

# Fit at 50, Sexy at 70, Nimble at 90 Successful Aging Via Prevention

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ALPERT  
MEDICAL  
SCHOOL



BROWN

SCHOOL  
OF PUBLIC  
HEALTH

# American Wisdom on Prevention, Circa 1900

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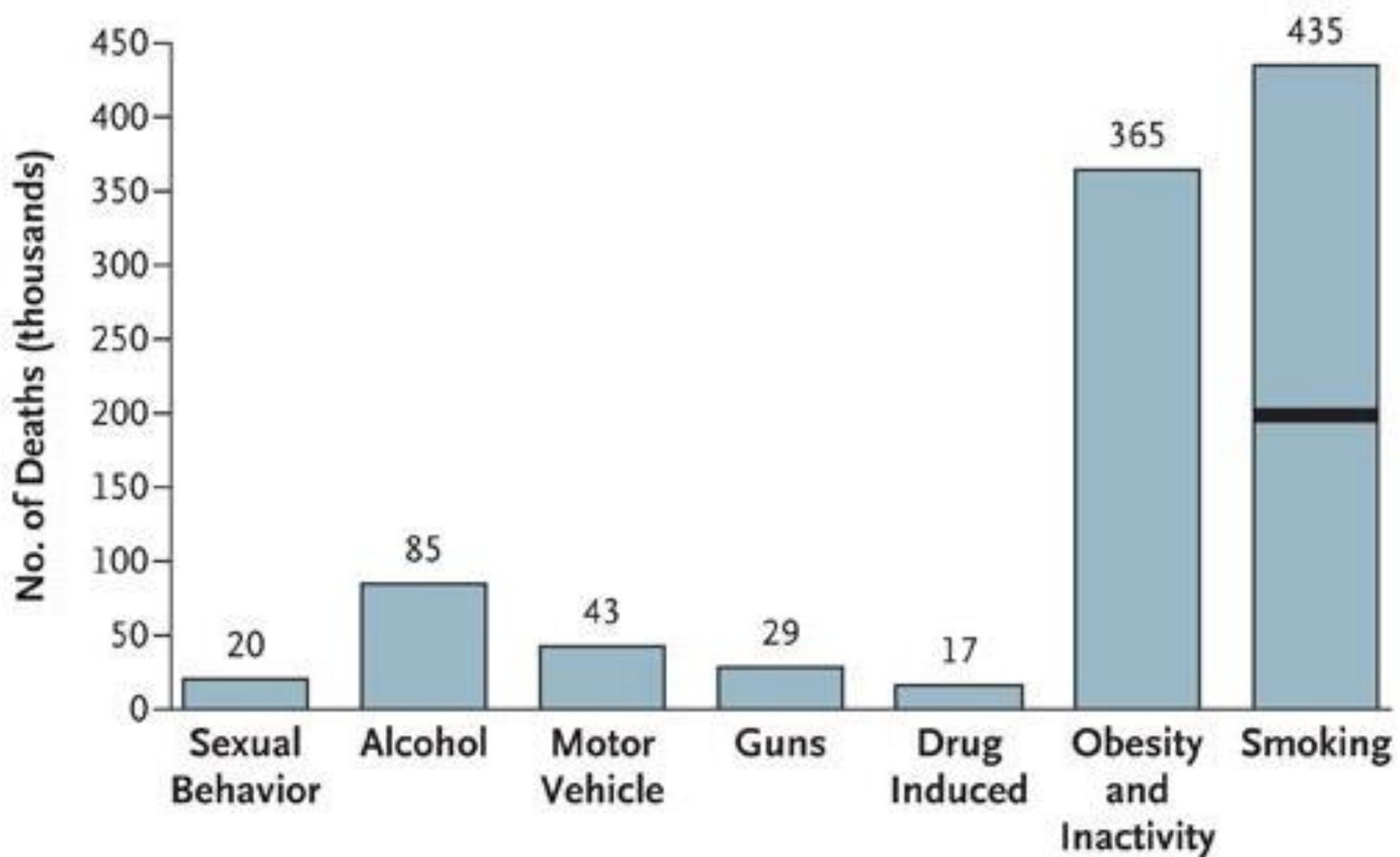
"The only way to keep your health is to eat what you don't want, drink what you don't like, and do what you'd rather not."

Twain M. Pudd'nhead Wilson's new calendar. In: Following the Equator, Vol. II. New York, NY: Harper & Brothers; 1907: 137.

# Why Prevention Fails



# US Deaths from Behavioral Causes, 2000



# Opportunities for Intervention

Blood pressure

Exercise

Smoking cessation

Driving safety

Immunizations

Nutrition

Environment

Screening for cancer

Booze (Alcohol problems)

Oral health

Osteoporosis

Mobility - prevent falls

Emotional health

Rx - drug safety

Social networks

ARE

Sexuality

Advance directives

Dementia

# Blood Pressure

Control (130/80) is quality of care measure

- All forms of HTN demand treatment
- Health professional education
- Non-pharmacologic Rx addressed first (exercise, salt, weight, alcohol, stress)
- Diuretics and  $\beta$ -blockers produce optimal outcomes in many older patients
- But what about the very old, >80? Yes!

# Exercise

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- Activity (walking), vs. exercise (running) provides considerable benefits to those unable to exercise
- Exercise most beneficial for CV and other organs
- Aerobic debt 30 minutes every day (does not have to be all at once) - weight bearing ideal
- Physician education on prescribing exercise
- Strategies to make convenient sites for exercise available
- Clear messaging to the public



**“My doctor told me to start my exercise program very gradually. Today I drove past a store that sells sweat pants.”**

# RCTs Documenting Benefits of Exercise

- Decreased incidence, mortality of CV Disease
- Improved profile of blood lipids (HDL)
- Amelioration of glucose intolerance and Diabetes
- Decreased incidence, mortality of many Cancers
- Increased Bone Mineral Density, fewer fractures
- Reduced incidence of depression
- Improved physical function
- Improved cognitive function



**“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”**

# Smoking Cessation

- Benefits (heart & lung disease, all cancers) accrue rapidly after quitting at any age – elders have lowest relapse rate
- Patches for older smokers too
- Quitting in early lung CA prolongs survival
- Education - quitting at any age lowers all risks
- Smoke-free sites
- No tobacco advertising
- Counseling covered by Medicare

# Driving Safety

- Drivers >75 have highest crash fatality rate
- Driver re-education programs
- Counseling on seat belt use
- Referring high risk patients for driving evaluation
  - + Cognitive impairment
  - + Physical impairment
    - Lower extremity weakness, head turning
    - Coordination, balance
- Identify patients who are not safe to drive

# Immunizations

- Pneumococcal vaccine (all, plus new Prevnar) - it works, once is enough (for healthy), with flu is OK (other arm); reduces infections , pneumonia and death
- Influenza vaccine (all) – annual, cost-effective; high dose gives higher ab titers & protection – new data from Brown School of Public Health Gerontology Center
- Shingles vaccine – new recombinant (Shingrix; not live virus) far superior to older one (Zostavax; live virus) – more protection, longer lasting, much better at preventing post-herpetic neuralgia

# Nutrition

- Routine screening of nutritional status
- Diet history, follow weight longitudinally
- <10% saturated fat, <30% total fat, ↑complex carbohydrates, ↓simple sugars (“diabetic diet”)
- Mediterranean diet!
- Professional education
- Early intervention in frail or high-risk (NH, hospital)
- Vitamins and supplements?

# Benefits of a Mediterranean Diet

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- 30+ years of observational data indicating many benefits: heart and brain most prominently
- Randomized controlled trial of ~7500 men & women >55 at high risk for CV disease and diabetes – ended early because of great benefit to those in Med Diet groups
  - + Reduced heart attack, stroke and cardiac death
  - + Fewer developed diabetes
  - + Memory and global cognition increased
  - + Less invasive breast cancer
  - + Fewer hip fractures

# What is a Mediterranean Diet?

- A variety of fresh vegetables (dark green, red/orange, legumes) and fruits, especially whole fruits
- Grains, at least half of which are whole grains
- Lots of Extra Virgin Olive Oil (EVOO)
- Fat-free or low-fat dairy and fortified soy beverages
- Protein - seafood, lean meats/poultry, eggs, nuts, seeds, and soy products
- Limited saturated/trans fats, added sugars, sodium
- <10% calories from added sugars; <10% calories from saturated fats; <2300 mg/d sodium
- Moderate alcohol (red wine) - 1 drink/day women, 2 for men

# Environment (World, Home)

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- The world
  - + Advocate cleanup - water, air, ground
  - + Stop pollution
- Home safety
  - + Fire, smoke, CO detectors
  - + Emergency exits
  - + Remove toxins
  - + Remove guns

# Screening for Cancer

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- Patient education
  - + Do self-exam of skin, breast and mouth
  - + Get colon cancer screen and mammogram
- Annual exam by healthcare provider - skin, breast, mouth, rectum, prostate (?)
- Annual mammogram - Medicare covers without deductible
- Annual fecal occult blood (2 smears, each of 3 consecutive stools) - saves lives
- Flexible sig or colonoscopy @ 50; F/U by results

# Booze - Alcohol Use Problems

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- Lifelong drinkers grown old
- Previous pattern produces problems due to change in physiology
- New drinking in old age
- Strategies
  - + Screening sensitivity; if inexplicable, think of alcohol
  - + CAGE validated in elders, but misses 50% - open-ended questions
  - + Brief intervention strategy

# Oral Health

- No Medicare coverage for preventive/restorative care
- Poor oral health associated with many bad outcomes
- Education on self-care - brushing, flossing, fluoride
- Minimize tobacco and alcohol
- Fluoridated water
- Funding for older persons' dental care, especially NH
- Cancer screening – look, feel with dentures out

# Osteoporosis Prevention

Medicare covers BMD screening (women)

- 1500 mg calcium intake + 800 U vitamin D
- Exercise for better bone density and balance/gait
- Avoid smoking, alcohol, corticosteroids
- For treatment of low bone mass, bisphosphonates (7; e.g., alendronate [Fosamax]), SERMs (raloxifene)
- Maximize peak bone mass (<35) - Calcium, D, exercise

# Mobility - Falls Prevention

- Mobility assessment, intervention
- Minimize drugs - psychoactive, antihypertensives
- Evaluate and remedy physical environment
  - + Rugs, thresholds
  - + Lighting
  - + Grab bars
  - + Stairways
- Exercise and balance training (especially for women)

# Emotional Health

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- Stress reduction
  - + Include stress assessment for elders
  - + Stress reduction techniques
- Depression
  - + Professional awareness
  - + Detection programs
  - + Treatment initiatives - eligibility for services

# Rx - Therapeutic Drug Safety

Poly-medicine, aging changes, special toxicities (cognitive, functional) – continuing vigilance, not just at start

- Inventory all drugs, screen the inventory
- Use the best drug in its class
- Identify indication, delete if duplicate or egregious SE
- Set and monitor therapeutic goals
- Educate the patient, ask about new drugs
- Address adherence, review regimen periodically for benefit and harm
- Consider new symptoms as side effects

# Social Networks

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- Public and professional education on riskiness of isolation, benefits of friendships
- Creation of sites
- Attend facilitating sites
- Encouragement to make friends
- Case finding of isolation

# Sexuality Among Elders

- Many are active, but don't tell their children – 3000 volunteers, 57-85 years old
- Major predictors of frequency
  - + Health status – cardiovascular, DM, arthritis
  - + Available partner
  - + Frequency in middle age
- Prevalent problems: ♀ libido, lubrication; ♂ ED

# Advance Directives

- Most patients coming to hospital or ICU do not have any AD available; but goals of care conversations much more important than a document
  - + Most often, elders have thought about it
  - + Most often, they don't want to upset their nice young doctors or their children
  - + Most often, they are grateful if you raise it
- Be matter-of-fact, open-ended “Have you thought about what you would want if...?”
- And if your doctor doesn't, then you must (or get a new doctor!)

# Dementia

- Most of us fear dementia more than death
- Reduced risk for Alzheimer's disease
  - + Advanced education, lifelong hard brain work
  - + Exercise and diet – Mediterranean diet!
  - + Avoid or treat concussions, tobacco, HTN, obesity, diabetes, depression
  - + Cardiovascular health – avoid stroke, AMI
  - + NSAIDs, no
  - + Moderate alcohol, especially red wine – resveratrol?

## Jeanne Louise Calment

Born in Arles, France  
2/21/1875; died at **122** in  
Arles, 8/4/1997. She met  
Van Gogh in her father's  
shop. Her mother at died 86,  
father at 94,. She rode a  
bicycle until age 100. She  
ate 2 pounds of dark  
chocolate each week until  
she turned 119.

“A kind God forgot me”

