



Brigham and Women's Hospital
Founding Member, Mass General Brigham

Update in Geriatrics 2024

Suzanne Salamon, M.D., Clinical Chief Geriatrics
Beth Israel Deaconess Medical Center
Assistant Professor Harvard Medical School



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

Disclosure

- NONE

TOPICS

- Vaccine Update for Older Adults
- Paxlovid
- Hearing Loss
- Penicillin Allergy
- Cardiovascular disease in women
- Is vaginal estrogen safe?
- Vaginal pessaries for Managing Pelvic Organ Prolapse
- Can cranberries reduce urinary tract infections?
- Super Agers
- Myths About Getting Older

Vaccines Recommended for People > 65

- Flu (every year)
- Pneumonia PPSV 23, Prevnar 13, Prevnar 20
- COVID-19 (up to 7 at this time...)
- RSV (new 2023) > 60 YO
- Tdap once, then Td or Tdap every 10 years
- Shingles (Shingrix) 2 shots

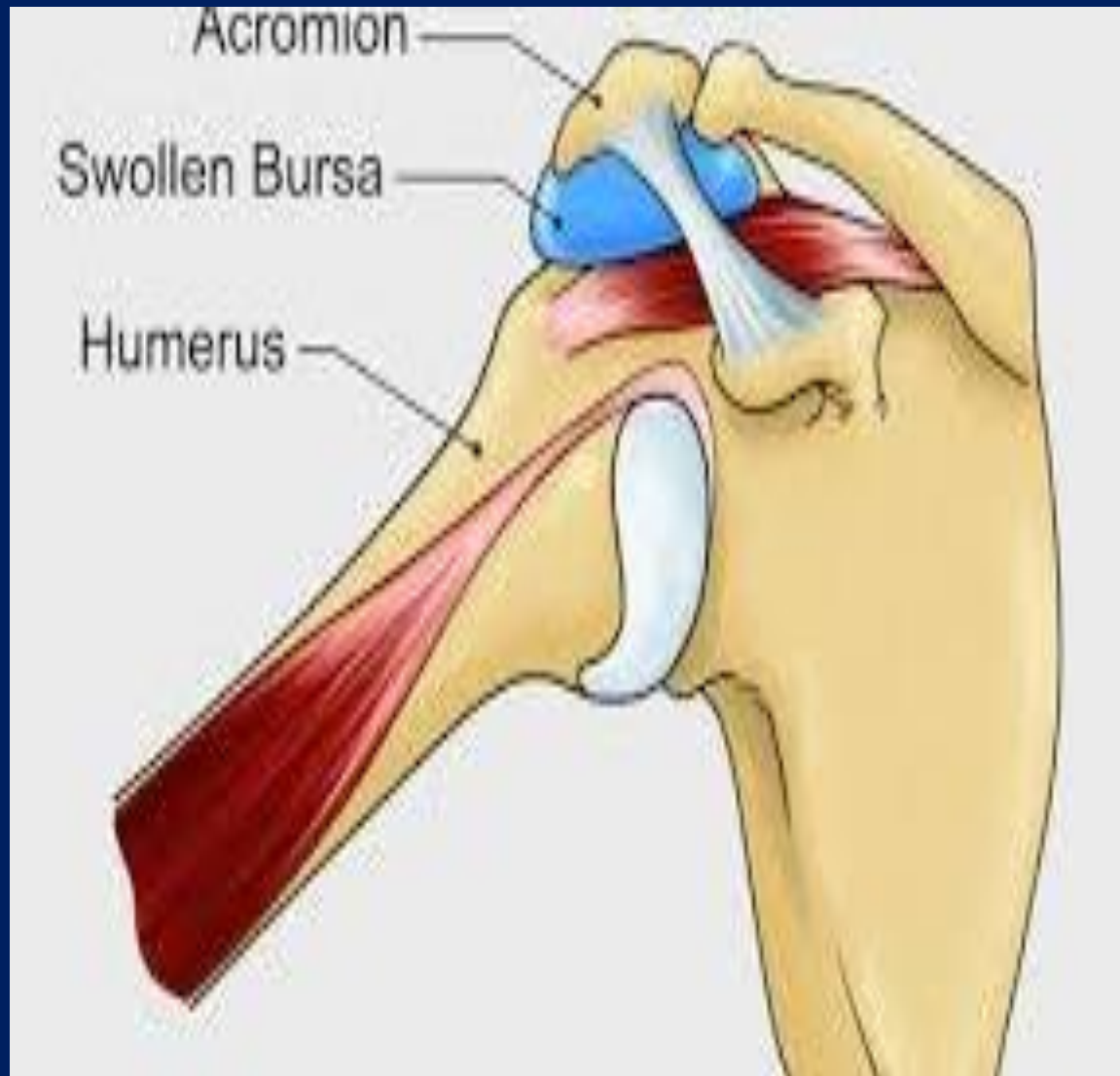


Vaccinations for > age 65 as of Jan 12.2024

- **FLU** vaccine: reduced the risk of flu-related hospitalization by 52%
-2022-2023 15,000 deaths from flu
- **PNEUMONIA.**
 - Pevnar 13 no longer recommended-strain is rare
 - If never vaccinated, either PCV 20 *or* PCV 15 followed by PPSV23 in 1 year
 - If only PPSV23 given, give PCV 15 or PCV 20
 - If only PCV 13 given, give PCV 15 or PCV 20
- **COVID:** vaccine reduced mortality by >80%
 - 95% >65 have gotten at least 1 dose vaccine: only 43% got bivalent booster
 - Unvaccinated patients with COVID-19 are 2.46 X more likely to die from the infection compared to vaccinated
- **RSV:** 17% gotten vaccine
 - 68.4% efficacy Each year, estimated 60,000-160,000 > 65in the US hospitalized, 6,000-10,000 die due to RSV .
- **TDAP.** Every 10 years
- **SHINGRIX** (Shingles). Efficacy 75-85% at 10 years

A Word About How to Give a Shot

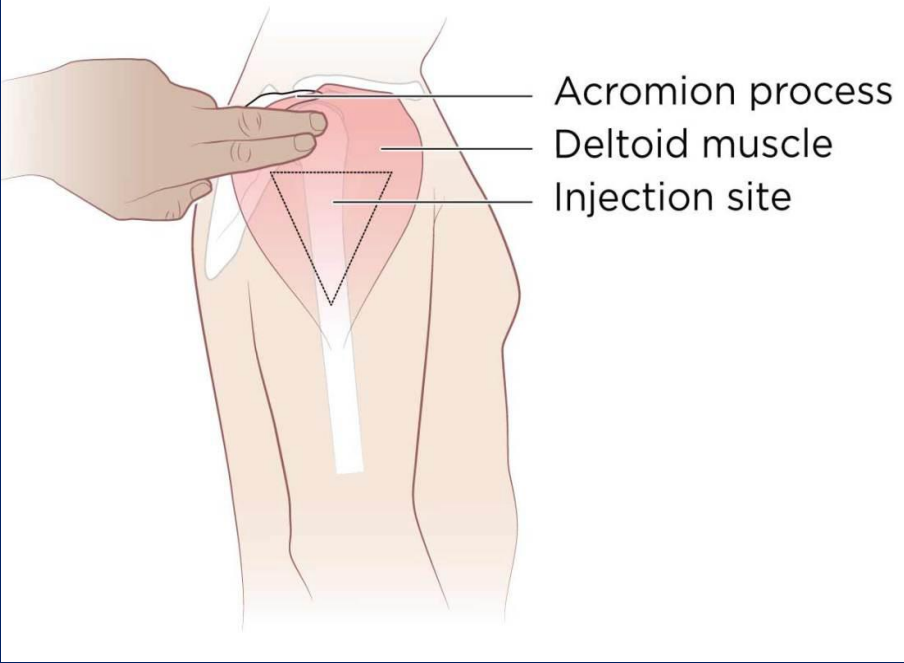
- Subdeltoid bursitis -reported as an adverse event after I.M. vaccination in the deltoid muscle.
- Pain, loss of motion in shoulder
- Usually injury or overuse (athletes)
- 2012 report as one of adverse effects of vaccines
- Since then, many more reports
- (\approx nearly 160 million people get flu vaccine yearly)-many more now



Subacromial Bursitis Pain Pattern



MendMeShop™ © 2012



Update on Treatments for COVID- 19

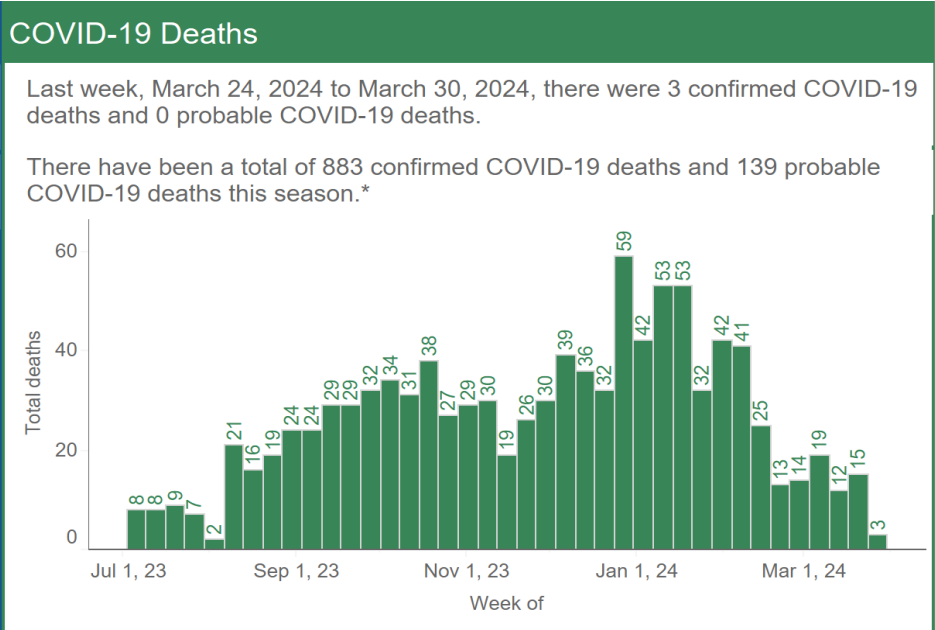
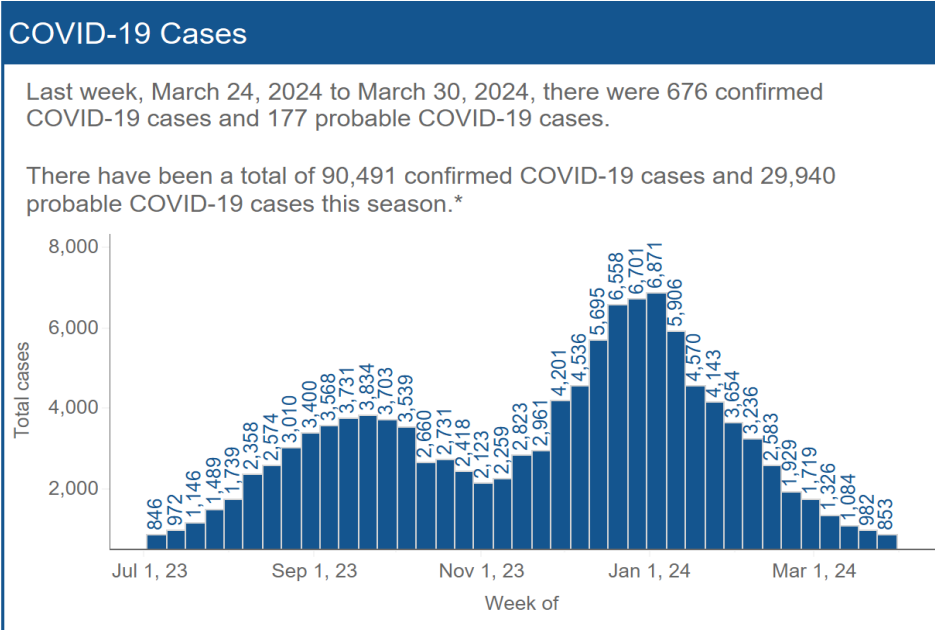


- WHAT TREATMENTS DO WE HAVE NOW FOR COVID?
- WHICH TREATMENT SHOULD WE USE?
- WHAT IS REBOUND COVID? IS IT WORSE WITH COVID TREATMENTS?
- WHAT IS LONG COVID? CAN IT BE PREVENTED?

Massachusetts COVID-19 Dashboard

Overview	COVID-19 Cases and Deaths	Demographic Characteristics	Data by City & Town	Resources
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So far during the 2023-2024 respiratory season*...



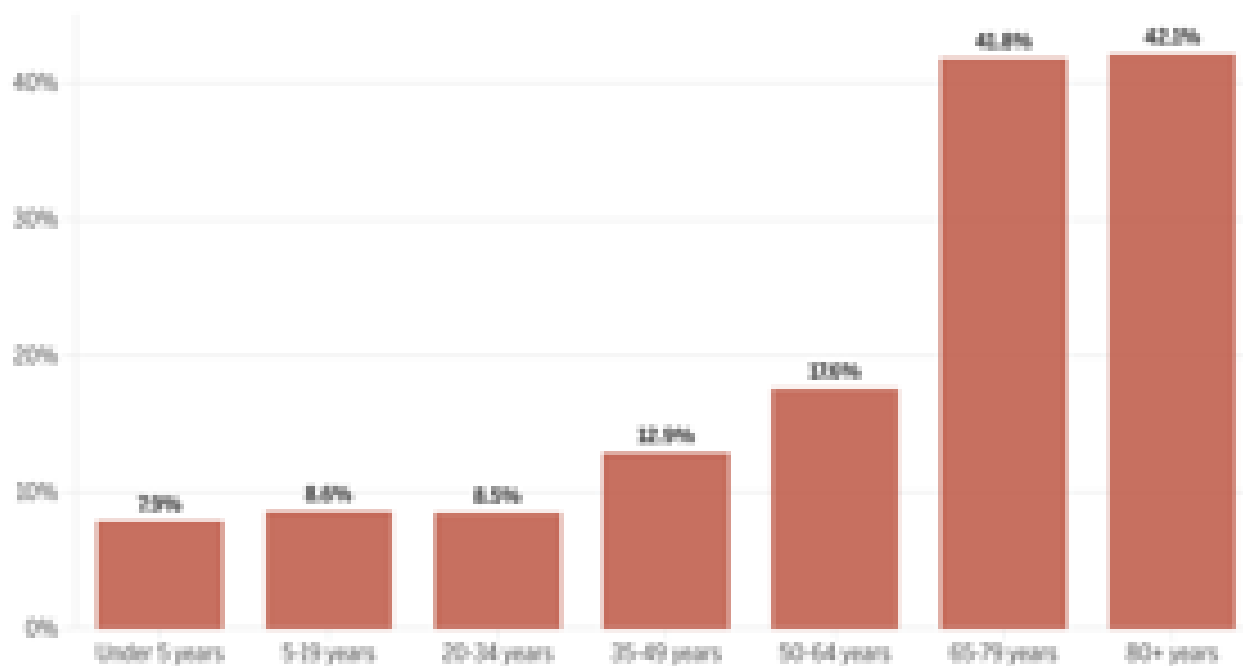
Looking for hospitalization data? These data are now reported on our new Respiratory Illness dashboard. [Click here to go to that page.](#)

*Respiratory season starts at the beginning of July and ends the following June. Data are reported by week. Interpret recent data with caution as data backfill over time and these values are likely to change. For earlier COVID-19 data, please visit our Data Archive. Data Sources: COVID-19 Data provided by the Bureau of Infectious Disease and Laboratory Sciences and the Registry of Vital Records and Statistics; COVID-19 Hospitalization Data provided by the MDPH survey of hospitals (hospital survey data are self-reported); Created by the Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Division of Surveillance, Analytics and Informatics.

Statewide COVID-19 vaccination rate by age

See the percentage of people who are up to date with their COVID vaccinations.

■ Percent of Mass. residents vaccinated



SOURCE: Massachusetts Department of Public Health • Latest data from Dec. 9.
KIRKLAND ANALYTICS STAFF

Antiviral therapeutics

for Covid-19

- Prevent progression to severe illness, hospitalization and death
- Yet, use remains low
- Best if given 5-7 days of symptom onset
- Will discuss 3 agents which are active against Omicron subvariants
- Convalescent plasma usefulness debated
- Anti-SARS-COV-2 monoclonal antibodies no longer used- variants have become resistant

Risk factors for progression to severe acute COVID illness:

- Age > 60
- BMI > 25
- Current smoker
- Cancer
- Cardiovascular disease
- Kidney disease
- Chronic lung disease
- Diabetes
- Immune dysfunction
- Hypertension

Nirmatrelvir-ritonavir (Paxlovid) (developed Dec.2021)

- Oral med, either 2 or 3 pills, depending on eGFR twice daily for 5 days.
- Combination of 2 medicines called nirmatrelvir which stops the virus from replicating, and ritonavir, which slows down metabolism of nirmatrelvir so it stays in the body longer.
- Reduced hospitalization or death by 86% compared with placebo and 80% in vaccinated people.
- Shorter duration of contagiousness
- Major side effects: metallic taste and diarrhea
- Inhibits cytochrome P3A4, nirmatrelvir-ritonavir has some potential drug interactions. University of Liverpool COVID-19 [Drug Interaction Checker](#).
- May be used in pregnancy.
- Full dose for eGFR > 60, reduced for eGFR 30-60, not for < 30

Remdesivir (Veklury)

- Remdesivir –intravenous, inhibits viral RNA polymerase so it blocks replication of the virus.. Remdesivir reduced hospitalization or death by 87% compared with placebo.
- Approved for adult and pediatric patients 28 days of age and older, weighing at least 3 kg, who are at high risk for progression to severe COVID-19 and within 7 days of symptom onset
- Administered once daily for 3 days, inpt or outpt.
- Difficult to arrange outpatient
- Side effects: Dizziness, slow/fast heartbeat, fever, shortness of breath, nausea, sweating, or shivering may occur during or after the infusion
- Fewer drug interactions

Molnupiravir (Legevrio)

- Inhibits viral replication by inducing viral RNA mutagenesis and is given orally 4 pills twice a day for 5 days.
- Reduced hospitalization or death by 30% compared with placebo.
- 18 years of age and older with mild to moderate COVID-19 who are at high risk of progression to severe COVID-19 and within 5 days of symptom onset, and for whom alternative treatment options are not available or appropriate.(people with eGFR<30, dialysis)
- Because animal studies raise concern for embryo-fetal and bone and cartilage toxicity, molnupiravir should not be used during pregnancy or in children.
- Side effects: dizziness, diarrhea, nausea

Which one should I choose?

- Older patients (those >50 years and especially those ≥ 65 years) regardless of vaccination status, younger patients with comorbidities, and immunocompromised individuals of any age.
- Paxlovid is preferred for most patients because it is the only available highly effective oral antiviral.
- Use of Paxlovid complicated by possible drug interactions
- Dose must be reduced if eGFR 30-60 and not currently recommended in patients with severe kidney disease (eGFR <30 mL/min).
- When Paxlovid cannot be used, remdesivir is the preferred therapy, acknowledging the substantial logistical barriers and resources required to administer 3 days of intravenous treatment.
- If neither option is accessible or appropriate, molnupiravir may be prescribed

What about Paxlovid and “Rebound” COVID?

COVID-19 rebound is when people with COVID-19 get better, then 2-8 days later test positive again and/or have symptoms. This can occur with treatment or no treatment.

- Unclear if caused by Paxlovid. Studies range from 2.3%-14% of people who took Paxlovid get rebound vs 1.7-9% of people who didn't take it.
- Symptoms of Rebound Covid usually mild with no increase in hospitalization or death
- Rebound does not mean Paxlovid didn't work
- Additional treatment not needed for Rebound

SARS-CoV-2 Rebound With and Without Use of COVID-19 Oral Antivirals.
MMWR Morb Mortal Wkly Rep 2023;72:1357–1364.

Smith DJ, Lambrou A, Patel P.

- No consistent association between Paxlovid and rebound was identified. The prevalence of rebound varied, depending upon host factors and the definition of rebound.
- Rebound symptoms were mild.
- No hospitalizations or deaths occurred from viral rebound.

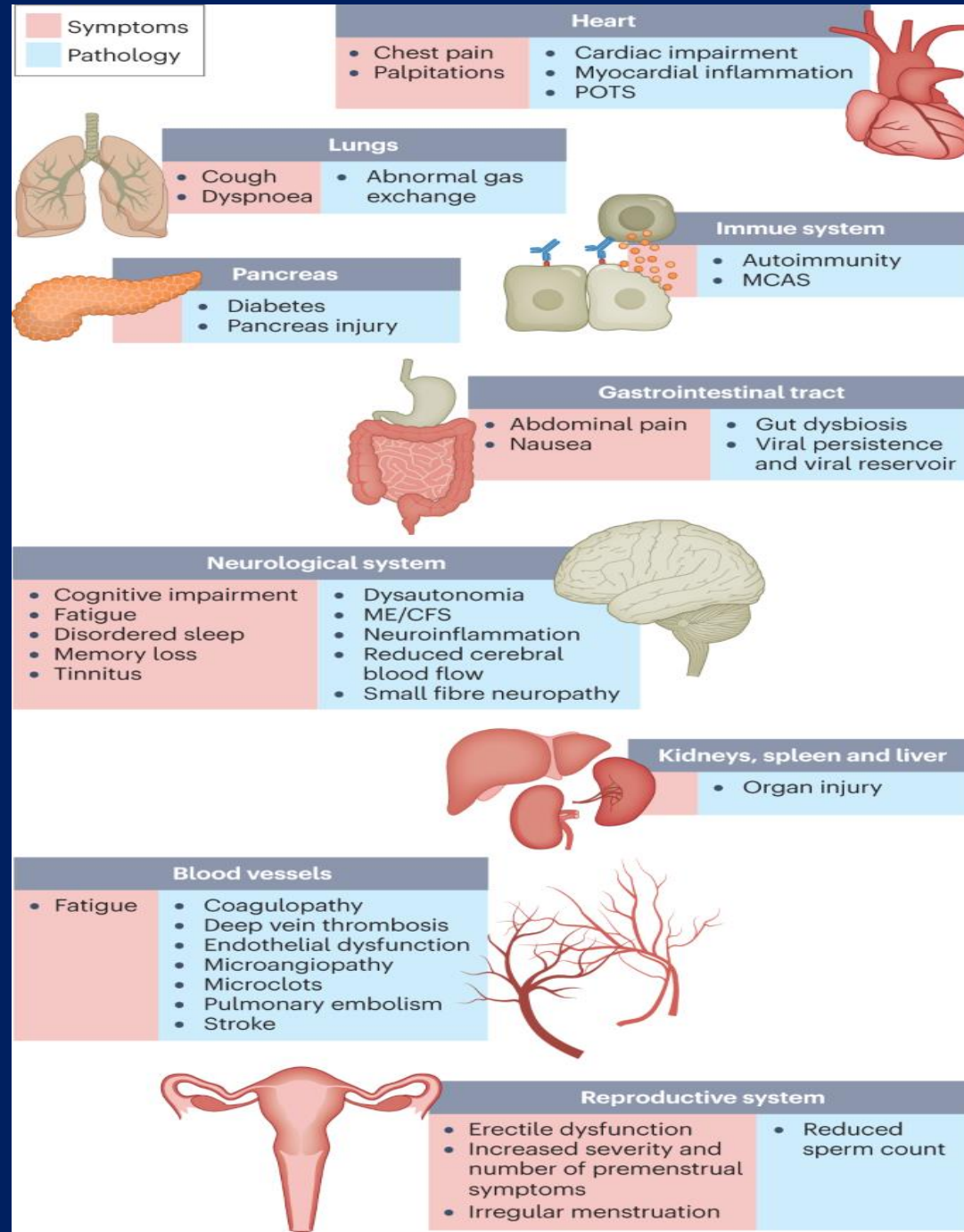
-National Institutes of Health : COVID-19 Treatment Guidelines, rebound should not deter providers from prescribing lifesaving antiviral treatments when indicated to prevent morbidity and mortality from COVID-19.

What is “long COVID?”

- The post-acute sequelae of SARS-CoV infection
- 7% of US population has had long COVID
- No approved medication for the prevention or treatment of Long Covid
- Several post-acute COVID-19 sequelae at 180 days:
 - Arrhythmia
 - Pulmonary embolism.
 - Fatigue/malaise
 - Acute kidney injury.
 - Diabetes
 - Dysautonomia
 - Cough
 - Ischemic heart disease
 - DVT
 - Liver disease
 - Muscle pain.
 - Neurocognitive impairment
 - Shortness of breath

Long COVID: major findings, mechanisms and recommendations

Nat Rev Microbiol **21**, 133–146
(2023) Davis et al



Effect of Paxlovid on Long Covid (PCC/Post-Covid Condition)

- Still controversial-studies are mixed

Paxlovid studies:

-VA Finds Paxlovid Associated With Lower Risk of Long COVID

Suran, PhD, JAMA. 2022;328(24):2386doi:10.1001/jama.2022.20051

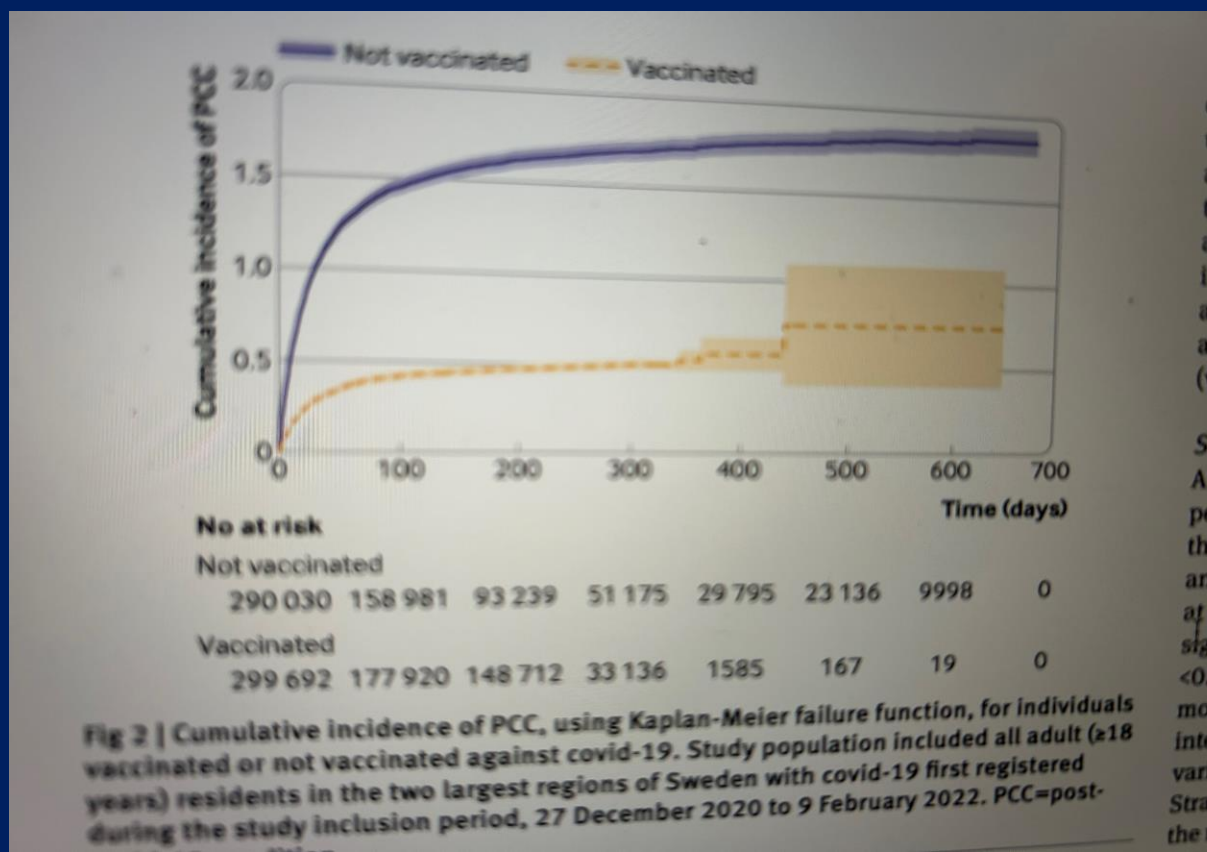
-Kin Wah Fung, MD¹; Fitsum Baye, MS¹; Seo H. Baik, PhD^{1,2}; et alClement J. McDonald, MD¹found that nirmatrelvir and molnupiravir were associated with a small reduction in incidence of long Covid, absolute risk reduction, nirmatrelvir 4.5%; molnupiravir 3.0%.

JAMA Intern Med. 2023;183(12):1404-1406.

doi:10.1001/jamainternmed.2023.5099

Covid-19 vaccine effectiveness against post-covid-19 condition among 589722 individuals in Sweden. BMJ 16 October 2023, Lundberg-Morrison, et.al.

- Strong association between receiving the first three doses of vaccine and a reduced risk of a diagnosis of long Covid
- Effectiveness against long Covid increased with each successive dose of vaccine



- Treatment with Paxlovid within 5 days of a positive SARS-CoV-2 test result reduced risk for 10 of 13 postacute sequelae, including deep vein thrombosis, as well as acute kidney disease, dysautonomia, dysrhythmia, fatigue and malaise, ischemic heart disease, muscle pain, neurocognitive impairment, pulmonary embolism, and shortness of breath.
- In phase 3 of the COVID-OUT - metformin reduced long COVID incidence by about 41% compared with placebo.
- Neither fluvoxamine nor ivermectin reduced long Covid incidence.

(Sort of) Bottom Line, for now...

- Paxlovid is recommended for patients who are at high risk of developing severe COVID, including those ages 50 and older, especially those ages 65 and over; those who are unvaccinated; and those with comorbid medical conditions. Drug interactions can usually be managed.
- Price will increase from \$530 to \$1400 per 5-day course when the government stocks run out. Will be free till end of 2023, for M-care and Med-caid through end of 2024, and to uninsured thru 2028.

Hearing Loss

- Hearing loss-one of the most frequently occurring sensory disabilities worldwide.
- Understudied ,undertreated
- 2021 USPSTF “Insufficient evidence to assess benefits vs harms for hearing loss screening in asymptomatic adults > 50.”
- Only 14% of people who need hearing aids wear them
 - Hearing Loss and Risk of Falling
 - Hearing Loss and Dementia
 - Over the Counter Hearing Aids



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).

• 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.

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.

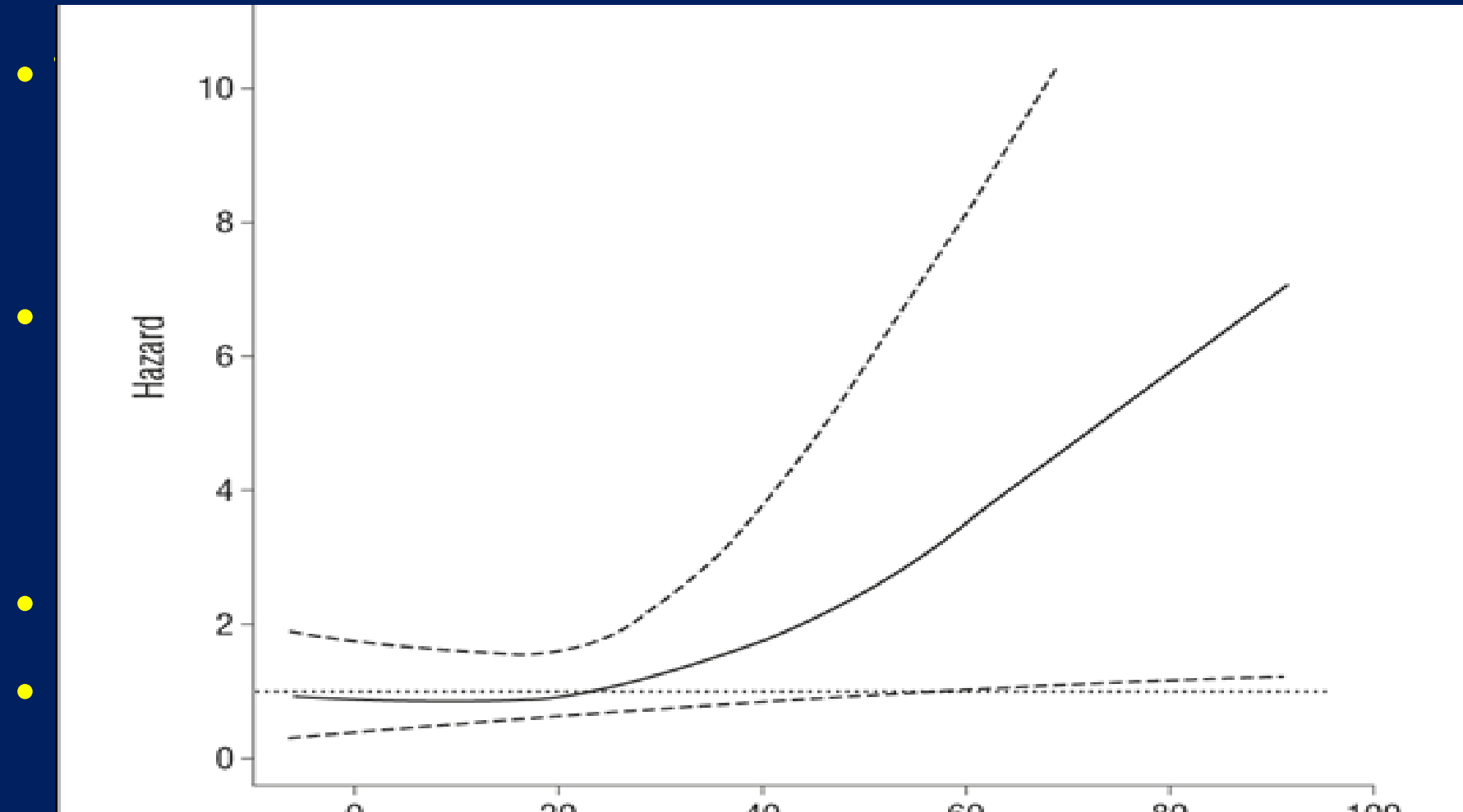
- If left untreated, hearing loss can be linked to a higher risk of cognitive decline in older adults. But there's encouraging news.
- **By Linda Matchan** Globe Correspondent, Updated October 13, 2023, 2:33 p.m.

Jama Otolaryngol Head and Neck Surgery 2020;146(1):57-67. Golub et al

- 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”
- 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 intervention versus health education control to reduce cognitive decline in older adults with hearing loss in the USA

Lancet 2023; 402: 786–97 Published Online July 18, 2023

Frank Lin, MD et al

- The hearing intervention did not reduce 3-year cognitive decline in the primary analysis of the total cohort.
- BUT: Might reduce cognitive change over 3 years in populations of older adults at increased risk for cognitive decline

But not in populations at decreased risk for cognitive decline.

- 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

- In this randomized clinical effectiveness trial, self-fitting OTC hearing aids with remote support yielded outcomes at 6 weeks post fitting comparable to those of hearing aids fitted using audiologist best practices.

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.

- **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.

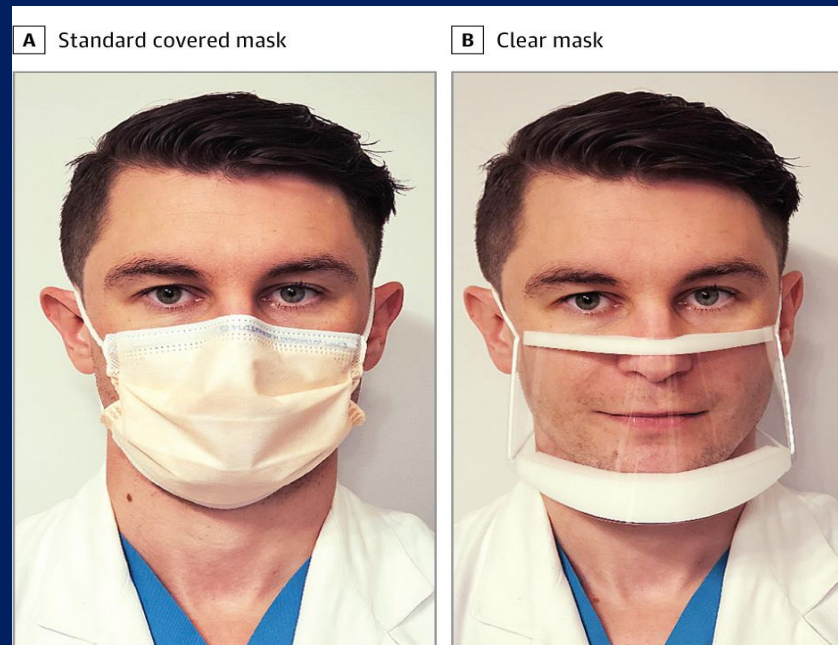


Image courtesy of JAMA Network®
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Antibiotic Allergy in Older Adults

Annals of Allergy, Asthma & Immunology, Vol 131, Issue 5, Nov. 2023 Accarino, et al

- 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

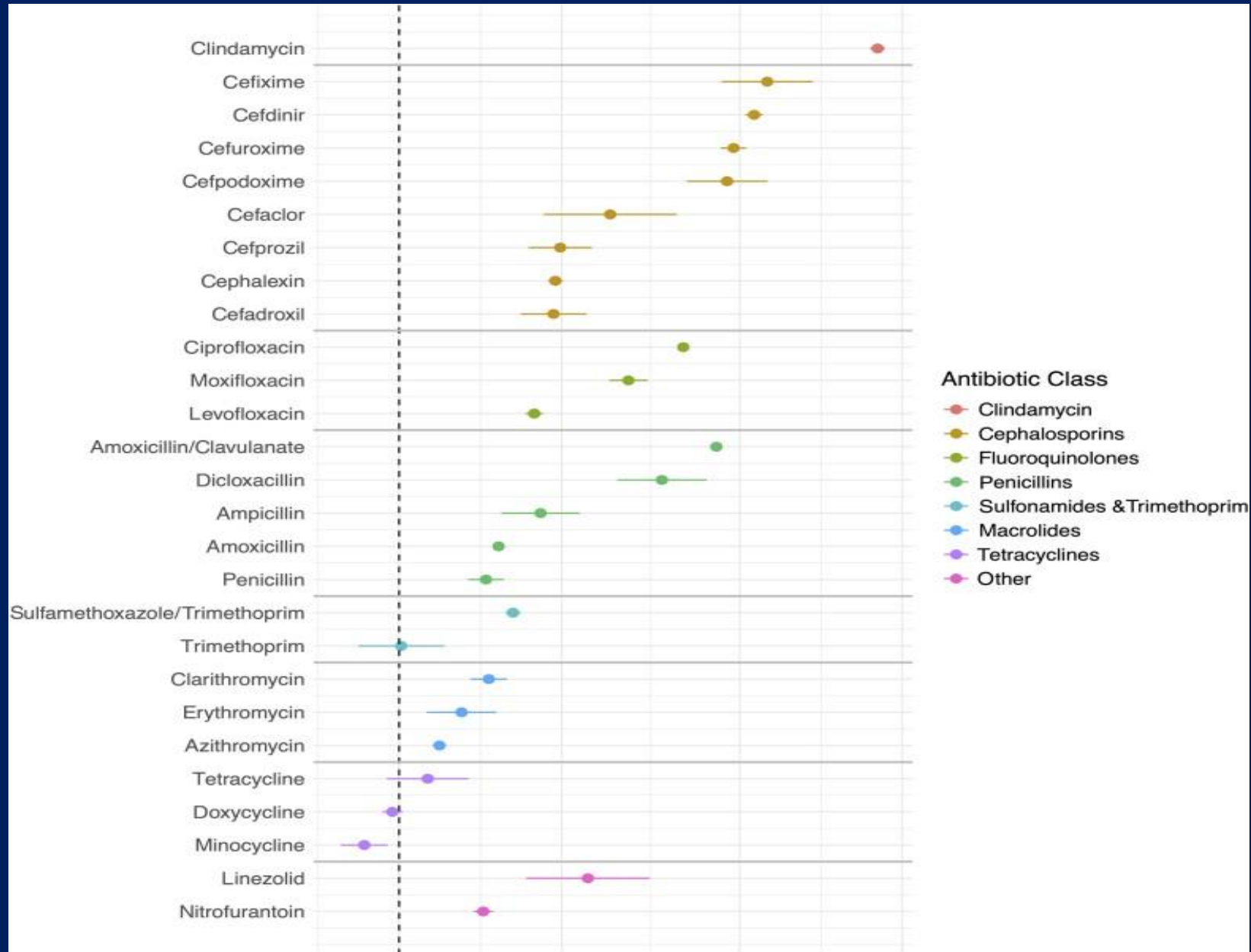
- Adverse drug reactions occur at higher rates in people with penicillin allergy label

- 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

CDC 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
- 400,000 deaths/year
- More than all cancers combined
- 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

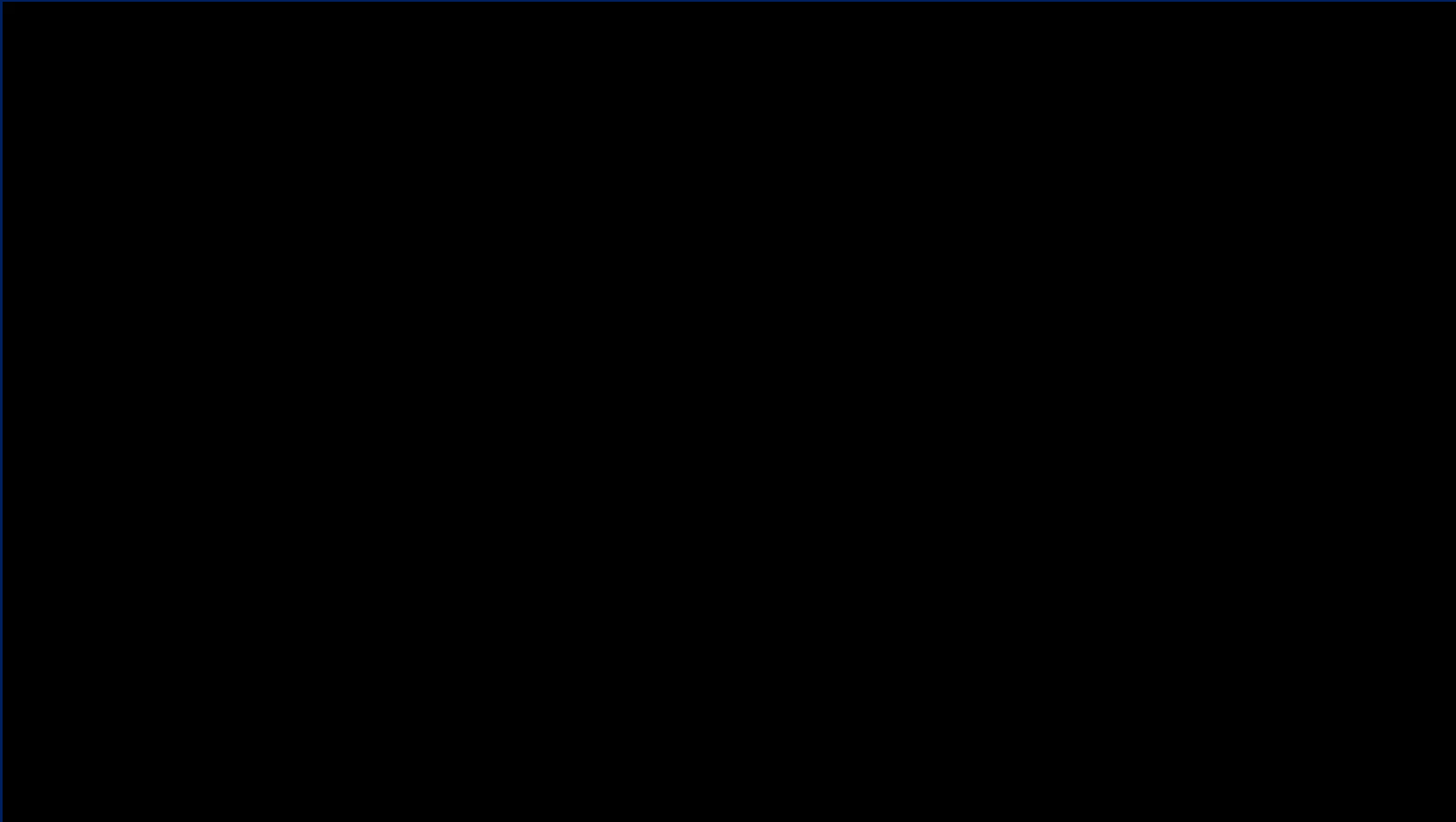


Knowledge, Attitudes, and Beliefs Regarding Cardiovascular Disease in Women: The Women's Heart Alliance.

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

Rosie O'Donnell



Post Menopausal Symptoms and Hormone Replacement



- 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.
- 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.

Use of Hormone Replacement Therapy and Risk of Venous Thromboembolism BMJ 2019;364:k4810

Vinogradova et al

Compared with no HRT, use of estrogen or estradiol associated with elevated risk for VTE

Transdermal estradiol (most commonly patch) was NOT associated with excess VTE risk.



- VTE risk was increased for all oral HRT formulations, including combined and estrogen only preparations.
- Higher doses of estrogen had higher VTE risk
- Transdermal HRT not associated with increased VTE risk and was consistent for different regimens
- Most prescriptions are still for oral preparations

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

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.

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.

Publishe

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.

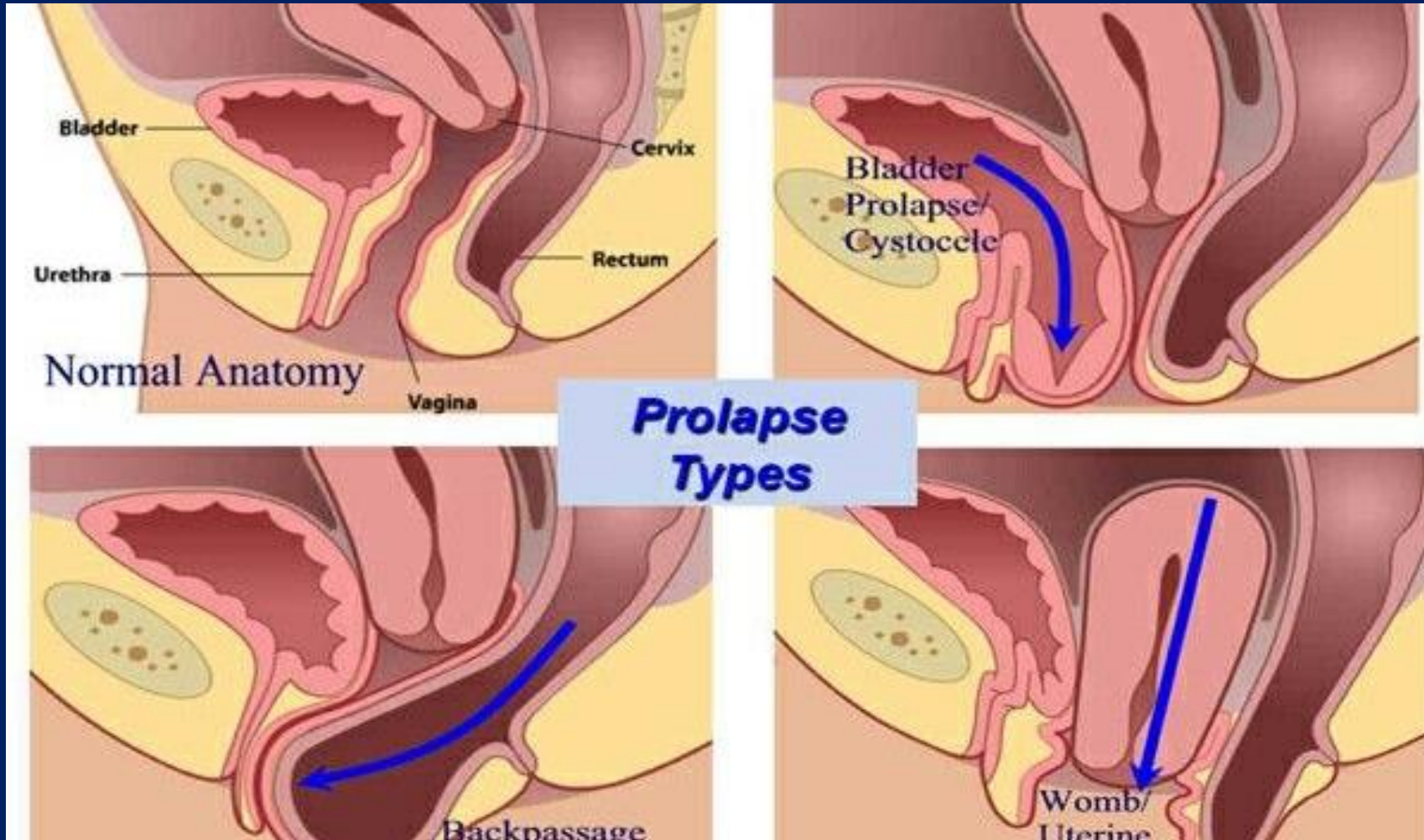
Perrotta C, Aznar M, Mejia R, Albert X, Ng CW.
Oestrogens for preventing recurrent urinary tract
infection in postmenopausal women. *Cochrane
Database Syst Rev.* 2008(2):CD005131.

- 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

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



Bronze pessary, Roman, 200 BCE-400 CE
Modern day pessaries



A tailored flexible vaginal pessary treatment for pelvic organ

prolapse(POP) in older women. Gold, et al

- 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.
- All patients were advised to use a vaginal estrogen cream twice a week.
- 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.

Timing of Office-Based Pessary Care

Ogset Gynecol 2020;135:100-5 Propst et al

- 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
- This study done to evaluate safety of 6 months vs 3 months visit
- 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

Sexual Activity in Older Adults



Sexual activity of older adults: let's talk about it. The Lancet. VOLUME 4, ISSUE 3, E96-E97, MARCH 2023. STECKENRIDER

- 2016 Study in England, 86% of men and 60% of women aged 60–69 years reported being sexually active, as did 59% of men and 34% of women aged 70–79 years, and 31% of men and 14% of women aged 80 years or older.⁴
- Even 10% of people older than 90 years reported being sexually active in a Swedish study.⁵
- According to a 2018 survey by the AARP (the organization formerly known as the American Association of Retired Persons), 2/3 said they were interested in sex, and more than 40% of Americans 65 to 80 are sexually active.

- Many older adults are sexually active. Since then, most information is in the lay press:

Health Day- Sex and Seniors: The 70-
Year Itch

NIH: Sexuality and Intimacy in Older
Adults

WebMD- Safe Sex Is Still
Important

- Sexual problems frequent among older adults, but infrequently discussed with physicians.

The majority of patients prefer information about sexual health concerns from primary care physicians.

Most are uncomfortable raising the issue

Many PCP's don't want to "open Pandora's box"

Ad for Erectile Dysfunction



Spending for the three most popular ED drugs (Viagra, Levitra, and Cialis) is over \$1 billion worldwide every year. (*Clinical Pharmacology and Therapeutics*, 2011)

Dyspareunia (painful sex)

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



Dyspareunia:

- can also lead to sexual difficulties
 - can cause trouble in sexual relationships
 - can have a significant impact on physical as well as mental health
 - can lead to depression, anxiety, hypervigilance to pain, negative body image, and low self-esteem.
-
- **Causes:**
 - structural, inflammatory, infectious, neoplastic, traumatic, hormonal, and psychosocial conditions

Intrarosa (prasterone) and Osphena (Ospemifene) are both treatments for moderate to severe dyspareunia

Intrarosa (prasterone)

-Approved 2016

- Steroid

--Vaginal insert once daily

-Vaginal discharge,abn.PaP.

-Increases estrogen levels

Osphena (Ospemifene)

-Approved 2013

-Selective estrogen-receptor modulator (SERM)

-Oral tablet once daily

-Vag.discharge,hot flush,muscle spasms, headache,XS

sweating,Vag bleeding,night sweats

-Binds to estrogen receptors

A Practical Solution for Dyspareunia in Breast Cancer Survivors

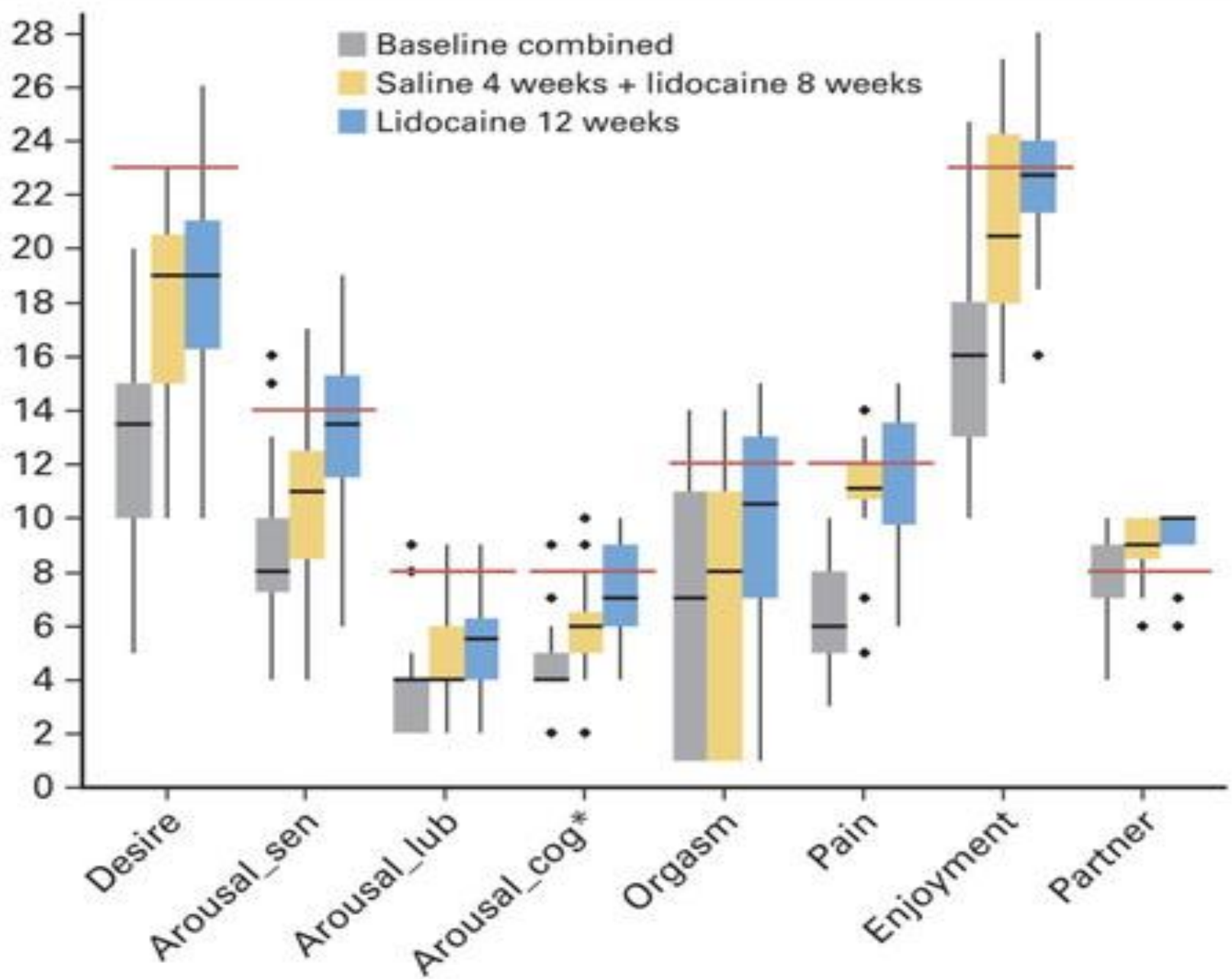
Journal of Clinical Oncology(Oct.20,2015)3394-3400

- Dyspareunia is a common symptom in post-menopausal women with and without breast cancer, negatively affecting their sex lives
- Comparing 46 patients who used first saline and then lidocaine 3 minutes before penetration, 90% reported significantly less pain with lidocaine used at the vulva (outside) and inside the vestibule
- No partners reported penile numbness
- Over the counter lidocaine 4% gel (hemorrhoidal, many brands which I can't list, but on the shelf in many stores...)

Dysparunia CMAJ June 19, 2017 189 (24) E836. Kumar & Robertson

- Lidocaine 5% gel or ointment should be applied directly to the vestibule twice daily. It should also be applied 30 minutes before penetrative vaginal intercourse

Sexual Function Questionnaire Score



Cranberries for Preventing

UTI (?)

- Cranberries (as cranberry juice, tablets or capsules) -used for many years to prevent urinary tract infections (UTIs).
- Cranberries contain proanthocyanidins (PACs), substances that can prevent bacteria from sticking to the walls of the bladder, which may help prevent infections .
- However, there is currently no established regimen for what dose to use and no formal regulation by health authorities of cranberry products.
- Multiple studies have given mixed results

MISCONCEPTIONS

The Cure for UTIs? It's Not

Cranberries

New York Times 2016



Does it help prevent colds

HealthDay

April

26,



Nov.10,2023, Williams

et al

- In this update,50 studies (8857 randomized participants)
- Taking cranberries as a juice, tablets or capsules reduced the number of UTIs in women with recurrent UTIs, in children with UTIs and in people susceptible to UTIs following an intervention such as bladder radiotherapy.
- However, UTIs did not appear to be reduced in elderly institutionalized men and women, in adults with neuromuscular bladder dysfunction and incomplete bladder emptying, or in pregnant women.
- Jepson RG, Craig JC.. *Mol Nutr Food Res.* 2007: daily dosages of 240–300 ml of cranberry juice cocktail can prevent 50% of the recurrences of UTIs or dried, concentrated juice extract range from 600 to >1,200 mg/day

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?
-

Major Findings of the 90+Study U.C. Irvine, so far:

- People who drank moderate amounts of alcohol or coffee lived longer than those who abstained.
- People who were overweight in their 70s lived longer than normal or underweight people did.
- Over 40% of people aged 90 and older suffer from dementia while almost 80% are disabled. Both are more common in women than men.
- About half of people with dementia over age 90 do not have sufficient neuropathology in their brain to explain their cognitive loss.
- People aged 90 and older with an APOE2 gene are less likely to have clinical Alzheimer's dementia, but are much more likely to have Alzheimer's neuropathology in their brains.

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** “social intelligence cells.” contain a higher volume and density of spindle-shaped 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.

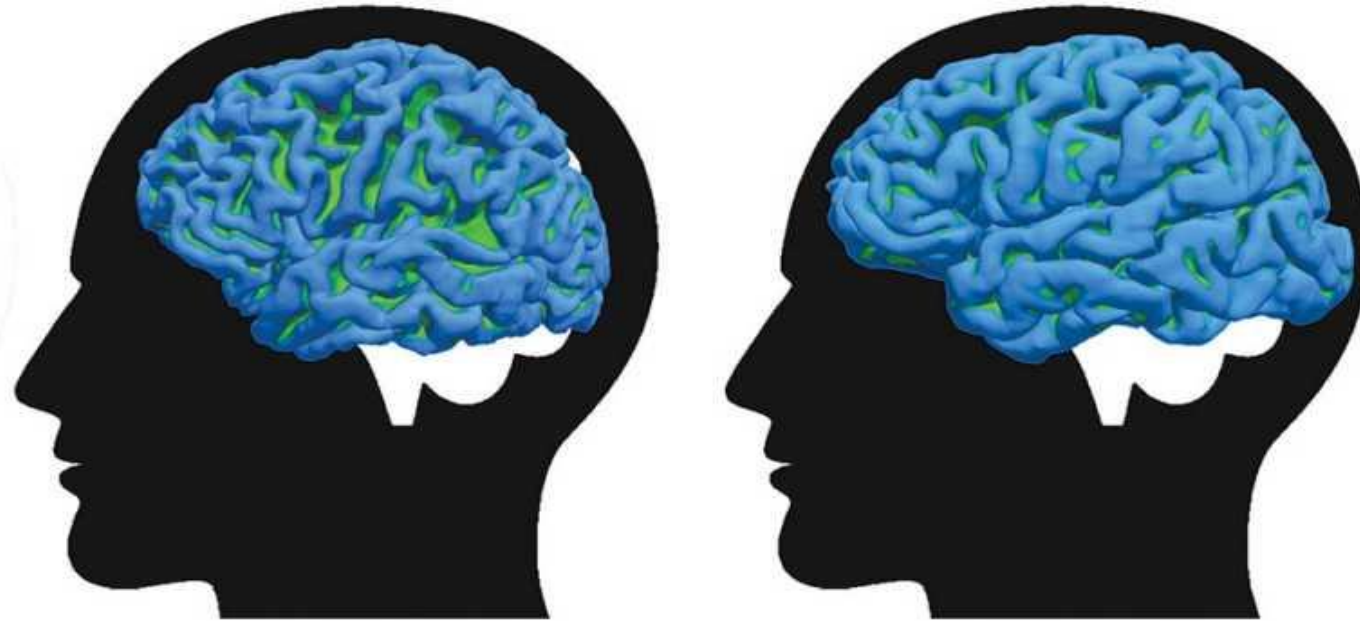
von Economo neurons

- **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.



**84-year-old
cognitively normal**

**85-year-old
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 (not more exercise, gardening, stairs)
- 7. Crossword puzzles, Sudoku, travel, playgames, 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, many use wheelchairs, despite their excellent cognitive health.

Age 97



Age 98



Age 99



Age 100



Age 101



101 Exercising with Great-Granddaughter



Reading "Oppenheimer" on Kindle, 101



Multivitamin supplementation improves memory in older adults: a randomized clinical trial

The American Journal of Clinical Nutrition, 118:273 Yeung et al. 2023

- Study of 3562 older adults randomly assigned to daily multivitamin or placebo
- Multivitamin had significantly better immediate recall at 1 year as well as across 3 year follow-up

• **New study The American Journal of Clinical Nutrition online**

Jan.18,2024 A daily MVM significantly benefits both global cognition and episodic memory. These findings support the benefits of a daily MVM in preventing cognitive decline among older adults.

Myths About Aging

National Institute on Aging-June 23,2020

1. Depression and loneliness are normal in older adults.

-In fact, 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)

- 5. 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 working over the past 12 months.

-Norman Lear. 101(d).

-Jane Fonda 86

-Mick Jagger 80

-Henry Kissinger 100(d).

-Paul McCartney 81

-Yoko Ono 87

-Joe Biden. 81

-Harry Belafonte 93

-Bob Dylan. 82

-Donald Trump 77

- John Williams 88.

-Dr. Howard Tucker 101

-Quincy Jones 90

-Nancy Pelosi 83

-Clint Eastwood-90.

-Pope Francis 97

-Alan Dershowitz 85

-King Charles 75

-Anthony Fauci 83

-Queen Elizabeth 96 (d).

-Robert Kraft 82

Dividing Line

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

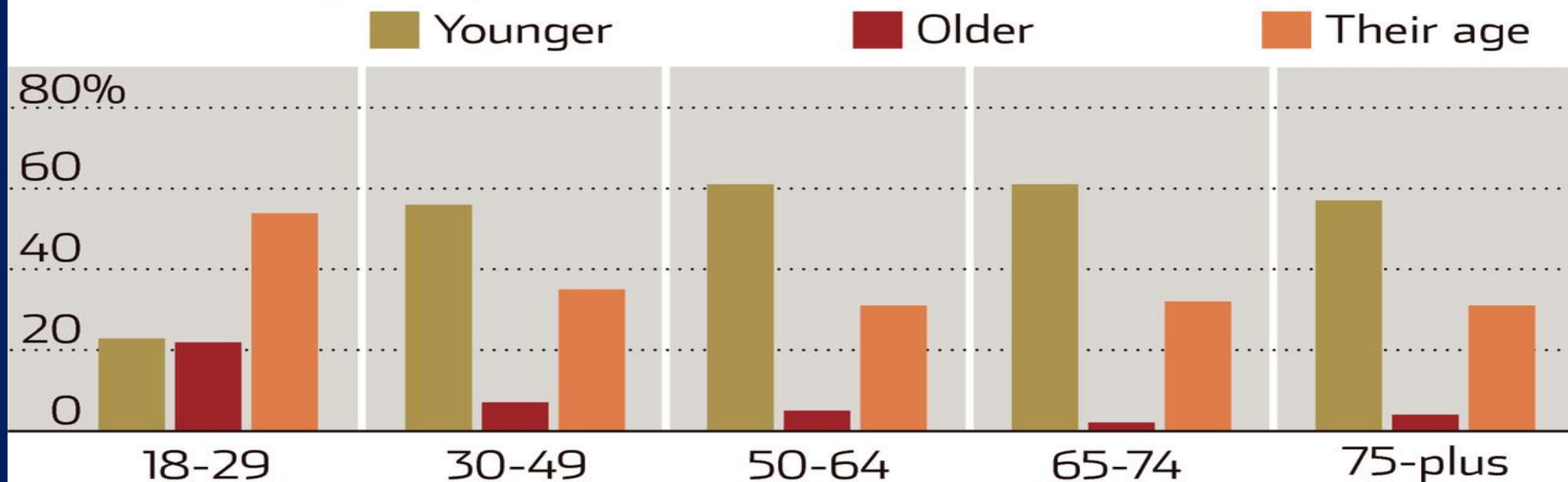
Age of respondents	Age of becoming old
18-29	60
30-49	69
50-64	72
65-plus	74

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:

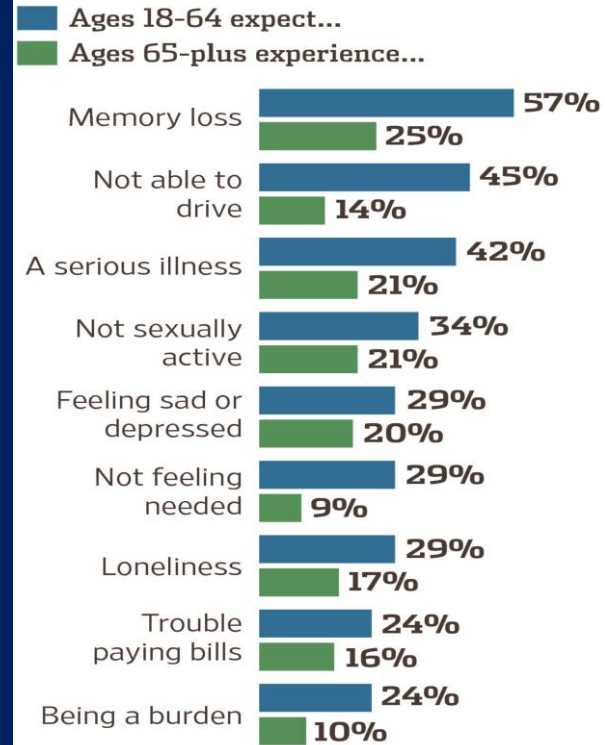


Note: "Don't know" or "refused" responses not shown.

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

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

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