell Biology, Bck2 and Cln3 appear to play overlapping roles in controlling yeast cell size under steady conditions. After a switch in growth medium, yeast lacking Bck2 had longer cell cycle arrests and more enlargement. This is basic cell biology in yeast, not human research.

THE JOURNAL OF CELL BIOLOGY · 2026-10-09

Three methods all grow fat-cell spheroids from human stromal cells in lab

A laboratory study in Adipocyte compared three ways of making 3D spheroids from human fat-derived stromal cells. All three methods produced spheroids that could develop into fat cells. The microwell plates gave more uniform spheroids with higher mass density. The work was done in cells, not in people.

ADIPOCYTE · 2026-10-09

Higher brain care scores linked to thicker retinas and younger retinal age

A study in GeroScience used UK Biobank data from 28,657 people. A higher brain care score, covering physical, lifestyle and social-emotional factors, was associated with thicker retinal layers and a smaller gap between retinal and actual age. Metabolic patterns were flagged for further study. This observational work shows associations, not cause.

GEROSCIENCE · 2026-10-09

Multi-dataset analysis links aging to a shift from gene maintenance to specialised activity

A study in GeroScience combined epigenetic, gene activity and protein datasets from several species. After sexual maturity, genes for basic cell maintenance lost share of activity in low-renewal tissues. Methylation patterns in specialised genes became more scattered. The authors stress these are associations. Cause has not been tested experimentally.

GEROSCIENCE · 2026-10-09

Rat study links maternal diabetes to pancreas changes in later generations

A study in Archives of Medical Research used rats to test how maternal diabetes and a high-fat diet affect the pancreas across generations. Offspring of diabetic mothers showed changes in pancreatic cell types, more cell death and signs of oxidative stress. The authors suggest female offspring may be especially vulnerable. This is animal research, not a human study.

ARCHIVES OF MEDICAL RESEARCH · 2026-10-08

Aged and senescent cells release vesicles that push neighbouring cells toward senescence

A cell-culture study in Aging found that human fibroblasts engineered to express p16 released more small extracellular vesicles. These vesicles caused nearby dividing cells to stop growing and show DNA damage signals. Vesicles from cells of aged donors had a similar effect on cells from young donors. The work was done in cells, not people.

AGING · 2026-10-08

Mouse study tests skin-based sensor to spot islet transplant rejection

Researchers writing in Advanced Science built a small synthetic immune niche that sits under the skin and can be biopsied repeatedly. In mouse islet transplant models, it picked up immune signatures that separated rejecting grafts from accepted ones. It also found a 13-gene signature in one model. This is early animal work.

ADVANCED SCIENCE (WEINHEIM, BADEN-WURTTEMBERG, GERMANY) · 2026-10-08

Irradiated medulloblastoma cells turn senescent and can be cleared by senolytic drugs

According to a laboratory study in Cell Death Discovery, one pediatric medulloblastoma cell line became senescent after gamma radiation. Senolytic substances, including Navitoclax, killed these cells. A different cell line with mutated p53 died by apoptosis instead. This was work in cultured cells only, not in patients.

CELL DEATH DISCOVERY · 2026-10-08

Engineered exosomes reduced senescence markers in lab-grown stem cells

A laboratory study in Experimental Gerontology used engineered vesicles called exosomes to lower two microRNAs in aged mesenchymal stem cells. The treated cells showed fewer senescence markers, longer telomeres and better colony-forming ability. This was work in cells, not in animals or people. The authors call it a promising approach for regenerative medicine.

EXPERIMENTAL GERONTOLOGY · 2026-10-08

NITRIC OXIDE & VASCULAR HEALTH

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Older adults' blood progenitor cells show more Pannexin 1, linked to senescence markers

A study in Biomarker Research compared blood cells from younger and older donors. Older donors had higher levels of Pannexin 1, a protein studied as a possible marker of cell senescence. Among older people, higher levels were seen with higher fasting glucose and higher Framingham risk scores. These are associations, so they do not show cause.

BIOMARKER RESEARCH · 2026-10-09

Compounds from Eurycoma longifolia root show anti-inflammatory signs in cells

A study in Phytochemistry isolated eighteen quassinoid compounds from the roots of Eurycoma longifolia, fourteen of them previously undescribed. In laboratory tests on stimulated RAW264.7 cells, compounds 7 and 18 significantly reduced nitric oxide production, interleukin-1β secretion and inducible nitric oxide synthase expression. The authors say this suggests potential anti-inflammatory activity. The work was done in cells only.

PHYTOCHEMISTRY · 2026-10-09

Review: pulsed inhaled nitric oxide matches continuous dosing with less total gas exposure

A review in Nitric Oxide: Biology and Chemistry looked at giving inhaled nitric oxide in pulses at the start of each breath. Across studies, it widened lung blood vessels and improved oxygenation about as well as continuous dosing. It also cut total gas exposure and nitrogen dioxide formation. The authors say long-term benefits in COPD still need research.

NITRIC OXIDE : BIOLOGY AND CHEMISTRY · 2026-10-09

Lab-grown heart organoids model early heart problems in Duchenne muscular dystrophy

A laboratory study in Mechanisms of Ageing and Development used human stem-cell heart organoids carrying Duchenne muscular dystrophy changes. The organoids showed more DNA damage, inflammation and abnormal development. Blocking nitric oxide synthase reduced DNA damage and improved contraction, but did not fix everything. The findings come from cell models, not patients.

MECHANISMS OF AGEING AND DEVELOPMENT · 2026-10-09

Review links certain gut microbes and metabolites to heart disease outcomes

A systematic review in Cardiovascular Drugs and Therapy pooled 18 prospective studies of people with coronary heart disease. Higher Lactobacillus levels were associated with better outcomes. Higher TMAO and several other gut-made compounds were associated with more cardiovascular events. These are associations, so the review cannot show that the microbes or metabolites cause the outcomes.

CARDIOVASCULAR DRUGS AND THERAPY · 2026-10-09

Plant compound eupatorin dampened inflammation pathway in lab-grown immune cells

According to a study in Immunologic Research, the flavone eupatorin reduced activity of the NLRP3 inflammasome, an inflammation driver, in cultured human immune cells. It also lowered markers of oxidative stress and nitric oxide. Computer modelling supported the findings. This was cell and computer work only. It has not been tested in animals or people.

IMMUNOLOGIC RESEARCH · 2026-10-09

Stiffer arteries seen in people with diabetes who have eye and kidney complications

A cross-sectional study in the Irish Journal of Medical Science included 160 people with type 2 diabetes. Arterial stiffness, measured by pulse wave velocity, was higher in those with diabetic eye disease or kidney disease. The design shows a link at one point in time. It cannot show which came first or whether one causes the other.

IRISH JOURNAL OF MEDICAL SCIENCE · 2026-10-09

Plant compound fraxetin eased memory deficits in a mouse Alzheimer's model

According to a study in the Journal of Neuroimmune Pharmacology, fraxetin improved cognitive test performance in mice given STZ to mimic sporadic Alzheimer's disease. It also reduced microglial overactivation and preserved mitochondrial structure. Cell experiments pointed to anti-inflammatory effects. This is animal and cell research, not human evidence.

JOURNAL OF NEUROIMMUNE PHARMACOLOGY : THE OFFICIAL JOURNAL OF THE SOCIETY ON NEUROIMMUNE PHARMACOLOGY · 2026-10-09

Meta-analysis sets reference values for arterial stiffness in healthy children

A systematic review and meta-analysis in the Journal of Hypertension pooled ten observational studies of healthy children. Pulse wave velocity, a measure of arterial stiffness, was 5.33 m/s at ages 0-5. It fell to 4.93 m/s at 6-8, then rose to 5.80 m/s at 15-18. The studies varied widely, and publication bias was suggested.

JOURNAL OF HYPERTENSION · 2026-10-09

Functional thiamine deficiency found in about 6% of Thai kidney patients

A study in Future Science OA used a red blood cell enzyme test to measure functional thiamine (vitamin B1) deficiency in 605 Thai participants. Prevalence was 6.1% overall and 6.4% among those with chronic kidney disease. Among kidney patients, hypertension stayed independently associated with deficiency after adjustment. The authors say this supports further investigation. The design shows association, not cause.

FUTURE SCIENCE OA · 2026-10-09

IN THE NEWS

Blocking STING signals from marrow fat helped preserve aging bone, report says

According to a Lifespan.io news report, a new study links STING-mediated signals from fat cells in bone marrow to inflammation and declining NAD^+ levels in bone-forming cells. Interrupting this pathway helped preserve aging bone. The available excerpt is brief and does not say whether the work was done in animals, cells or people, so the strength of the evidence is unclear.

LIFESPAN.IO · 2026-10-16

Researchers argue immune aging may drive both bone and joint degeneration

A discussion piece on Fight Aging! describes research in which authors propose that an aging immune system contributes to degenerative bone and joint conditions. They relate this to the more traditional view of what causes these conditions. The text stresses that aging is a network of interacting processes, not a simple chain of cause and effect.

FIGHT AGING! · 2026-10-16

Larger dogs show faster epigenetic aging than smaller dogs

Fight Aging! reports on research in dogs. Smaller breeds live longer than larger ones. The researchers found that age-related epigenetic change, which affects DNA structure and gene expression, proceeds faster in larger dogs. This was particularly so in regions containing transposable elements. The text does not give study details or say what causes the difference.

FIGHT AGING! · 2026-10-16

Report links gene DEAF1 to muscle aging and exercise's effects

A ScienceDaily news summary reports that scientists identified a gene, DEAF1, that becomes overactive with age. It is said to interfere with muscles clearing damaged proteins and repairing themselves. Exercise may help restore this balance, though benefits may shrink if the system is too disrupted. The summary does not say what type of study this was.

SCIENCEDAILY HEALTHY AGING · 2026-10-15