

**Supplemental Table. Summary of selected ARIC<sup>a</sup> cohort studies which demonstrate the use of a wide range of nutrition research methodologies. Review conducted March-August, 2016.**

1st Author	Aim	Study Type	Sample Characteristics	Dietary or nutrition-related measure	Outcome Measures	Key Findings
<b>Micronutrient, Macronutrient and Individual Food Evaluations</b>						
Shahar and colleagues, 1993 <sup>14</sup>	To examine relationship between hemostatic factors (fibrinogen, factor VII, factor VIII, VWF <sup>b</sup> ) and types of dietary fat	Cross-sectional	14,571 adults not taking anti-coagulants at baseline (age, sex, race=NR <sup>c</sup> )	<i>Baseline/Visit 1 (1987-89)</i> Total and saturated fat, MUFA <sup>d</sup> , PUFA <sup>e</sup> , animal fat, n-3 FA <sup>f</sup> , cholesterol, fiber, carbohydrates, caffeine, and alcohol.	<i>Baseline/Visit 1</i> Hemostatic factors (fibrinogen, factor VII, factor VIII, VWF, Protein C, and ATIII <sup>g</sup> ), BMI <sup>h</sup> , smoking, alcohol, and T2DM <sup>i</sup>	Inverse associations between n-3 FAs and fibrin, VIII, VWF for African Americans and whites. For whites only, positive association of n-3 FAs and protein C. Similar results for fish intake (primary source of diet n-3 FAs). Relationships between other dietary fats, fiber and hemostatic factors were variable.
Shimakawa and colleagues,	To examine relationship between vitamin	Case-control	640 individuals with and without atherosclerosis at	<i>Baseline/Visit 1</i> Supplement use, intake of vitamins A	<i>Baseline/Visit 1</i> Plasma homocysteine	Cases had higher homocysteine levels. Folate, vitamins B6, and B12 (key vitamins in

1997 <sup>15</sup>	intake and plasma homocysteine, a risk factor for atherosclerosis and thromboembolic disease		baseline (mean age=NR, 40% F <sup>j</sup> , 18% African American)	and B, folate, niacin, iron, potassium intake, methionine, protein, fats, carbohydrates, dietary fiber, cholesterol and select food groups (alcohol, cold cereals, fruit and milk)		homocysteine metabolism) and other nutrients inversely associated with homocysteine levels. Supplement users had lowest homocysteine levels. Cold breakfast cereal, milk, and fruit intakes associated with lower homocysteine levels.
Kan and colleagues, 2008 <sup>16</sup>	To evaluate association of fiber intake with COPD <sup>k</sup>	Cross-sectional	11,897 adults with complete data on smoking and traffic exposure (mean age F =53 y, mean age M <sup>l</sup> =54 y, 57% F, 24% African American)	<i>Baseline/Visit 1</i> Dietary fiber, cured meats, carotenoids, vitamins C,D,E, and n-3 FAs	<i>Baseline/Visit 1</i> FEV and FVC. COPD-related phenotypes (chronic bronchitis and Global Initiative for Chronic Obstructive Lung Disease [derived from FEV <sup>m</sup> and FVC <sup>n</sup> ])	All sources of fiber, cereal and fruit intakes associated with improved lung function and lower COPD prevalence. Relationships not explained by specific nutrients (carotenoids, vitamins C, D and E, or omega-3 fatty acids) or lower cured meat intake, or other factors associated with improved lung

						function.
Volcik and colleagues, 2008 <sup>17</sup>	To evaluate effect of genetic variants of PPAR-alpha <sup>o</sup> (a genetic regulator of lipid metabolism) on the association between n-6 and n-3 FAs and lipid measures	Cross-sectional	13,614 adults with complete data and permission to use genetic information (age and gender=NR, 26% African American)	<i>Baseline/Visit 1</i> n-6 and n-3 FAs	<i>Baseline/Visit 1</i> BMI, TC <sup>p</sup> , TG <sup>q</sup> , LDL-C <sup>r</sup> , HDL-C <sup>s</sup> . Nine SNPs <sup>t</sup> associated with PPAR gene region. Smoking and cholesterol-lowering medications	Genotype frequencies varied by race. No associations between lipids and genetic variants. Interactions between n-3 and n-6 FAs and lipids differed by race. African Americans with higher intake of n-3 FA had higher HDL-C and whites with higher intake of n-6 FAs had higher TC and LDL-C and lower HDL-C.
Imamura and colleagues, 2013 <sup>18</sup>	To examine associations of plasma long-chain LCMUFAs <sup>u</sup> with CVD <sup>v</sup> risk factors, incident CHF <sup>w</sup> and dietary sources of LCMUFAs	Cross-sectional  Prospective (14-21 yrs. of follow-up [differed by cohort])	3,694 adults in CHS <sup>x</sup> (mean age=75 y, gender=NR, 100% whites); 3,577 adults in ARIC Minnesota Cohort (mean age=54 yrs., gender=NR, 100% whites)	<i>Baseline/Visit 1</i> LCMUFAs (29 in ARIC and 42 in CHS). 43 food groups derived from two FFQs <sup>y</sup> for CHS and one FFQ for ARIC	<i>Baseline/Visit 1</i> BMI, BP <sup>z</sup> , lipid profile, hemostatic factors, physical activity, left ventricular hypertrophy, and incident CHF	Higher levels of both 22:1 and 24:1 LCMUFA, but not 20:1, were associated with higher CHF incidence in both cohorts. LCMUFAs not associated with stroke. LCMUFAs levels associated with seafood, poultry, meat, mustard and nuts.

Steffen and colleagues, 2003 <sup>19</sup>	To examine relationship between whole and refined grains, fruits, and vegetables with mortality and incidence of CAD <sup>aa</sup> and ischemic stroke	Prospective (through 11 yrs. of follow-up)	11,940 adults free at baseline of prevalent CAD, ischemic stroke, T2DM and cancer (mean age F=53.4 y, mean age M = 54.1 y, 56% F, 26% African American).	<i>Baseline/Visit 1 and Visit 3 (1993-95)</i> Foods classified as whole grain, refined grain, fruits and vegetables, dairy, fish and red meat	<i>Baseline through 1999 follow-up</i> All-cause mortality, incident CAD and incident ischemic stroke	Whole grain intake inversely related to mortality and CAD. Fruit and vegetable intake inversely related to mortality and for African Americans, inversely related to CAD. No beneficial effects of whole grains, fruits and vegetables on stroke risk.
Fuchs and colleagues, 2004 <sup>20</sup>	To prospectively evaluate relationship between consumption of alcoholic beverages and incidence of CHD <sup>bb</sup>	Prospective (through average of 9.8 yrs. of follow-up)	14,506 adults without CHD at baseline (mean age=NR, 57% F, 27% African American)	<i>Baseline/Visit 1</i> Servings of wine, beer, alcohol and estimated total alcohol intake.	<i>Baseline through 1998 follow-up</i> Incident CHD or CHD death. Education, family income, smoking, DM, baseline BP, PA <sup>cc</sup> , lipid profile, BMI, and use of anti-hypertension medications	For whites, alcohol intake, even at low levels, associated with lower CHD risk. Among African American men, alcohol intake was associated with higher risk. African American women drank too infrequently to assess. Further research needed to fully characterize alcohol intake and determine how it influences CHD.

Steffen and colleagues, 2007 <sup>21</sup>	To prospectively evaluate the relationship between VTE <sup>dd</sup> incidence and foods rich in B vitamins and omega-3 fatty acids	Prospective (through 12 yrs. of follow-up)	14,962 adults free of VTE at baseline (mean age=54 y, 55% F, 27% African American)	<i>Baseline/Visit 1 and Visit 3</i> Whole and refined grains, fruits and vegetables, dairy, fish, and processed meat. Two " <i>a posterior</i> " diet patterns ("Healthy" and "Western") derived from PCA <sup>ee</sup> .	<i>Baseline through 2001 follow-up</i> VTE (deep vein thrombosis or pulmonary embolism)	VTE risk was inversely associated with fruit, vegetable and fish intake and positively associated with "Western" diet pattern. Dairy, grains and "prudent" diet pattern not related. After clotting factors adjustment, relationships attenuated but remained significant.
Nettleton and colleagues, 2008 <sup>22</sup>	To prospectively evaluate the associations between food intake and risk of HF <sup>ff</sup> in a diverse population	Prospective (through 13 yrs. of follow-up)	14,153 adults free of prevalent HF at baseline (mean age =NR, 55% F, 45% M, 25% African American)	<i>Baseline/Visit 1 and Visit 3</i> Whole grains, fruits and vegetables, fish, nuts, eggs, high fat dairy, and red meat	<i>Baseline through 2003 follow-up</i> Incident HF (death or hospitalization) based on deaths certificate and hospital discharge lists	HF risk lower with greater whole-grain intake but higher with greater intake of eggs and high-fat dairy. Relationships independent of other foods associated with HF and CVD risk factors.
Bombback and colleagues,	To evaluate whether drinking	Prospective (through 3	15,745 adults (mean age=NR, 55% F,	<i>Baseline/Visit 1 and Visit 3</i>	<i>Baseline/visit 1, Visit 2 (1990-92), Visit 3 and</i>	Higher intake of sugar-sweetened soda associated with

2010 <sup>23</sup>	sugar-sweetened or diet soda is associated with hyperuricemia and CKD <sup>gg</sup>	and 9 yrs. of follow-up)	26.9% African American, .03% Other)	Daily intake of sugar-sweetened and diet soft drinks, sodium, animal protein and total energy intake	Visit 4 (1996-98) HTN <sup>hh</sup> status, DM, serum creatinine, uric acid. Prevalent and incident hyperuricemia and CKD	prevalent hyperuricemia and CKD but not on future hyperuricemia and CKD. Effect more pronounced for those with elevated uric acid. No associations with diet drinks.
<b>Dietary Pattern Analysis</b>						
Steffen and colleagues, 2007 <sup>21</sup> (also listed above)	To prospectively evaluate relationship between foods rich in B vitamins and omega-3 fatty acids and VTE incidence	Prospective (through 12 yrs. of follow-up)	14,962 adults free of VTE at baseline (mean age=54 y, 55% F, 27% African American)	Baseline/Visit 1 and Visit 3 "A posterior" diet patterns derived from PCA. "Prudent or Healthy": High in fish, fruit and vegetables; low in red and processed meats, fast food and high fat dairy. "Western": High in red and processed	Baseline through 2001 follow-up VTE (deep vein thrombosis or pulmonary embolism)	"Western" diet pattern was positively associated with VTE risk. After adjustment for clotting factors, relationships attenuated but remained significant. Dairy, grains and "Prudent or Healthy" diet pattern not related to VTE.  Fruit and vegetable and fish intake had an inverse relationship with VTE risk.

				meats, fast food, high fat dairy; low fish, fruit and vegetables. Single foods in analysis: whole and refined grains, fruits and vegetables, dairy, fish, and processed meat.		
Lutsey and colleagues, 2008 <sup>32</sup>	To prospectively evaluate relationship between incident MetS <sup>ii</sup> and dietary intake	Prospective (through 9 yrs. of follow-up)	9514 adults free of MetS and CVD at baseline (mean age= 53.6 y, 56% F, 25% African American)	Baseline/Visit 1 and Visit 3 "A posterior" diet patterns derived from PCA.  "Prudent": fruit, fish, seafood, poultry, whole grains, tomatoes, low fat dairy, yogurt, nuts.	Baseline/visit 1 and Visits 2-4 MetS, WC <sup>jj</sup> , TG, HDL-C, SBP <sup>kk</sup> , DBP <sup>ll</sup> , anti-HTN medication use, BG <sup>mm</sup> , BG medication use, smoking and PA	After adjusting for demographic, smoking, and PA, "Western" diet pattern positively associated with greater risk of MetS. No association with "Prudent" diet pattern. Dairy intake inversely associated and meat, fried foods and diet soda positively associated with MetS.

				"Western": refined-grain bread, cereal, rice, and pasta, processed meat, fried foods, eggs, desserts, soda and sweet beverages, high fat dairy, candy.		
Nettleton and colleagues, 2010 <sup>33</sup>	To prospectively examine associations of " <i>a posterior</i> " diet patterns and cell-specific markers of activation and inflammation	Cross-sectional	1101 adults representing a range of carotid intima-media thickness (mean age F =70.8 y, mean age M=71.8 y, 48% F, 100% white)	<i>Willett 131-item FFQ (2005-2006)</i> " <i>A posterior</i> " diet patterns derived from PCA collected " <i>Healthy</i> ": fruit, vegetables, legumes, fish, tomatoes, whole grain, nuts and poultry. " <i>Western</i> ": processed	<i>Supplemental data collection (2005-2006)</i> 16 biomarkers of systemic inflammation (cell aggregates and multiple platelet and leukocyte markers) measured by flow cytometry measured	Three of 16 biomarkers were inversely associated with the " <i>Healthy</i> " diet pattern; two markers positively associated with " <i>Western</i> " diet pattern, and six markers inversely associated with alcohol.



				and red meats, fried potatoes, refined grains, high fat dairy, desserts, sugar-sweetened beverages, candy, white potatoes, eggs, pizza and butter.		
Weng and colleagues, 2013 <sup>40</sup>	To prospectively examine associations of an "a priori" diet score with incident high normal BP and HTN	Prospective (through 10 yrs. of follow up)	9913 adults free of high normal BP or HTN at baseline. (mean age F =53 y, M=54 y, 55% F, 18% African American)	Baseline/Visit 1 and Visit 3 A priori diet score (Healthy Food Score) at baseline and exam 3 which included 13 food groups.	Baseline/visit 1 and Visits 2-4 High normal BP and HTN	Adjusted for demographics and CVD risk, the "a priori" food score was associated with lower HTN risk but not high normal BP. Relationship largely due to greater dairy and nut intake nuts and lower meat intake.
Folsom and colleagues, 2011 <sup>42</sup>	To prospectively estimate prevalence of a composite measure of CVD risk factors and	Prospective (through 28 yrs. of follow-up)	12,744 adults without HF, CHD or stroke at baseline (mean age=54 y, 56% F, 24% African	Baseline/Visit 1 Healthy Diet Score (one of Simple 7 measures) included servings of fruit and	Baseline through 2007 follow-up PA, smoking, use of BG, HTN or cholesterol medications, TC, BG,	One of 8 participants had ideal CVD health, i.e., met 5-7 components. CVD incidence associated with Simple 7 prevalence; of those with ideal

	health behaviors and assess its relationship with incident CVD		American)	vegetable, fish, whole grains, and sugar-sweetened beverages	BP, BMI, and incident CVD	CVD metrics, 3.9/1000 person-yrs. had CVD compared to 37.1 per 1,000 person-years for those with zero ideal health metrics.
<b>Neighborhood Effects on Diet and Health</b>						
Chichlowska and colleagues, 2008 <sup>46</sup>	To examine association of iSES <sup>nn</sup> and nSES <sup>oo</sup> on the prevalence of MetS	Cross-sectional	12,709 adults without DM at baseline, characterized for MetS and geocoded for geographic location (mean age =NR, 55% F, 23% African American)	<i>Baseline/Visit 1:</i> Diet or nutrition-related measures were not evaluated directly in this study. MetS, which is associated with lifestyle characteristics including dietary behavior, was.	<i>Baseline/Visit 1:</i> The nSES index used 1990 census block assessment of education, income, and occupation. The iSES index included annual family income and educational attainment, MetS.	For whites and African Americans, both iSES and nSES independently associated with an increased prevalence of MetS among women but not men. Understanding the differential health effects of SES on men and women is crucial to the development of gender-specific models of MetS risk.
Diez-Roux and colleagues, 1999 <sup>47</sup>	To examine whether neighborhood income is related to dietary patterns	Cross-sectional	13,095 adults living in ARIC-defined census blocks with complete income and diet data (mean=NR,	<i>Baseline/Visit 1:</i> Fruits, vegetables, meats, and fish, saturated fat, PUFA, cholesterol, Keys	<i>Baseline/Visit 1:</i> Individual income was based upon family income. Neighborhood median household	Living in a lower income neighborhood associated with lower intake of fruits, vegetables and fish and higher meat intake. Relationships

	independent of individual income.		55% F, 26% African American)	score (composite measure of saturated fat, PUFA and cholesterol)	income was based on 1990 US census tract assessment	attenuated by individual income. Close association between neighborhood and individual income made it difficult to judge each independently.
Diez-Roux and colleagues, 1997 <sup>48</sup>	To estimate association of neighborhood SES characteristics with CHD prevalence and risk factors and evaluate whether these associations are mediated by individual-level indicator	Cross-sectional	12,601 adults living in 567 census block groups (mean age=NR, 55% F, 24% African American)	<i>Baseline/Visit 1:</i> Keys Score	<i>Baseline/Visit 1 Address:</i> iSES (average income, median home value, % adults without HS degree, % in lower income occupations) and iSES (race, education, occupation and family income). PA, CHD, T2DM, SBP, lipid profile, and fibrinogen	Both neighborhood context and individual level measures of SES provide information about CHD risk among African Americans and whites. One exception, African American men from Jackson with lower neighborhood SES had lower CHD prevalence.
Borrell and colleagues, 2004 <sup>49</sup>	To prospectively evaluate association of CVD	Prospective (through 10 yrs. of	14,005 adults with complete income information living in	Diet or nutrition-related measures were not evaluated	<i>Baseline/Visit 1 Address</i> nSES index (1990 census assessment of	Most advantaged African American neighborhoods had similar SES characteristics as

	mortality with neighborhood SES characteristics	follow-up)	one of 597 census block groups (mean age=NR, 55% F, 27% African American)	but SES, which is related to lifestyle characteristics, including diet, was. Article provided the foundation for the other neighborhood level studies.	amount and sources of income, education, and occupation and iSES index (family income, education, and occupation.) Deaths classified as related to CVD, cancer and other causes.	most disadvantaged white neighborhoods. Independent effects of individual and neighborhood SES difficult to distinguish, but having low individual income and living in a disadvantaged neighborhood advanced the age of death for whites by 11 yrs. and African American by 13 yrs.
Morland and colleagues, 2002 <sup>50</sup>	To examine distribution of food stores and food service places by the level of neighborhood wealth and racial segregation	Cross-sectional	216 ARIC-defined census tracts (56 located in Mississippi, 78 in North Carolina, 28 in Maryland, and 54 in Minnesota)	<i>Baseline/Visit 1 Address: 1997</i> prevalence of supermarkets, grocery and convenience stores, various types of restaurants, carry-out, specialty shops, and bars in each tract.	<i>Baseline/Visit 1 Address: 1990 Census</i> median price of homes as a marker of neighborhood wealth. Percentage of African Americans represented the level of neighborhood segregation	More supermarkets and gas stations with convenience stores in wealthier areas than in poor neighborhoods. More supermarkets and restaurants of all types in predominantly W or mixed race areas.

Morland and colleagues, 2006 <sup>51</sup>	To examine whether prevalence of cardiovascular disease (CVD) risk factors are associated with characteristics of the local food environment	Cross-sectional	10,763 adults living within 207 ARIC-defined census tracts (mean age=NR, 56% F, 23% African American)	<i>Baseline/Visit 1 Address:</i> 1999 assessment of number of supermarkets, convenience stores, grocery stores, full service, limited service or fast food restaurants in 207 census tracts.	<i>Visit 3:</i> CVD risk factors (obesity, overweight, T2DM, HTN and high TC)	Presence of supermarkets associated with lower prevalence of obesity and overweight. Presence of convenience stores associated with higher prevalence of overweight and obesity. Associations with T2DM, high cholesterol and HTN inconsistent.
Morland and colleagues, 2002 <sup>52</sup>	To evaluate the association between the local food environment and self-reported dietary intake	Cross-sectional	10,623 adults living within 208 ARIC-defined census tracts (mean age =60, 56% F, 23% African American)	<i>Visit 3:</i> Fruits and vegetables, cholesterol and % of calories from fat and saturated fat. Healthy diet score (two fruit, three vegetables, 30% fat, <10% saturated fat, and	<i>Baseline/Visit 1 Address</i> 1997 Supermarkets, grocery stores, and full-service and fast-food restaurants were geocoded to 1990 census tracts	For African Americans and to a lesser extent whites, presence of supermarkets had a positive effect on fruit and vegetable intake and presence of supermarket and full service restaurants had a positive effect on adherence to dietary fat recommendations.

				<300 mg cholesterol daily)		
<b>Nutritional Genomics</b>						
Lutsey and colleagues, 2015 <sup>62</sup>	To prospectively evaluate if serum 25-hydroxyvitamin D (25[OH]D) is associated with incident HF and if the effect is mediated by traditional CVD risk factors, race, and genetic predisposition to higher levels of DBP <sup>PP</sup>	Prospective (through 21 yrs. of follow-up)	12,215 adults without HF at baseline (mean age =57 y, 56% F, 24% African American)	<i>Visit 2</i> Serum 25(OH)D	<i>Follow-up baseline through 2010:</i> Death from HF <i>Visit 2:</i> BMI, BP, DM, TC, TG, HDL, Cystatin C (marker of kidney disease), eGFR <sup>qq</sup> , HF, Pre-existing CHD  SNPs representing DBP gene variants	Whites had higher levels of serum 25(OH)D. For whites only, lower serum 25(OH)D was associated with HF. For both races, those who carried the genetic variation which predisposes them to higher DBP had a greater risk of HF.
Nettleton and colleagues, 2010 <sup>66</sup>	To evaluate whether whole grain intake	Cross-sectional	Approximately 48,000 individuals without T2DM from	<i>Baseline/Visit 1:</i> Daily servings of whole-grain foods	<i>Baseline/Visit 1:</i> FG <sup>rr</sup> and FI <sup>ss</sup> . Genotyping of 15 SNPs	Confirmed results from smaller studies, whole grain intake inversely associated with FI and

	modifies association between fasting glucose levels and genetic variants related to glycemic traits		14 European-descent cohorts (7,201 ARIC [mean age=53.7 y, 54% F, 100% white])	from FFQ (11 cohorts), dietary recall (1 cohort), food record (1 cohorts), or a combination of food diary and FFQ (1 cohort)	associated with only FI, 1 SNP with only FI, and 1 SNP with both FI and FG	FG. A possible interaction between whole grain intake and a single insulin-raising allele suggests the potential for tailored dietary guidance based on genetic profiles.
Hruby and colleagues, 2013 <sup>67</sup>	To evaluate whether genetic variants related to glycemic traits or magnesium metabolism influence relationship between magnesium intake and FG and FI	Cross-sectional	52,684 European descent participants without T2DM from CHARGE <sup>tt</sup> Consortium (15 cohorts) (8,951 ARIC [mean age=54 y, 54% F, 100% white])	<i>Baseline/Visit:</i> Dietary intake from FFQ (11 cohorts), dietary recall (1 cohort), food record (2 cohorts), or food diary and FFQ combination (1 cohort). Dietary magnesium, fiber, caffeine, and alcohol	<i>Baseline/Visit 1:</i> FG and FI. Genotyping of SNPs associated with fasting glucose (16 SNPs), insulin (2 SNPs), or magnesium (8 SNPs)	After adjusting for BMI and demographic and lifestyle factors, magnesium was inversely associated with FG and FI. There were no magnesium-related SNPs or interaction between any SNPs and magnesium.
Kanoni and colleagues,	To evaluate whether zinc intake	Cross-sectional	46,021 European descent participants	<i>Baseline/Visit 1</i> Zinc intake from diet	<i>Baseline/Visit 1</i> BMI, FI and FG.	After BMI adjustment, total zinc associated with lower FG.

2011 <sup>68</sup>	modifies association between fasting glucose and genetic variants related to glycemic traits and zinc metabolism		without T2DM from CHARGE and MAGIC <sup>uu</sup> Consortiums from 14 cohorts (6,088 ARIC [mean age=60.2 y, 54% F, 100% white])	and supplements. Total zinc assessment limited to the five cohorts which assessed supplement intake	Genotyping of 20 SNPs (18 associated with FG or FI and two SNPs based upon their potential role in zinc metabolism	Dietary zinc alone not related. The effect of a glucose-raising allele (related to zinc transporter variant) on BG was attenuated by higher zinc levels.
Lutsey and colleagues, 2012 <sup>71</sup>	To prospectively evaluate the relationship between lipid-specific GRS <sup>vv</sup> and lipid levels and the association of GRSs to longitudinal changes in lipid levels	Prospective (through 9.0 yrs. of follow-up)	9,328 white adults (mean age M=54 y, 53% F, 100% white)	<i>Baseline/visit 1, Visits 2 -4</i> Plasma TC, TG, HDL-C, LDL-C	SNPs identified from prior GWAS <sup>ww</sup> used to create lipid-specific gene scores	Lipid gene scores explained <7% of variation in baseline lipid values. After 9 yrs., all lipid GRS were associated with abnormal lipid values and anti-HTN medication use. The TG GRS was positively related to change in TG levels over time, but similar longitudinal results not observed for LDL-C or HDL-C.



Demerath and colleagues, 2015 <sup>78</sup>	To evaluate results of EWAS <sup>xx</sup> of BMI, lipid and T2DM-related traits and identify novel associations with BMI, WC and BMI change among African Americans	Cross-sectional	2,097 African Americans with complete methylation data (mean age=56 y, 64% F, 100% African American)	Diet or nutrition-related measures were not evaluated but BMI, lipids and T2DM, which are related to lifestyle characteristics, including diet, were evaluated.	<i>Visit 2: Methylation of leukocyte DNA</i> <i>Baseline/visit 1, visits 2-4 and visit 5 (2011-2013):WC, BMI, T2DM</i> <i>Baseline/visit 1: Self-reported weight at age 25</i>	The EWAS identified numerous methylation variants associated with BMI and WC. These associations were replicated across tissues types, ethnicities and analytic approaches. Identified sites related to macronutrient metabolism.
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<sup>a</sup>ARIC=Atherosclerosis in the Community

<sup>b</sup>VWF=Von Willebrand Factor

<sup>c</sup>NR=not reported

<sup>d</sup>MUFA=monounsaturated fatty acids

<sup>e</sup>PUFA=polyunsaturated fatty acids

<sup>f</sup>n-3 FA=n-3 fatty acids

<sup>g</sup>ATIII=antithrombin III

<sup>h</sup>BMI=body mass index

<sup>i</sup>T2DM=type 2 diabetes mellitus

<sup>j</sup>F=female

<sup>k</sup>COPD=chronic Obstructive Pulmonary Disease

<sup>l</sup>M=male

<sup>m</sup>FEV=forced expiratory volume

<sup>n</sup>FVC=forced vital capacity

<sup>o</sup>PPAR-alpha=peroxisome proliferated-activated receptor-alpha

<sup>p</sup>TC=total cholesterol

<sup>q</sup>TG=triglycerides

<sup>r</sup>LDL-C=low-density lipoprotein cholesterol

<sup>z</sup>CHF = congestive heart failure

<sup>aa</sup>CAD=coronary artery disease

<sup>bb</sup>CHD=coronary heart disease

<sup>cc</sup>PA=physical activity

<sup>dd</sup>VTE=venous thromboembolism

<sup>ee</sup>PCA=principal component analysis

<sup>ff</sup>HF=heart failure

<sup>gg</sup>CKD=chronic kidney disease

<sup>hh</sup>HTN=hypertension

<sup>ii</sup>MetS=metabolic syndrome(BP, TG, HDL-C, BG, and waist-to-hip ratio)

<sup>jj</sup>WC=waist circumference

<sup>kk</sup>SBP=systolic BP

<sup>ll</sup>DBP=diastolic BP

<sup>mmm</sup>BG=blood glucose

<sup>nn</sup>iSES=individual socio-economic status

<sup>oo</sup>nSES=neighborhood socio-economic status

<sup>pp</sup>DBP=vitamin D binding protein

<sup>qq</sup>eGFR=estimated glomerular filtration rate

<sup>s</sup>HDL-C=high-density-lipoprotein cholesterol

<sup>t</sup>SNPs=single nucleotide polymorphisms

<sup>u</sup>LCMUFA=long chain MUFA

<sup>v</sup>CVD=cardiovascular disease

<sup>w</sup>CHS=Cardiovascular Healthy Study

<sup>x</sup>FFQ=food frequency questionnaire

<sup>y</sup>BP=blood pressure

<sup>r</sup>FG=fasting glucose

<sup>ss</sup>FI=fasting insulin

<sup>tt</sup>CHARGE=Cohorts for Heart and Aging Research in Genomic Epidemiology

<sup>uu</sup>Meta-Analyses of Glucose and Insulin-related traits Consortium

<sup>vv</sup>GRS=genetic risk score

<sup>ww</sup>GWAS=genome-wide association studies

<sup>xx</sup>EWAS=epigenome-wide association studies