Men's Health

A Primary Care Perspective

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Montage Medical Group - Family Practice

3/9/23 – Stillwater Club

Overview

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Background

B.S. Mechanical Engineering
M.S. Biomedical Engineering

Doctor of Osteopathic Medicine

Background

Background


50 Years
OF
TEACHING
AND
LEARNING
Our heartfelt thanks
to all those who
make it possible
HIDDEN VALLEY
Hidden Valley
Music Seminars

Background

MONTEREY
SPINE & JOINT

Motivation

- What kills men?

45-64 years	65-84 years
Cancer 25.6%	Cancer 28.1%
Heart disease 23.8%	Heart disease 24.8%

https://www.cdc.gov/minorityhealth/lcod/men/2016/all-races-origins/index.htm[1]

JM1

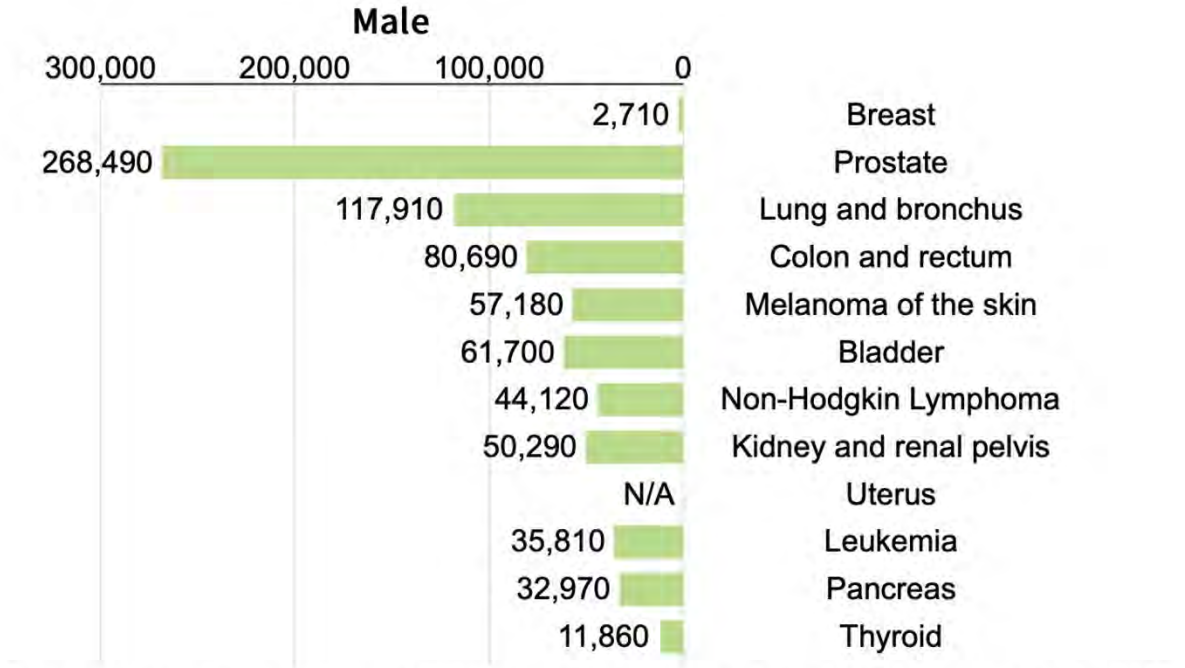
Motivation

- What kills men?
- What makes life worth living?

Slide 8

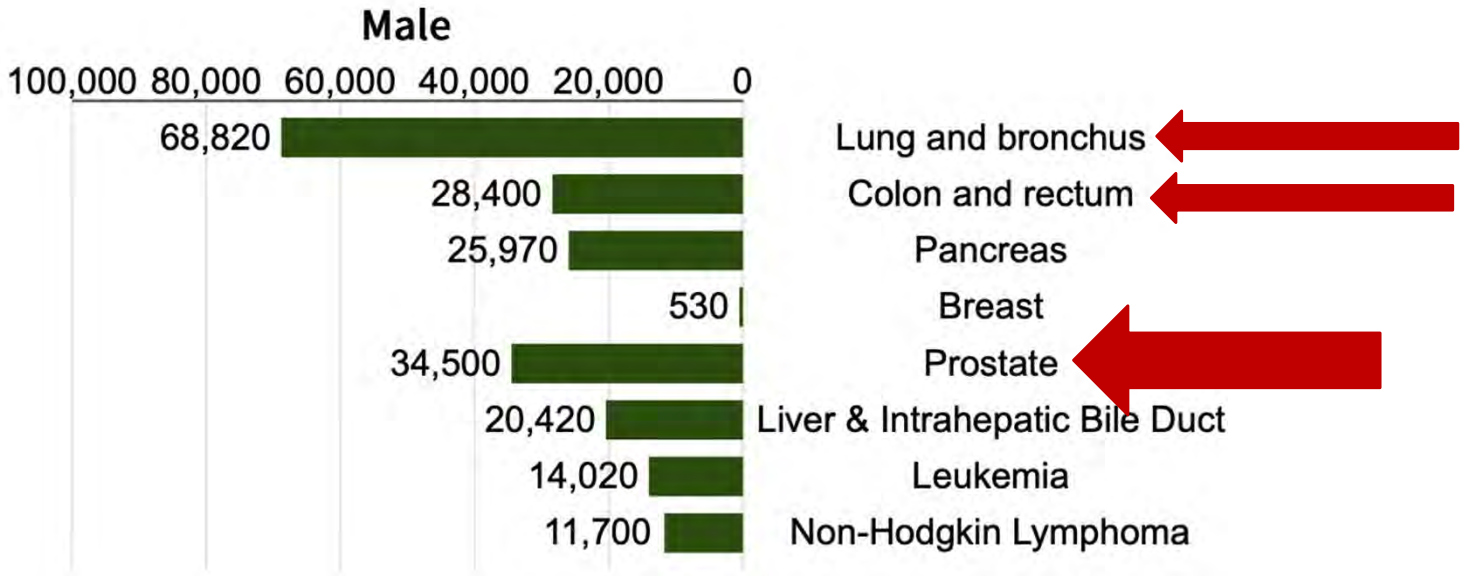
JM1 Jon-Peter Meckel, 2/20/2023

Cancer - Incidence 2022



Source: Cancer Facts & Figures 2022, American Cancer Society (ACS), Atlanta, Georgia, 2022.

Cancer – Deaths 2022



Source: Cancer Facts & Figures 2022, American Cancer Society (ACS), Atlanta, Georgia, 2022.

Cancer Screening - Lung Cancer

- 85-90% of lung cancer is **attributed to smoking** in men

Population	Recommendation	Grade
Adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.	B

USPSTF 2021 Lung Cancer Screening update

Cancer Prevention - Lung Cancer

- Smoking cessation

Cancer Screening – Colorectal Cancer

Population	Recommendation	Grade
Adults aged 50 to 75 years	The USPSTF recommends screening for colorectal cancer in all adults aged 50 to 75 years. See the "Practice Considerations" section and Table 1 for details about screening strategies.	A
Adults aged 45 to 49 years	The USPSTF recommends screening for colorectal cancer in adults aged 45 to 49 years. See the "Practice Considerations" section and Table 1 for details about screening strategies.	B
Adults aged 76 to 85 years	The USPSTF recommends that clinicians selectively offer screening for colorectal cancer in adults aged 76 to 85 years. Evidence indicates that the net benefit of screening all persons in this age group is small. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the patient's overall health, prior screening history, and preferences.	C

2021 USPSTF Colorectal Cancer Screening

Cancer Screening – Colorectal Cancer

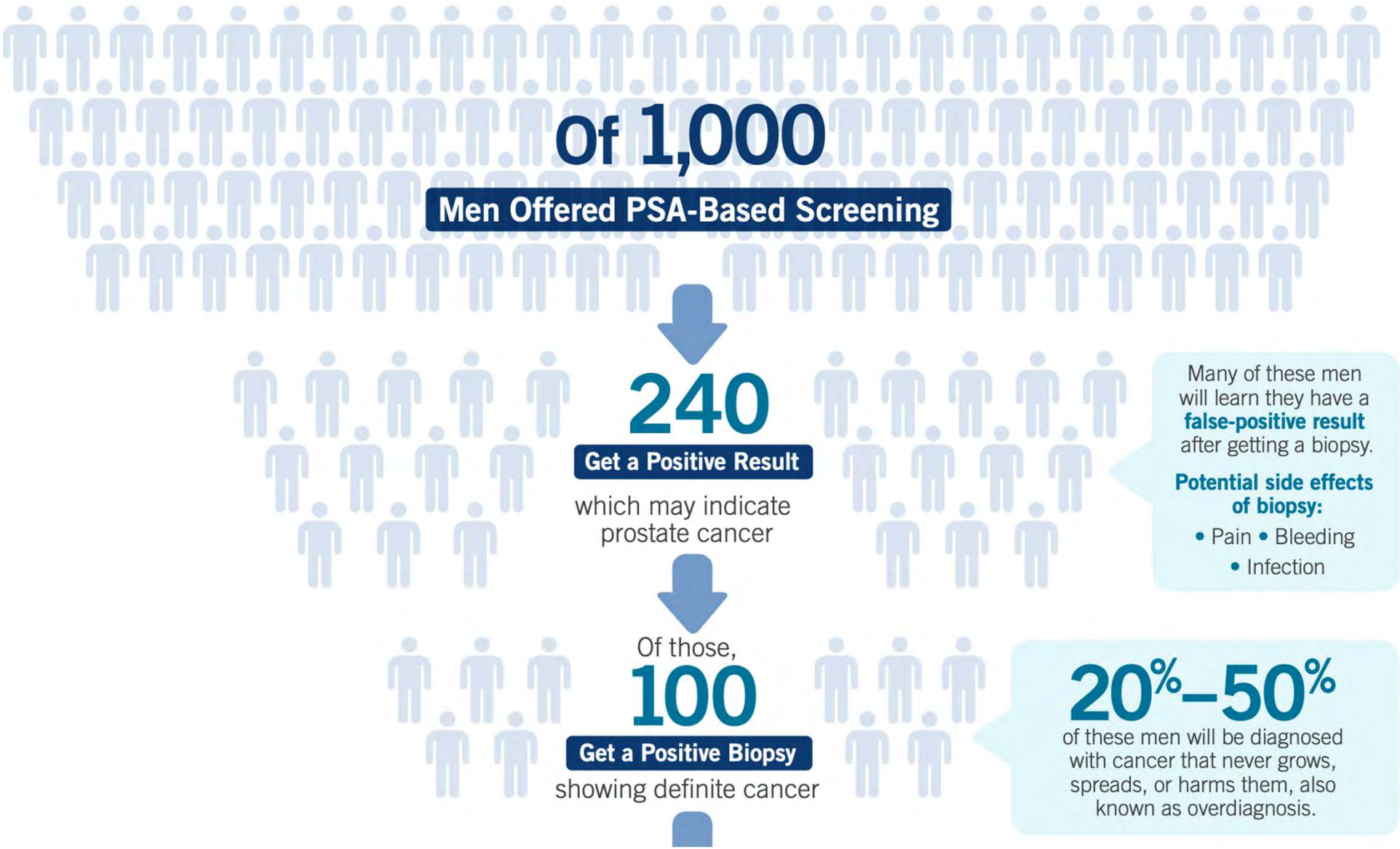
- Non-modifiable risk factors – family history, higher prevalence in Black and American Indian populations, Inflammatory bowel disease
- Colonoscopy – timing varies on pathology and risk
- Fecal occult blood annually
- FIT + abnormal DNA (Cologuard) every 3 years
- CT Colonography every 5 years

Cancer Prevention – Colon Cancer

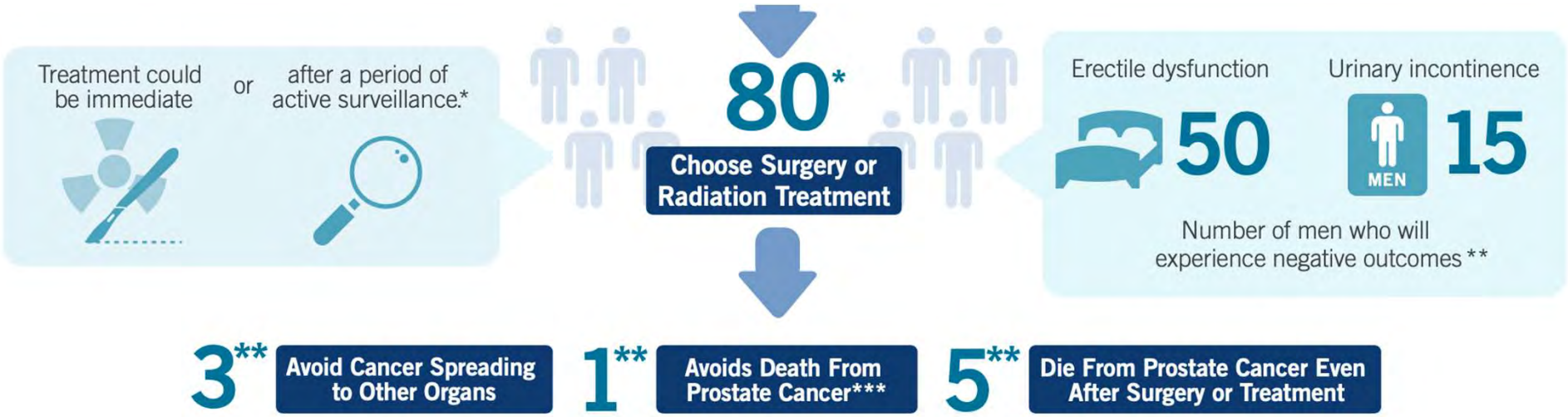
- Smoking Cessation
- Obesity
- Alcohol use – 2 drinks per day or less
- Red meat/processed meat intake
- Diabetes
- Physical activity
- Aspirin?

Cancer Screening - Prostate Cancer

- 2022 U.S. – 268K diagnosed cases, 34.5K deaths
- Dynamic recommendation – Best data ages 55-69
- Diagnostic/management risks weighed against mortality improvements with screening
- Primary screening approach Prostate Specific Antigen (PSA)
- DRE (Digital rectal exam) not recommended as screening adjunct


Of 1,000
Men Offered PSA-Based Screening
240
Get a Positive Result
which may indicate prostate cancer
Many of these men will learn they have a false-positive result after getting a biopsy.
Potential side effects of biopsy:
• Pain • Bleeding
• Infection
Of those,
100
Get a Positive Biopsy
showing definite cancer
20%–50%
of these men will be diagnosed with cancer that never grows, spreads, or harms them, also known as overdiagnosis.

1,000 men offered PSA Screening



Cancer Screening - Prostate Cancer

Population	Recommendation	Grade
Men aged 55 to 69 years	For men aged 55 to 69 years, the decision to undergo periodic prostate-specific antigen (PSA)-based screening for prostate cancer should be an individual one. Before deciding whether to be screened, men should have an opportunity to discuss the potential benefits and harms of screening with their clinician and to incorporate their values and preferences in the decision. Screening offers a small potential benefit of reducing the chance of death from prostate cancer in some men. However, many men will experience potential harms of screening, including false-positive results that require additional testing and possible prostate biopsy; overdiagnosis and overtreatment; and treatment complications, such as incontinence and erectile dysfunction. In determining whether this service is appropriate in individual cases, patients and clinicians should consider the balance of benefits and harms on the basis of family history, race/ethnicity, comorbid medical conditions, patient values about the benefits and harms of screening and treatment-specific outcomes, and other health needs. Clinicians should not screen men who do not express a preference for screening.	C
Men 70 years and older	The USPSTF recommends against PSA-based screening for prostate cancer in men 70 years and older.	D

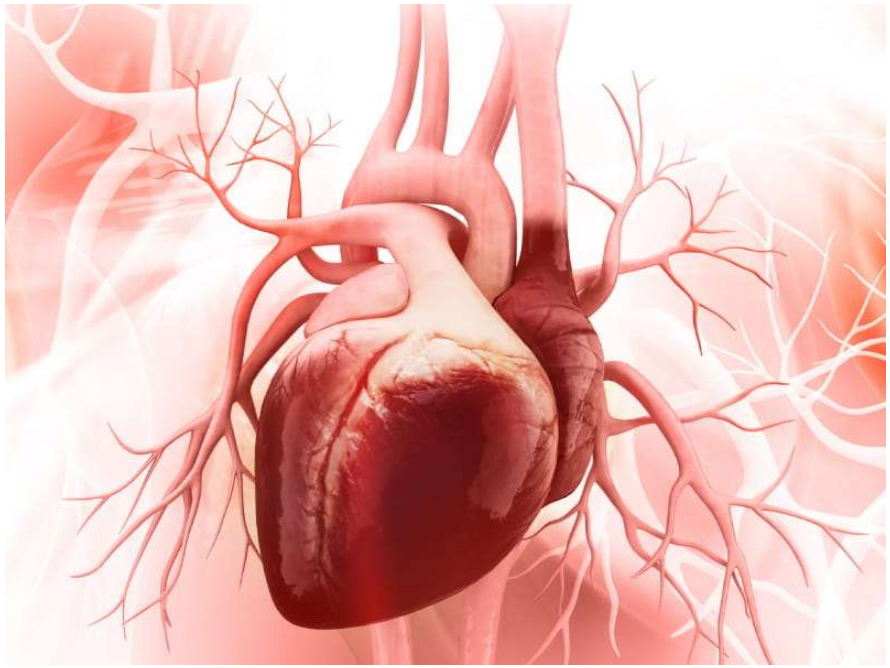
Cancer Screening – Prostate Cancer

- Ages 55-69
- Family history
- Significant urinary symptoms not associated with infection (Urinary urgency, difficulty initiating flow, weak urinary stream, frequency) – unfortunately similar symptoms to BPH (Benign Prostatic Hypertrophy)
- 70?

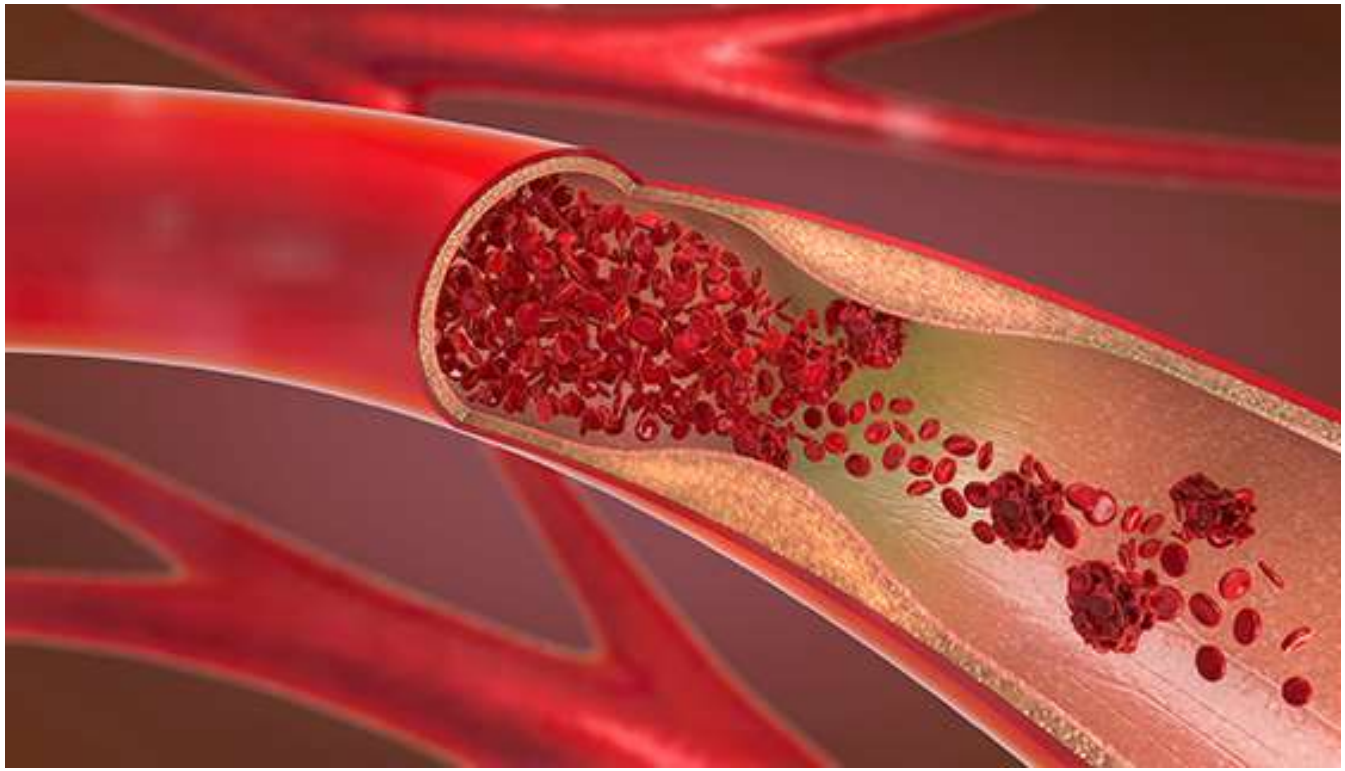
Cancer Prevention – Prostate Cancer

- Diet? Insulin-like Growth Factor 1 (IGF-1)
- Smoking – Possible increase in mortality
- Supplemental testosterone use?

Heart Disease



Heart Disease - Coronary Artery Disease



Heart Disease – Risk Factors

- Hyperlipidemia
- Hypertension
- Smoking
- Alcohol use
- Diabetes
- Diet
- Family history
- Obesity
- Activity Level

Heart Disease - Hyperlipidemia

- LDL-C cholesterol strongest association
  - LDL Targets <100 mg/dL, <70 mg/dL
- Bad news on HDL
- Dietary changes – Controversial data regarding dietary cholesterol intake, however consensus exists on general dietary trends:
  - DASH/Mediterranean diets – focus on fruits, vegetables, lean protein, whole grains, nuts, seeds, olive oil

Heart Disease - Statins

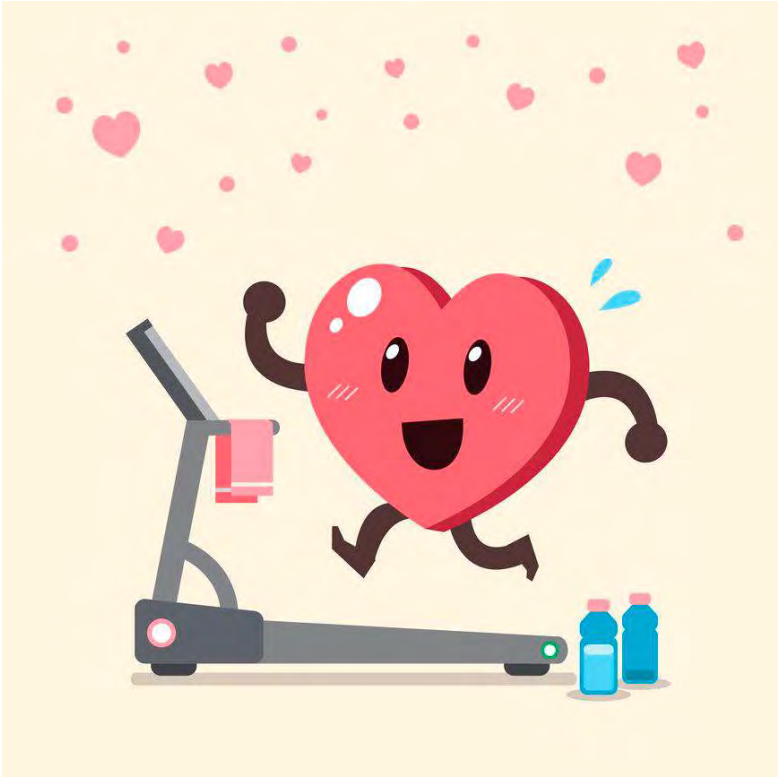
- Medication therapy – Do statins work?
  - Primary vs Secondary prevention
  - Risk Profile
- NIH data review 8/2022, primary prevention (review of 22 trials, 94,624 patients):
  - Reduction in all cause mortality – Relative risk 0.92
  - Reduction in myocardial infarction – Relative risk 0.67
- 75+ ?

Heart Disease - Statins

- Statin Risks/Side Effects – dose dependent
- Muscle aches (Myalgias)
- Rhabdomyolysis
- Liver Injury
- Diabetes?
- Dementia?

Heart Disease – Exercise

- AHA recommendation – 150 minutes/week of moderate intensity exercise, or 75 minutes vigorous activity
- Associated with a 40-65% reduction in adverse cardiovascular events



Key Question

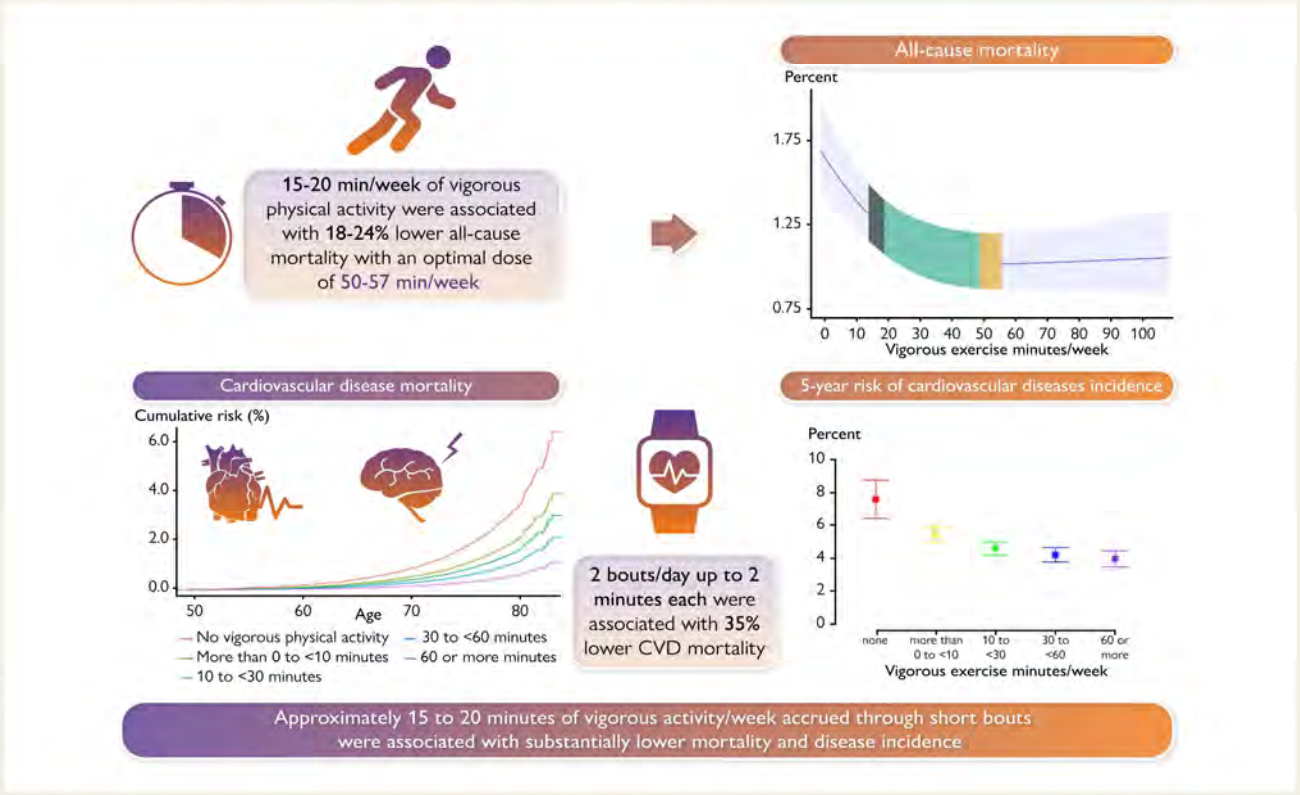
What is the dose-response association of device-measured vigorous physical activity with mortality and incident cardiovascular disease (CVD) and cancer?

Key Finding

15 minutes/week was associated with a 16% to 18% lower all-cause and cancer mortality, and 20 minutes/week was associated with 40% lower CVD mortality. Further beneficial associations were observed for up to 50-57 minutes/week.

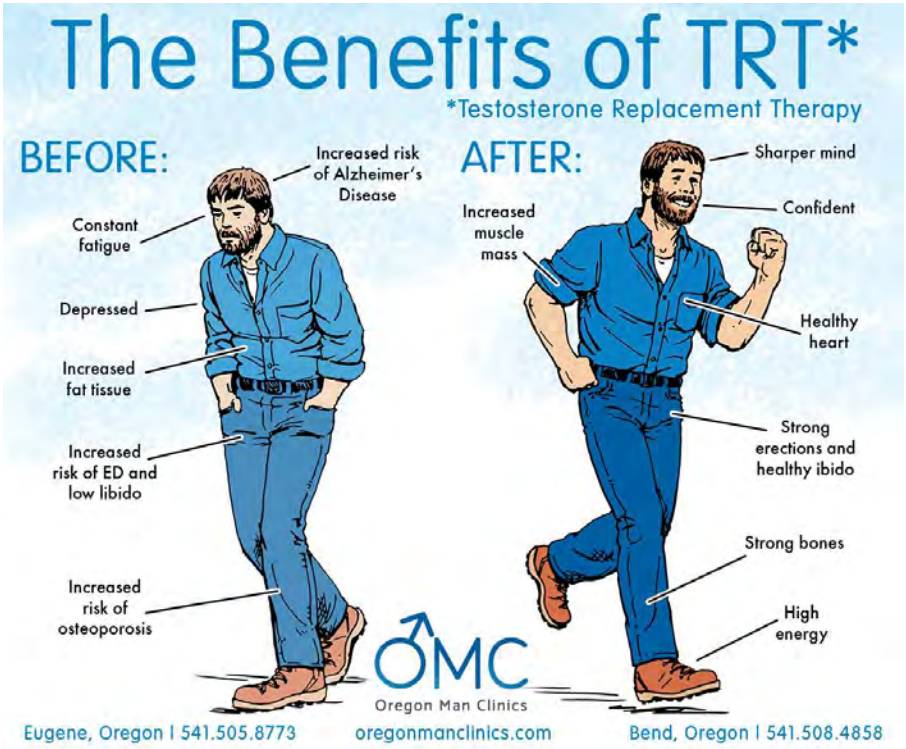
Take Home Message

Premature mortality and major chronic diseases may be lowered through relatively modest amounts of vigorous physical activity. Such amounts are considerably lower than what questionnaire-based studies have proposed.



Eur Heart J, Volume 43, Issue 46, 7 December 2022, Pages 4801–4814,
https://doi.org/10.1093/eurheartj/ehac572

Low T



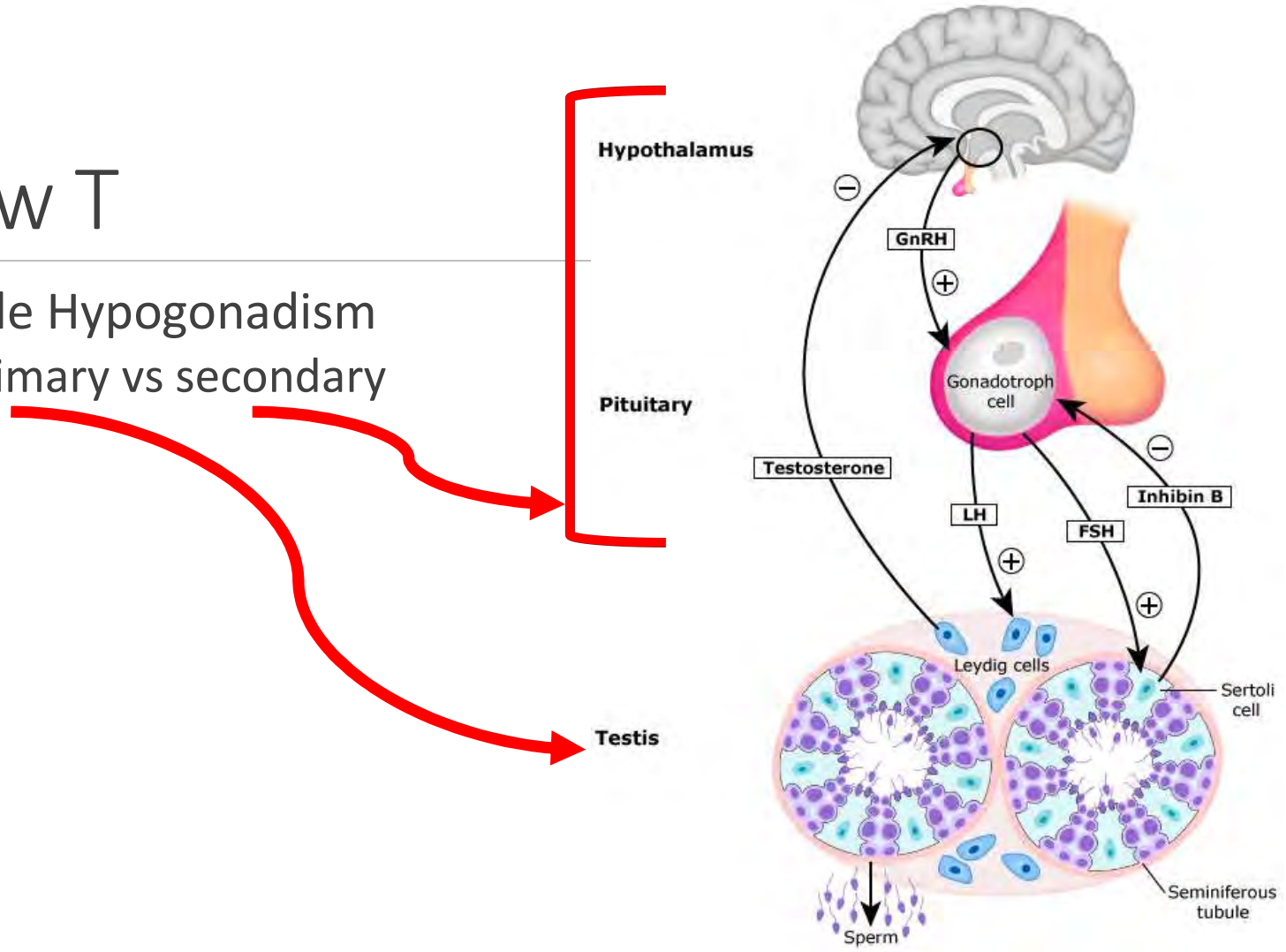
Supplemental testosterone use Tripled from 2001 - 2011

Low T

- True signs of hypogonadism
  - Decreased libido
  - Decreased body hair/muscle mass
  - Gynecomastia
  - Decreased testicular size
  - Mood effects?

Low T

- Male Hypogonadism
  - Primary vs secondary



Primary Hypogonadism

Infections, especially mumps
Radiation
Alkylating agents
Suramin
Ketoconazole
Environmental toxins
Trauma
Testicular torsion
Autoimmune damage
Chronic systemic illnesses
Hepatic cirrhosis
Chronic renal failure
AIDS
Idiopathic

Secondary Hypogonadism

Tumors
▪ Benign tumors and cysts
▪ Craniopharyngiomas
▪ Germinomas, meningiomas, gliomas, astrocytomas
▪ Metastatic tumors (breast, lung, prostate)
"Functional" gonadotropin deficiency
▪ Chronic systemic disease
▪ Acute illness
▪ Malnutrition
▪ Hypothyroidism, hyperprolactinemia, diabetes mellitus, Cushing's disease
▪ Anorexia nervosa, bulimia
▪ Post-androgen abuse
▪ Drugs - marijuana, opioids, anabolic steroids, glucocorticoids
Infiltrative diseases
▪ Hemochromatosis
▪ Granulomatous diseases
▪ Histiocytosis
Head trauma
Pituitary apoplexy

Low T

- Morning fasting blood test – 250-300 ng/dL x3
- Overweight/obese interpretation
- Data driven effects of supplementation:
  - Sexual drive – minimal effect on erectile dysfunction
  - No cognitive effects
  - Mood
  - Bone Density
  - Spermatogenesis
- Testosterone levels and aging

Low T

- Dosage forms
  - Nasal Gel (Daily)
  - Topical (daily)
  - Injection (1-4 weeks)
  - Implanted pellets (3-6 months)
- OTC “Testosterone Boosters”

Testosterone – Risks of Supplementation

- More data needed on long term safety and outcomes
- Erythrocytosis
- Increased blood clot risk
- Potential effects on prostate cancer
- Cardiovascular/stroke risk?

Boosting Testosterone Naturally

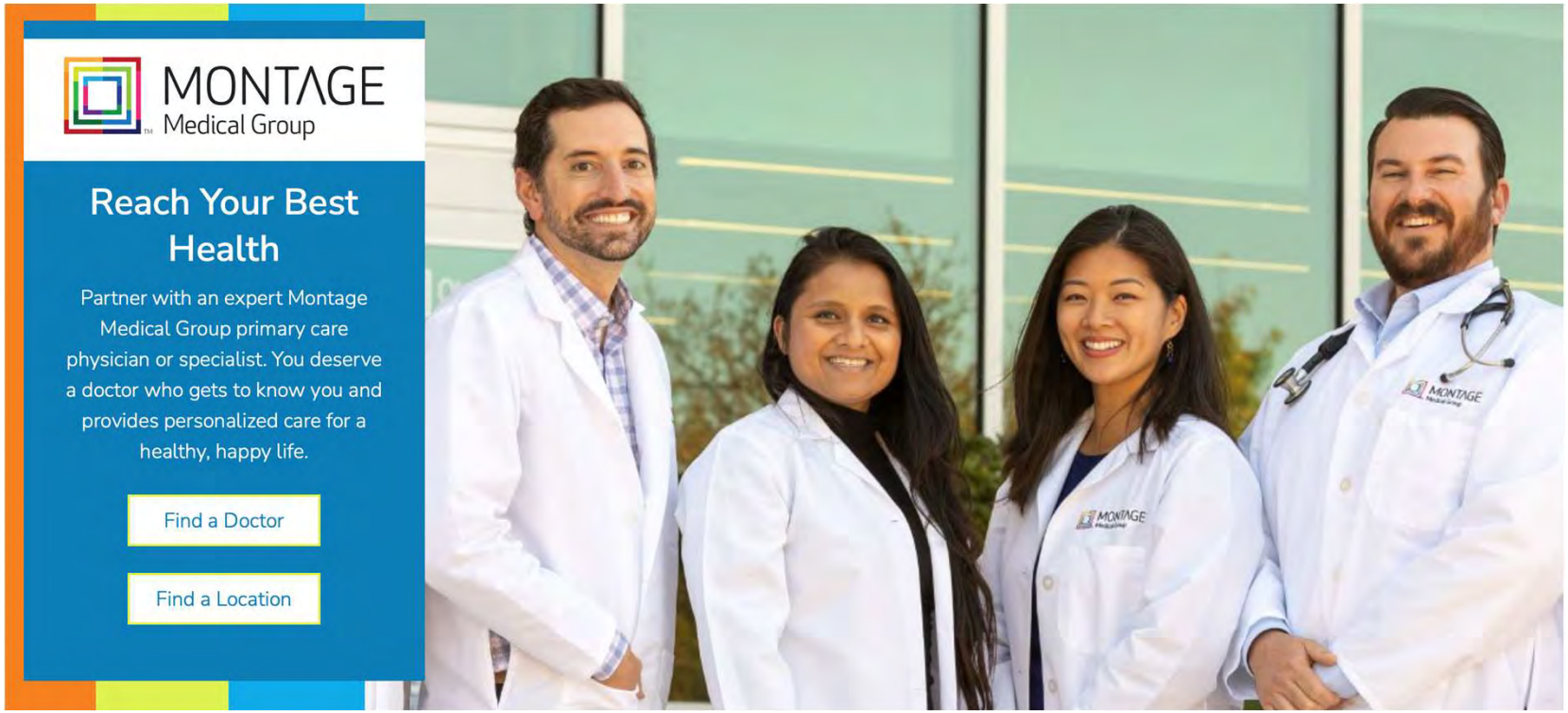
- Exercise!
- Weight loss
- Sleep
- Opioid use
- Alcohol use
- Sleep Apnea treatment

Summary

Summary

- Remember your motivation
- Get moving
- Stop smoking
- Stay up on cancer screening
- Discuss concerns with your physician

Thank You!


MONTAGE
Medical Group
Reach Your Best Health
Partner with an expert Montage Medical Group primary care physician or specialist. You deserve a doctor who gets to know you and provides personalized care for a healthy, happy life.
Find a Doctor
Find a Location

References

1. CDC, *Leading Causes of Death – Males – All races and origins – United States, 2016* https://www.cdc.gov/minorityhealth/lcod/men/2016/all-races-origins/index.htm

2. Carter HB, Albertsen PC, Barry MJ et al: Early detection of prostate cancer: AUA Guideline. J Urol 2013; 190:419

3. Wang X, O'Connell K, Jeon J*, et al* Combined effect of modifiable and non-modifiable risk factors for colorectal cancer risk in a pooled analysis of 11 population-based studies, *BMJ Open Gastroenterology* 2019;**6:**e000339. doi: 10.1136/bmjgast-2019-000339

4. Johns Hopkins, *High Cholesterol* https://www.hopkinsmedicine.org/health/conditions-and-diseases/high-cholesterol

5. Carson et al. *Dietary Cholesterol and Cardiovascular Risk: A Science Advisory From the American Heart Association,* 16 Dec 2019 Circulation. 2020;141:e39–e53

6. Chou et al. *Statin Use for the Primary Prevention of Cardiovascular Disease in Adults: A Systematic Review for the U.S. Preventive Services Task Force* Aug 2022

7. Olmastroni et al. *Statin use and risk of dementia or Alzheimer's disease: a systematic review and meta-analysis of observational studies* European Journal of Preventive Cardiology, Volume 29, Issue 5, March 2022, Pages 804–814, https://doi.org/10.1093/eurjpc/zwab208

8. Michos, E *Testosterone: Toxic or therapeutic for the cardiovascular health of men?* The Lancet, Published: June, 2022DOI:https://doi.org/10.1016/S2666-7568(22)00115-5