



Table 4 B-II-2 Summary of Findings

Dietary patterns identified using factor analysis or (FA) cluster analysis (CA) and association with risk of coronary heart disease (CHD)

Author, Year, Quality Rating, Study Design, Cohort	Sample Size, Location, Duration, Dietary Assessment, Methodology / Number Patterns	Age, Percent Female, Race/Ethnicity, Outcome / Comparison No. Events	Dietary Patterns Associated With Lower CHD Risk	Dietary Patterns With No Significant Association With CHD	Dietary Patterns Associated With Higher CHD Risk
<p>Brunner et al, 2008</p> <p>Neutral</p> <p>Prospective Cohort</p> <p>Whitehall II Study</p>	<p>N=6,610</p> <p>U.K.</p> <p>15 years</p> <p>FFQ (127-item)</p> <p>CA: Four patterns</p>	<p>Mean age 50 years</p> <p>30%</p> <p>Not reported</p> <p>CHD</p>		<p>Fatal CHD + Non-fatal MI</p> <p>Unhealthy pattern (white bread, processed meat, fries and full-cream milk) vs. Healthy pattern (fruit, vegetables, whole-meal bread, low-fat dairy and little alcohol): HR=0.74 (0.53, 1.02); P=0.07; NS</p> <p>Sweet (white bread, biscuits, cakes, processed meat and high-fat dairy products): HR=0.81 (0.52, 1.27); P=0.35; NS</p> <p>Mediterranean-like (fruit, vegetables, rice, pasta and wine): HR=0.72 (0.46, 1.12); P=0.15; NS</p>	
<p>Farchi et al, 1989</p> <p>Neutral</p> <p>Prospective Cohort</p> <p>Two Rural Villages From the Seven Countries Study</p>	<p>N=1,366</p> <p>Italy</p> <p>20 years</p> <p>Dietary history</p> <p>CA: Four patterns</p>	<p>45 years to 64 years</p> <p>0% Not reported</p> <p>CHD mortality, age-adjusted death rate</p> <p>CHD: 168 deaths</p>		<p>Cluster 1 [high alcohol intake (one-third of the total energy intake), consumption of minimum amount of meat, fruit, and cookies]; NS</p> <p>Cluster 2 [largest amount of polyunsaturated fatty acids (approximately three times more than other groups)]; NS</p> <p>Cluster 3 (highest consumption of monounsaturated and saturated fatty acids, proteins; other nutrients are below the mean); NS</p> <p>Cluster 4 [largest consumption of</p>	



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				carbohydrates (approximation of total energy), proteins, vegetables and starchy foods]; NS	
Fung et al, 2001 Positive Prospective Cohort Nurses' Health Study	N=69,017 U.S. 12 years FFQ (116-item) FA: Two patterns	38 years to 63 years 100% Not reported CHD risk, highest vs. lowest quintile <i>Incident CHD (Fatal CHD + non-fatal MI): 821 cases</i>	Prudent (higher intakes of fruit, vegetables, whole grains, legumes, fish and poultry): RR=0.76 (95% CI: 0.60, 0.98); P _{trend} =0.03		Western (higher intakes of refined grains, red and processed meats, desserts, high-fat dairy products and French fries): RR=1.46 (95% CI: 1.07, 1.99), P _{trend} =0.02
		CHD risk, highest Prudent score vs. lowest Western score		Test for interaction between the Prudent and Western patterns was NS.	
Guallar-Castillón et al, 2012 Positive Prospective Cohort EPIC study	N=10,757 Spain 11 years Diet history FA: Two patterns	29 years to 69 years 62% Not reported CHD mortality and morbidity, lowest vs. highest quintile <i>CHD: 606 events</i>	Evolved Mediterranean (frequent intake of plant-based foods and olive oil): HR=0.73 (95% CI: 0.57, 0.94); P _{trend} =0.0013	Westernized (frequent consumption of refined cereals and red meats); NS	
Hu FB et al, 2000 Positive	N=44,875 U.S.	40 years to 75 years 0% Not reported Fatal CHD and non-fatal MI,		Prudent (high intake of vegetables, fruits, legumes, whole grains, fish and poultry); NS	Western (high intake of processed meat, red meat, high-fat dairy products, refined grains, French fries,



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Prospective Cohort Health Professionals Follow-up Study (HPFS)	Eight years FFQ (131-item) FA: Two patterns	lowest vs highest quintile <i>Fatal CHD</i> : 359 events <i>Non-fatal MI</i> : 730 events			sweets and desserts): RR=1.64 (95% CI: 1.24, 2.17); $P_{trend}<0.0001$ Further adjusted for dietary cholesterol, saturated fat and trans fat: RR=1.43 (95% CI: 1.01, 2.01); $P_{trend}<0.004$
Menotti et al, 2011 Neutral Prospective Cohort Two Rural Villages From Seven Countries Study	N=1,221 Italy CHD: 20 years CHD/CVD: 40 years Diet history FA: Three patterns	40 years to 59 years 0% Not reported Fatal CHD, Fatal and Non-fatal MI <i>CHD incidence</i> : 185 events <i>CHD mortality</i> : 187 events	Fatal CHD + Fatal and Non-fatal MI <i>At 20 years</i> : Factor 2 (bread, cereals, vegetables, fish, potatoes, oils): HR=0.88 (95% CI: 0.73, 0.96) CHD Mortality at 40 Years Factor 2 (bread, cereals, vegetables, fish, potatoes, oils): HR=0.79 (95% CI: 0.66, 0.95)	Fatal CHD + Fatal and Non-fatal MI at 20 Years Factor 1 (sugar, milk, meat, fruit, pastries, cheese): HR=1.12 (95% CI: 0.95, 1.31); NS Factor 3 (eggs, alcoholic beverages): HR=1.02 (95% CI: 0.87, 1.19); NS CHD Mortality at 40 Years Factor 1 (sugar, milk, meat, fruit, pastries, cheese): HR=0.87 (95% CI: 0.76, 1.01); NS Factor 3 (eggs, alcoholic beverages), HR=1.17 (95% CI: 0.97, 1.40); NS	
Nettleton et al, 2009	N=5,316	45 years to 84 years 53%	Whole grains and fruit (whole grains, fruit, nuts and seeds, green leafy vegetables and low-fat dairy	Stated in narrative, analysis not shown. Fats and processed meat (added fats,	



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<p>Positive</p> <p>Prospective Cohort</p> <p>MESA</p>	<p>U.S.</p> <p>Median age 4.6 years</p> <p>FFQ (120-item)</p> <p>FA: Four patterns</p>	<p>White: 43%</p> <p>Black: 24%</p> <p>Hispanic: 21%</p> <p>Chinese: 12%</p> <p>Lowest vs. highest quintile</p> <p>Hard CHD (MI + Resuscitated cardiac arrest + CHD death): 87 events</p> <p>All CHD (Hard CHD + definite angina + probable angina): 150 events</p>	<p>foods):</p> <p>Hard CHD: HR=0.35 (95% CI: 0.14, 0.85), P_{trend}=0.01</p> <p>All CHD: HR=0.63 (95% CI: 0.34, 1.16), P_{trend}=0.05</p>	<p>processed meat, fried potatoes and desserts); NS</p> <p>Vegetables and fish (several vegetable groups, fish, soup, Chinese foods, red meat, poultry and soy): NS</p> <p>Beans, tomatoes and refined grains (beans, tomatoes, refined grains, high-fat dairy foods, avocado and red meat): NS</p>	
<p>Osler and Andreasen et al, 2002</p> <p>Positive</p> <p>Prospective Cohort Study</p> <p>Danish WHO-MONICA Survey</p>	<p>N=5,834</p> <p>Denmark median: 15 years</p> <p>FFQ (26-item)</p> <p>FA: Two patterns</p>	<p>30 years to 70 years</p> <p>49% Not reported</p> <p>CHD mortality and morbidity, 280 events</p> <p>CHD</p>		<p>Prudent food (whole meal breads): HR=1.06 (95% CI: 0.93, 1.21); NS</p> <p>Western food (meat, sausages, potatoes, butter and white bread): HR=0.97 (95% CI: 0.85, 1.10); NS</p>	



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Shimazu et al, 2007 Positive Prospective Cohort Ohsaki NHI Cohort	N=40,547 Japan Seven years FFQ (40-item) FA: Three patterns	40 years to 79 years Not reported CHD mortality, highest vs. lowest quartile CHD: 181		CHD Mortality Japanese (soybean products, fish, seaweeds, vegetables, fruits and green tea): HR=0.82 (95% CI: 0.52 to 1.29), P _{trend} =0.29; NS	CHD Mortality Animal [Animal-derived products (beef, pork, ham, sausage, chicken, liver and butter), coffee and alcohol]: HR=1.50 (95% CI: 0.95 to 2.37); P _{trend} =0.05
Stricker et al, 2011 Positive Prospective Cohort EPIC-NL Cohort	N=35,910 The Netherlands 13 years FFQ (79-item) FA: Two patterns	20 years to 69 years Not reported CHD mortality and morbidity, lowest vs. highest quartile CHD: 1,843 cases		Prudent (high intakes of fish and shellfish, raw vegetables, wine and high-fiber cereals and low consumption of potatoes): HR=0.87 (95% CI: 0.75, 1.00), P _{trend} =0.058 Western [high consumption of French fries, fast food (spring rolls, Russian salad, pizza and Dutch-fried meat snack), low-fiber products and different drinks, and low on fruit and vegetables and low-fat dairy products]; HR=0.91 (95% CI: 0.76, 1.08); P _{trend} =0.342; NS	
	CA: Two patterns	K-means cluster analysis, Prudent vs. Western cluster		Prudent (high intakes of fish and shellfish, raw vegetables, wine and high-fiber cereals and low consumption of potatoes): HR=0.93 (95% CI: 0.85, 1.02)	