Cardiorespiratory Fitness and All-Cause Mortality in Cancer Survivors

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Introduction

There is little evidence on cardiorespiratory fitness and mortality in cancer survivors.

Study Aim

• To determine the associations between fitness and all-cause mortality in cancer survivals.

Methods

• Setting
  - Aerobics Center Longitudinal Study (ACLS)
  - Mostly college graduates, Caucasians, executive/professional occupations

• Population
  - 2,891 adults aged ≥20 years (mean age, 53) with a cancer diagnosis at baseline
  - Medical exams during 1987-2003

Methods

• CRF in METs estimated based on the final treadmill speed and grade (modified Balke protocol).

• Tertiles (thirds) of age- and sex-specific treadmill time

<table>
<thead>
<tr>
<th>CRF Category</th>
<th>Mean Maximal METs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Third</td>
<td>8.7 METs</td>
</tr>
<tr>
<td>Middle Third</td>
<td>10.7 METs</td>
</tr>
<tr>
<td>High Third</td>
<td>13.1 METs</td>
</tr>
</tbody>
</table>

National Death Index

89 total deaths
- 45 by cancer
- 25 by CVD
- 19 by other causes

MET: metabolic equivalent
Results

Adjusted for age, sex, examination year, smoking status, alcohol intake, body mass index, medical conditions (abnormal electrocardiogram, hypertension, diabetes, and hypercholesterolemia)

Conclusions

• Moderate to high cardiorespiratory fitness is important for longevity in cancer survivals.
• Cancer survivals should keep their fitness levels by participating in regular aerobic physical activity.

Thank you!