

Update in Geriatric Medicine

Suzanne Salamon, MD
Assistant Professor in Medicine
Harvard Medical School
Director Clinical Geriatrics Beth Israel Deaconess
Medical Center

Suzanne Salamon, M.D.



- Tufts Medical School
- Residency Faulkner Hospital-Internal Med.
- Fellowship Geriatric Medicine, Harvard Medical School
- Assistant Professor Harvard Medical School
- Associate Chief Clinical Geriatrics, Beth Israel Deaconess Medical Center

Topics

- Vaccinations in Older Adults
- Hearing Loss
- Antibiotic Allergies
- Nocturnal Leg Cramps
- Heart Disease in Women
- How Many Steps do we really need to be healthy?
- Hormone Replacement Therapy
- Organ Prolapse
- Super Agers
- Myths About Aging

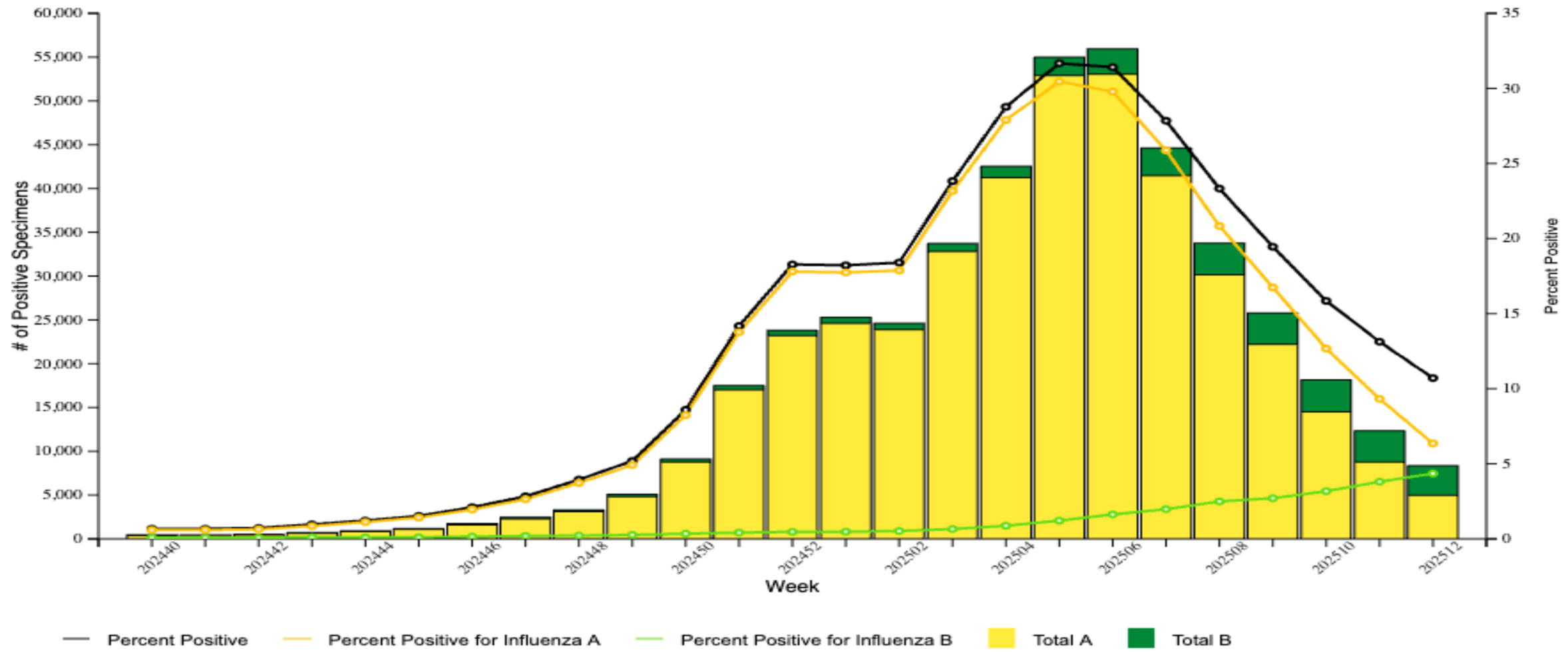
Vaccinations in Older

Adults

FLU-high dose quadrivalent vaccine 23% lower rate of flu hospitalizations than standard dose quadrivalent (1). Every year

- -Peak flu season Dec-Feb
- CDC estimates 28,000 died from flu 2023-2024 flu season
- Vaccine prevented 8000 deaths
- -Flu vaccine protection wanes 9%/month, so don't give shot too early
- -NEJM Evid July 2024-risk of MI 6 times higher within 1 week of positive influenza test
- **PNEUMONIA-**
- -Mortality rate of 10% in older adults
- -recommendation: A single dose of PCV21, PCV20, or PCV15 after PPSV23

Influenza Positive Tests Reported to CDC by Clinical Laboratories,
National Summary, 2024-25 Season, week ending Mar 22, 2025



Shingles



- **SHINGLES** (Shingrix). Vaccine efficacy (VE) (2) Dev. 2017

	<u>1 dose.</u>	<u>2 doses</u>
1 year	70%	79%
2 years	45%.	75%
3 years.	48%.	73%

TDaP (**T**etanus, **D**iphtheria and **P**ertussis) every 10 years

Tetanus (lockjaw) around 30/year in US

Diphtheria. Very rare

Pertussis (whooping cough) dangerous for babies,kids.Very contagious

- **COVID-19**

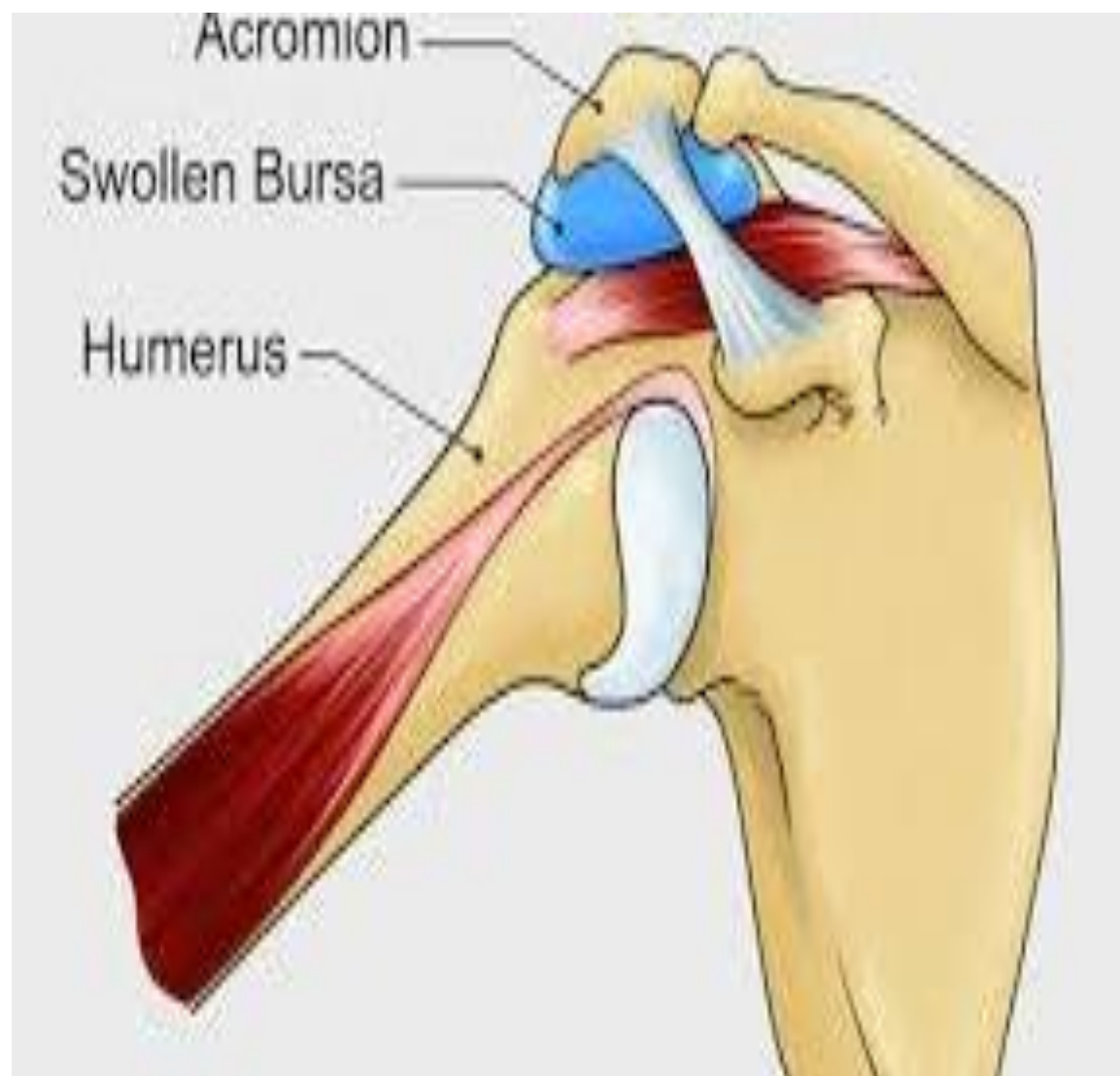
- As of April, 2024 1,219,487 deaths from COVID
- >81% of COVID-19 deaths occurred in people >age 65
- First COVID case in US Jan. 20, 2020
- First COVID vaccine given in US Dec. 14, 2020
- Latest COVID recommendations- 2 doses of any 2024-2025-COVID vaccine separated by 6 months (min. 2 months)
- If you recently had COVID, may delay getting vaccine for 3 months

RSV. Respiratory syncytial virus.

- 6000-10,000 deaths each year in >65
- 2023-2024 season, RSV vaccines 77% against RSV ED visits, and 80% against hospitalization

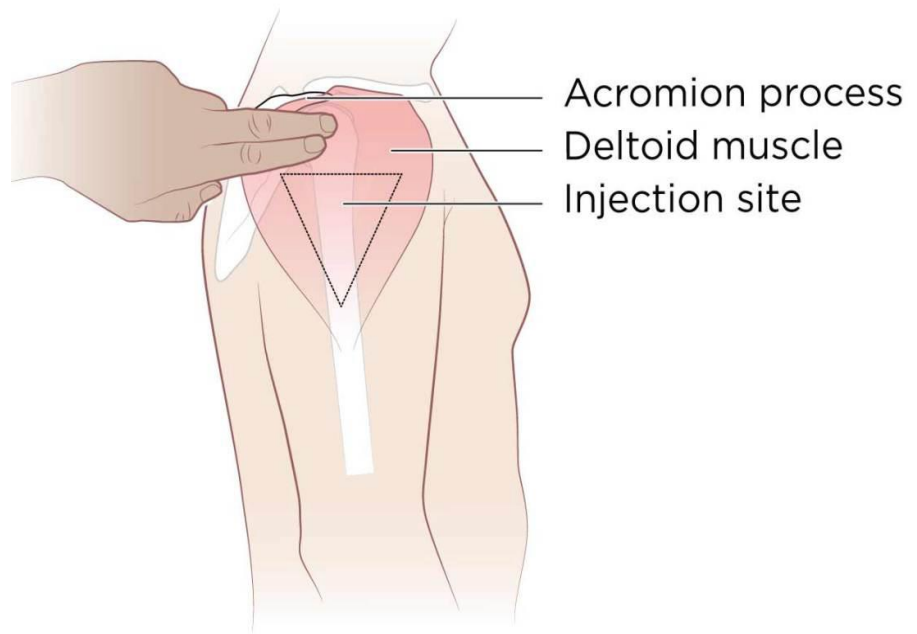
A Word About How to Give a Shot

- Subdeltoid bursitis -reported as an adverse event after I.M. vaccination in the deltoid muscle. (AKA SIRVA-Shoulder Injury Related to Vaccine Administration)
- Occurs when the vaccine is inadvertently injected into the subdeltoid bursa or other pericapsular tissues instead of the deltoid muscle (“too high”)
- Pain, loss of motion in shoulder
- 2012 report as one of adverse effects of vaccines
- Millions of shots given each year



Subacromial Bursitis Pain Pattern





LOSS

- Hearing Loss and Falls
 - Hearing Loss and Dementia
 - Hearing Loss and development of Parkinson's disease
 - Do Hearing Aids help prevent cognitive decline?
 - What hearing devices are available?
-
- 30–35 % of adults ages 65 and 75 years suffer from hearing loss.
 - 40–50 % of adults 75 and older suffer from hearing loss.
 - Can cause fewer job and educational opportunities, social withdrawal, difficulty communicating with others, worse self-esteem, confidence

Hearing loss and falls



Falls are the leading cause of fatal and nonfatal injuries among older adults.



People with hearing loss have a higher risk of falling than the general population.



The more severe the hearing loss, the higher the risk.



Prevent falls by wearing hearing aids and eyeglasses (if needed), using assistive devices, staying active, and fall-proofing your home.



Healthy Hearing

www.healthyhearing.com

Postural

Instability in Older

Korean Adults

JAMA Otolaryngol Head Neck Surg. 2020;146:530-53. Seung-Hwan et al

- Study of >3500 people found loss of balance was twice as high with moderate hearing loss in at least one ear (compared with having no hearing loss or mild hearing loss).
- **Impact of Hearing Loss on Patient Falls in the Inpatient Setting**
American Journal of Preventive Medicine. Vol 58,Iss.6,June 2020,Tiase et al

In the inpatient setting, there was a positive association between hearing loss and falls. However, among patients with hearing loss, only those without hearing aids were significantly more likely to fall

. J Am Geriatr Soc . Oct, 2023 71(10):3163-3171.

Consistent hearing aid use is associated with lower fall prevalence and risk in older adults with hearing loss.

Laura Campos et al

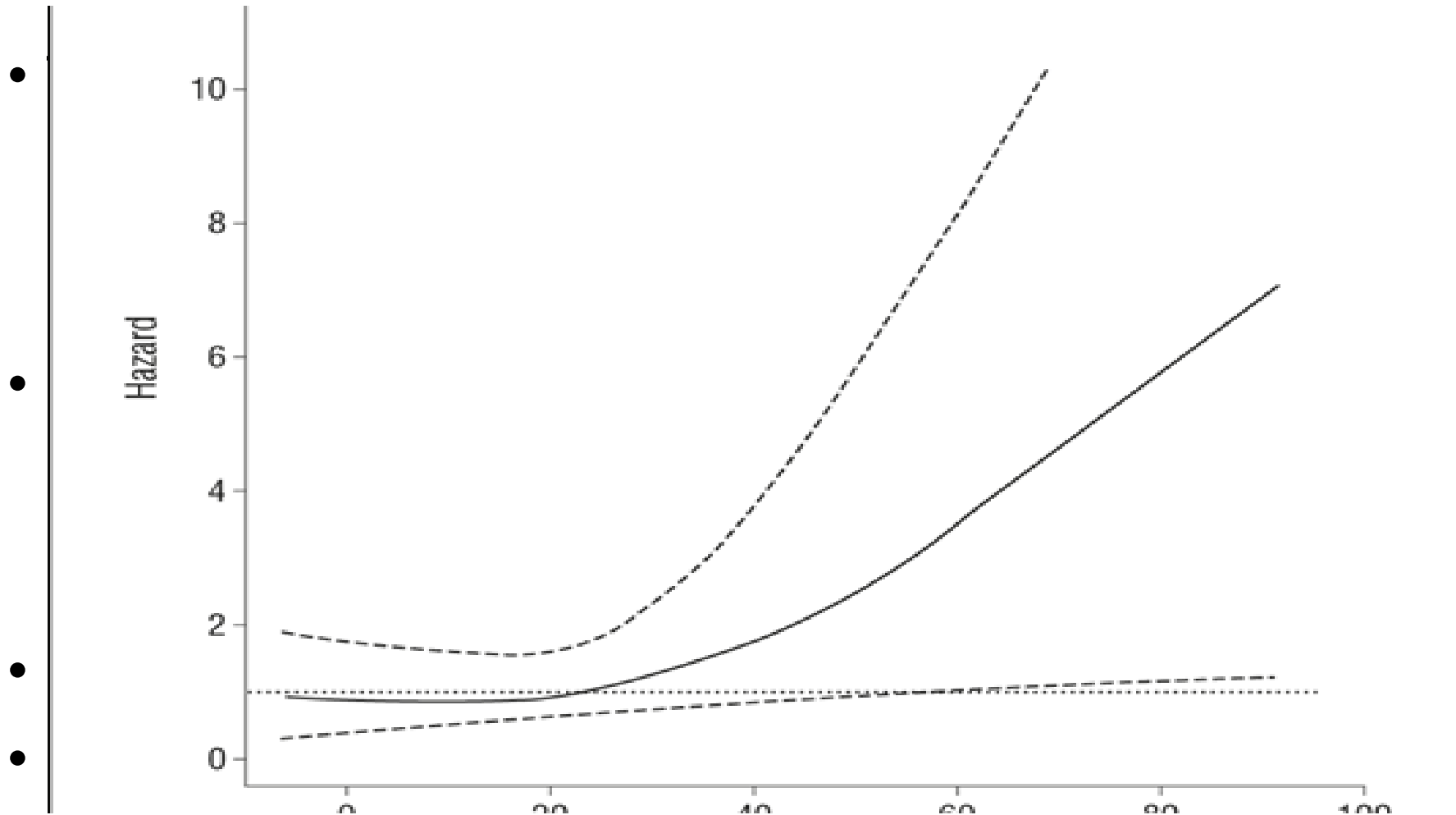
- Older adults with hearing loss are at 2.4 times greater risk of falls than their normal hearing peers
- These findings suggest that use of hearing aids-especially consistent hearing aid use-is associated with lower odds of experiencing a fall or being classified as at risk for falls in older individuals with hearing loss.

Hearing Loss and Dementia

- 2/3 of > 70 YO have hearing loss (HL)
- Only 14% of adults wear hearing aids
- In 2011, Lim published a report “Hearing loss is independently associated with incident all-cause dementia” (7)
- Research now suggests that decreased hearing may be a significant risk factor for dementia and may begin at very low levels of hearing impairment.
- This study of > 6000 people done to determine connection between hearing and cognition is present in people with “normal” hearing

Conclusion

- An independent association was observed between cognition and subclinical HL.



Hearing Loss and Dementia Prevalence in Older Adults in the US.

Jama.

2023

In a nationally representative sample of older adults in the US, moderate to severe hearing loss was associated with higher prevalence of dementia compared with normal hearing.

Hearing aid use was associated with lower dementia prevalence,

Association of Subclinical Hearing Loss with Cognitive Performance

- **Can Hearing Aids Help Prevent Dementia?**

New York Times Magazine Feb 20, 2020. Kim Tingley

Older people rarely want hearing aids. A dementia study could change that.

- **By Linda Matchan** Globe Correspondent, Updated October 13, 2023, 2:33 p.m.

If left untreated, hearing loss can be linked to a higher risk of cognitive decline in older adults. But there's encouraging news.

Hearing Loss, Incident Parkinson Disease, and Treatment With Hearing Aids (8)

JAMA Neurol. 2024;81(12):1295-1303 Neilson et al

- Hearing loss appears to be an independent risk factor for later development of PD.
- Hearing aids attenuate this risk, and therefore widespread screening for hearing loss and appropriate use of hearing aids may reduce the incidence of PD.

Why Won't People Wear Hearing Aids?

- Social stigma (feeling like it makes them appear older)
- Discomfort with the device
- Unrealistic expectations about hearing restoration
- Concerns about cost
- Difficulty with fitting and adjustments
- Lack of perceived need for the aid, often stemming from denial about their hearing loss
- Quick in office hearing test: finger rub by patient's ear or whisper test

- Over-the-Counter Hearing Aid Act was signed into law in 2017 and requires the FDA to issue draft rules by August 2020
- FDA was delayed (waylaid by pandemic)
- The *Over-the-Counter Hearing Aid Act* amends the *Food, Drug, and Cosmetic Act* and allows the FDA to categorize certain hearing aids as OTC
- OTC hearing aids for adults with mild-to-moderate hearing loss, without a hearing exam. Cost less than prescription hearing aids approved May 2021



Effectiveness of an Over-the-Counter Self-fitting Hearing Aid Compared With an Audiologist-Fitted Hearing Aid

JAMA Otolaryngol Head Neck Surg. 2023;149(6):522-530.
doi:10.1001/jamaoto.2023.0376 April 13, 2023. DeSouse et al

- Self-fitting OTC devices provide outcomes comparable to audiologist-fit hearing aids
- Sold in pharmacies, electronics stores, and wholesale clubs (Best Buy, CVS, Walmart, Walgreens, Costco, Amazon, etc)

On-line resources for hearing aids

	Price per pair	Battery Life	Bluetooth	Warranty	Financing	Learn More
<u>Jabra Enhance</u>	\$799–\$1,995	12–30 hours	Yes	3 years	Yes	<u>Visit Site</u>
<u>Eargo</u>	\$1,650–\$2,950	16 hours	Yes	1–2 years	Yes	<u>Visit Site</u>
<u>Audien Hearing</u>	\$99–\$489	20–24 hours	No	1 year	No	<u>Visit Site</u>
<u>MDHearing</u>	\$299–\$699.98	15–20 hours	Yes	2 years	Yes	<u>Visit Site</u>
<u>Lexie</u>	\$799–\$999	18 hours	Yes	1 year	No	<u>Visit Site</u>
<u>Audicus</u>	\$1,398–\$2,998	18 hours	Yes	2 years	Yes	<u>Visit Site</u>

Pros and cons of Over the Counter Hearing

Aids

- Pros
- OTC hearing aids are cheaper than prescription hearing aids.
- Some brands offer remote evaluations and adjustments by an audiologist.
- Many devices come with a smartphone app that allows the person to adjust the volume and settings.
- People do not need a medical examination, prescription, or professional fitting.
- Many have trial period where you can return them
- Cons
- OTC hearing aids are only suitable for people with mild or moderate hearing loss.
- People cannot custom-fit the device to their specific hearing needs.
- Some devices may offer fewer features than prescription hearing aids.
- Some stores do not offer after-purchase hearing care.
- Most OTC hearing aids come with shorter warranties than prescription hearing aids.

Pocket Talker

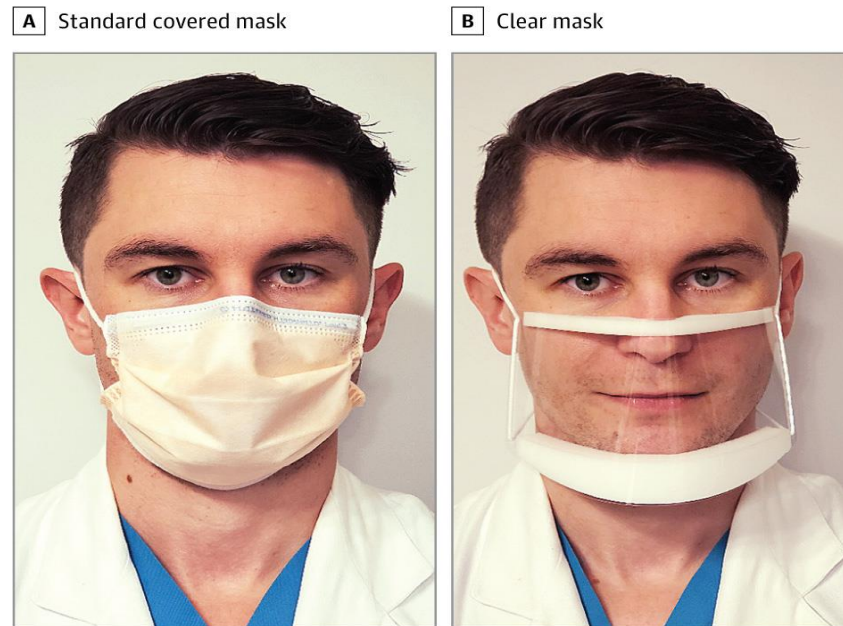


Effect of Clear vs Standard Covered Masks on Communication with Patients During Surgical Clinic Encounters

Jama Surg.2021:156 (4)372-378 Kratzke et al



- Results: 200 patients. When surgeons wore a clear mask, patients rated their surgeons higher for:
- - providing understandable explanations (clear, [95%] vs covered, [78%];
- -demonstrating empathy (clear, [99%] vs covered, [85%];
- -building trust (clear, [94%] vs covered, [72%]; Patients preferred clear masks (clear, [100%] vs covered, [72%]; citing improved surgeon communication and appreciation for visualization of the face.



Nocturnal Leg Cramps

- Of older adults, 1/3 will have a leg cramp at least once every 2 months
- Many remedies (magnesium, heat, cold, pickle juice, mustard, apple cider vinegar, tonic water, stretching, massaging, standing, walking)
- Article in JAMA Oct, 2024,
- 199 participants 65 years and older with NLCs, those who received vitamin K₂ 180 µg experienced a significant reduction in the mean frequency of cramps per week compared with the placebo group.
- No adverse events related to vitamin K₂ were observed, demonstrating the safety of vitamin K₂ application in the older population with NLCs
- However, vitamin K₂ (1-2 mg) can affect the anticoagulant effectiveness of warfarin. Therefore, vitamin K₂ is not recommended for those taking warfarin. Otherwise does not cause or affect clotting

RCT: Vitamin K₂ in Managing Nocturnal Leg Cramps

POPULATION

91 Men, 108 Women



Older adults with nocturnal leg cramps (NLCs) occurring ≥ 2 times in 2 wk

Mean (SD) age, 72.3 (5.5) y

SETTINGS / LOCATIONS



2 Hospitals
in China

INTERVENTION

199 Participants randomized



103 Vitamin K₂
180 μ g Daily for 8 wk



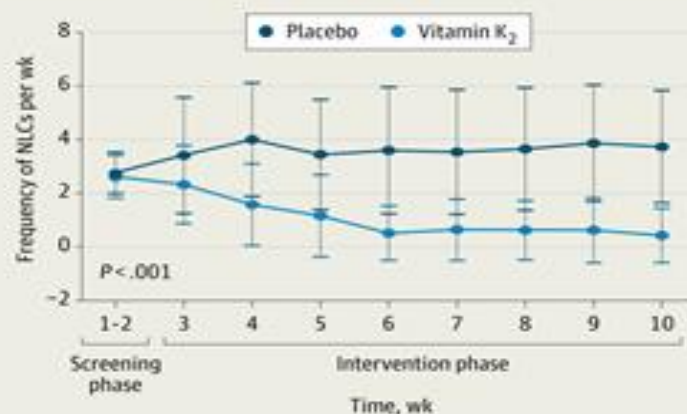
96 Placebo
Similar-looking placebo
capsule daily for 8 wk

PRIMARY OUTCOME

The mean number of reported NLCs per wk between the vitamin K₂ and placebo groups

FINDINGS

The mean number of reported NLC episodes was significantly reduced among patients randomized to receive vitamin K₂ treatment compared with the placebo group



Mean (SD) NLCs per week:

Vitamin K₂: 0.96 (1.41)

Placebo: 3.63 (2.20)

Difference, -2.67; 95% CI, -2.86 to -2.49; P < .001

Vitamin K2 as a potential therapeutic candidate for the prevention of muscle cramps in hemodialysis patients: A prospective multicenter, randomized, controlled, crossover pilot trial

Nutrition 2022 May;97:111608. Dan Xu et al

- Vitamin K2 reduced the frequency, duration, and severity of muscle cramps in HD patients (all $P < 0.05$). The frequency, duration, and severity of muscle cramps in HD patients increased again after crossing over to the placebo.
- There were no serious adverse events
- Can be taken with vitamin D3 as both these vitamins are reported to have synergistic effects, inhibiting the osteoclast cells which are responsible for bone resorption. Aug 25, 2019

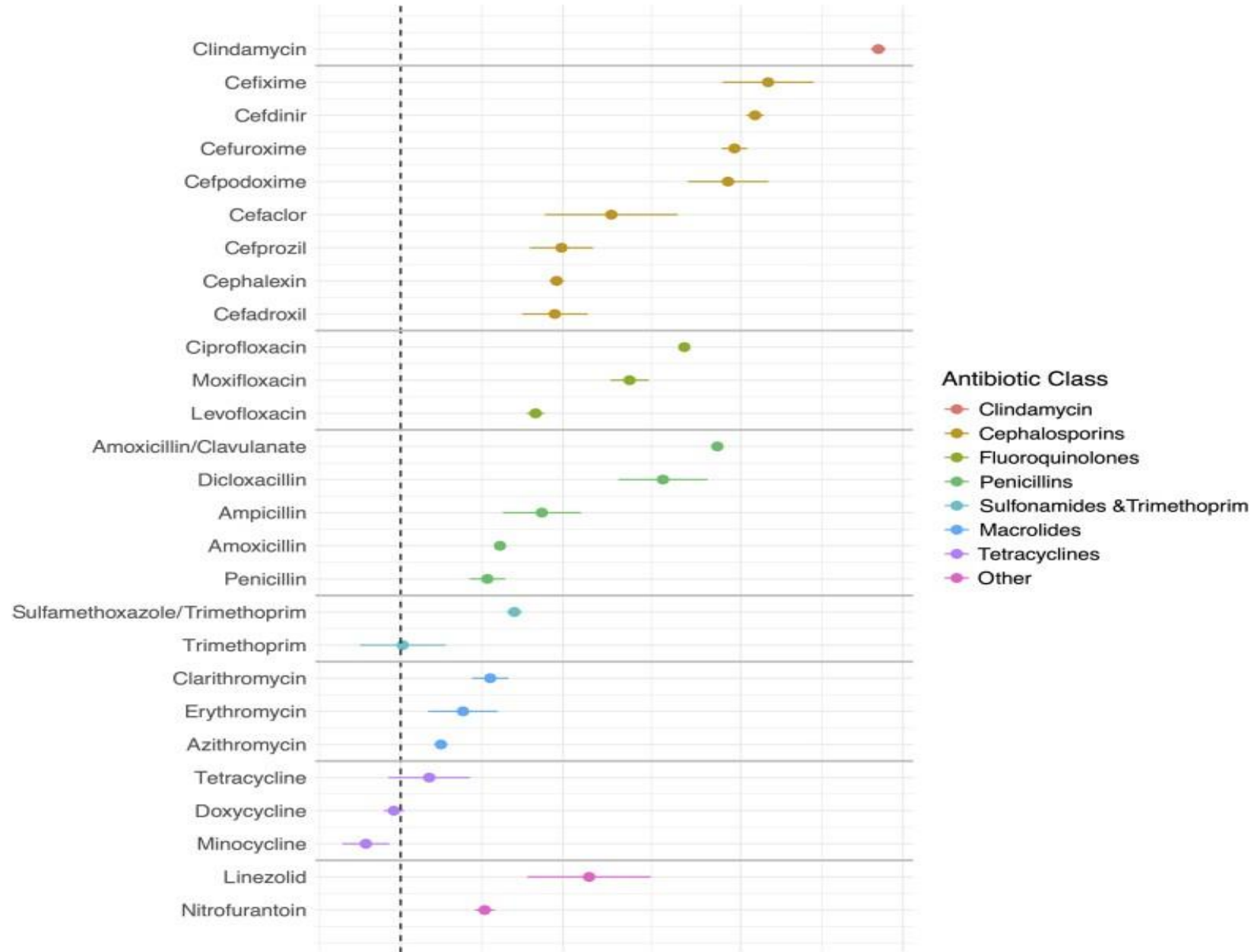
Antibiotic Allergy in Older Adults

- Drug allergy frequently reported
- Documented antibiotic allergies result in second-line therapies, treatment failures, resistant pathogens, and secondary infections, including *Clostridioides difficile* colitis.
- Older patients have 3X prevalence community acquired pneumonia, 20 X UTI's
- Adverse drug reactions occur at higher rates in people with penicillin allergy label
- C.difficile infections occur at higher rates in patients with penicillin allergy labels

- Of 296 penicillin allergy assessments in older adults, 286 (97%) were disproved
- Sulfonamide 41 (88% disproved)
- Cephalosporin 20, (95% disproved) antibiotics.
- Important to get tested



Comparison of Different Antibiotics and the Risk for Community Associated *Clostridioides difficile* Infection



National Penicillin Allergy Day

September 28

Allergic to penicillin?

Which are you?

Total U.S.
population

328
MILLION

Get tested to find
out for sure!

People who report
penicillin allergy

32.8
MILLION



People who report a
penicillin allergy but
are not actually allergic

29.5 | **90%**
MILLION



People who are
truly allergic
to penicillin

3.28 | **10%**
MILLION



Allergy
& Asthma
NETWORK

AsthmaAllergyNetwork.org

DO YOU KNOW THE DIFFERENCE BETWEEN UNDERACTIVE AND OVERACTIVE THYROID?

SYMPTOMS OF UNDERACTIVE THYROID



Unexplained
Weight Gain

Constant Fatigue
and Tiredness

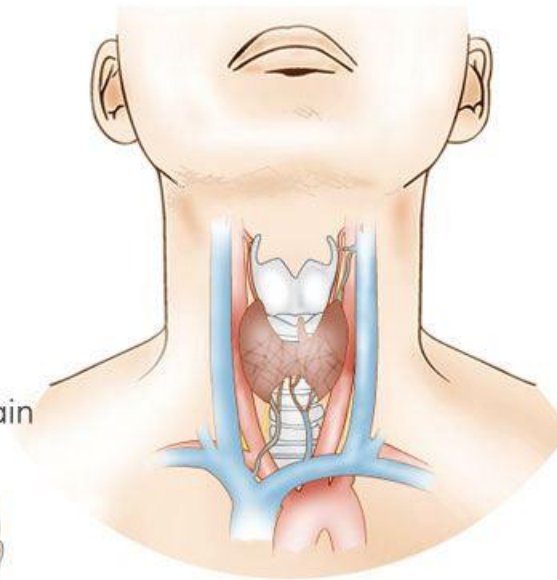


Muscle
Soreness & Pain

Hair Loss



Dry and
Flaky Skin



SYMPTOMS OF OVERACTIVE THYROID

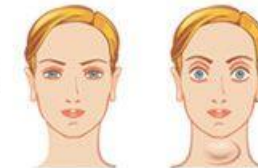
Unexplained
Weight Loss



Feeling
Fatigued



Bulging
Eyes



Panic
Attacks



Top10
Home Remedies
To explore more, visit
www.Top10HomeRemedies.com

The Dangers of Overtreating Hypothyroidism

- Subclinical hypothyroidism defined as high ↑TSH, Normal T4
- Occurs in up to 20% adults >65 YO
- Should the elevated TSH be treated?

Will review:

- Does overtreatment affect life expectancy?
- Does overtreatment increase fracture risk?
- Does overtreatment lead to cognitive impairment?

- TSH increases normally with age with no change in free T4 levels
- In older adults, mildly elevated TSH levels normalized in about 50% of cases during 1 to 2 years of in the United States in the past decade

Study	Location	Number	Assay	TSH, mU/L			
				Age 20– 30 years	Age 60– 70 years	Age 70– 80 years	Age 80– 90 years
Boucai et al. (2011) [83]	USA	13,296	Nichols	0.40– 3.60	0.46– 4.70	0.47– 5.60	0.44– 6.30

- Levothyroxine prescriptions consistently among the top 3 of all prescription
- 7% Americans have prescription for thyroid med
- Often people started on thyroid meds in middle age and never change dose
- Iatrogenic thyrotoxicosis is a common result of thyroid hormone therapy.
- TSH levels below 0.4mU/L is considered hyperthyroidism
- Why is this important?

Subclinical Thyroid Dysfunction and Fracture Risk(12)

- Subclinical hyperthyroidism was associated with an increased risk of fractures, with highest risk in those with suppressed TSH <0.10 mIU/L
- No association between subclinical hypothyroidism and fractures
- Important to check TSH/T4 as people age

Association Between Subclinical Thyroid Dysfunction and Fracture Risk
JAMA Network Open.2022;5(11);e2240823 Daya et al

- 10,946 older adults. Those with subclinical hyperthyroidism (TSH <0.56 mIU/L) had a 34% higher risk of fracture compared with euthyroid.

Is too much thyroid hormone a risk for dementia?

-Among patients 65 years and older, a low TSH level from either endogenous or exogenous thyrotoxicosis was associated with higher risk of incident cognitive disorder.

Endogenous and Exogenous Thyrotoxicosis and Risk of Incident Cognitive Disorders in Older Adults Roy Adams et al *JAMA Intern Med.* 2023;183(12):1324-1331.

- -Thyroid hormone dose in older adults are one-third lower than for younger populations.
- Recommendations Derived From The Baltimore Longitudinal Study of Aging, Gavigan et al. *Endocrine Practice.* Vol. 29, Issue 8, Aug. 2023, pp 612-617

CVD (Cardiovascular Disease Leading Cause of Death in Women in US, All Races and Origins

Leading Causes of Death, United States, Females, 2017, all races and origins, all ages	
All races and origins, Female, All ages	Percent
1) Heart disease	21.8%
2) Cancer	20.7%
3) Chronic lower respiratory diseases	6.2%
4) Stroke	6.2%
5) Alzheimer's disease	6.1%
6) Unintentional injuries	4.4%
7) Diabetes	2.7%
8) Influenza and pneumonia	2.1%
9) Kidney disease	1.8%
10) Septicemia	1.6%

- Cardiovascular disease (CVD) is the #1 cause of death in women in the US
- >300,000 deaths/year
- More than all cancers combined
- 44% of women in the U.S. have some form of heart disease
- Mortality has been declining, but slower decline than for men
- Among women <55 years, increased incidence CVD
- Too few women aware of CVD.
- Physicians also not aware

HEART ATTACK SYMPTOMS



Knowledge, Attitudes, and Beliefs Regarding Cardiovascular Disease in Women: The Women's Heart Alliance.

J Am Coll Cardiol 2017;70:123-32 Merz et al

- 45% of women were unaware that CVD is the number 1 killer of women
- 45% of women said it was common to cancel or postpone a doctor appointment until losing weight.
- CVD rated top concern by only 39% of doctors after weight and breast health
- Heart disease was rated as top concern less frequently than weight issues by both women and physicians.
- Physicians underestimate probability of CVD in women
- Less likely to refer women for cardiac catheterization

ATRIAL FIBRILLATION

- Atrial fibrillation (AF) -most prevalent cardiac arrhythmia in clinical practice.
-Catheter ablation is highly effective for the treatment of AF.
- Women comprise 55% of the up to 6-million patients with AF in the United States , but undergo only 40% of catheter ablations
- Female patients were older and had higher CHA₂ DS₂ -VASc scores compared to males at the time of AF ablation.
- Women tried more drugs than men before ablation.
- One-year arrhythmia recurrence rates and procedural complications were similar in both sexes. No sex-based differences were observed in safety and efficacy of ablation.

Association of Step Volume and Intensity with All-Cause Mortality (6)



- “Wearables” can track physical activity
- 2023, 35% of people in US wear a fitness tracker
- Worldwide average #steps 5000/day; in US 4800/day
- Common goal of 10,000 steps/day in lay press, often used as default on wearables and smartphones
- Most likely origin of goal of 10,000 steps derives from trade name of a pedometer sold in 1965 by Yamasa Clock and Instrument Company in Japan called Manpo-kei, which translates to “10,000 steps” in Japanese.
- Several studies on how many daily steps needed for health and mortality, as well as intensity of steps

Relationship of Daily Step Counts to All-Cause Mortality and Cardiovascular Events

Journal of the American College of Cardiology

Volume 82, Issue 15, 10 October 2023, Pages 1483-1494 Stens et al

- As few as about 2,600 steps/d yield significant mortality and CVD benefits, with progressive risk reductions up to about 8,800 and about 7,200 steps/d, respectively.
- Additional mortality benefits were found at a moderate to high vs a low step cadence.

- Lower risk for all-cause mortality and incident CVD may already be experienced after about 2,600 steps/day

Additional increments of 1,000 steps/d (about 10 minutes of walking) increase risk reductions.

Optimal health benefits were achieved at about 8,800 steps/d for all-cause mortality and about 7,200 steps/d for incident CVD.

Prospective Association of Daily Steps With Cardiovascular Disease

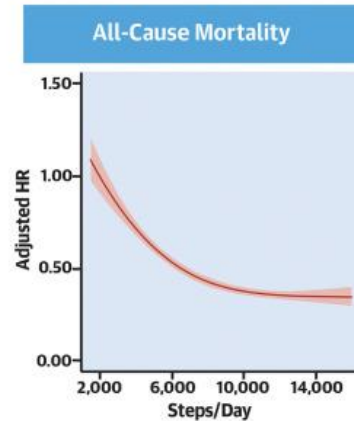
Circulation Volume 147, Issue 2, 10 January 2023; Pages 122-131

Among older adults > 60 YO, taking ≈ 6000 to 9000 steps per day was associated with 40% to 50% lower risk of cardiovascular disease, compared with taking ≈ 2000 steps per day.

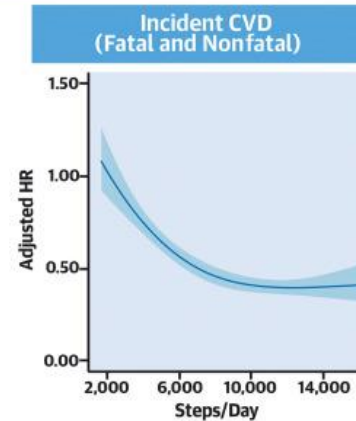


CENTRAL ILLUSTRATION: Dose-Response Associations of Daily Step Count With Clinical Outcomes

This systemic review and meta-analysis of 12 cohorts including 111,309 individuals from the general population identified minimal and optimum step count targets for reducing adverse health outcomes.



	Steps/day	Adjusted HR (95% CI)
Minimum dose	2,517	0.92 (0.84-0.99)
Optimum dose	8,763	0.40 (0.38-0.43)
Risk reduction at 16,000 steps	16,000	0.35 (0.30-0.40)



	Steps/day	Adjusted HR (95% CI)
Minimum dose	2,735	0.89 (0.79-0.99)
Optimum dose	7,126	0.49 (0.45-0.55)
Risk reduction at 16,000 steps	16,000	0.42 (0.33-0.53)

Step count targets were independent of:



Device wear location (wrist vs hip)



Additional health benefits with higher step cadence, irrespective of total step count



Stens NA, et al. J Am Coll Cardiol. 2023;82(15):1483-1494.

Age 97



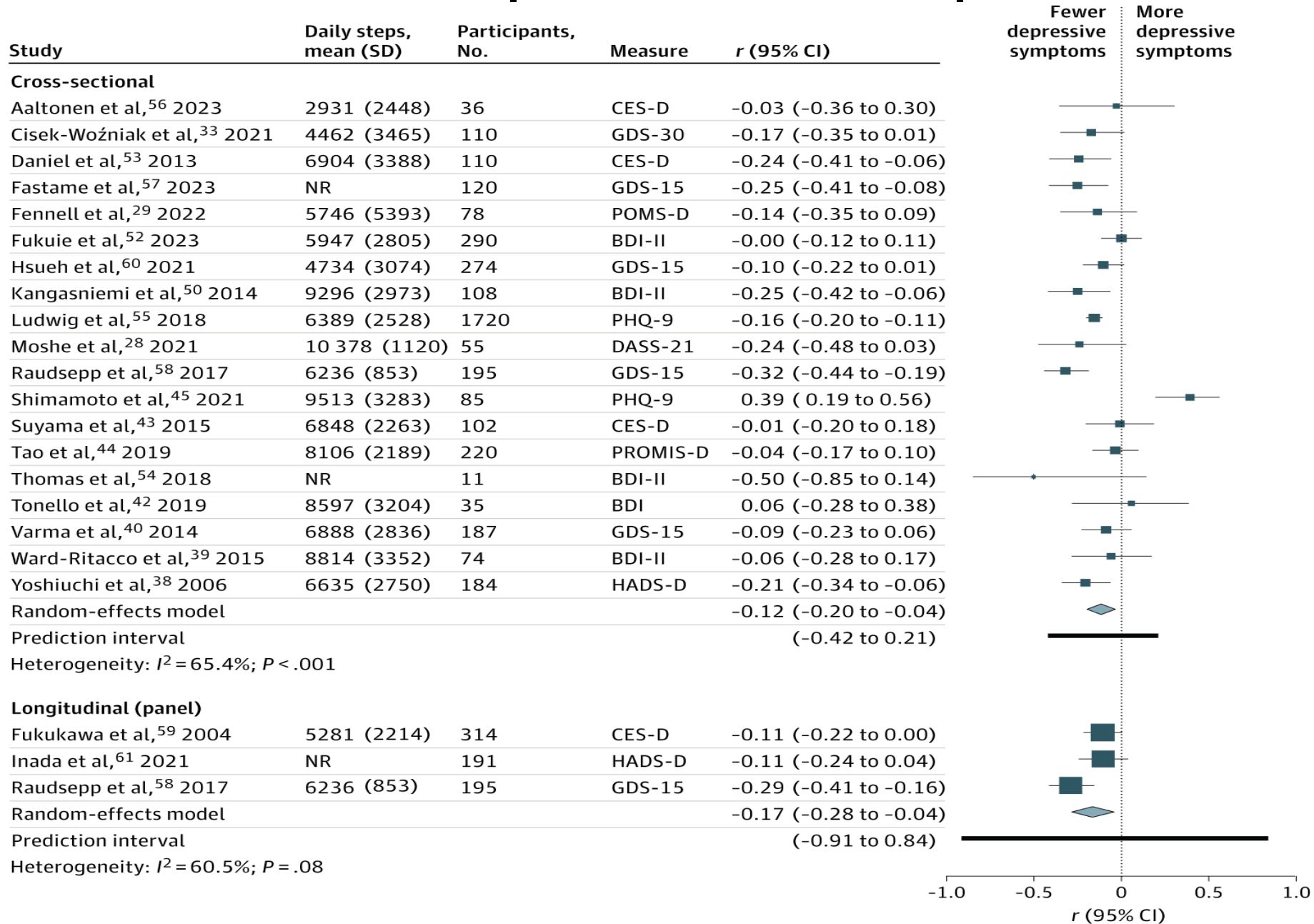
Daily Step Count and Depression

Meta-analysis of 33 observational studies involving 96 173 adults, higher daily step counts were associated with fewer depressive symptoms in the general adult population. (14)

Compared with fewer than 5000 steps/d, achieving 5000 or more was associated with reduced depressive symptoms

Daily step count of 7000 or higher was associated with lower risk of depression in prospective studies.

Step count and depression



Hormone Replacement Therapy

- Hormone Replacement Therapy (HRT)used to prevent sx of menopause (hot flashes, sweats, insomnia, dry skin, vaginal dryness)
- As a result of the Women's Health Initiative (WHI) trial in 2002, the US Food & Drug Administration and Health Canada require all estrogen-containing prescription therapies to carry a “black box” warning in their prescribing information about the adverse risks of HRT.(risk of CVD, dementia, breast ca, endometrial ca)
- Observational studies reported increased risks with overall HRT, but did not give detailed comparisons between different types of treatment.
- Study done to compare risk of VTE (venous thromboembolism) blood clots and use of different types of HRT.

- Study showed 16% of women have hot flashes, night sweats in their 80's (3)
- Transdermal estrogen therapy avoids first-pass hepatic metabolism is associated with a lower risk of venous thromboembolism (VTE) and stroke compared to oral therapy.^[2]
- Does not appear to increase the risk of VTE and stroke and may reduce the risk of myocardial infarction (MI) compared with nonusers
- Transdermal HRT is considered safe, particularly in terms of reducing the risk of VTE and stroke, and is often recommended for women with higher cardiovascular risk profiles



What About Vaginal Estrogen?

- Vaginal atrophy after menopause -vaginal dryness, pain & bleeding during sex (dyspareunia) , itching, irritation, burning, and discharge, urinary symptoms, recurrent UTI
- Up to 45% of postmenopausal women ,but few seek help
- Due to decreased estrogen
- Underreported and undertreated.
- NAMS recommends non-hormonal vaginal lubricants for painful sex (Replens,K-Y,Astroglide) and increased sexual activity. OK for mild, but not moderate or severe sx.
- Systemic hormones OK for menopause symptoms, but long-term therapy not recommended

Dyspareunia (painful sex)

Genital pain that can be experienced before, during, or after intercourse



Vaginal Estrogen Formulations

- Vaginal ring-every 3 months. Slow, steady release of estrogen
- Estrogen cream-1-2 times/week
- Estrogen tablets 1-2 times/week



- **Estradiol Vaginal Insert**
- **Dosage Form:** vaginal insert
- **WARNING: ENDOMETRIAL CANCER, CARDIOVASCULAR DISORDERS, BREAST CANCER and PROBABLE DEMENTIA**
- Estrogen-Alone Therapy
- -Endometrial Cancer There is an increased risk of endometrial cancer in a woman with a uterus who uses unopposed estrogens. Cardiovascular Disorders and Probable Dementia
- -The Women's Health Initiative (WHI) estrogen-alone substudy reported increased risks of stroke and deep vein thrombosis (DVT) in postmenopausal women (50 to 79 years of age) The WHI Memory Study (WHIMS) estrogen-alone ancillary study of WHI reported an increased risk of developing probable dementia in postmenopausal women 65 years of age or older during 5.2 years of treatment with daily CE (0.625 mg)-alone, relative to placebo In the absence of comparable data, **these risks should be assumed to be similar for other doses of CE and other dosage forms of estrogens.**
- Breast Cancer
- The WHI estrogen plus progestin substudy also demonstrated an increased risk of invasive breast cancer [see *Warnings and Precautions* ([5.3](#)), and *Clinical Studies* ([14.2](#))].
- **In the absence of comparable data, these risks should be assumed to be similar for other doses of CE and MPA, and other combinations and dosage forms of estrogens and progestins.**
- Estrogens with or without progestins should be prescribed at the lowest effective doses and for the shortest duration consistent with treatment goals and risks for the individual woman.

- Increased risk for DVT, PE, CAD, and endometrial and breast cancer.¹
- Long-term systemic hormone therapy no longer recommended for sole treatment of vaginal atrophy
- Local vaginal estrogen therapy –increased blood flow to uterine lining, epithelial thickness, secretions, reverses atrophy, decreases symptoms
- BUT-is it safe?
- This study done to determine association between vaginal estrogen and risk of coronary heart disease (CHD), invasive breast cancer, stroke, pulmonary embolism, hip fracture, colorectal cancer, endometrial cancer, or death from any cause.

Breast Cancer, Endometrial Cancer, and Cardiovascular Events in Participants who used Vaginal Estrogen in the Women's Health Initiative Observational Study. Crandall et al

- 40 US clinical centers, 45,663 50-79 YO , median follow-up 7.2 years
- Collected data on incident CHD, invasive breast cancer, stroke, pulmonary embolism, hip fracture, colorectal cancer, endometrial cancer, death, and self-reported use of vaginal estrogen (cream, tablet).
- The risks of cardiovascular disease , blood clots and cancer were not elevated among postmenopausal women using vaginal estrogens, providing reassurance about the safety of treatment.

One Caveat...

Systemic or Vaginal Hormone Therapy After Early Breast Cancer

JNCI: Journal of the National Cancer Institute, Volume 114, Issue 10, October 2022, Pages 1347–1354, Cold et al.

Published

The use of vaginal estrogen therapy (VET) increased the risk for breast cancer recurrence by 39% in women with early estrogen receptor–positive breast cancer who were taking aromatase inhibitors, , but not increased mortality,

There was no increase in the risk for recurrence in women who were using VET and taking tamoxifen, or in women who were using VET and not taking any adjuvant endocrine therapy.

Perrotta C, Aznar M, Mejia R, Albert X, Ng CW. Oestrogens for preventing recurrent urinary tract infection in postmenopausal women. *Cochrane Database Syst Rev*. 2008(2):CD005131.

- In postmenopausal women, treatment of atrophic vaginitis with topical estrogen formulations was shown to decrease rates of UTI recurrence through effects on vaginal flora.
- Women treated with topical estrogen had a 50% reduction in UTI recurrence.
- Oral estrogens are less effective with more risks and should not be used for this purpose.

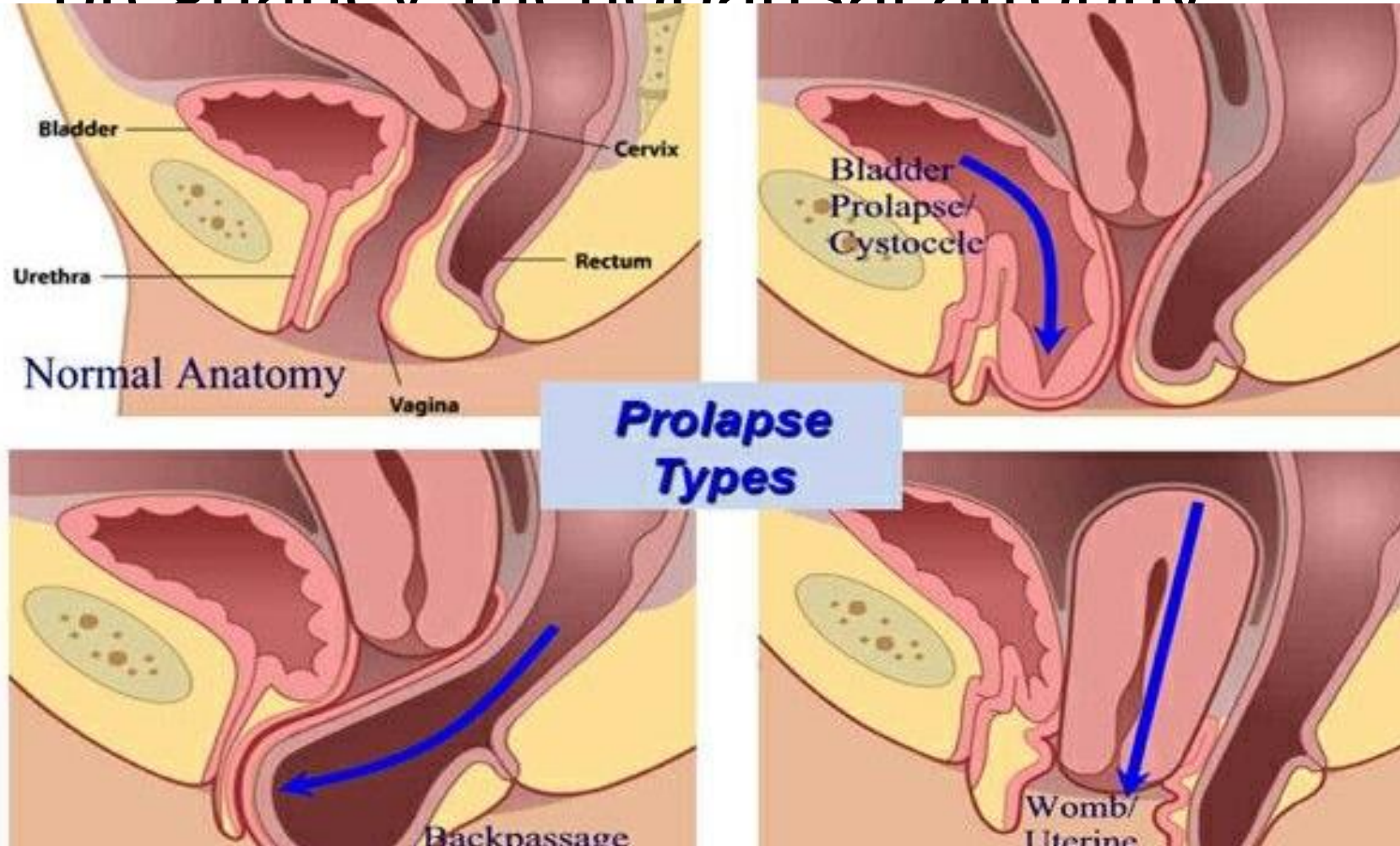
ORGAN

PROLAPSE

- As many as half of women between the ages of 50 and 80 have some degree of pelvic organ prolapse.
- Risk factors include childbirth, age, obesity, chronic constipation, having a hysterectomy
- Often no symptoms, but can be uncomfortable, embarrassing, cause urinations problems, interfere with sexual intercourse
- Women often can feel a “bulge” in the vaginal area
- Symptoms also can include urine leakage, difficulty starting the urine stream, vaginal pain, difficulty having bowel movements
- Treatments include Kegel exercises, surgery, pessaries

PROLAPSE

Causes of prolapse: congenital weakness of uterus or vagina, pregnancy, menopausal atrophy



Bronze pessary, Roman, 200 BCE-400 CE

Modern day pessaries



How effective and how safe are pessaries?

- To determine efficacy and safety of vaginal pessaries for older women
- A prospective cohort study of 140 older women (aged ≥ 65 years) with significant POP treated with individually fitted vaginal pessaries.
- After initial insertion, each patient evaluated after 1 month and subsequent follow-ups at increasing intervals.
- During each examination, the pessary was removed and the vagina was inspected for infection, bleeding, or erosions.
- 87% were successful
- Vaginal pessary for symptomatic POP in older women is effective and safe and is an alternative for older women who are unable or unwilling to undergo reconstructive pelvic surgery.(5)

How often should pessary be checked?

- Guidelines vary on pessary care (in UK every 6 months, in US every 3 months)
- Goal is to check fit, complications, satisfaction
- Most common adverse effect-vaginal epithelial abnormalities like granulation tissue or erosions
- A study done to evaluate safety of 6 months vs 3 months visit (4)
- Average age 79 YO
- Rate serious vaginal epithelial abnormalities was **7.4%** in routine arm (12 weeks) and **1.7%** in extended arm (24 weeks).
- 92% in the extended arm preferred schedule of less frequent pessary exams

Nov.
2023



SUPERAGERS

- AARP -“Superagers”-what they are and how they got to be that way.
- People over age of 80 with exceptional mental faculties of people decades younger.
- Many people live to 100, but brains often declines at 80
- *The 90+ Study* at U.C.Irvine studied the “oldest old”-people over 90- to try to determine factors associated with living longer
- Super-Ager Study over 5 cities people with exceptional memories
- MRIs and scans, test for biological markers and conduct postmortem studies on those who have donated their brains after death

U.C Irvine

- *What factors are associated with longevity:* Food, activities, lifestyle
- :How many > 90 have dementia?
- How can people prevent memory loss and disability at this age?
- Do the brains of people in their 90's show evidence of memory loss and dementia on pathology?
- Do people with dementia have differences in their brains that can be detected and treated?
- Determining Modifiable Risk Factors for Mortality and Dementia: Can people change their risk of dementia through diet, exercise or supplements?
-

60 Minutes



SuperAging Research Initiative in 5 cities around the US & Canada, led by cognitive neuroscientist Emily Rogalski

Brains of super agers behave differently:

- Shrink at a slower rate than the brains of similarly aged people and maintain volume in the areas associated with memory
- The anterior cingulate cortex, which impacts thinking, empathy, emotion, decision-making, is thicker in super agers
- Super ager brains have more** von Economo neurons

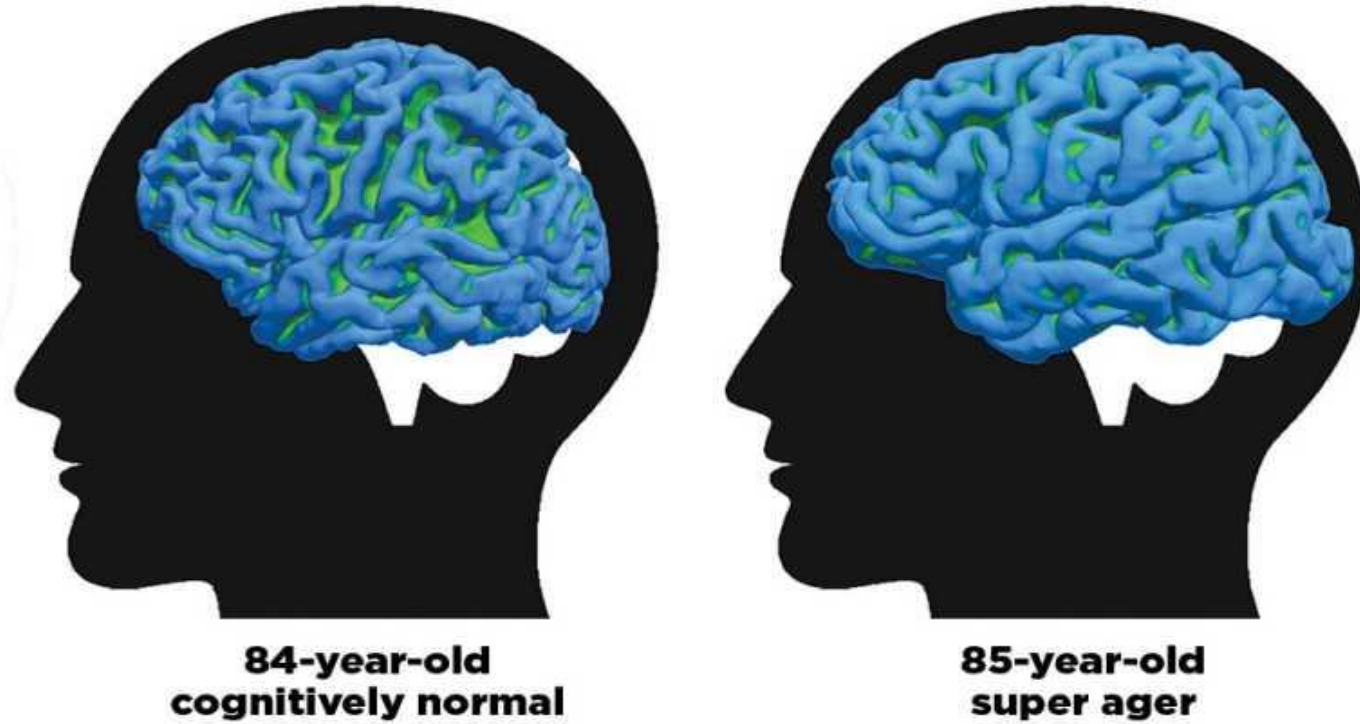
von Economo neurons

- **Super ager brains have more** “social intelligence cells.” contain a higher volume and density of von Economo neurons — cells that have been linked to social intelligence and awareness, which help facilitate rapid communication across the brain, providing an enhanced ability to navigate the outside world.
- Found at birth, increase in number during 1st 8 mos of life
- Abundant in the relatively large brains of great apes, elephants , cetaceans(whales, dolphins), humans
- 4 times bigger than other brain cells
- Frontotemporal dementia involves loss of mostly von Economo neurons



Larger cingulate cortex

**MRI scans (reconstructed) show
normal cognitive decline versus a super ager.**



COURTESY OF DR. ADAM MARTERSTECK AND DR. EMILY ROGALSKI

7 “Secrets” of Super Agers

- 1. Control blood pressure and and blood sugar. Healthy diets
- 2. Talk to their friends-a lot
- 3. Avoid stress and prioritize mental health
- 4. Get enough sleep (w/o chronic sleeping pills)
- 5. Protect vision (cataract surgery) and hearing (hearing aids)
- 6. Push themselves physically (more exercise, gardening, stairs)
- 7. Crossword puzzles, Sudoku, but also travel, play games, lectures, concerts

- the medical problems of super agers similar to the health profiles of normal agers.
- medications of super agers similar to people with average memory for their age.
- superagers who have many diseases, use wheelchairs, despite their excellent cognitive health.

23rd Annual
Review of Geriatric Medicine
2007



Friday, March 2 - Tuesday, March 6

The Four Seasons Hotel

Annual Review of Geriatric Medicine 2014



Monday, February 28 - Tuesday, March 3

**Long Wharf Marriott Hotel
Boston, Massachusetts**

Age 93



Age 93



Age 97



Age 98



Age 99



Age 100



Age 101



101 Exercising with Great-Granddaughter



Reading “Oppenheimer” on Kindle, Age 101



Myths About Aging

National Institute on Aging-April 2024

1. Depression and loneliness are normal in older adults.
 - Depression is less prevalent among older adults than younger adults
2. A person needs less sleep with age.
 - In fact, older adults need the same 7-9 hours of sleep as all adults
3. Older adults can't learn new things.
 - In fact, it may take longer to learn new things, there are positive contributors, such as having more knowledge and insight from a lifetime of experiences
4. Getting dementia is inevitable in older people.
 - In fact, risk grows with age. Mild forgetfulness is normal, but dementia is not.
 - About 3% adults ages 70-74 had dementia in 2019, 22% of adults 85-89 and 33% >90 (Population Reference Bureau, 2021)

More Myths about Aging

- 5.-Older people are less happy than their younger counterparts.
 - Older people are happier. Anxiety, stress, depression, and anger all decrease as we age. Characteristics such as wisdom, empathy, gratitude, and resilience all increase with age, and this could be why the elderly are happier
- 6. Most seniors end up in nursing homes
 - Less than 5% of people >65 live in nursing homes.

7.-Older people are less productive at work and should retire after 65

-In fact, workers ages 75 and older are the fastest-growing age group in the workforce, more than quadrupling in size since 1964, Pew Research Center

-255,000 Americans 85 years old or older were employed over the past 12 months.

-Norman Lear. 101(d).	-Jane Fonda 867	-Mick Jagger 81
-Henry Kissinger 100(d).	-Paul McCartney 82	-Yoko Ono 88
-Joe Biden. 82	-Harry Belafonte 94	-Bob Dylan. 83
-Donald Trump 78	- John Williams 89.	-Dr. Howard Tucker 101
-Quincy Jones 91	-Nancy Pelosi 84	-Clint Eastwood-91
-Pope Francis 88	-Alan Dershowitz 86	-King Charles 76
-Anthony Fauci 84	-Queen Elizabeth 96 (d).	-Robert Kraft 83
-Dick Van Dyke 99		

Dividing Line

When asked at what age a person becomes old, surveyed adults in the following groups said on average:

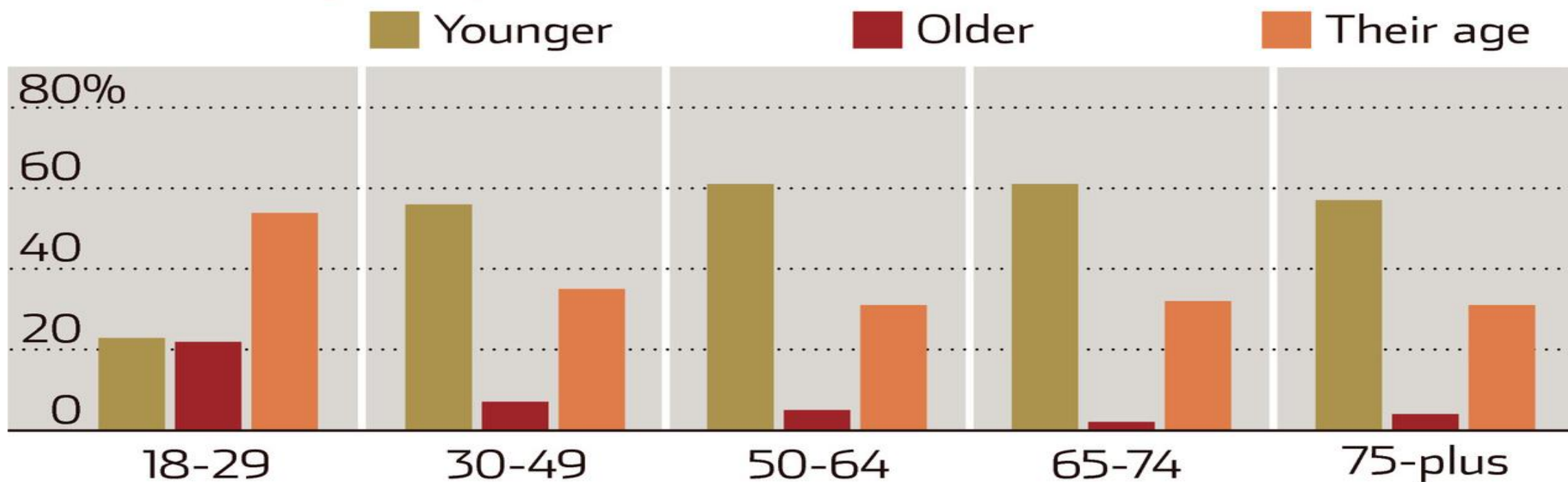
Age of respondents	Age of becoming old
18-29	60
30-49	69
50-64	72
65-plus	74

Source: Pew Research Center telephone survey of 2,969 adults, 2009; margin of error: +/- 2.6 percentage points

The Wall Street Journal

Young at Heart

The percentage of respondents by age who said that relative to their current age, they feel:



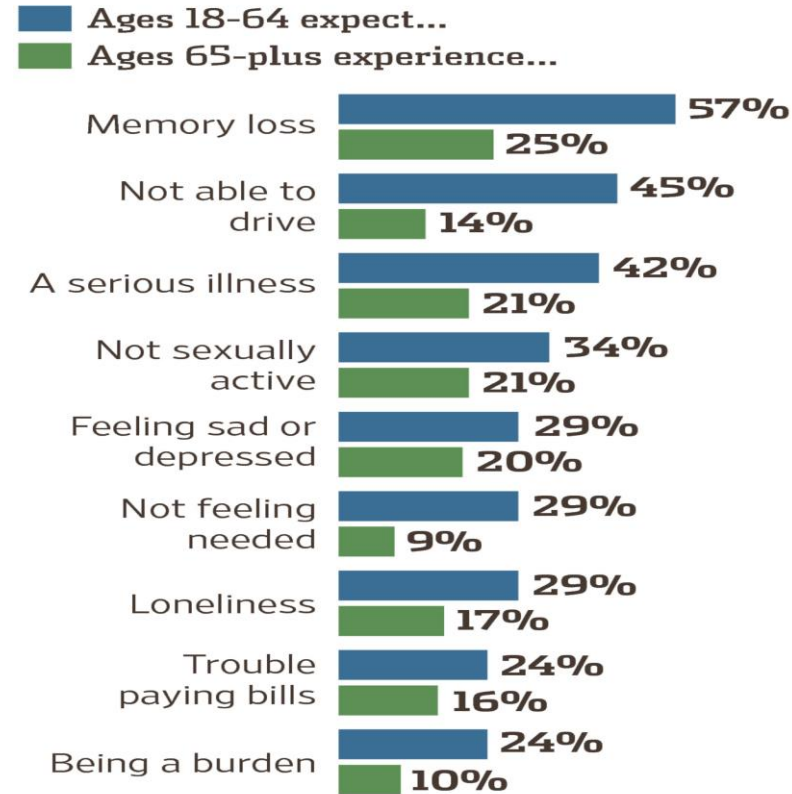
Note: "Don't know" or "refused" responses not shown.

Source: Pew Research Center telephone survey of 2,969 adults, 2009; margin of error: +/- 2.6 percentage points

The Wall Street Journal

Getting Older: Expectations vs. Reality

Many difficulties that younger adults expect to face in later life aren't affecting the vast majority of older Americans.

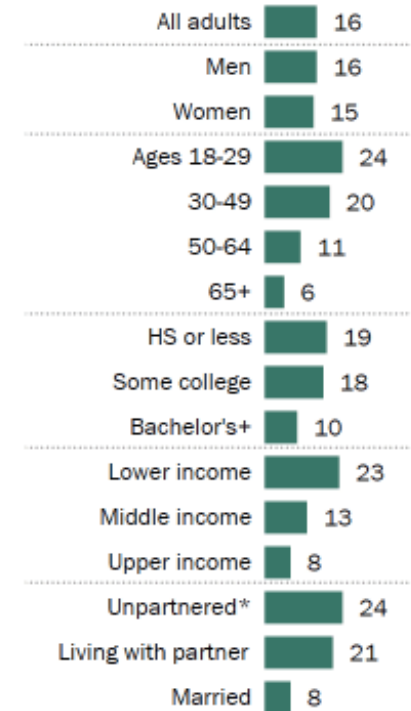


Source: Pew Research Center telephone survey of 2,969 adults, 2009; margin of error: +/- 2.6 percentage points

The Wall Street Journal

Adults under 50 are more likely than older adults to feel lonely

% saying they feel lonely or isolated from those around them **all or most of the time**



* Includes those who are neither married nor living with a partner.

Note: Other response options included "Sometimes," "Hardly ever" and "Never." "Some college" includes those with an associate degree and those who attended college but did not obtain a degree. Family income tiers are based on adjusted 2023

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