**SEX DIFFERENCES IN EXERCISE DURATION TIME AND RISK OF CARDIOVASCULAR DISEASE EVENTS IN HEALTHY ADULTS**

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We aimed to evaluate sex differences in cardiorespiratory fitness in a relatively healthy population and its association with cardiovascular disease (CVD) events.

**Methods:** Study population included 16,216 subjects that were free of ischemic heart disease and completed maximal exercise stress test according to Bruce protocol. Exercise time (ET) was used to estimate cardiorespiratory fitness and compared between sexes. Linear regression analysis was used to identify predictors of ET. Cox regression model was use for the association between ET and development of CVD events defined as composite of myocardial infarction and/or percutaneous coronary intervention.

**Results**: Mean age was 47.56y±9.90 and 29% were women. Women were younger, less likely to have diabetes or hypertension (p<0.001 for all).At a maximum follow-up of 16 yrs Kaplan- Meier survival analysis showed that the probability of CVD event was higher among men (12% in men vs 2.3% in women, p<0.001). Multivariate regression model with adjustment for known predictors of low cardiorespiratory fitness showed significant ET differences between women and men (9.3±2.2 vs 11±2.7 min, p<0.001). Multivariate Cox regression model showed that women were 6 times less likely to have CVD event. In both sexes each minute increase in ET was associated with 4%/yr decrease in CVD events (table).

**Conclusion:** Despite lower cardiorespiratory fitness/shorter ET women have lower cardiovascular risk. Shorter ET is associated with worse CVD outcome in both sexes.

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| Cox Regression Model for Prediction of CVD events |
| **Variable** | **Hazard Ratio** | **95% CI** | **P value** |
| **Male** | 6.20 | 4.50-8.54 | <0.001 |
| **Age** | 1.08 | 1.07-1.88 | <0.001 |
| **Smoking** | 1.5 | 1.25-1.82 | <0.001 |
| **SystolicBlood Pressure (5 mmHg increase)** | 1.02 | 0.95-1.01 | 0.325 |
| **Diabetes Mellitus** | 1.40 | 1.05-1.81 | 0.022 |
| **Exercise Duration (1 minute increase)** | 0.96 | 0.93-0.99 | <0.001 |
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