

Longevity & Healthspan Literature Monitor

As requested by Prof. Dr. Michael Friebe

Coverage period: September 18 - October 2, 2026 | Sources: PubMed (incl. Nature, Nature Aging, Nature Medicine, Nature Metabolism, Nature Communications, Cell, Cell Systems, Science, NEJM, JAMA, JAMA Internal Medicine)

Score	Relevance for Personal Prevention & Healthspan
★★★★★ 5	Breakthrough / immediately actionable for personal healthspan
★★★★☆ 4	High relevance - strong mechanistic or clinical data
★★★☆☆ 3	Moderate - promising early data or relevant mechanisms
★★☆☆☆ 2	Low-moderate - basic science, limited translational path
★☆☆☆☆ 1	Minimal direct relevance to personal prevention

SECTION A - Score 5: Breakthrough Findings

No articles reached this score in this reporting period.

SECTION B - Score 4: High Relevance

4 ★★★★☆	Exercise enhances aged chondrocyte health through microRNA-29-enriched extracellular vesicles Nature aging September 29, 2026 Iijima H, Dave KM, Wang K et al. DOI: 10.1038/s43587-026-01225-9 Summary: A 3-month aerobic exercise intervention in older adults increased microRNA-29 in circulating extracellular vesicles. In vitro, these exercise-primed EVs de-repressed the klotho gene and restored a more youthful chondrocyte phenotype; engineered EVs replicated this, and administration into aged mice improved cartilage health. This links exercise to a specific EV-microRNA-klotho mechanism, supporting exercise as an accessible intervention for joint/tissue aging, though direct clinical cartilage outcomes in humans remain untested.
4 ★★★★☆	Multi-modality profiling identifies Neisseria flavescens as a central geroprotective oral commensal in humans Nature aging September 24, 2026 Chen J, Ren Y, Zhou Y et al. DOI: 10.1038/s43587-026-01220-0 Summary: Using multi-modality aging clocks and in silico screening in human data, researchers identified the oral commensal Neisseria flavescens as associated with slower biological aging. Live bacteria extended lifespan/healthspan in C. elegans, and heat-killed supplementation in aged mice restored serum metabolome, liver transcriptome, and gut microbiome toward younger states. This nominates a specific, identifiable oral microbe as a candidate geroprotective target, offering a novel, testable avenue for microbiome-based prevention strategies pending human trials.

4

★★★★☆

Periodontitis, Edentulism, and Accelerated Biological Aging: A Population-Based Study of Epigenetic Clocks

Journal of periodontal research | September 23, 2026 | Chen YN, Wang L, Romandini M et al.

DOI: 10.1111/jre.70163

Summary: In a population-based NHANES cohort of 1,926 adults aged 50+, severe periodontitis and edentulism were associated with accelerated epigenetic aging across multiple DNA-methylation clocks (PhenoAge, Hannum, GrimAge2Mort, Horvath), with effect sizes of roughly 1-2 years acceleration. This supports oral health as a modifiable, accessible marker/contributor to biological aging, reinforcing dental care and periodontal treatment as a practical component of personal prevention strategies for healthspan.

SECTION C - Score 1-3: Moderate / Lower Relevance

3

★★★★☆

Reframing menopause and menopause hormone therapy as opportunities for healthy aging

Science (New York, N.Y.) | October 1, 2026 | Gravelsins LL, Perovic M, Alexander MW et al.

DOI: 10.1126/science.aeg5004

3

★★★★☆

The Mediterranean pyramid: 30 years later, still relevant

European journal of nutrition | September 24, 2026 | Visioli F, Martínez-Urbistondo D, Martínez-González MA

DOI: 10.1007/s00394-026-04114-4

3

★★★★☆

Research progress in skin anti-aging drugs based on core pathological drivers

Ageing research reviews | September 23, 2026 | Wei Y, Liang C, Zhou X et al.

DOI: 10.1016/j.arr.2026.103375

3

★★★★☆

Repurposing MitoQ10 as a Therapeutic for Established Alzheimer's Disease Pathology

Aging and disease | September 22, 2026 | Kumar M, Ray S, Sil S

DOI: 10.14336/AD.2026.0946

3

★★★★☆

Associations of single and combined exposure to plasma metals with biological aging in Chinese adults: Mediation by inflammation and oxidative stress and moderation by diabetes

Journal of hazardous materials | September 18, 2026 | Liang X, Liu S, Huang Y et al.

DOI: 10.1016/j.jhazmat.2026.143662

3

★★★★☆

The role of the immune system in hypertension

Journal of hypertension | September 18, 2026 | Fields E, Berillo O, Schiffrin EL

DOI: 10.1097/HJH.0000000000004440

2

★★★☆☆

X and Y chromosomes as determinants of aging and disease

Science (New York, N.Y.) | October 1, 2026 | Dubal DB, Ambrosio F, Stout MB et al.

DOI: 10.1126/science.aeh0145

2 ★★★★☆	Longevity products: Innovation through regulation Science (New York, N.Y.) October 1, 2026 Strassle C, Lynch HF, Zettler PJ DOI: 10.1126/science.aei2427
2 ★★★★☆	Type 2 immune history trains lung macrophages for viral disease tolerance Nature September 30, 2026 Damani-Yokota P, Yordanov Y, Bernier ED et al. DOI: 10.1038/s41586-026-11060-y
2 ★★★★☆	Prevalence and Correlates of Perceived Food Noise Among U.S. Adults in a Nationally Representative Sample Obesity science & practice September 26, 2026 Hayashi D, Masterson TD DOI: 10.1002/osp4.70201
2 ★★★★☆	Lipid Networks in Osteoarthritis: Context-Dependent Drivers, Hallmarks of Aging, and Clinical Translation Aging and disease September 23, 2026 Qin N, Fan X, Tan Y et al. DOI: 10.14336/AD.2026.0752
2 ★★★★☆	Lsp2 links early-life diet to adult translation and lifespan in Drosophila Nature September 23, 2026 Kosakamoto H, Okada R, Barker CS et al. DOI: 10.1038/s41586-026-11031-3
2 ★★★★☆	Lsp2 links mTORC1 to TOP mRNA translation and lifespan in Drosophila Nature September 23, 2026 Wang J, Cai Z, Gu J et al. DOI: 10.1038/s41586-026-11029-x
2 ★★★★☆	NAD⁺-sirtuin-mitochondrial quality control in lens epithelial cells: a candidate modulatory network in crystalline lens aging Experimental eye research September 20, 2026 Huo R, Chang N, Bergersen LH DOI: 10.1016/j.exer.2026.111242

SUMMARY - Key Findings by Domain

Domain	Score 5 Highlight	Score 4 Highlight
Exercise / Mechanisms	-	Exercise raised EV microRNA-29 linked to klotho activation and improved cartilage phenotype in aged mice, mechanism only (Nature aging)
Microbiome	-	Oral commensal Neisseria flavescens linked to slower biological aging in humans; extended lifespan in worms, improved metabolome in aged mice (Nature aging)

Oral Health / Epigenetics	-	Severe periodontitis and edentulism associated with roughly 1-2 years of accelerated epigenetic aging across multiple clocks in adults 50+ (Journal of periodontal research)
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Key Takeaway for Personal Prevention (October 2026)

This period's evidence is modest and mostly preliminary. The strongest human finding is a cohort study (NHANES, adults 50+) linking severe periodontitis and tooth loss to modestly accelerated epigenetic aging - an association, not proof of causation. This supports discussing routine dental care and periodontal treatment with a dentist or clinician as a general, low-risk health habit. Two other findings are not yet actionable for prevention: a small human exercise study showed exercise alters a blood signaling molecule tied to a youth-related gene in lab experiments, but this was not tested as a clinical outcome; and an oral bacterium linked to slower biological aging markers in humans was only tested for lifespan/health effects in worms and mice, not people. These animal/cell findings should not be treated as treatments to pursue. Overall, maintain general healthy habits like regular exercise and dental hygiene, as supported by broader evidence, and discuss any specific concerns about aging biomarkers with a qualified clinician rather than acting on early-stage lab findings.

General information drawn from the studies above - not medical advice. Animal and early findings are not recommendations; discuss any change to your health routine with your clinician.