

Coronary Heart Disease Risk in Victorian Volunteer Firefighters

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Introduction

Coronary heart disease (CHD) is a significant problem for USA volunteer firefighters^{1,2,3}. Previous research has, however, measured the prevalence of individual CHD risk factors^{2,3}, rather than more accurate CHD risk prediction using multiple risk factors. No CHD risk data exists for Australian firefighters. This study aimed to determine the absolute CHD risk in Victorian Country Fire Authority (CFA) volunteer firefighters.

Methods

Risk factors were measured in 779 CFA volunteer firefighters (aged 30 – 74 years) and the data was entered into the Framingham function to predict absolute CHD risk.



Figure 1. Obtaining blood sample from participant using finger prick lancing device

Results

- Male CFA firefighters mean risk of developing CHD in next 10 years: $9.1 \pm 7.0\%$ (95% CI 8.5 to 9.6%).
- Female CFA firefighters mean risk of developing CHD in next 10 years: $5.1 \pm 4.3\%$ (95% CI 4.4 to 5.8%).
- Twenty-two percent of CFA firefighters were classified as intermediate CHD risk (10 – 20% risk of developing CHD in next 10 years).
- Seven percent of CFA firefighters were classified as high CHD risk (> 20% risk of developing CHD in next 10 years).

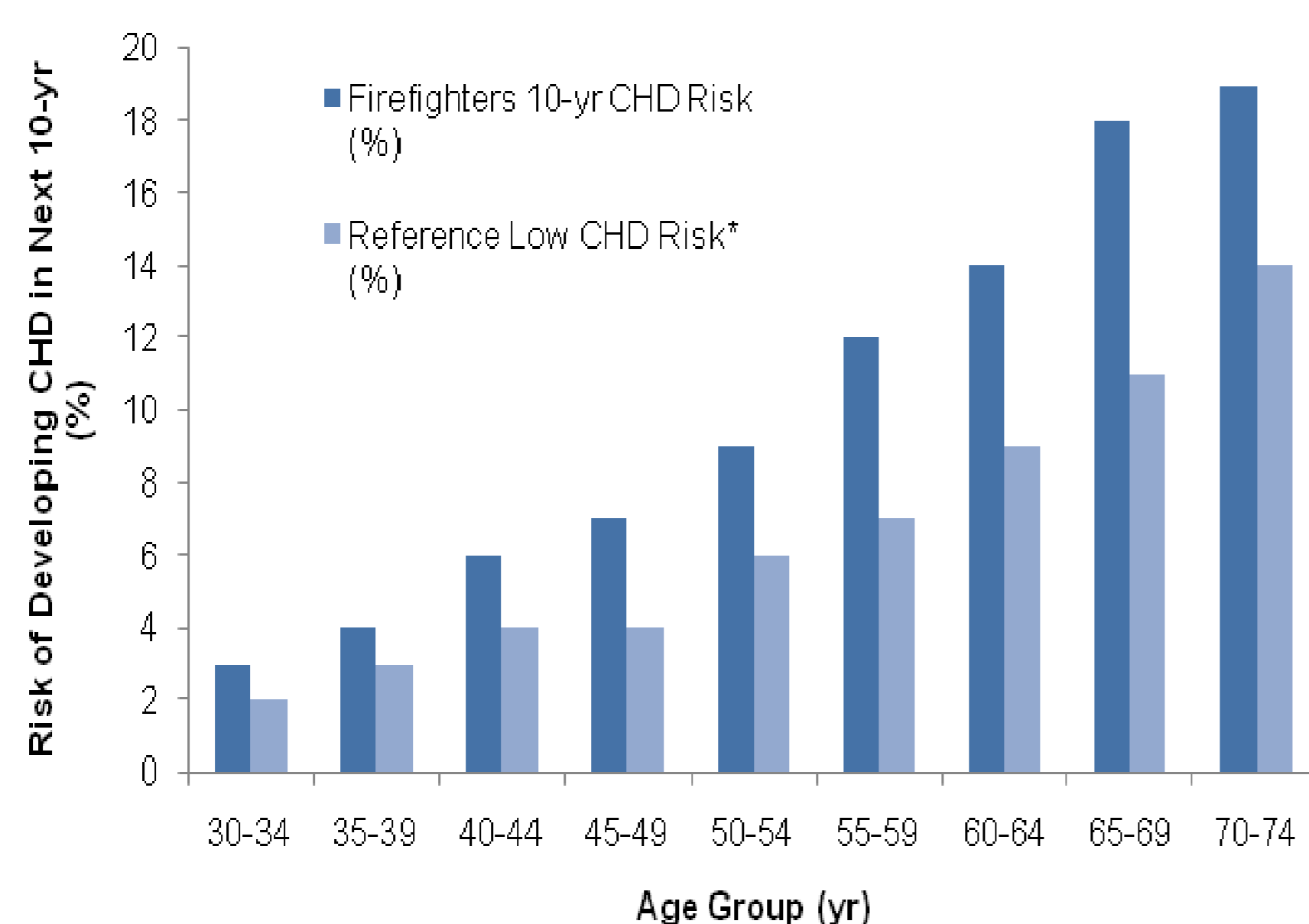


Figure 2. Predicted 10-yr risk of CHD in male CFA firefighters compared to reference low CHD risk for males.

*Reference low CHD risk calculated for a male the same age, optimal blood pressure, LDL-Cholesterol, HDL-Cholesterol, non-smoker and no diabetes;

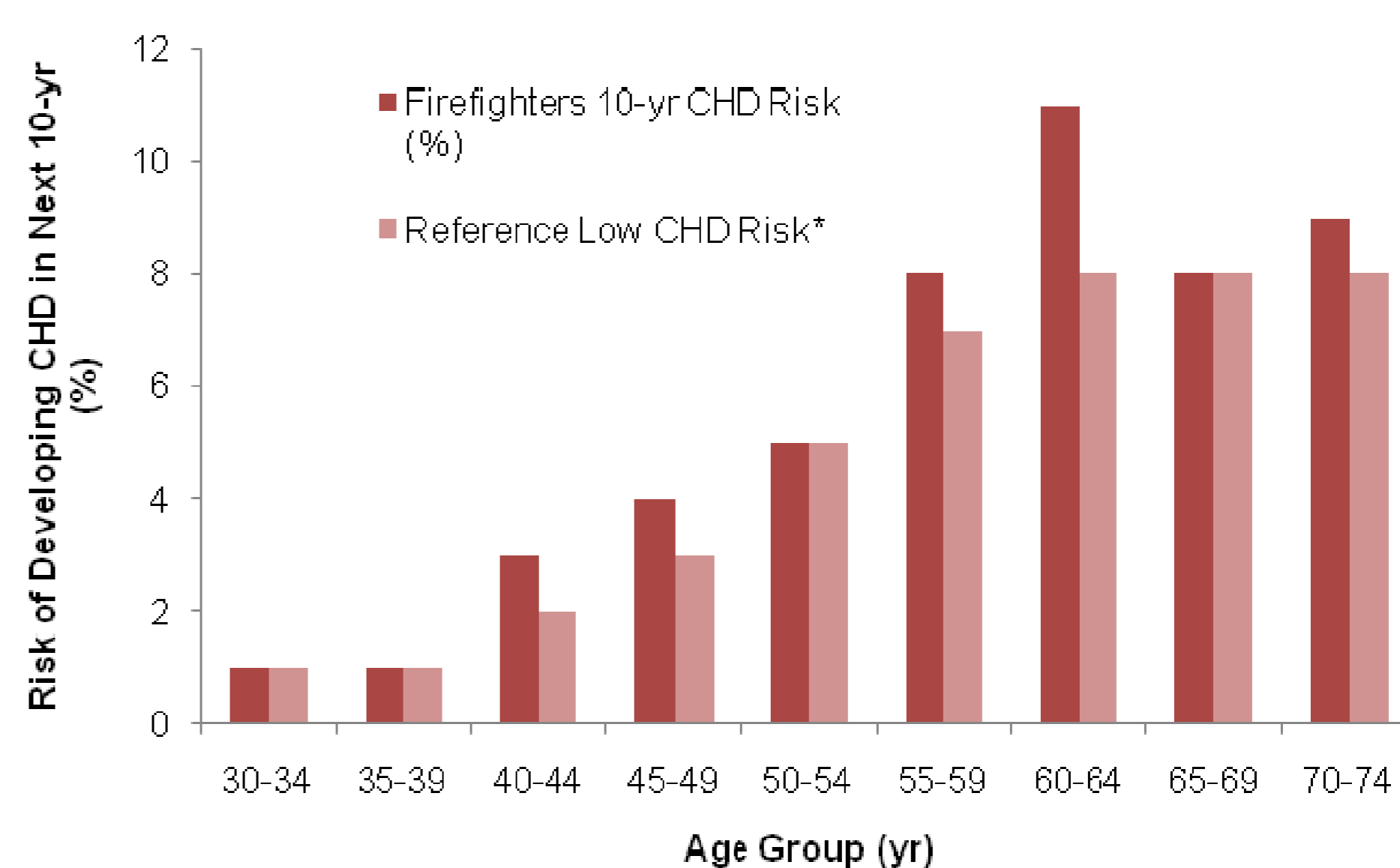


Figure 3. Predicted 10-yr risk of CHD in female CFA firefighters compared to reference low CHD risk for females.

*Reference low CHD risk calculated for a female the same age, optimal blood pressure, LDL-Cholesterol, HDL-Cholesterol, non-smoker and no diabetes;

Conclusion

- Twenty-nine percent of CFA firefighters have higher CHD risk than reference 'low risk' levels.
- The prevalence of CHD risk factors for CFA firefighters was not, however, different to Australian population, matched for age and sex.
- To reduce CFA firefighters absolute CHD risk, researchers and the CFA should consider introducing interventions targeted at lowering multiple modifiable CHD risk factors.