Good Food is Good Medicine

By: Adam B. Murphy, MD, MBA, MSCI
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About Me

Board of Directors, FamilyFarmed
Assistant Professor of Urology, Northwestern Medicine
Urologist & Prostate Cancer Disparities Researcher
Lots of newly diagnosed cancer patients and patients surviving
What do people with cancer die from?
Cancer death < risk of death from other conditions

Non-cancer death is high in:

- colon & rectum
- bladder and kidney cancer
- female cancers (endometrial, cervix, breast, and vulvar)
- male cancers (prostate, testicular, and penile)
- tonsil cancer, melanoma, and lymphomas
Heart disease > Cancer

The most common cause of non-cancer death is heart disease.

The highest rates of heart disease-associated death (all 13%–21%) are currently observed among patients with cancers of the prostate, breast, testis, endometrium, larynx, and HL.

Prostate and breast cancer patients contributing the largest share to the overall non-cancer mortality rates.
Still important to do the basics

1. Exercise
2. Stop Smoking
3. Follow up with your providers/physicians
4. Rest
5. Join support groups
6. Stay connected to your friends and family
Dietary concerns

- Meat intake
- Fruits and Vegetables
- Whole Grain
- Dairy
- Eggs
Meta-Analysis Defined

- Eggs good for you or NOT
- Conflicting reports in the media
- Pooled studies
Table 2. Multivariate Analysis for Red, White, and Processed Meat Intake and Total and Cause-Specific Mortality in Men in the National Institutes of Health–AARP Diet and Health Study

<table>
<thead>
<tr>
<th>Mortality from Injuries and Sudden Deaths</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>P Value for Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
<td>164</td>
<td>216</td>
<td>228</td>
<td>280</td>
<td>343</td>
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<td>1.02</td>
<td>0.96</td>
<td>0.97</td>
<td>1.09</td>
<td>1.24</td>
<td>1.04</td>
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<td>0.98</td>
<td>1.01</td>
<td>1.10</td>
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<td>.05</td>
</tr>
<tr>
<td>Adjusted model</td>
<td>1.04</td>
<td>0.99</td>
<td>1.01</td>
<td>1.09</td>
<td>1.24</td>
<td>.02</td>
</tr>
<tr>
<td>All other deaths</td>
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<td>1536</td>
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White Meat Intake

<table>
<thead>
<tr>
<th>Mortality from Injuries and Sudden Deaths</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>P Value for Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deaths</td>
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<td>266</td>
<td>249</td>
<td>219</td>
<td>184</td>
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<td>0.78</td>
<td>0.74</td>
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<tr>
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<td>0.74</td>
<td>0.79</td>
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</tr>
<tr>
<td>Adjusted model</td>
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<td>0.93</td>
<td>0.85</td>
<td>0.89</td>
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</tr>
<tr>
<td>All other deaths</td>
<td>2775</td>
<td>2206</td>
<td>1948</td>
<td>1722</td>
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<tr>
<td>Adjusted model</td>
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<td>0.72</td>
<td>0.68</td>
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Processed Meat Intake

<table>
<thead>
<tr>
<th>Mortality from Injuries and Sudden Deaths</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>P Value for Trend</th>
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</thead>
<tbody>
<tr>
<td>Deaths</td>
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<td>0.98</td>
<td>0.93</td>
<td>1.04</td>
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<td>0.72</td>
<td>0.99</td>
<td>0.93</td>
<td>1.00</td>
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<tr>
<td>Adjusted model</td>
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<td>0.87</td>
<td>0.93</td>
<td>0.94</td>
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<tr>
<td>All other deaths</td>
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<td>1548</td>
<td>1896</td>
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<td>0.97</td>
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<td>1.28</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>Basic model</td>
<td>1.05</td>
<td>0.97</td>
<td>1.14</td>
<td>1.28</td>
<td>1.33</td>
<td></td>
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</tbody>
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From: Meat Intake and Mortality: A Prospective Study of Over Half a Million People
### Table 3. Multivariate Analysis Red, White, and Processed Meat Intake and Total and Cause-Specific Mortality in Women in the National Institutes of Health–AARP Diet and Health Study

<table>
<thead>
<tr>
<th>Mortality in Women (n=223,390)</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
<th>P Value for Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q5</td>
<td></td>
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<tr>
<td><strong>Red Meat Intake</strong></td>
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<td></td>
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<tr>
<td>All mortality</td>
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<td>4395</td>
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<td>Deaths</td>
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<td>1754</td>
<td>1687</td>
<td>1345</td>
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<td></td>
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<tr>
<td>Basic model</td>
<td>1.03 (1.02-1.05)</td>
<td>1.09 (1.07-1.11)</td>
<td>1.22 (1.18-1.26)</td>
<td>1.06 (1.00-1.11)</td>
<td>1.20 (1.13-1.27)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Adjusted model</td>
<td>1.08 (1.06-1.10)</td>
<td>1.17 (1.15-1.19)</td>
<td>1.28 (1.22-1.34)</td>
<td>1.26 (1.20-1.33)</td>
<td>1.36 (1.30-1.43)</td>
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<td><strong>CVD mortality</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>All mortality</td>
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<tr>
<td>Deaths</td>
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<tr>
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<td>1.26 (1.16-1.37)</td>
<td>1.39 (1.27-1.52)</td>
<td>1.50 (1.37-1.65)</td>
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<tr>
<td><strong>Mortality from injuries and sudden deaths</strong></td>
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<td>97</td>
<td>74</td>
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<td>All mortality</td>
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<td>1167</td>
<td>1191</td>
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<tr>
<td>Deaths</td>
<td>1.09 (1.09-1.20)</td>
<td>1.41 (1.30-1.53)</td>
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<td>1.91 (1.76-2.09)</td>
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<tr>
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<td>1.25 (1.14-1.47)</td>
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<td>1.61 (1.48-1.76)</td>
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<tr>
<td><strong>White Meat intake</strong></td>
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<tr>
<td>All mortality</td>
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<td>4320</td>
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<td>Deaths</td>
<td>1887</td>
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<td>1735</td>
<td>1822</td>
<td>&lt;.001</td>
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<tr>
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<td>0.95 (0.90-0.99)</td>
<td>0.99 (0.93-0.99)</td>
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<td>0.94 (0.90-0.99)</td>
<td>0.99 (0.93-0.99)</td>
<td>0.99 (0.93-0.99)</td>
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<tr>
<td><strong>CVD mortality</strong></td>
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</tr>
<tr>
<td>All mortality</td>
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<td>1030</td>
<td>1049</td>
<td>1103</td>
<td>&lt;.001</td>
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<tr>
<td>Deaths</td>
<td>1.10 (0.97-1.25)</td>
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<tr>
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<tr>
<td>Adjusted model</td>
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<tr>
<td><strong>Mortality from injuries and sudden deaths</strong></td>
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<td>91</td>
<td>92</td>
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<tr>
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<tr>
<td><strong>Processed Meat intake</strong></td>
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<td>4181</td>
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<td>Deaths</td>
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</tr>
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<td>1.01 (0.98-1.05)</td>
<td>1.01 (0.98-1.05)</td>
<td>1.01 (0.98-1.05)</td>
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<tr>
<td>Cancer mortality</td>
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<td>1.08 (1.03-1.13)</td>
<td>1.11 (1.06-1.15)</td>
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<td>1.12 (1.07-1.23)</td>
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<td>Adjusted model</td>
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<td>1.11 (1.07-1.26)</td>
<td>1.12 (1.07-1.23)</td>
<td>1.12 (1.07-1.23)</td>
<td></td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Conclusions

- Red and processed meat intakes, as well as a high-risk meat diet, were associated with a modest increase in risk of total mortality, cancer, and CVD mortality in both men and women.

- In contrast, high white meat intake and a low-risk meat diet was associated with a small decrease in total and cancer mortality.
Fruits & Vegetable Intake


**Fruit and vegetable intake and the risk of cardiovascular disease, total cancer and all-cause mortality—a systematic review and dose-response meta-analysis of prospective studies.**

Aune D¹,²,³, Giovannucci E⁴,⁵,⁶, Boffetta P⁷, Fadnes LT⁸, Keum N⁵,⁶, Norat T², Greenwood DC⁹, Riboli E², Vatten LJ¹, Tonstad S¹⁰.

**Author information**

**Abstract**

**BACKGROUND:** Questions remain about the strength and shape of the dose-response relationship between fruit and vegetable intake and risk of cardiovascular disease, cancer and mortality, and the effects of specific types of fruit and vegetables. We conducted a systematic review and meta-analysis to clarify these associations.

**METHODS:** PubMed and Embase were searched up to 29 September 2016. Prospective studies of fruit and vegetable intake and cardiovascular disease, total cancer and all-cause mortality were included. Summary relative risks (RRs) were calculated using a random effects model, and the mortality burden globally was estimated; 95 studies (142 publications) were included.

**RESULTS:** For fruits and vegetables combined, the summary RR per 200 g/day was 0.92 [95% confidence interval (CI): 0.90-0.94, I² = 0%, n = 15] for coronary heart disease, 0.84 (95% CI: 0.76-0.92, I² = 73%, n = 10) for stroke, 0.92 (95% CI: 0.90-0.95, I² = 31%, n = 13) for cardiovascular disease, 0.97 (95% CI: 0.95-0.99, I² = 49%, n = 12) for total cancer and 0.90 (95% CI: 0.87-0.93, I² = 83%, n = 15) for all-cause mortality. Similar associations were observed for fruits and vegetables separately. Reductions in risk were observed up to 800 g/day for all outcomes except cancer (600 g/day). Inverse associations were observed between the intake of apples and pears, citrus fruits, green leafy vegetables, cruciferous vegetables, and salads and cardiovascular disease and all-cause mortality, and between the intake of green-yellow vegetables and cruciferous vegetables and total cancer risk. An estimated 5.6 and 7.8 million premature deaths worldwide in 2013 may be attributable to a fruit and vegetable intake below 500 and 800 g/day, respectively, if the observed associations are causal.

**CONCLUSIONS:** Fruit and vegetable intakes were associated with reduced risk of cardiovascular disease, cancer and all-cause mortality. These results support public health recommendations to increase fruit and vegetable intake for the prevention of cardiovascular disease, cancer, and premature mortality.
Fruits & Vegetables

- 8-16% reduced risk of cardiovascular disease related death
- 3% reduction in cancer deaths
- 10% reduction in all-cause mortality
Fruits & vegetables

- Meta-analysis investigating the association between consumption of vegetables and fruits and breast cancer survival
- Ten studies, with a total of 31,210 breast cancer cases, were included in the meta-analysis.
Fruits & vegetables don’t help breast cancer

No significant risk associations of overall survival were found for post-diagnostic intake of vegetables and fruits.

No significant association was found between intake of vegetables and fruits and breast cancer-specific mortality.

In addition, intake of cruciferous vegetables was not associated with death from breast cancer.
Breast Cancer- 2nd meta-analysis shows no effect


Fruit and vegetable intake and breast cancer prognosis: a meta-analysis of prospective cohort studies.

Peng C¹, Luo WP¹, Zhang CX¹.

Author information

Abstract
The effect of fruit and vegetable intake on breast cancer prognosis is controversial. Thus, a meta-analysis was carried out to explore their associations. A comprehensive search was conducted in PubMed, Web of Science, OVID, ProQuest and Chinese databases from inception to April 2016. The summary hazard ratios (HR) and 95% CI were estimated using a random effects model if substantial heterogeneity existed and using a fixed effects model if not. Subgroup analyses and sensitivity analyses were also performed. In total, twelve studies comprising 41 185 participants were included in the meta-analysis. Comparing the highest with the lowest, the summary HR for all-cause mortality were 1·01 (95% CI 0·72, 1·42) for fruits and vegetables combined, 0·96 (95% CI 0·83, 1·12) for total vegetable intake, 0·99 (95% CI 0·89, 1·11) for cruciferous vegetable intake and 0·88 (95% CI 0·74, 1·05) for fruit intake; those for breast cancer-specific mortality were 1·05 (95% CI 0·77, 1·43) for total vegetable intake and 0·94 (95% CI 0·69, 1·26) for fruit intake; and those for breast cancer recurrence were 0·89 (95% CI 0·53, 1·50) for total vegetable intake and 0·98 (95% CI 0·76, 1·26) for cruciferous vegetable intake. This meta-analysis found no significant associations between fruit and vegetable intake and breast cancer prognosis.
Fruit & vegetables decrease lung cancer risk


Fruits, vegetables and lung cancer risk: a systematic review and meta-analysis.

Vieira AR1, Abar L2, Vingeliene S2, Chan DS2, Aune D3, Navarro-Rosenblatt D2, Stevens C2, Greenwood D4, Norat T2.

Author information

Abstract

BACKGROUND: Lung cancer is the most common cause of cancer death. Fruits and vegetables containing carotenoids and other antioxidants have been hypothesized to decrease lung cancer risk. As part of the World Cancer Research Fund International Continuous Update Project, we conducted a systematic review and meta-analysis of prospective studies.

METHODS: We searched PubMed and several databases up to December 2014 for prospective studies. We conducted meta-analyses comparing the highest and lowest intakes and dose-response meta-analyses to estimate summary relative risks (RRs) and 95% confidence intervals (CIs), and examine possible non-linear associations. We combined results from the Pooling Project with the studies we identified to increase the statistical power of our analysis.

RESULTS: When comparing the highest with the lowest intakes, the summary RR estimates were 0.86 [95% CI 0.78-0.94; n (studies) = 18] for fruits and vegetables, 0.92 (95% CI 0.87-0.97; n = 25) for vegetables and 0.82 (95% CI 0.76-0.89; n = 29) for fruits. The association with fruit and vegetable intake was marginally significant in current smokers and inverse but not significant in former or never smokers. Significant inverse dose-response associations were observed for each 100 g/day increase: for fruits and vegetables [RR: 0.96; 95% CI 0.94-0.98, I(2) = 64%, n = 14, N (cases) = 9609], vegetables (RR: 0.94; 95% CI 0.89-0.98, I(2) = 48%, n = 20, N = 12 583) and fruits (RR: 0.92; 95% CI 0.89-0.95, I(2) = 57%, n = 23, N = 14 506). Our results were consistent among the different types of fruits and vegetables. The strength of the association differed across locations. There was evidence of a non-linear relationship (P < 0.01) between fruit and vegetable intake and lung cancer risk showing that no further benefit is obtained when increasing consumption above ~400 g per day.

CONCLUSIONS: Eliminating tobacco smoking is the best strategy to prevent lung cancer. Although residual confounding by smoking cannot be ruled out, the current evidence from prospective studies is consistent with a protective role of fruit and vegetables in lung cancer aetiology.
Fruit may reduce lung cancer risk

overall survival (highest vs. lowest) from lung cancer is 8% higher based on their pre-diagnostic consumption of vegetables and fruits combined

4% reduction in risk for vegetables alone

17% reduction in risk for fruit alone.
Eat a variety of fruits and vegetables.

- Results were consistent among the different types of fruits and vegetables.

- Don’t have to be vegan to do it

- No further benefit is obtained when increasing consumption above ~400 g per day (< 1 pound).
Fruit does not cancel out excess red meat


High red meat intake and all-cause cardiovascular and cancer mortality: is the risk modified by fruit and vegetable intake?

Bellavia A1, Stilling F2, Wolk A2.

Author information

Abstract

BACKGROUND: High red meat consumption is associated with a shorter survival and higher risk of cardiovascular disease (CVD), cancer, and all-cause mortality. Fruit and vegetable (FV) consumption is associated with a longer survival and lower mortality risk. Whether high FV consumption can counterbalance the negative impact of high red meat consumption is unknown.

OBJECTIVE: We evaluated 2 large prospective cohorts of Swedish men and women (the Swedish Mammography Cohort and the Cohort of Swedish Men) to determine whether the association between red meat consumption and the risk of all-cause, CVD, and cancer-specific mortality differs across amounts of FV intake.

DESIGN: The study population included 74,645 Swedish men and women. Red meat and FV consumption were assessed through a self-administered questionnaire. We estimated HRs of all-cause, CVD, and cancer mortality according to quintiles of total red meat consumption. We next investigated possible interactions between red meat and FV consumption and evaluated the dose-response associations at low, medium, and high FV intake.

RESULTS: Compared with participants in the lowest quintile of total red meat consumption, those in the highest quintile had a 21% increased risk of all-cause mortality (HR: 1.21; 95% CI: 1.13, 1.29), a 29% increased risk of CVD mortality (HR: 1.29; 95% CI: 1.14, 1.46), and no increase in the risk of cancer mortality (HR: 1.00; 95% CI: 0.88, 1.43). Results were remarkably similar across amounts of FV consumption, and no interaction between red meat and FV consumption was detected.

CONCLUSION: High intakes of red meat were associated with a higher risk of all-cause and CVD mortality. The increased risks were consistently observed in participants with low, medium, and high FV consumption. The Swedish Mammography Cohort and the Cohort of Swedish Men were registered at clinicaltrials.gov as NCT01127698 and NCT01127711, respectively.
Tree nuts and peanuts reduce heart disease, total cancer & mortality from chronic diseases


Aune D1,2, Keum N3, Giovannucci E4,5, Fadnes LT6, Boffetta P7, Greenwood DC8, Tonstad S9, Vatten Lj10, Riboli E11, Norat T11.

Abstract

BACKGROUND: Although nut consumption has been associated with a reduced risk of cardiovascular disease and all-cause mortality, data on less common causes of death has not been systematically assessed. Previous reviews missed several studies and additional studies have since been published. We therefore conducted a systematic review and meta-analysis of nut consumption and risk of cardiovascular disease, total cancer, and all-cause and cause-specific mortality.

METHODS: PubMed and Embase were searched for prospective studies of nut consumption and risk of cardiovascular disease, total cancer, and all-cause and cause-specific mortality in adult populations published up to July 19, 2016. Summary relative risks (RRs) and 95% confidence intervals (CIs) were calculated using random-effects models. The burden of mortality attributable to low nut consumption was calculated for selected regions.

RESULTS: Twenty studies (29 publications) were included in the meta-analysis. The summary RRs per 28 grams/day increase in nut intake was for coronary heart disease, 0.71 (95% CI: 0.63-0.80, I² = 47%, n = 11), stroke, 0.93 (95% CI: 0.83-1.05, I² = 14%, n = 11), cardiovascular disease, 0.79 (95% CI: 0.70-0.88, I² = 60%, n = 12), total cancer, 0.85 (95% CI: 0.76-0.94, I² = 42%, n = 8), all-cause mortality, 0.78 (95% CI: 0.72-0.84, I² = 66%, n = 15), and for mortality from respiratory disease, 0.48 (95% CI: 0.26-0.89, I² = 61%, n = 3), diabetes, 0.61 (95% CI: 0.43-0.88, I² = 0%, n = 4), neurodegenerative disease, 0.65 (95% CI: 0.40-1.08, I² = 5.9%, n = 3), infectious disease, 0.25 (95% CI: 0.07-0.85, I² = 54%, n = 2), and kidney disease, 0.27 (95% CI: 0.04-1.91, I² = 61%, n = 2). The results were similar for tree nuts and peanuts. If the associations are causal, an estimated 4.4 million premature deaths in the America, Europe, Southeast Asia, and Western Pacific would be attributable to a nut intake below 20 grams per day in 2013.

CONCLUSIONS: Higher nut intake is associated with reduced risk of cardiovascular disease, total cancer and all-cause mortality, and mortality from respiratory disease, diabetes, and infections.
How much? Nut too much

- Need only a pound a month or > 20 grams per day

- **Tree nuts**
  - Cashews
  - Almonds
  - Pecans
  - Walnuts and more

- The **peanut** is actually a legume.
Whole Grains

- Whole grains contain endosperm, germ, and bran
- Refined grains have the germ and bran removed during the milling process.
About Whole Grains

- Whole grains have fiber, B vitamins, iron, magnesium, and zinc, antioxidants, vitamin E, carbohydrates, protein, and energy.

- In the US, whole grain bread and breakfast cereals are main sources

- Whole wheat, whole oats, brown rice, whole rye, whole barley, quinoa, couscous, corn, bulgar, buckwheat
Benefits of Whole Grains

- Just 90 g/day of whole grains per day reduces the risk by:
  - 19% of coronary heart disease
  - 22% of cardiovascular disease
  - 15% total cancer
  - 17% of all cause mortality
  - 3-6 servings/day best

- NOTE: One serving equals 30 grams
Refined grains

- Refined grains include:
  - White rice
  - White bread
  - Regular white pasta
  - Foods made with white flour (also called enriched wheat flour or all-purpose flour)
  - Many cookies, cakes, breakfast cereals, crackers, and snack foods

- Do not seem to harm or help (except with diabetes)
Food groups and risk of all-cause mortality: a systematic review and meta-analysis of prospective studies

Lukas Schwingshackl, Carolina Schwedhelm, Georg Hoffmann, Anna-Maria Lampousi, Sven Knüppel, Khalid Iqbal, Angela Bechthold, Sabrina Schlesinger, and Heiner Boeing

Records identified through database searching: (until December 2016)
PUBMED (n=3898)
EMBASE (n=12409)

Additional records identified through other sources (handpicking & Google Scholar) (n=1272)

Records screened (n=17579)

Records excluded after title/abstract screening; (n=17313)

Full-text articles assessed for eligibility (n=266)

Full-text articles excluded, with reasons (n=163):
- Reviews (n=121)
- Conference Abstract (n=9)
- Not relevant exposure/outcome (n=7)
- Risk ratio reported as substitution of carbohydrates (n=1)
- Exposure unclear (n=7)
- Longer follow-up available (n=4)
- Cohort already included in multicenter cohort (n=11)
- Study population with coronary heart/artery disease (n=3)

Publications included in quantitative synthesis (meta-analysis); n=103
- Whole grains (n=19)
- Refined grains (n=4)
- Vegetables (n=37)
- Fruits (n=34)
- Nuts (n=16)
- Legumes (n=17)
- Eggs (n=8)
- Dairy (n=27)
- Fish (n=39)
- Red Meat (n=12)
- Processed Meat (n=7)
- Sugar sweetened beverages (n=5)
Nonlinear dose-response relation between daily intakes of whole grains, refined grains, vegetables, fruits, nuts, legumes, eggs, dairy, fish, red meat, processed meat, and sugar-sweetened beverages and risk of all-cause mortality.
Relative risks from nonlinear dose-response analysis of 12 predefined food groups and all-cause mortality according to servings per day

<table>
<thead>
<tr>
<th>Associations by food group</th>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>Inverse association</td>
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</tr>
<tr>
<td>Whole grains (30 g/d)</td>
<td>1.00</td>
<td>0.91 (0.89, 0.92)</td>
<td>0.84 (0.82, 0.86)</td>
<td>0.79 (0.76, 0.83)</td>
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<tr>
<td>Vegetables (80 g/d)</td>
<td>1.00</td>
<td>0.94 (0.93, 0.96)</td>
<td>0.91 (0.89, 0.93)</td>
<td>0.89 (0.87, 0.92)</td>
<td>0.89 (0.87, 0.91)</td>
<td>0.89 (0.87, 0.91)</td>
<td>0.89 (0.86, 0.92)</td>
</tr>
<tr>
<td>Fruit (80 g/d)</td>
<td>1.00</td>
<td>0.94 (0.93, 0.96)</td>
<td>0.91 (0.89, 0.93)</td>
<td>0.90 (0.88, 0.93)</td>
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<td>0.92 (0.89, 0.94)</td>
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<tr>
<td>Nuts (28 g/d)</td>
<td>1.00</td>
<td>0.85 (0.82, 0.89)</td>
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<tr>
<td>Legumes (100 g/d)</td>
<td>1.00</td>
<td>0.90 (0.85, 0.96)</td>
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<tr>
<td>Fish (100 g/d)</td>
<td>1.00</td>
<td>0.93 (0.90, 0.96)</td>
<td>0.90 (0.84, 0.96)</td>
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<td>Positive association</td>
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<tr>
<td>Eggs (55 g/d)</td>
<td>1.00</td>
<td>1.07 (1.01, 1.15)</td>
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<td>Red meat (85 g/d)</td>
<td>1.00</td>
<td>1.16 (1.14, 1.18)</td>
<td>1.35 (1.32, 1.38)</td>
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<td>Processed meat (30 g/d)</td>
<td>1.00</td>
<td>1.12 (1.10, 1.14)</td>
<td>1.20 (1.17, 1.23)</td>
<td>1.28 (1.23, 1.32)</td>
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<td>Sugar-sweetened beverages (250 mL/d)</td>
<td>1.00</td>
<td>1.07 (1.01, 1.14)</td>
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<td>Inverse and positive association</td>
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<tr>
<td>Dairy (200 g/d)</td>
<td>1.00</td>
<td>0.97 (0.95, 0.99)</td>
<td>0.99 (0.97, 1.01)</td>
<td>1.04 (1.01, 1.07)</td>
<td>1.11 (1.05, 1.17)</td>
<td>1.16 (1.08, 1.23)</td>
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<td>No association</td>
<td></td>
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<td></td>
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<tr>
<td>Refined grains (30 g/d)</td>
<td>1.00</td>
<td>0.96 (0.92, 1.01)</td>
<td>0.96 (0.90, 1.02)</td>
<td>0.97 (0.91, 1.05)</td>
<td>1.00 (0.92, 1.08)</td>
<td>1.03 (0.92, 1.16)</td>
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</tr>
</tbody>
</table>

1 Values are risk ratios (95% CIs). NA, not applicable.
Good Food IS Good Medicine

- Optimal consumption of risk-decreasing foods results in a 56% reduction of all-cause mortality.
- Consumption of risk-increasing foods is associated with a 2-fold increased risk of all-cause mortality.
- Very few medications can do that (antibiotics, insulin, AZT/HAART).
Questions
References


