

# The Challenge of Heart Disease and the Elderly Male

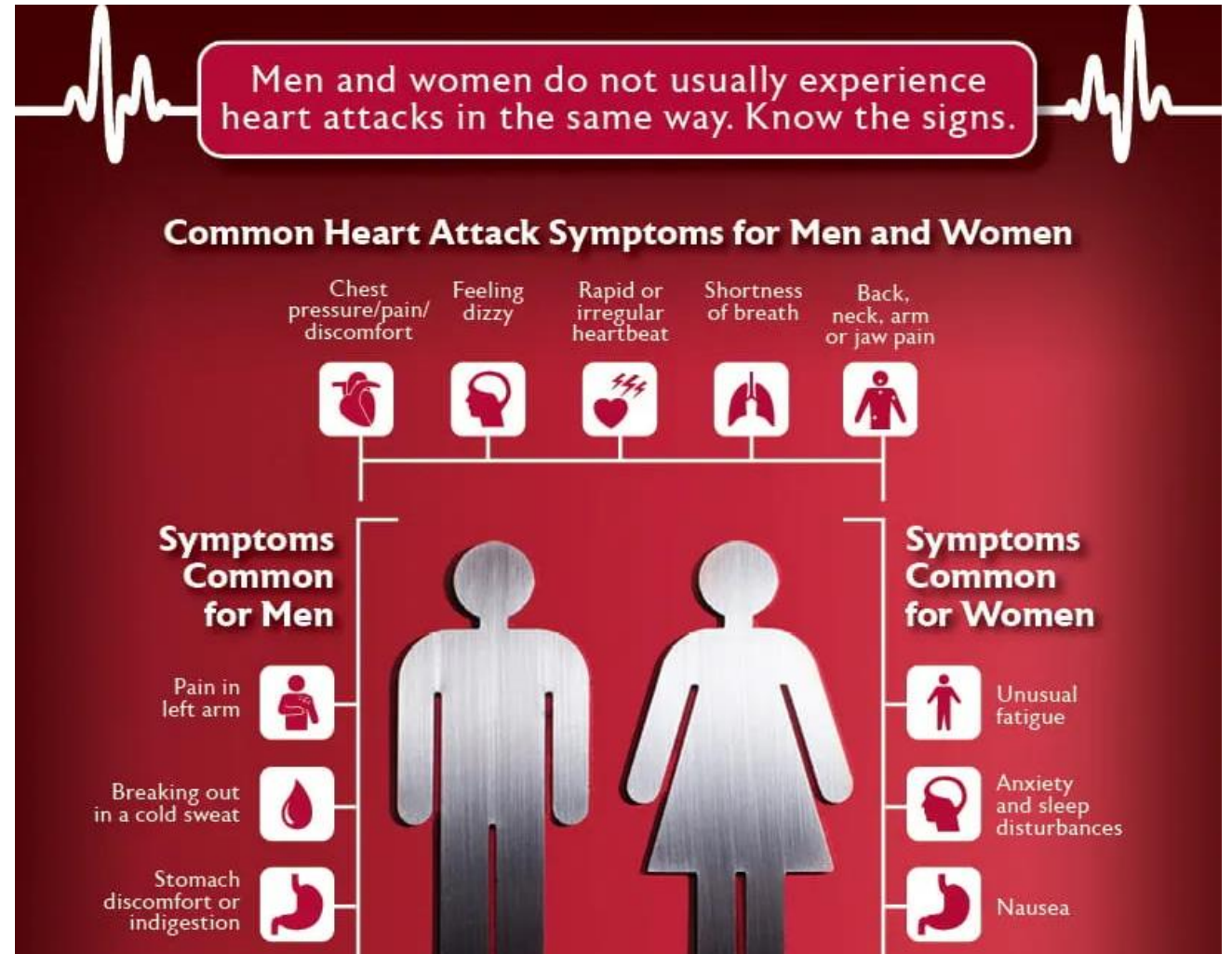
A look at the latest approaches to heart  
health in the adult population

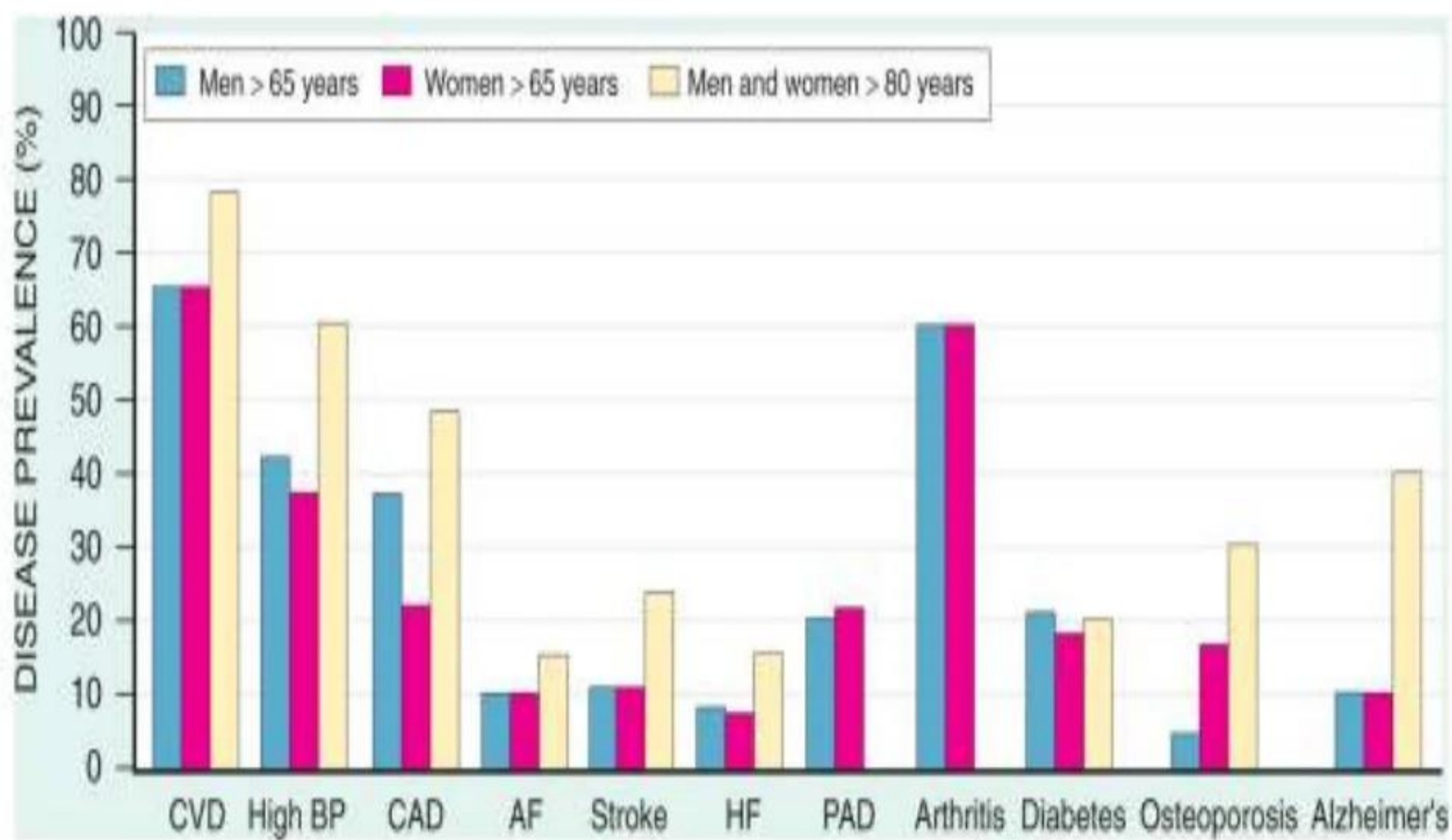
# Do men and women experience a heart attack the same way?

"The better we educate the public on knowing the risk factors, the higher the likelihood they would be more in tune to some of the potential signs and symptoms of a heart attack," he said. **Men and women do not usually experience heart attacks the same way.** Women are more likely to experience unusual fatigue and nausea.

[www.franciscanhealth.org/community/blog/mens-and-womens-heart-attack](http://www.franciscanhealth.org/community/blog/mens-and-womens-heart-attack)

77.5% of men and 75.4% of women ages 60-79 have some form of heart disease. After 80 that number jumps to 90% (America's War Against Heart Disease)





**Prevalence of cardiovascular and other common chronic medical illnesses in older persons in the United States. Data are percentages. Blue bars represent data for men older than 65 years, pink bars represent women older than 65 years, and yellow bars represent men and women older than 80 years. AF = atrial fibrillation; CAD = coronary artery disease; CVD = cardiovascular disease; HF = heart failure; BP = hypertension (all forms); PAD = peripheral artery disease.** *[drtoufiq19711@yahoo.com](mailto:drtoufiq19711@yahoo.com)*

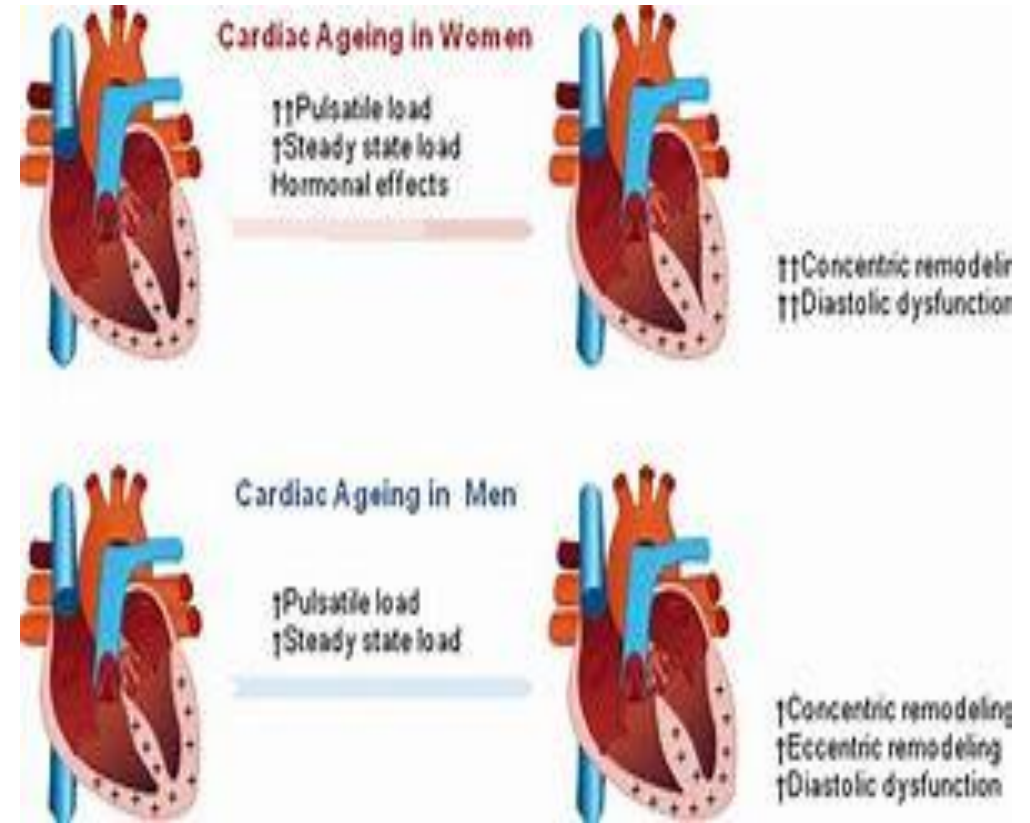
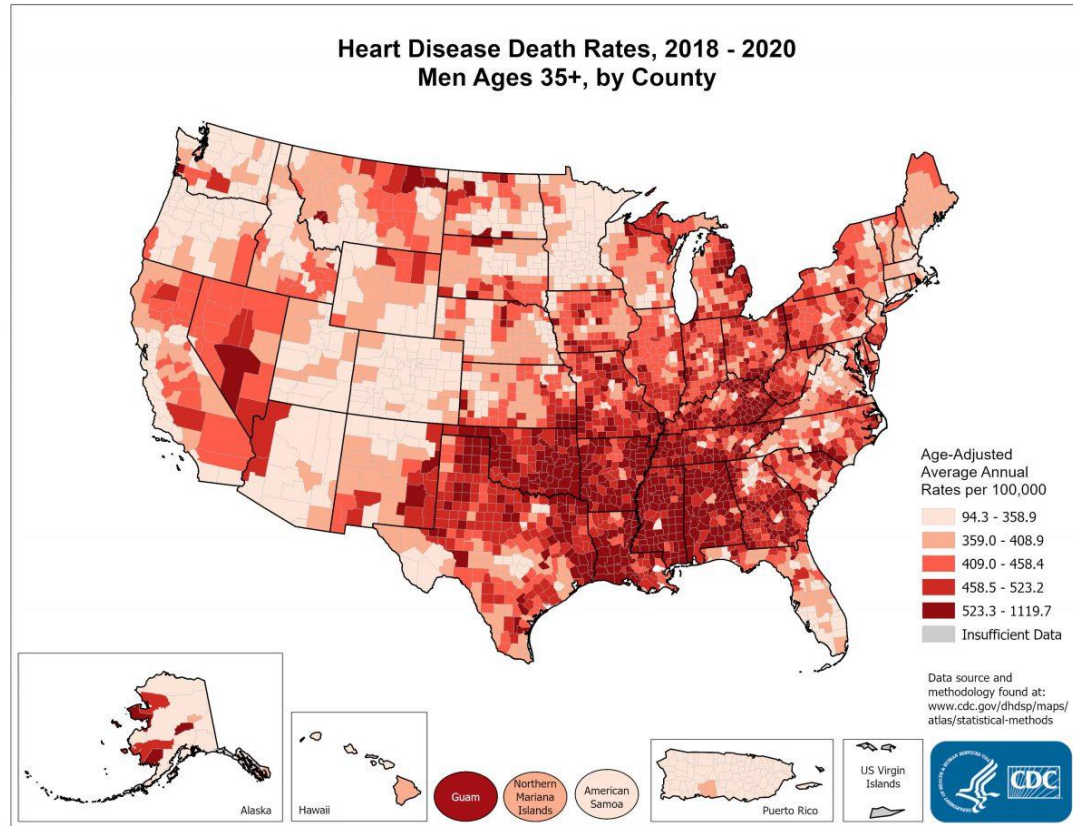
# Talking Heart Disease and a few findings.....

- One person every 34 seconds dies of cardiovascular disease ([www.cdc.gov](http://www.cdc.gov))
- HF is a leading cause of death in older adults-dependent on age ([www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov))
- Benefits of reducing High Blood Pressure by 5%: 34% fewer strokes and 21% less ischemic heart disease (Executive Report: Health Technology Assessment 7(31), 2003)
- Midlife and younger adults are dying of heart disease. Record numbers of older adults are dying in higher numbers (AARP, Americas War on Heart disease, Sari Harrar, Jan/Feb 2023 issue)

# 5 Amazing Facts About the Human Heart ???

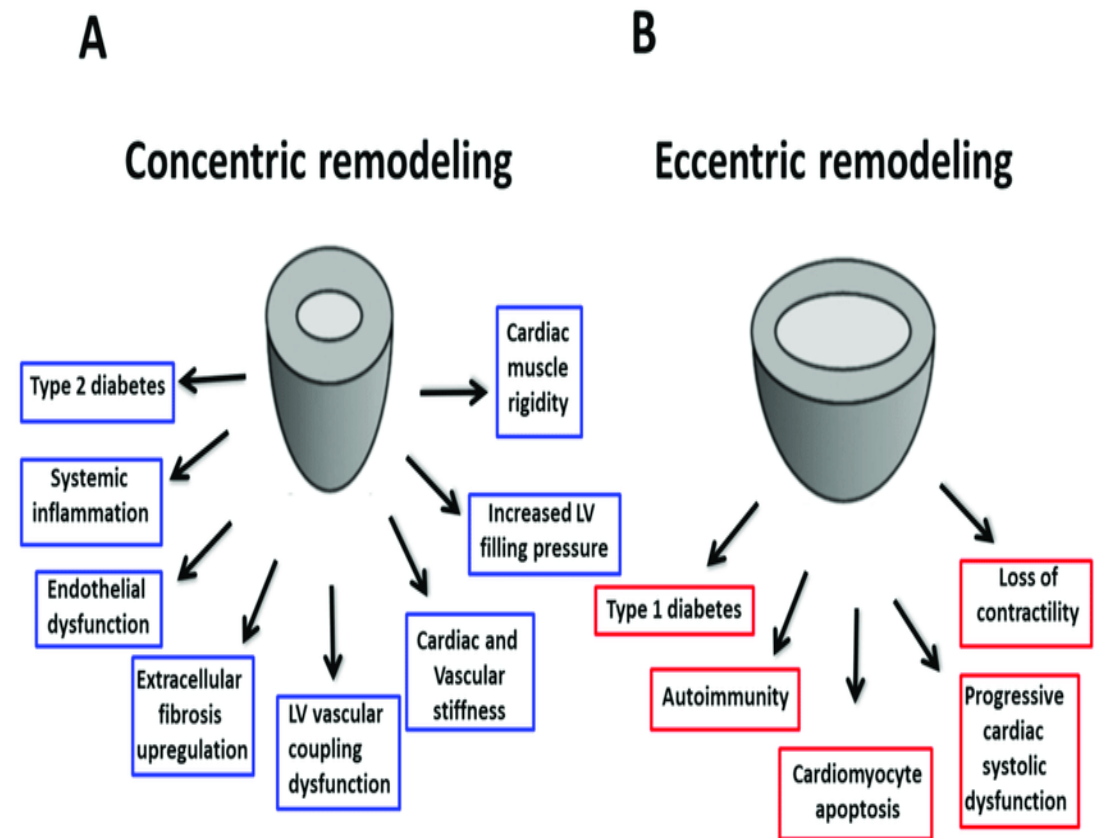
- On the downside, the blood vessels in your heart are the most likely to clog
- Nearly half of all Heart attacks(MI's) have no symptoms at all
- The best food for the heart? Maybe Bananasg
- Spare parts for your heart may come from outer space (zero gravity)
- A great sport for your heart? Grab a racket
- From: Americas War Against Heart disease by Sari Harrar, AARP Bulletin Jan/Feb 2023

# Men and Heart Disease by population density and by differences in cardiovascular changes men vs. Women



# What is Cardiac Remodeling?

- **Ventricular remodeling** may include ventricular hypertrophy, ventricular dilation, cardiomegaly, and other changes. It is an aspect of cardiomyopathy, of which there are many types. **Concentric** hypertrophy is due to pressure overload, while **eccentric** hypertrophy is due to volume overload.



# Why remodeling occurs

- Acute MI, or
- Gradual changes prior to MI
- Cardiomyopathy (pathological changes in the heart muscle)
- Usually L ventricular changes, but changes can occur in other heart chambers, as well.
- **Impact:** LVEF % is an important measure of hearts pumping capacity of O<sub>2</sub> rich blood.
- Ventricular walls become thinner and less elastic due to mechanical stress
- If remodeling of heart muscle is not addressed early on then HF develops
- Usually MRI or echocardiography are used to measure or assess. LVEF is a measure 50-70% is normal. <40% is greatly reduced

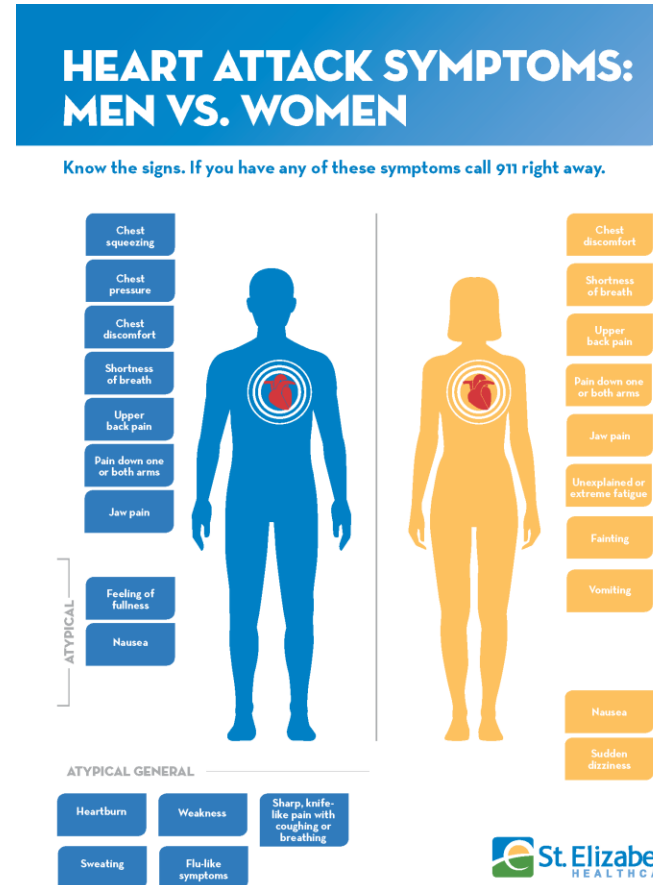


# Back to Men and Heart Disease

- Sober statistic: 1 in every 4 deaths in men is by heart disease
- Now, as of 2020, heart disease is the leading cause of death in men
- About half the men who die suddenly of heart disease, MI, had no warning signs.
- Heart disease in men is usually silent and underdiagnosed until a s/s is detected:
- Palpitations in chest
- Angina
- Actual first MI
- s/s of HF setting in

# What Risk Factors are prevalent in male population? Are s/s similar men vs. women?

- Diabetes
- Weight/obesity
- Diet.....^cholesterol
- Inactivity
- Smoking
- Excessive ETOH use
- Stress and ^ blood pressure
- [Men and Heart Disease | cdc.gov](https://www.cdc.gov)



# Hotter nights increase risk of death from heart disease for men in early 60s ??????

- A 1C (temp) rise in summer night temperature linked to 3.1% increase in risk of CVD mortality among men aged 60 to 64, study says.
- Study was observational, so cannot establish causality
- Published in the BMJ Open (online public access to medical studies)
- The Guardian May 22 2022.
- Warmer temperatures and heat waves have been associated with poor health outcomes, in general, including heart disease
- Heart attacks in men and women, associated with temperature spikes, seem to be evenly divided between men and women, with an average age of 70. But the data varied, showing ^risk in men only.
- <https://www.publichealth.columbia.edu/>

# Worrying may raise risk of MI in Men!!!

- The web site is: [Worrying more linked to increased risk of heart disease \(medicalnewstoday.com\)](http://www.medicalnewstoday.com)

The study was published in the [\*Journal of the American Heart Association \(JAHA\)\*](#)

- **Findings:** Anxiety is linked to several cardiometabolic illnesses, including heart disease, stroke, HTN, and DM. Several indicators were used in this study over 40 years
- Reasons for this are still unclear!!!!
- **After adjusting for demographic factors, the scientists found that higher neuroticism was linked to a 13% higher chance of having six or more cardiometabolic disease risk factors.**

# Future research on aging and heart disease

- Person's over 65 are more likely to develop cardiovascular disease and changes in blood vessels/heart chambers, and other organ systems.
- Even in the normal aging processes changes in the heart and blood vessels can lead to heart disease.
- In order to address heart disease in the elderly we must first understand what is happening in the healthy but aging heart and vascular system.
- Once we understand this process better recommendations and screening and interventions can be put into place much earlier in life.



**Neurological**

- ↓ Brain volume
- ↓ Cerebral blood flow
- ↓ Number of synapses
- ↑ Neurofibrillary tangles and senile plaques
- ↑ Energy expenditure
- ↓ Working memory
- ↓ Executive function

**Cardiac**

- ↑ LV wall thickness
- ↑ LA size
- ↓ end diastolic volume
- ↑ myocyte hypertrophy
- ↓ number of cardiomyocytes
- ↑ collagen content
- ↑ fibrosis

**Respiratory**

- ↓ alveolar surface area
- ↓ recoil
- ↓ diffusion capacity
- ↑ alveolar-arterial oxygen gradient
- chest wall compliance
- ↓ FEV<sub>1</sub>
- ↓ FVC
- ↓ airway clearance

**Renal**

- ↓ GFR
- ↑ Glomerulosclerosis
- ↑ Interstitial fibrosis
- ↑ Tubular atrophy
- ↑ Arteriosclerosis
- ↓ number of nephrons
- ↓ kidney volume

**Musculoskeletal**

- ↓ muscle mass
- ↓ muscle quality
- ↑ myosteatosis
- altered muscle energetics
- ↑ fracture risk

# Some follow up internet links to look at:

- <https://www.nia.nih.gov/health/heart-health-and-aging>
- <https://www.mayoclinic.org/.../aging/art-20046070>
- [www.mountsinai.org/health-library/special-topic/aging-changes-in-the-heart-and ...](http://www.mountsinai.org/health-library/special-topic/aging-changes-in-the-heart-and-...)
- <https://newsroom.heart.org/news/men-who-worry-more-may-develop-heart-disease-and-diabetes-risk-factors-at-younger-age>
- [Sex differences in coronary heart disease and stroke mortality: a global assessment of the effect of ageing between 1980 and 2010 | BMJ Global Health](#)

Questions??????