

Update in Geriatrics 2026

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DISCLOSURES

- **I have no relevant financial relationships with ineligible companies.**

Topics

- Vaccines Recommended for Older Adults
- Nocturnal Leg Cramps
- Hearing Loss
- Thyroid-when is treatment too much?
- Penicillin Allergy
- Gabapentin
- Caregiver Stress
- Cannabis
- Acupuncture in Low Back Pain
- How many steps does it take to improve our health?

Vaccines in Older

Adults > 65

rec.by ACIP (Advisory Committee of Immunizations Practices)

Influenza

Pneumococcal

Shingles

TDaP

COVID-19

RSV

FLU-high dose quadrivalent vaccine 23% lower rate of flu hospitalizations than standard dose quadrivalent -The effectiveness of the 2025 flu vaccine (for the 2025-2026 Northern Hemisphere season) is projected to be around 37.7% effective against hospitalization in older adults ,

-Peak flu season Dec-March. CDC estimates 27,000-38,000 died from flu 2024-2025 flu season with around 600,000 hospitalizations

- 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
- Adults >65 should get the high-dose flu vaccine (Fluzone High-Dose, Fluaqua, Flublok)

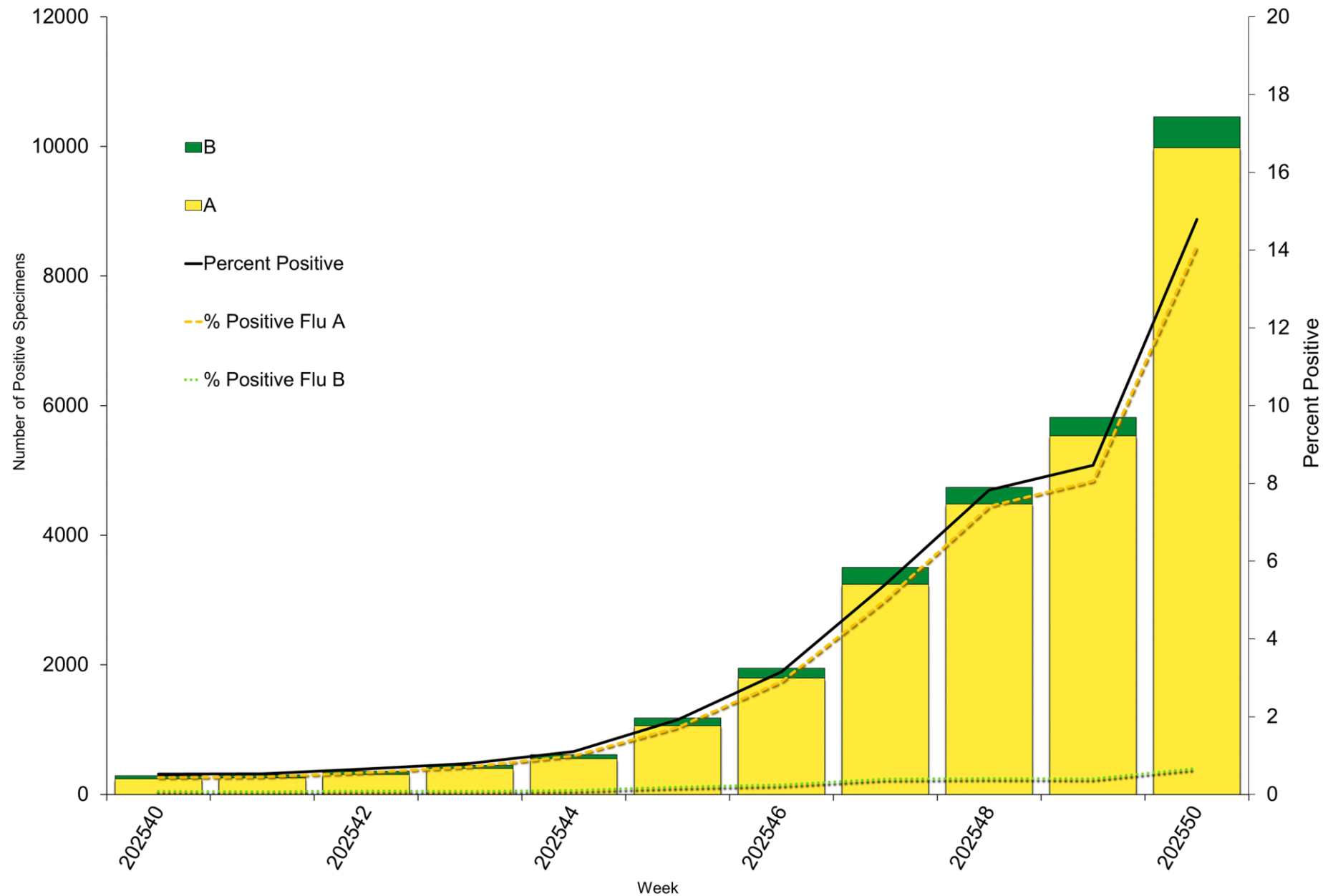
INFLUENZA (FLU)

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Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, 2025-2026 Season



PNEUMONIA

- Adults >70 Y.O. account for over 88% of pneumonia deaths in the US.
- -Mortality rate of 10% in older adults
 - recommendation: A single dose of PCV21, PCV20, or PCV15 after PPSV23

cc

cc

Shingles



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

	<u>1 dose.</u>	<u>2 doses</u>	
1 year	70%	79%	(84% effective against PHN)
2 years	45%.	75%	
3 years.	48%.	73%	

Recent study in Nature and a follow up study in Cell on Dec.2,2025, suggests shingles vaccine may lower likelihood of developing dementia and slow its progression in people who have already have dementia.

-(? may contribute to brain inflammation and accumulation of proteins linked to dementia.)

May 2025, the *European Heart Journal* published a study of 1.3 million people in South Korea. Those who received the shingles vaccine had 25% lower risk of heart disease and stroke ,over the following six years.

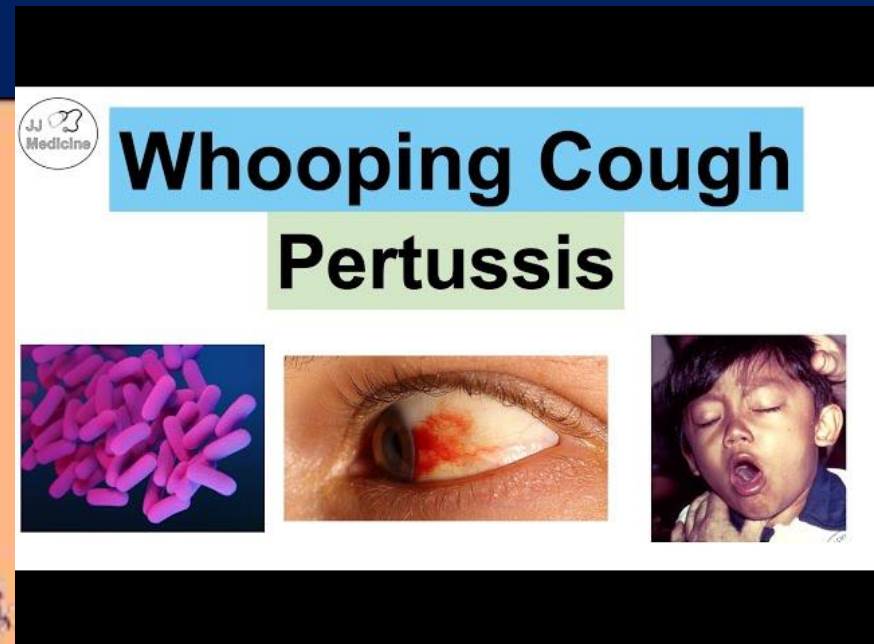
TDaP

TDaP (Tetanus, Diphtheria and Pertussis) every 10 years

- Tetanus (lockjaw) .37 in 2025 in US. Mostly not vaccinated

- Diphtheria. (aka throat distemper, putrid throat, leather throat.) None in US since 1997. 6-10% fatality rate

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



COVID-19

Since 2020, 1,228,289 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-2025–2026 COVID-19 Vaccine 2 or more doses of 2025-2026 vaccine separated by 6 months (min.2 months)

-If you recently had COVID, may delay getting vaccine for 3

RSV

Respiratory syncytial virus.

-RSV season- October, peaks in December and January, until spring

-6000-10,000 deaths each year in >65. First vaccine 2023

-2023-2024 season, RSV vaccines 77% against RSV ED visits, and 80% against hospitalization

- (RSV) in adults -linked to elevated risk of CV events up to one year after the acute illness.
- Post-Infectious Cardiovascular Risks –Older Adults -major adverse CV
 - Usually within the 30 days after infection,.

A Word About How to Give a Shot

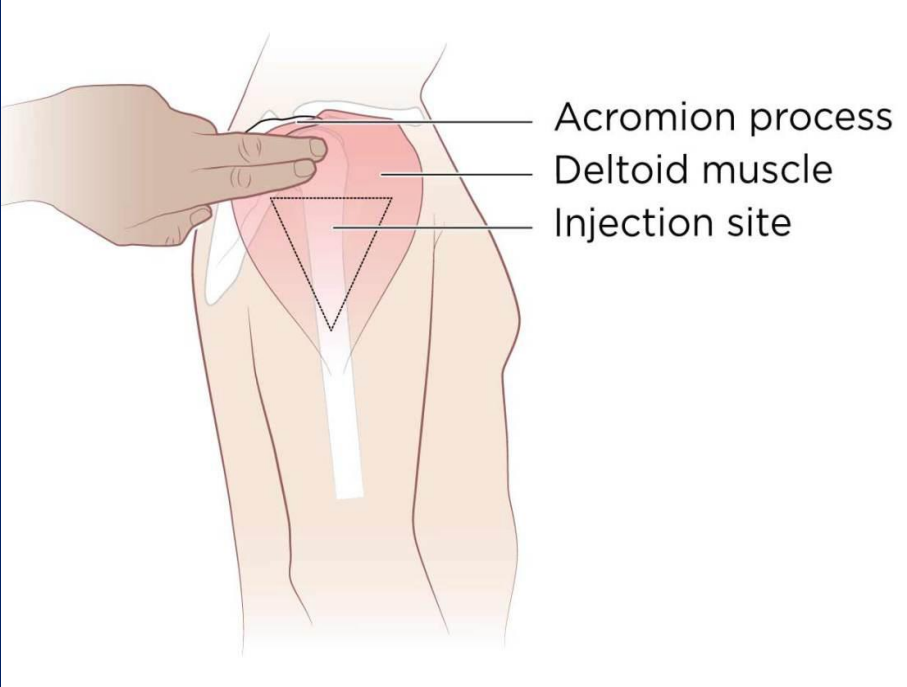
- Subdeltoid bursitis -reported as an adverse event after I.M. vaccination in the deltoid muscle. (AKA SIRVA-Shoulder Injury Related to Vaccine Administration)
- Occurs when the vaccine is inadvertently injected into the subdeltoid bursa or other pericapsular tissues instead of the deltoid muscle (“too 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



MendMeShop™ © 2012



Nocturnal Leg

Cramps (NLC)

- 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
- 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



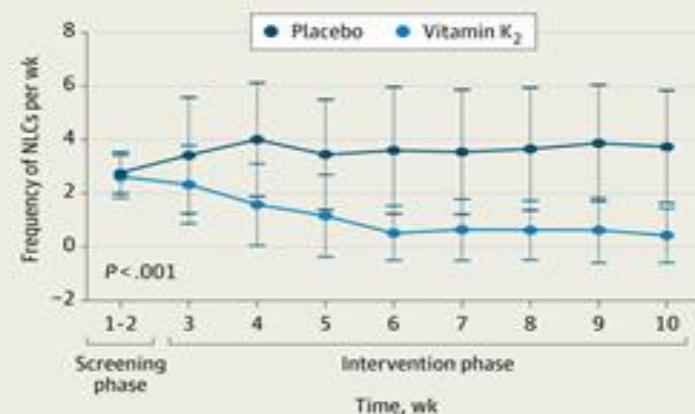
96 Placebo
Similar-looking placebo
capsule daily for 8 wk

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:

Nutrition2022 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



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

Association Between Hearing Loss and 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, but not with patients wearing hearing aids.

• 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)
- 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

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.

Why Won't People Wear Hearing Aids?

- Only 14% of adults 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>

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.

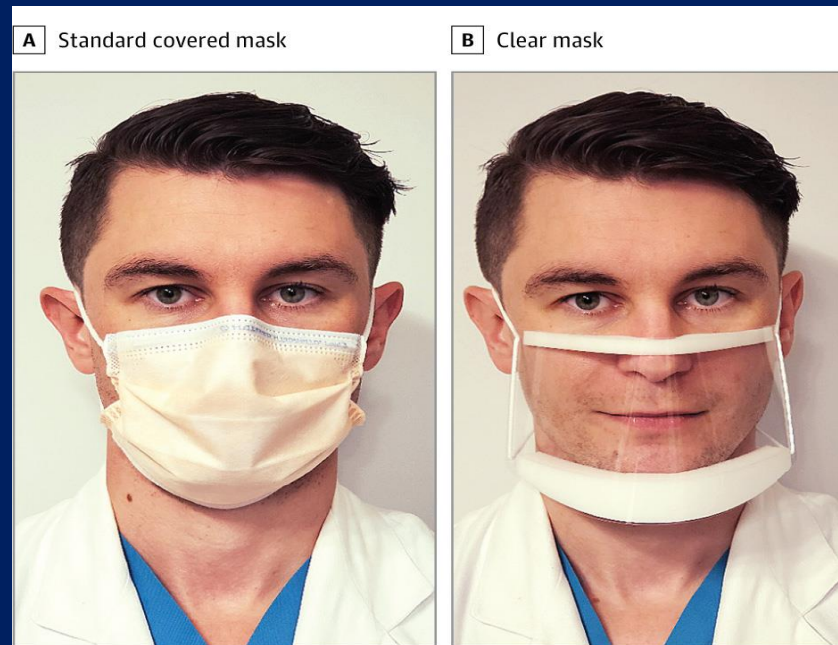


Image courtesy of JAMA Network®
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Association of Step Volume and Intensity with All-Cause Mortality (6)



- “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.



- **Physical activity as a modifiable risk factor in preclinical Alzheimer's disease.** *Nature Medicine* volume 31, pages 4075–4083 (2025) Wai-Ying Wendy Yau et al.
- Associations with slower tau accumulation on scans and cognitive decline reached a plateau at a moderate level of physical activity (5,001–7,500 steps per day), potentially offering a more approachable goal for older sedentary individuals.



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.

DO YOU KNOW THE DIFFERENCE BETWEEN UNDERACTIVE AND OVERACTIVE THYROID?

SYMPTOMS OF UNDERACTIVE THYROID



Unexplained
Weight Gain

Constant Fatigue
and Tiredness

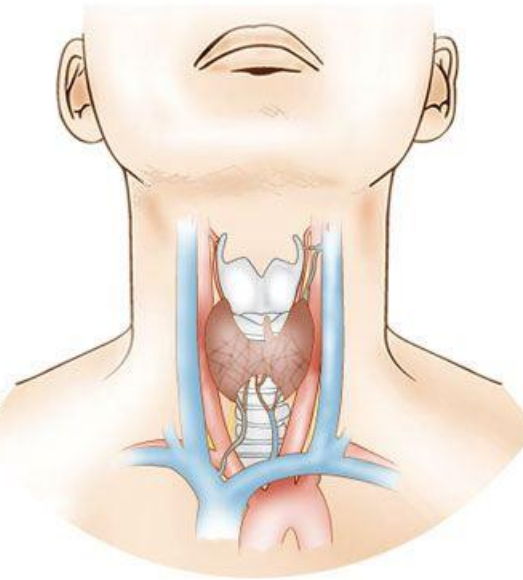


Muscle
Soreness & Pain

Hair Loss



Dry and
Flaky Skin



SYMPTOMS OF OVERACTIVE THYROID

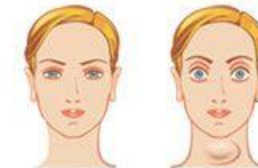
Unexplained
Weight Loss



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.

D. 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

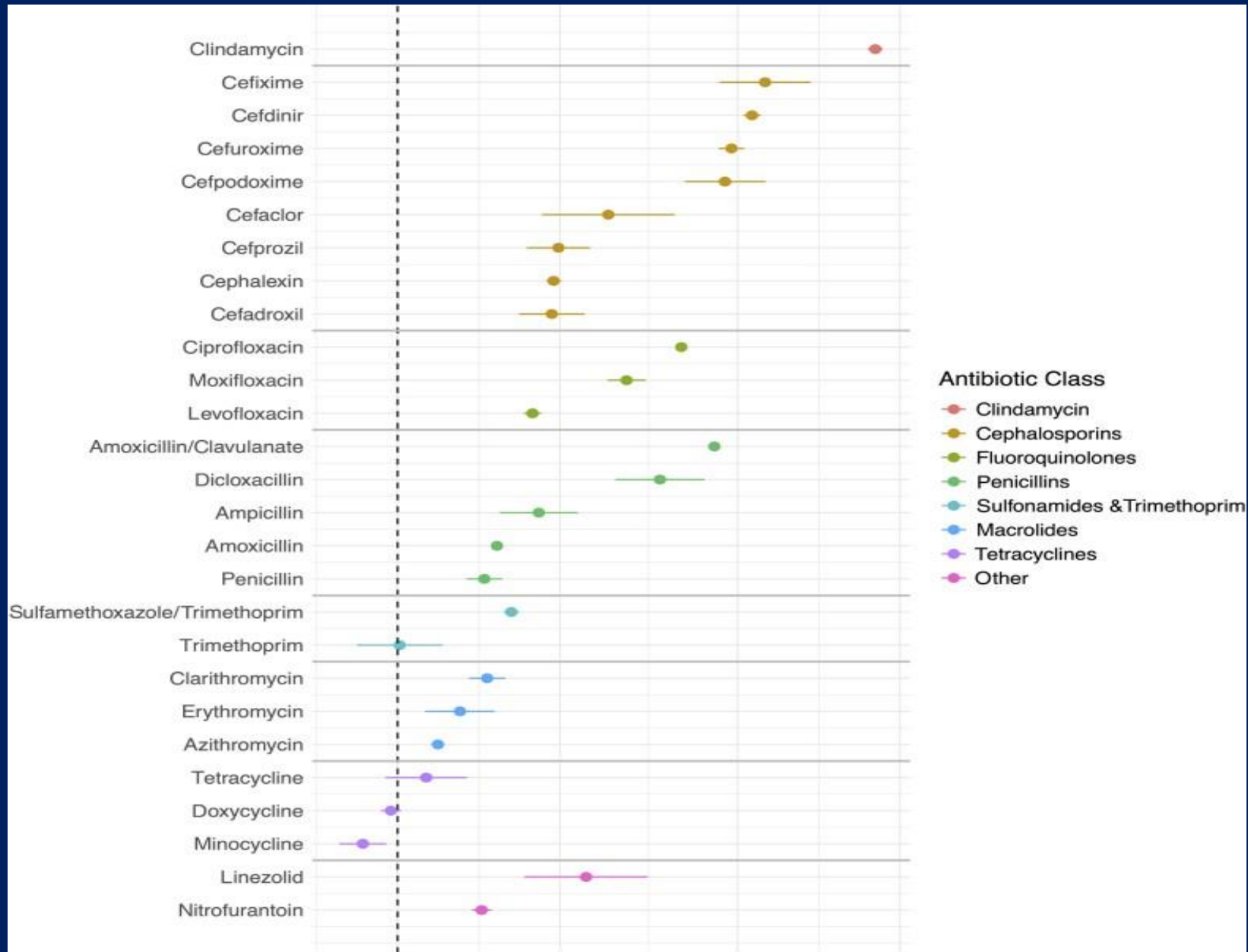
Antibiotic Allergy in Older Adults

- 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

Gabapentin/Pregabalin-To Use or Not To Use-Still a Question

- Gabapentin -an anticonvulsive medication that received approval from the US Food and Drug Administration (FDA) in 1993
- available in generic form in the USA since 2004.
- originally used as a muscle relaxant and an anti-spasmodic.
- later discovered potential of an anticonvulsive
- beneficial in managing certain types of nerve pain and psychiatric disorders
- 3-10% have neuropathic pain, 23-45% diabetics
- **FDA-Approved Indications**
 - postherpetic neuralgia
 - adjunctive therapy for partial seizures in adults and pediatric patients >3 YO
 - moderate-to-severe restless legs syndrome (RLS).[(Before pramipexole)

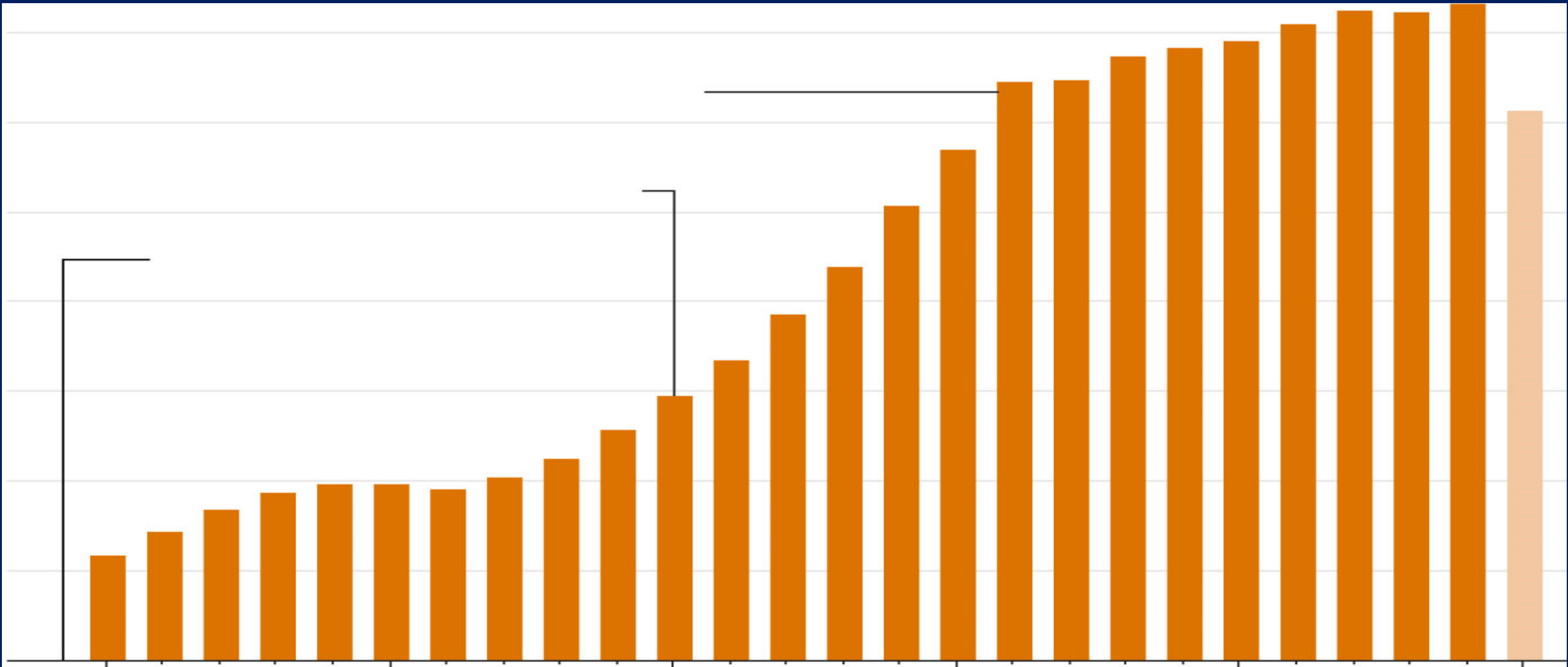
Off-Label Uses

- **Alcohol withdrawal:-can be used instead of or when benzos contraindicated**
- **treatment of anxiety and depression-unclear benefit**
- clearer efficacy for alcohol craving and withdrawal symptoms and may be an adjunct to treating opioid dependence.
- movement disorders-no benefit in ALS, may help essential tremors, restless leg syndrome (gabapentin enacarbil,, an extended release form)
- Diabetic neuropathy
- Chronic pruritus
- Agitation in dementia
- Perioperative use to reduce opioid use for pain control

2000
Pharma touts
drugs benefits.

2010
crackdown on.
opioid prescribing

2016
CDC lists gabapentin as an
alternative for neuropathic pain to opioids



The Wall Street Journal Dec 24, 2025

- **The Hidden Risks of America's Most Popular Prescription Painkiller**
- Gabapentin has soared in popularity as an alternative to opioids, but patients are finding it can cause harm



Does Gabapentin Reduce Post-Op Pain?

- Perioperative Use of Gabapentinoids for the Management of Postoperative Acute Pain: Meta-analysis *Anesthesiology* 133(2):p 265-279, August 2020. “No clinically significant analgesic effect for the perioperative use of gabapentinoids was observed.” (All types surgery)
- The Role of Gabapentin in Enhanced Recovery After Surgery for Patients Undergoing Abdominal Procedures, Meta-Analysis. *Health Sci Rep* 2025 Apr 29;8(5): “Gabapentin demonstrates efficacy in reducing postoperative pain, opioid consumption, and PONV in patients undergoing abdominal surgery”.
- The Efficacy and Safety of Gabapentinoids in Total Joint Arthroplasty. *J Arthroplasty* 2000 Oct. “Moderate evidence supports the use of pregabalin in TJA to reduce postoperative pain and opioid consumption. Gabapentinoids should be used with caution, however, as they may lead to an increased risk of sedation and respiratory depression especially when combined with other central nervous system depressants such as opioids.

Does gabapentin help with peripheral neuropathy?

- At least a 50% reduction in pain was observed in 38% of those with painful diabetic peripheral neuropathy receiving 1200 mg of gabapentin daily. **JAMA Published Online: November 17, 2025**
- Derry S, Bell et al. Pregabalin for neuropathic pain in adults. Cochrane Database of Systematic Reviews 2019. Pregabalin at doses of 300 mg or 600 mg daily helps pain in 30% with neuropathic pain after shingles ,diabetes, post-traumatic pain (stroke or spinal cord injury).
- Less or not effective with HIV, neuropathic back pain, cancer pain.
- It is not possible to know beforehand who will benefit and who will not. Current knowledge suggests that a short course of treatment (perhaps four weeks) is the best way of telling.

Gabapentin vs. Pregabalin (Lyrica)

- Front. Pain Res., 06 January 2025. Meta-analysis. Mayoral et al
- Similar mechanism of action, but...
- Pregabalin -higher oral bioavailability, faster absorption, and a more predictable dose-response relationship than gabapentin Pregabalin also undergoes minimal metabolism and is primarily excreted unchanged in the urine, while gabapentin undergoes significant renal elimination and requires dosage adjustments in patients with impaired renal function .
- Pregabalin demonstrated superior and faster efficacy in alleviating neuropathic pain than gabapentin did. Additionally, it improved patient-reported outcomes, resulted in lower opioid consumption
- Higher incidence of nausea and vomiting in the gabapentin group.
- **Lyrica (Pregabalin):** More frequently linked to **weight gain**, blurred vision, dry mouth, and constipation.
- **Gabapentin:** More likely to cause **nausea, vomiting**, difficulty speaking, and jerky movements

Cost Comparison: Lyrica(Pregabalin) vs. Gabapentin

- **Gabapentin (Generic):**
 - **Low Cost:** Monthly supplies can be found for as low as **\$3.60** with discount programs like GoodRx.
 - **Average Retail:** Typically ranges from **\$15–\$50** for standard 300mg dosing.
- **Lyrica (Pregabalin):**
 - **Generic (Pregabalin):** Costs significantly more than gabapentin, typically ranging from **\$100–\$500+** per month depending on plan rules and dosage.
 - **Brand (Lyrica):** Remains the most expensive option, often requiring higher-tier co-pays or brand-name premiums.
- **Insurance Coverage:** Generic gabapentin is almost universally covered as a Tier 1 (lowest cost) drug. Pregabalin may still require "step therapy" or prior authorization on many plans.

Risks of Gabapentin

- Increased Dementia Risk: *Regional Anesthesia & Pain Medicine* in July 2025- patients who received 6 or more prescriptions of gabapentin had a **29% increased risk of dementia and an 85% increased risk of mild cognitive impairment (MCI)** over 10 years.
- August 1 in *JAMA Network Open*. 240,000 Medicare beneficiaries with noncancer chronic pain, initiation of pregabalin was associated with a **48% higher risk for new-onset HF overall and an 85% higher risk in those with a history of CVD than initiation of gabapentin**.(stronger)
- **Severe reactions:** suicidality, depression, Stevens-Johnson syndrome, anaphylaxis, angioedema, erythema multiforme, rhabdomyolysis, and withdrawal seizure or withdrawal symptoms if the drug is discontinued abruptly.[\[39\]](#)
- More common reactions: More common reactions to gabapentin include ataxia, dizziness, fatigue, somnolence, fever, nystagmus, peripheral edema, hostility, hyperkinesia (in pediatric patients), nausea, vomiting, tremor, asthenia, diplopia, diarrhea, xerostomia, infection, amblyopia, headache, constipation, weight gain, abnormal thinking, amnesia, back pain, impotence, and depression.
- **Must be renally dosed**

Risks, cont.

- JAMA Intern Med September 19, 2022- study of 237 872 adults aged >65 perioperative gabapentin users had significantly increased risk of delirium, new antipsychotic use, and pneumonia compared with nonusers after major surgery.
- BOTTOM LINE:
- **Cognitive Risks:** Recent 2025 studies have linked prolonged gabapentin use to a significantly increased risk of **dementia** and mild cognitive impairment, especially when used for off-label conditions like chronic back pain.
- **Fall Risk:** Side effects like dizziness (28% of users), impaired coordination, and leg swelling (peripheral edema) significantly increase the danger of falls and hip fractures.
- **Respiratory Warning:** The FDA warns of life-threatening breathing problems when gabapentin is taken with **opioids**, anti-anxiety meds, or by those with existing lung conditions like COPD.
- **Kidney Function:** Because gabapentin is cleared almost entirely by the kidneys, older adults (who often have reduced kidney function) must use lower doses to avoid toxic buildup in the blood.

If you are going to use gabapentin:

- **Start Low, Go Slow:** Clinical guidelines recommend starting at very low doses (e.g., 100mg at night) and gradually increasing only as tolerated.
- **Avoid "Prescribing Cascades":** Be aware that gabapentin can cause leg swelling, which may lead doctors to prescribe a diuretic unnecessarily. This "cascade" can cause further complications.
- **Manage Withdrawal:** Do not stop taking gabapentin abruptly. Discontinuing the medication requires tapering over at least 7 days to avoid mood swings, headaches, or return of symptoms.
- **Medication Review:** Regularly review the necessity of the drug :many older adults continue use for years past the point of clinical benefit.

Caregiver Stress

- Defined as the **emotional, physical, and mental strain** experienced by individuals who provide ongoing care for a loved one with a chronic illness, disability, or age-related needs.
- Patients with dementia are most strongly associated with high caregiver stress burden, followed by those with depression, stroke, and traumatic brain injury.
- 1/3 of adult US pop is a caregiver for an ill or disabled relative, mostly female, many employed part- or full-time
- 3 key signs of caregiver stress; emotional exhaustion (feeling overwhelmed, sad, irritable), physical symptoms (fatigue, headaches, sleep issues), and social withdrawal/behavioral changes (losing interest in hobbies, snapping at people, isolating)

Signs of Caregiver stress

Common Signs of Caregiving Burnout



Easily flustered
or frustrated



Forgetful or foggy



Quick to anger



Extremely tired



Anxious or depressed



Uninterested in things
they used to enjoy



Hopeless or helpless

The efficacy of psychosocial interventions in relieving family caregiver burden in older adults with disabilities. Age and Ageing June 11,2025-Meta-analysis

- For dementia caregivers specifically, Mindfulness-based interventions (MBI's) show medium to large effects on depressive symptoms, anxiety, stress, and quality of life that persist at follow-up assessments.

Tips to manage caregiver stress

- Ask for and accept help. Make a list of ways in which others can help you. Focus on what you can do. ...
- Set goals you can reach. ...
- Get connected. ...
- Join a support group. ...
- Seek social support. ...
- Take care of your health. Exercise. Eat well.
- See your health care professional.

1 in 5 Older Adults Uses Cannabis

AARP Sept 12, 2024

(Up from 12% in 2021)

JAMA Internal Med. Vol.185.no.7.Han et al

Trends in Past-Month Cannabis Use Among

Older Adults June 2, 2025



What are cannabinoids?

- Chemical compounds (phytocannabinoids) produced by the cannabis plant
- THC (tetrahydrocannabinol) and CBD (cannabidiol) are two main compounds, or cannabinoids, from the cannabis plant
- THC is psychoactive and causes a "high," while CBD is non-psychoactive.
- Both have therapeutic potential
- THC is known for euphoria, appetite stimulation, and pain relief
- CBD - anti-inflammatory, anti-anxiety, and seizure-reducing effects, making them useful for different needs.
- Synthetic Cannabinoids (Lab-created)
- **Prescription Medications:** FDA-approved synthetic versions like **Dronabinol (Marinol)** and **Nabilone (Cesamet)** are used to treat chemotherapy-related nausea or appetite loss in HIV/AIDS patients.
- **Illicit Products:** Unregulated substances like "**Spice**" or "**K2**" are dangerous and can cause severe, unpredictable side effects such as hallucinations or organ failure.

Top reasons older adults use cannabis

- Relax (81%)
- Help with sleep(68%)
- Enjoy the effects / feel good (64%)
- Help with pain relief(63%)
- Help mental health or mood((53%)
- Treat a medical condition (40%)

Why are more older people using cannabis?

- Increased legal access (medical and recreational).
- Decreased stigma.
- Perceived benefits for chronic conditions like pain, anxiety, and insomnia.
- 44% of regular cannabis users have not told their health care provider

Where do older adults get cannabis?

- Older adults get cannabis primarily from licensed dispensaries for medical or recreational use, often starting with a healthcare provider's recommendation, using telemedicine for ease, and finding dispensaries offer helpful staff and senior discounts, with options like low-dose CBD products for symptom relief without strong "highs"..

As of July,2025, the Massachusetts Cannabis Control Commission (CCC) has granted 754 notices to commence operations for adult-use and medical-use licensees, with over 300 dispensaries (retailers) in operation across the state.

Benefits:

- **Sleep Improvement:** insomnia and better quality sleep.
- **Mental Health:** Used for anxiety, depression, and general relaxation.
- **Neurological Conditions:** Mixed benefits for Parkinson's symptoms (dyskinesia) and MS spasticity
- **Reduced Medication:** Can decrease opioid or other prescriptions.
- **Pain Relief:** Arthritis, often finding it better than OTC drugs.

Risks:

- **Potency:** Modern products have much higher THC levels, increasing potential for side effects like dizziness, falls, or impaired memory.
- **Drug Interactions:** can interfere with enzymes (CYP450) that process other drugs, potentially raising levels of blood thinners (e.g., warfarin), antidepressants, and blood pressure medications..
- Regular use is linked to a **29% increase in heart attacks** and a **20% increase in strokes**
- Side effects such as dizziness, confusion, and impaired coordination significantly increase the likelihood of falls and related injuries.
- Long-term use is associated with declines in verbal memory, processing speed, and executive function.



Acupuncture vs Sham Acupuncture for Chronic Sciatica From Herniated Disk

Jama Internal Medicine. Oct.14,2024 Jian-Feng Tu et al

- Randomized clinical trial of 216 patients mean age 51 YO found that in patients with chronic sciatica from herniated disk, acupuncture resulted in less pain and better function compared with sham acupuncture at week 4, and these benefits persisted through week 52.
- Acupuncture should be considered as a potential treatment option for patients with chronic sciatica from a herniated disk.

Acupuncture for Chronic Low Back Pain (CLBP) in Older Adults

JAMA published online Sept 12, 2025 Debar et al

- Over one-third of US adults aged 65 years or older experience chronic low back pain (CLBP)
- Often treated with back surgery, spinal injections, opioids, gabapentin, NSAIDS
- Acupuncture has demonstrated effectiveness for CLBP,² is recommended by the American College of Physicians guidelines as first-line care for treating CLBP, and has an excellent safety profile reported across large studies.
- Medicare Part B (Medical Insurance) covers acupuncture (including dry needling) for chronic low back pain defined as:
 - -Lasting 12 weeks or longer
 - -Having no known cause, not related to cancer, inflammation or infectious disease)
 - -Pain that isn't associated with surgery or pregnancy
- After you meet the Part B deductible, you pay 20% of the Medicare-approved amount

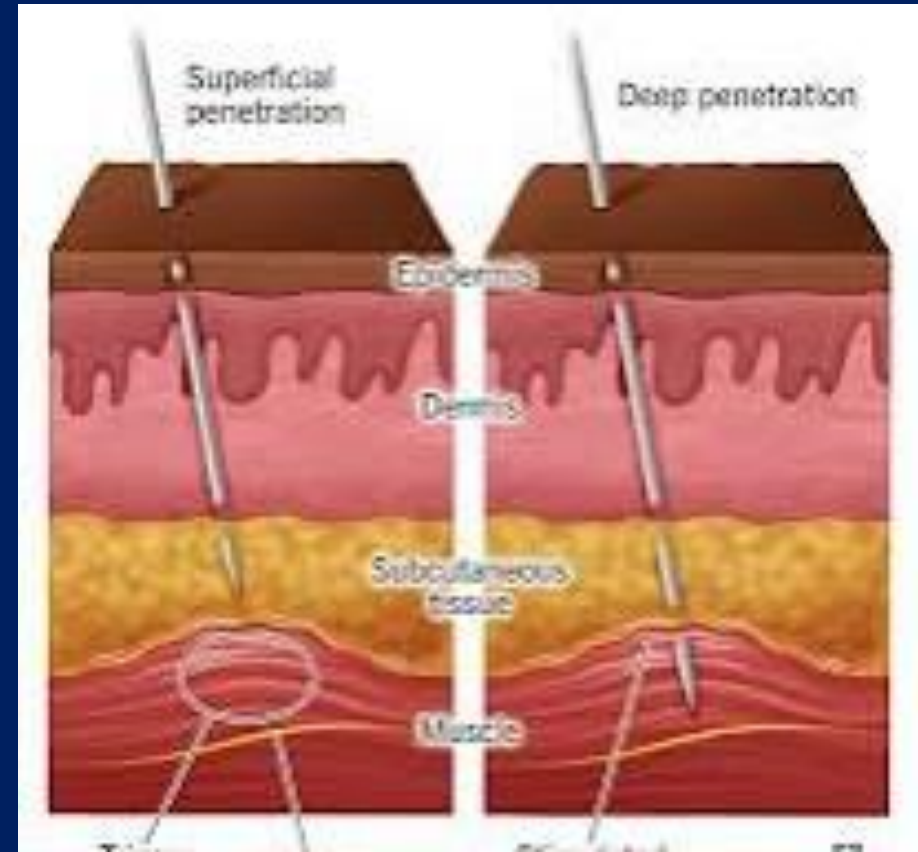
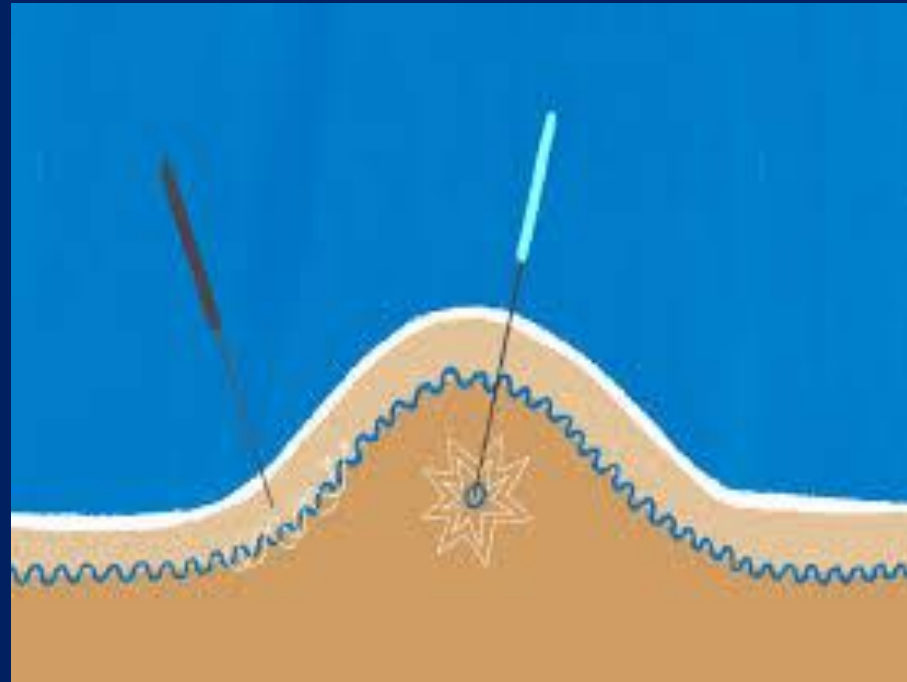
Is Acupuncture covered by insurance/Medicare?

Who is eligible?

- Medicare Part B (Medical Insurance) covers acupuncture (including dry needling) for chronic low back pain defined as:
 - -Lasting 12 weeks or longer
 - -Having no known cause (for example, it's not related to cancer that has spread, or an inflammation or infectious disease)
 - -Pain that isn't associated with surgery or pregnancy
- How often? Medicare covers up to 12 acupuncture treatments in 90 days for chronic low back pain. If you show improvement, Medicare covers an additional 8 sessions (for a maximum of 20 acupuncture treatments in a 12-month period). If you aren't showing improvement, Medicare won't cover your additional treatments and you'll pay 100% of the costs if you continue getting them.

Difference between acupuncture and dry needling

- Acupuncture comes from Traditional Chinese Medicine, targeting energy (Qi) flow
- Dry Needling, rooted in Western medicine, inserts needles directly into muscle "trigger points" (tight knots) causing a twitch response to release tension, improve blood flow, and restore muscle function, often as part of physical therapy.
- Useful for joint issues (shoulder, elbow, hip, knee, ankle) tendonitis, muscular pain/spasms, spinal issues & low back pain, plantar fasciitis
- Acupuncture helps back pain by stimulating nerves to release natural painkillers (endorphins, serotonin), reducing inflammation, improving blood flow, and relaxing tight muscles, essentially "tricking" the nervous system to block pain signals and promote healing
- Useful for pain (back, neck, headaches, osteoarthritis), reducing nausea (chemotherapy, post-surgery), improving mental health (anxiety, insomnia, stress), and helping with conditions like allergies, menstrual cramps, and side effects of cancer treatments



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