

Table 4-B-II-1 Summary of Findings

Dietary patterns identified using factor analysis of cluster analysis (shaded rows) and association with risk of cardiovascular disease (CVD)

Author, Year, Quality Rating, Study Design, Cohort	Sample Size, Location, Duration, Dietary Assessment, Methodology/No. Patterns	Age, % Female, Race/Ethnicity, Outcome/Comparison No. Events	Dietary Patterns Associated with Lower CVD Risk	Dietary Patterns with No Significant Association with CVD	Dietary Patterns Associated with Higher CVD Risk
Harriss et al., 2007 Positive Prospective Cohort Melbourne Collaborative	N = 40,653 Australia 10.4 y 112- item FFQ FA: 4 patterns	40–69 y 59% 24% (Southern European immigrants) CVD mortality, highest vs lowest quartile Mortality: 697 events	<ul style="list-style-type: none"> • "Factor 1-Mediterranean" (garlic, cucumber, olive oil, salad greens, capsicum, cooked dried legumes, soups, feta and ricotta cheeses, olives, steamed fish, and broiled chicken), HR = 0.51 (95% CI = 0.30, 0.88), P for trend 0.03 	<ul style="list-style-type: none"> • "Factor 2-Vegetables" (cauliflower, broccoli, carrots, cabbage or Brussels sprouts, pumpkin, green beans or peas, leafy greens, celery or fennel, potato cooked without fat, beetroot, zucchini or squash or eggplant, coleslaw, salad greens, cucumber, and capsicum), NS • "Factor 3-Meat" (beef rissoles, roast beef or veal, fried potatoes, beef or veal schnitzel, savory pastries, mixed dishes with lamb, fried eggs, beef steaks, fried fish, and bacon), NS • "Factor 4-Fresh fruit" (apricots, peaches or nectarines, plums, cantaloupe or honeydew, grapes, watermelon, pears, strawberries, oranges or mandarins, figs, apples, and pineapple), NS 	
Heidemann et al., 2008 Positive Prospective Cohort Nurses' Health Study	N = 72,113 U.S. 18 y 116- item FFQ FA: 2 patterns	48–53 y 100% 97% White CVD mortality, highest vs lowest quintile Mortality: 1154 events	<ul style="list-style-type: none"> • "Prudent" (vegetables, fruit, legumes, fish, poultry, and whole grains), RR = 0.72 (95% CI = 0.60, 0.87), P<0.001 		<ul style="list-style-type: none"> • "Western" (red and processed meats, refined grains, French fries, and sweets and desserts), RR = 1.22 (95% CI = 1.01, 1.48), P = 0.009

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Maruyama et al., 2012 Positive Prospective cohort Japan Collaborative cohort (JACC) Study	N = 64,037 Japan Median = 12.6 y 40-item FFQ FA: 3 patterns	40–79 y 59% NR CVD mortality and risk , highest vs lowest quintile Mortality: 2311 events	CVD mortality: • "Vegetable" (fresh fish, vegetables, fungi, potatoes, algae, tofu [soybean curd] and fruits) Women: HR = 0.67 (95% CI = 0.43, 1.06), P for trend 0.05 Men: NS CVD risk: • "Dairy product" pattern (milk and dairy products, butter, margarine, fruits, coffee and tea) Women: HR = 0.76 (95% CI = 0.61 - 0.94), P for trend 0.01 Men: NS	CVD risk: • "Animal food" (meats, fish, and deep-fried foods or tempura), NS for either sex	
Menotti et al., 2011 Neutral Prospective cohort 2 rural villages from Seven Countries Study	N = 1153 for CHD incidence at 20 y N= 1,221 for mortality at 40 y Italy Diet History FA: 3 patterns	40–59 y 0% Women NR CVD incidence and Mortality CVD incidence: 513 events	• "Factor 2" (bread, cereals, pasta, potatoes, vegetables, fish, oils), P values not reported - CVD mortality (40 y): HR = 0.87 (95% CI = 0.78, 0.96)	• "Factor 1" (sugar, milk, meat, fruit, pastries, cheese), NS • "Factor 3" (eggs, alcoholic beverages), NS	

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Nettleton et al., 2009 Positive Prospective cohort MESA	N = 5,316 U.S. 4.6 y (median of follow-up) 120-item FFQ FA: 4 patterns	45–84 y 53% White: 43% Black: 24% Hispanic: 21% Chinese:12% All CVD (fatal and nonfatal) and Hard CVD (incidence); highest vs lowest quintile All CVD: 207 events Hard CVD: 139 events	<ul style="list-style-type: none"> • "Whole grains and fruit" (whole grains, fruit, nuts and seeds, green leafy vegetables, and low-fat dairy foods) Any CVD (fatal and nonfatal) HR = 0.54 (95% CI = 0.33, 0.91), P for trend 0.007 Hard CVD HR = 0.37 (95% CI = 0.19, 0.72), P for trend 0.002 	<ul style="list-style-type: none"> • "Fats and processed meat" (added fats, processed meat, fried potatoes, and desserts), NS • "Vegetables and fish" (several vegetable groups, fish, soup, Chinese foods, red meat, poultry, and soy), NS • "Beans, tomatoes and refined grains" (beans, tomatoes, refined grains, high-fat dairy foods, avocado, and red meat), NS 	
Osler and Heitmann et al., 2001 Neutral Prospective cohort Danish WHO-MONICA survey	N = 5,871 Denmark Median = 15 y 28-item FFQ FA: 2 patterns	30–70 y 49% NR CVD mortality, highest vs lowest quartile Mortality: 108 events	<ul style="list-style-type: none"> • "Prudent diet" (whole meal cereals, fruit and vegetables) P values not reported - Women: HRRE = 0.87 (95% CI = 0.71, 1.06) Men: HRRE = 0.63 (95% CI = 0.44, 0.90) 	<ul style="list-style-type: none"> • "Western food" (meat products, butter and white bread) pattern (which reflected the primary characteristics of traditional Danish main meals), NS 	

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Shimazu et al., 2007 Positive Prospective cohort Ohsaki NHI Cohort	N = 40,547 Japan 7 y 40-item FFQ FA: 3 patterns	40–79 y NR NR CVD mortality, highest vs lowest quartile Mortality: 801 events	<ul style="list-style-type: none"> • "Japanese" pattern (soybean products, fish, seaweeds, vegetables, fruits and green tea), HR =0.74 (95% CI: 0.59 - 0.91), P for trend 0.004 	<ul style="list-style-type: none"> • "DFA" pattern [High-dairy (milk and yogurt), margarine, fruits and vegetables (carrot, pumpkin and tomato)], NS 	<ul style="list-style-type: none"> • "Animal" pattern [Animal-derived products (beef, pork, ham, sausage, chicken, liver, and butter), coffee and alcohol], HR = 1.24 (95% CI: 1.00–1.54), P for trend 0.02
Panagiotakos et al., 2008 Positive Prospective cohort ATTICA	N = 3042 Greece 5 y 156-item FFQ FA: 15 components	18–89 y 50% NR CVD risk (fatal and nonfatal), highest vs lowest quintile Mortality: 170 events	<p>Food components and risk of developing CVD (p<0.05)</p> <ul style="list-style-type: none"> • Component 2 (Cereals, small fish, hardtack, and olive oil): HR = 0.72 (95% CI = 0.52, 1.00) • Component 5 (Fruits, vegetables, and olive oil): HR = 0.80 (95% CI = 0.66, 0.97) 	<p>Food components and risk of developing CVD, NS</p> <ul style="list-style-type: none"> • Component 1 (Cereals, potatoes, and bread) • Component 3 (Poultry) • Component 4 (Legumes) • Component 6 (Low fat dairy products) • Component 9 (Fish) • Component 10 (Red meat, pork, and margarine) • Components 11 -14 (mainly characterized by coffee, tea, nuts [without salt], wild tea, and chocolate) 	<p>Food components and risk of developing CVD (p<0.05)</p> <ul style="list-style-type: none"> • Component 7 (Sweets, red meat, margarine, and nuts with salt): HR = 1.32 (95% CI = 1.05, 1.66) • Component 8 (Cheese and nuts with salt): HR = 1.26 (95% CI = 1.01, 1.56) • Component 15 (Alcoholic beverages): HR = 1.26 (95% CI = 0.99, 1.60)
	CA: 3 groups	Group 3 vs Group 1		<p>Comparator</p> <ul style="list-style-type: none"> • Group 1 (Healthy dietary choices.--increased fish, nuts w/o salt, legumes, low-fat dairy, F/V, potatoes, cereals, moderate red meat and poultry, and less coffee drinking) 	<ul style="list-style-type: none"> • Group 3 (Unhealthier choices--reduced fish, nuts, legumes, dairy, F/V, potatoes, cereals, and poultry intake, but increased red meat, sweets, and alcohol), HR = 2.0 (95% CI: 1.12, 3.54)
		Group 2 vs Group 3		<p>Comparator:</p> <ul style="list-style-type: none"> • Group 3 (Unhealthier choices--reduced fish, nuts, legumes, dairy, F/V, potatoes, cereals, and poultry intake, but increased red meat, sweets, and alcohol) 	<ul style="list-style-type: none"> • Group 2 (Between healthy and unhealthy options--in the middle of the other groups in terms of consumption), HR = 1.6 (95% CI: 1.02, 2.50)

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Hlebowicz et al., 2011 Neutral Prospective Cohort Malmö Diet and Cancer CVD Programme	N = 4,999 Sweden 13 y Dietary history CA: 6 groups	45–68 y 59% NR CVD risk (fatal and nonfatal,) each group versus "Many foods and drinks" (MFD) Incident: 449 events		<p>Comparator: "Many foods and drinks" (MFD)</p> <p>HR and p-value not reported:</p> <ul style="list-style-type: none"> • "White bread" (white bread, low-fat margarine, high-fat and low-fat meats and sweets) • "Low fat and high fiber" (fruits, low-fat milk, both high-fat and low-fat meats and sweets) • "Fiber bread" (fiber-rich bread, meats, sweets, fruits, low-fat margarines, and boiled potatoes) 	<p>No P values reported</p> <ul style="list-style-type: none"> • "Milk fat" (Bregott [a spread consisting of butter and rapeseed oil] cheese, whole milk, white bread, and sweets): Women: HR = 2.2 (95% CI = 1.09, 4.44) Men: HR = 1.18 (95% CI = 0.72, 1.92) • "Sweets and cakes" (sugar, sweets, jam, cakes, biscuits, and soft drinks): Women: HR = 2.14 (95% CI = 1.17, 3.93) Men: HR = 1.10 (95% CI = 0.72, 1.71)