



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Shared Decision Making: Coronary Artery Disease

February 26, 2018

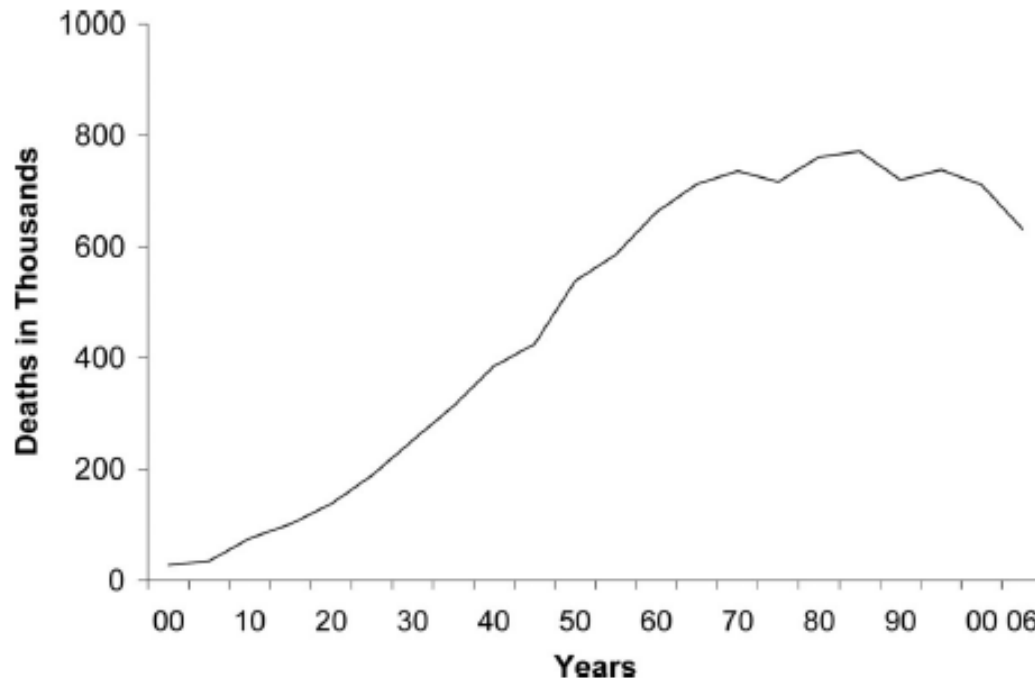
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Coronary Artery Disease



CAD mortality in the US has decreased, but remains the cause of 1/3 of deaths in people >35 yrs of age

Lloyd-Jones, *Circulation*, 2010



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Risk Factors

- Family history
- Smoking
- Hypertension
- Hyperlipidemia
- Diabetes Mellitus

Risk Calculators



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ACC/AHA Risk Calculator

Heart Risk Calculator

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Age (years)

Gender Male
 Female

Race African American
 Other

Total cholesterol (mg/dL)

HDL cholesterol (mg/dL)

Systolic blood pressure (mmHg)

Diastolic blood pressure (mmHg)

Treated for high blood pressure No
 Yes

Diabetes No
 Yes

Smoker No
 Yes

Calculate your 10-year risk of heart disease or stroke using the ASCVD algorithm published in [2013 ACC/AHA Guideline on the Assessment of Cardiovascular Risk](#).

This calculator assumes that you have not had a prior heart attack or stroke. If you have, generally it is recommended that you discuss with your doctor about starting aspirin and a statin. Furthermore, if you have an LDL-cholesterol (bad cholesterol) greater than 190, it is also generally recommended that you discuss with your doctor about starting aspirin and a statin.

Unfortunately, there is insufficient data to reliably predict risk for those less than 20 years of age or greater than 79 years of age and for those with total cholesterol greater than 320.

UPDATE (6/30/16) -- The calculator has been vetted against the [final guidelines from the USPSTF](#) for initiating aspirin therapy.

UPDATE (9/18/15) -- The calculator now also incorporates [draft guidelines from the USPSTF](#) for initiating aspirin therapy.

UPDATE (5/26/14) -- The calculator now also incorporates [guidelines from JNC-8](#) for blood pressure management.

An [excel spreadsheet](#) is also available for download.



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Pathophysiology



Normal condition of an artery



Beginning of plaque formation



Increased plaque accumulation



Narrowed artery blocked by a blood clot

Coronary Artery Disease

‘Plaque rupture’ vs ‘Stable plaque’



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Prevention / Treatment

- Diet
- Exercise
- Medication
 - Aspirin
 - Statin
 - Blood pressure control
- Stress testing: for those with symptoms or established disease

Other Tools to Risk Stratify?

- Beyond Traditional Risk Factors
 - High sensitivity CRP
 - Calcium (CT) scan
 - Coronary CT angiogram