



Table 4-B-I-5 Overview Table: Hypertension and Blood Pressure and Blood Lipids

Author, Year Study Design	Sample Size Location Duration Dietary Assessment	Population Age/Gender Cohort	Exposure Index/Score	Outcomes Measured	Health Outcome
HTN and Blood Pressure					
Camoes et al, 2010 Prospective Cohort	N=549 Portugal 3.8 years FFQ (82-item) validated	44% 40 years to 49 years 37% 50 years to 60 years 19% older than 60 years 62% Women EPI Porto	DASH <i>Total score: Zero to nine</i>	HTN	HTN, comparing highest to lowest tertile of DASH scores: • IRR=0.84 (95% CI: 0.55 to 1.26; NS)
Dauchet et al, 2007 Prospective Cohort	N=2,341 France 5.4 years Repeated 24-hour dietary records	<i>Mean age:</i> <i>Female: 47.9±6.5 years</i> <i>Male: 52.7±4.7 years</i> 64% Women SU.VI.MAX	DASH score DASH + Keys score	SBP and DBP	Comparing highest to lowest quartile of DASH scores: • SBP: -2.1mm Hg (P _{trend} <0.002) • DBP: -0.6mm Hg (P _{trend} <0.02); the relation was similar for Dash + Keys score • SBP men: -2.7mm Hg (P _{trend} <0.03) • DBP men: -0.8mm Hg (P _{trend} <0.12; NS) • SBP women: -1.5mm Hg (P _{trend} <0.06; NS) • DBP women: -0.3mm Hg (P _{trend} <0.17; NS)
Estruch et al, 2006 RCT	Initial N: 772 Final N: 769 Spain Three months FFQ (137-item) validated	50 years to 80 years High CVD risk 60%, 50%, 58% Women for: Med, diet +OO, Med diet + nuts, and low-fat diet PREDIMED Trial	Subjects assigned to control low-fat diet (N=257) or Med diet + OO (N=257) or Med diet + nuts (N=258) Med diet received nutrition education	SBP and DBP	SBP, compared with the low-fat diet: • Mean change with Med diet + OO: -5.9mm Hg (95% CI: -8.7 to -3.1; P<0.001) • Mean change with Med diet +nuts: -7.1mm Hg (95% CI: -10.0 to -4.1; P<0.001) DBP, compared with the low-fat diet: • Mean change with Med diet + OO: -1.60mm Hg (95% CI: -3.00 to -0.01; P=0.048) • Mean change with Med diet + nuts: -2.6mm Hg (95% CI: -4.2 to 1.0; P<0.001)
Folsom et al, 2007 Prospective Cohort	N=20,993 U.S. 16 years FFQ (127-item) validated	55 years to 69 years Women IWHs	DASH score <i>Total score: Zero to 11</i>	HTN	HTN, comparing highest to lowest quintile of DASH scores: • HR=0.97 (95% CI: 0.87 to 1.07; P _{trend} =0.96; NS)



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Jacobs et al, 2009 RCT	Initial N: 219 Final N: 187 Norway One year FFQ (180-item) validated	Mean age: 45±2 years Men Oslo Diet and Exercise Study (ODES)	Author derived <i>a priori</i> score Total score: Zero to 62	SBP and DBP	Per 10-point increase in diet score: <ul style="list-style-type: none"> • SBP: -3mm Hg (P<0.01); NS after adjustment for intervention + change in percent body fat • DBP: NS
Núñez-Córdoba et al, 2009 Prospective Cohort	N=9,408 Spain 4.2 years FFQ (136-item) validated	Mean age: Females: 34.0±9.7 years Males: 39.4±11.2 years 62% Women SUN	MDS Total score: Zero to nine	HTN and BP	Comparing highest to lowest MDS: <ul style="list-style-type: none"> • HTN: HR=1.12 (95% CI: 0.79 to 1.60; P_{trend}=0.41; NS) • SBP: -3.1mm HG (95% CI: -5.4 to -0.8; P_{trend}<0.01) • DBP: -1.9mm HG (95% CI: -3.6 to -0.1; P_{trend}<0.05)
Rumawas et al, 2009 Prospective Cohort	N=2,730 U.S. Seven years FFQ, Harvard	43 years to 70 years 43% to 70% women across quintiles Framingham Offspring and Spouse (FOS)	MSDPS Total score: Zero to 130	SBP and DBP	NS MSDPS and SBP or DBP
Steffen et al, 2005 Prospective Cohort	N=4,304 U.S. 15 years CARDIA FFQ (baseline / 7 years)	18 years to 30 years 57% Women CARDIA	Authors' Food Index Total score: Zero to 24	Elevated BP (EBP)	EBP, comparing highest to lowest quintile of Food Index scores: <ul style="list-style-type: none"> • HR=0.59 (95% CI: 0.45 to 0.76; P_{trend}>0.001) • Food Index score was inversely associated with SBP and DBP (P<0.05)
Toledo et al, 2010 Prospective Cohort	N=10,800 Spain 4.6 years FFQ (136-item) validated	Mean age by DASH score: 36±11 years to 39±12 years 57% to 84% Women SUN	MDS, MMDS, updated MMDS (UMMDS), MAI, Mediterranean Diet Quality Index (MDQI), Mediterranean Food Pattern (MFP), Med Diet Score, DQI-I, RFS, Quantitative Index Dietary Diversity, HEI & AHEI	HTN	HTN, comparing highest to lowest DASH scores: <ul style="list-style-type: none"> • HR=0.48 (95% CI: 0.21 to 1.09; P_{trend}=0.02) HTN, comparing highest to lowest UMMDS scores: <ul style="list-style-type: none"> • HR=1.34 (95% CI: 1.04 to 1.73; P_{trend}=0.02)



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Tortosa et al, 2007 Prospective Cohort	N=2,563 Spain Six years FFQ (136-item) validated	Age not reported Gender Not reported SUN	MDS referred to as Med Food Pattern (MFP) Total score: Zero to nine	SBP and DBP	NS MFP and SBP or DBP
van der Laar et al, 2012 Prospective Cohort	N=373 The Netherlands 24 years Cross-check dietary history interviews	Mean age: 13.1±0.8 years 53% Girls The Amsterdam Growth and Health Longitudinal Study	aMed Total score: Zero to nine	SBP, DBP, mean BP (MBP)	Per two-point increase in aMed score: <ul style="list-style-type: none"> SBP: β=-0.140 (95% CI: -0.267 to -0.012) DBP: β=-0.142 (95% CI: -0.259 to -0.025) MBP: β=-0.158 (95% CI: -0.283 to -0.033)
Zamora et al, 2011 Prospective Cohort	N=3,700 U.S. 13 years FFQ CARDIA Diet History	Young adults average age: 24 years to 25 years Blacks: 58% Women Whites: 53% Women -50% Blacks; 50% Whites CARDIA	DQI-2005	SBP and DBP	Comparing highest to lowest quartile of DQI-2005 scores: <ul style="list-style-type: none"> Decreased SBP (P=0.03) Decreased DBP (P=0.01)
Blood Lipids					
Estruch et al, 2006 RCT	Initial N=772 Final N=769 Spain Three months FFQ (137-item) validated	50 years to 80 years High CVD risk 60%, 50%, 58% Women for: Med diet +OO, Med diet +nuts, and low-fat diet PREDIMED Trial	Subjects assigned to control low-fat diet (N=257) or Med diet + OO (N=257) or Med diet + nuts (N=258) Med diet received nutrition education	Blood lipids	HDL Cholesterol <ul style="list-style-type: none"> Med + OO vs. control, mean change: 0.08mmol per L (95% CI: 0.04 to 0.10; P<0.001) Med + nuts vs. control, mean change: 0.04mmol per L (95% CI: 0.01 to 0.07; P=0.006) Total Cholesterol:HDL Cholesterol Ratio <ul style="list-style-type: none"> Med + OO vs. control: -0.38 (95% CI: -0.55 to -0.22; P<0.001) Med + nuts vs. control: -0.26 (95% CI: -0.42 to -0.10; P=0.002) Triglycerides <ul style="list-style-type: none"> Med + nuts vs. control: -0.15mmol per L (95% CI: -0.26 to -0.02; P=0.022)



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Rumawas et al, 2009 Prospective Cohort	N=2,730 U.S. Seven years FFQ, Harvard	43 years to 70 years 43% to 70% women across quintiles Framingham Offspring and Spouse (FOS)	MSDPS Total score: Zero to 130	Blood lipids	Highest compared to lowest quintile of MSDPS: <ul style="list-style-type: none"> Decreased triglyceride levels (P<0.001) Increased HDL-cholesterol (P=0.02)
Tortosa et al, 2007 Prospective Cohort	N=2,563 Spain Six years FFQ (136-item) validated	Age Not Reported (University Graduates) Gender Not Reported SUN	MDS - Referred to as Med Food Pattern (MFP) Total score: Zero to nine	Blood lipids	NS between MFP and triglycerides or HDL-C
van der Laar et al, 2012 Prospective Cohort	N=373 The Netherlands 24 years Cross-check dietary history (face-to-face) interviews	Mean age: 13.1±0.8 years 53% Girls The Amsterdam Growth and Health Longitudinal Study	aMed Total score: Zero to nine	Blood lipids	Per two-point increase in aMed score: <ul style="list-style-type: none"> Total cholesterol: β=-0.155 (95% CI: -0.273 to -0.038) HDL-cholesterol: β=-0.059 (95% CI: -0.167 to 0.048)
Zamora et al, 2011 Prospective Cohort	N=3,627 U.S. 13 years FFQ CARDIA Diet History	Young adults average age: 24 years to 25 years Blacks: 58% Women Whites: 53% Women -50% Blacks; 50% Whites CARDIA	DQI-2005	Blood lipids	Comparing highest to lowest quartile of DQI- 2005 scores: <ul style="list-style-type: none"> Increased HDL cholesterol (P=0.02; NS) triglycerides