

# **AGING BIOLOGY UPDATE**

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**UAB NATHAN SHOCK CENTER OF EXCELLENCE  
IN THE BASIC BIOLOGY OF AGING**

## **Featured**

[The evolutionary value of elders](#)

## **Headline vs Study**

Headline: [Lifestyle, not aging, may best determine dementia risk, study says](#)

Study: [The adverse effect of modifiable dementia risk factors on cognition amplifies across the adult lifespan](#)

Headline: [Men Often Die Before Women, and the Y Chromosome May Be to Blame](#)

Study: [Hematopoietic loss of Y chromosome leads to cardiac fibrosis and heart failure mortality](#)

Headline: [Eggs can survive decades without signs of aging. Now, scientists may know why](#)

Study: [Oocytes maintain ROS-free mitochondrial metabolism by suppressing complex I](#)

## **Contrary or Null Findings**

[No effect of outdoor temperature on energy expenditure in adults](#)

[Vitamin D supplementation worsens Alzheimer's progression in a mouse model and appears to in humans](#)

[No association of protein intake with age-related grip strength loss](#)

[No effect of developmental temperature on lifespan of seed beetles](#)

[Inactivation of Sirt6 improves muscle function in a mouse model of muscular dystrophy](#)

[Steepest cognitive declines observed in women with lowest C reactive protein concentrations](#)

[No association of vascular aging markers with early-onset cryptogenic ischemic stroke](#)

## **Energetics/Nutrition**

[Short- and long-term caloric restriction has tissue specific effects in older female mice](#)

[Plant-based diet is associated with decreased cognitive impairment in older adults](#)

[Mediterranean diet is associated with higher cognitive scores in Hispanic and Latino middle age and older adults](#)

[Diversity outbred mice used to find novel genetic loci associated with age and diet](#)

[Using wearable activity trackers to promote physical activity in old age](#)

[Review: Exercise as a method to target senescent cells](#)

[Review: Do caloric restriction mimetics reduce the risk of age-related heart failure?](#)

[Review: Does diet affect longevity in the so-called Blue Zones?](#)

[Review: Obesity, type 2 diabetes, and testosterone in aging men](#)

[Review: Lipodystrophy-associated progeroid syndromes](#)

### **Basic Biology**

[Hypothalamic function is maintained but testicular function is not in men over aged 90](#)

[Transient rapamycin injections in juvenile mice extend life but injections in month 2 do not. Similar findings when larval flies are treated.](#)

[Morphological changes in the hippocampus of 50-91 year olds](#)

[Urolithin A improves mitochondrial function in a human cell model of osteoarthritis, slows disease progression and reduces pain in a male mouse model](#)

[Single-cell analysis of the aging female mouse hypothalamus](#)

[A novel genetic locus associated with reduced ApoE ε4 risk of Alzheimer's disease in older African American adults](#)

[Reduced insulin signaling in serotonergic neurons, but not other neuron types, extends life in fruit flies](#)

[Review: Mitochondrial dysfunction in cell senescence and aging](#)

[Review: Interventions and slowing aging clocks](#)

[Review: Sex-specific interventions to prevent and manage frailty](#)

[Review: DNA damage and repair in age-related inflammation](#)

[Review: DNA repair as a shared hallmark in cancer and aging](#)

[Review: An overview of the molecular mechanisms of mitophagy in yeast](#)

### **Ecology & Evolution**

[Global warming leads to larger Bechstein's bats with faster reproduction and increased mortality](#)

[Aging red deer alter their spatial behavior and become less social](#)

[High blood neutrophils and low lymphocytes are predictive of mortality in wild Alpine marmots](#)

[The mismeasurements of men: An explanation for seeming negligible senescence in animals](#)

### **Novel Organisms/Comparative**

[Paternal but not maternal age influences relative telomere length in tawny owls](#)

[Stressed out birds are short-lived](#)

[Pace and shape of senescence in three species of duckweed](#)

[Elephants' diversified p53 isoforms escape MDM2-mediated repression](#)

[Genetic variants in Alzheimer's-like disease-associated genes in the social rodent, the degu](#)

[Methylation changes with age and caste in termites](#)

[Colonial tunicate offers insights into neurodegeneration via conserved pathways](#)

### **Epidemiology/Demography**

[Population of Puerto Rico is aging exponentially due to emigration of working age adults](#)

[Constructing a robust phenotypic measure of aging](#)

[Shifts in lifestyle and socioeconomic circumstances predict change in epigenetic aging in middle-aged black women](#)

### **Clinical**

[Older adults with neurodegenerative and cerebrovascular disease have worse oral health than controls](#)

[SuperAgers, older adults with memory function like young adults, are resilient against surgery induced delirium](#)

[Spectral-domain voice parameters may be useful, noninvasive markers of frailty](#)

[Review: Miscarriage syndrome and age-related diseases: Recurrent miscarriage associated with increased risk of negative health outcomes in later life](#)

[Review: Adipose tissue and ovarian aging](#)

[Review: Multimorbidity](#)

### **Caregiving**

[Fears of seeking and receiving care in later age in transgender and gender diverse people](#)

[Review: The needs of unpaid dementia caregivers increased during the COVID-19 pandemic](#)

### **Policy/Ethics**

[Special issue: Advancing diversity in aging research](#)

[Food insecurity across older adult households](#)

[Elders' communication disorders present barriers to healthcare](#)

[Improving policy for the prevention of falls among older adults](#)

**Commentary**

[Critical evaluation of targeting the "hallmarks of aging"](#)

[Perspective: A complex systems approach to aging biology](#)

[Journalistic speculation: Can a 'magic' protein slow the aging process?](#)

[Shifting our aging society from a burden to an asset](#)

**Odd and Ends**

[30 years of the NIA's Butler-Williams Scholars Program](#)

[The value in "old" things](#)

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Aging Biology Update is brought to you by the UAB Nathan Shock Center and compiled by Jessica Hoffman, Kathleen Fischer, Heather Patterson, Joseph Palmer, and Steven Austad. [Subscribe to this newsletter](#).



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