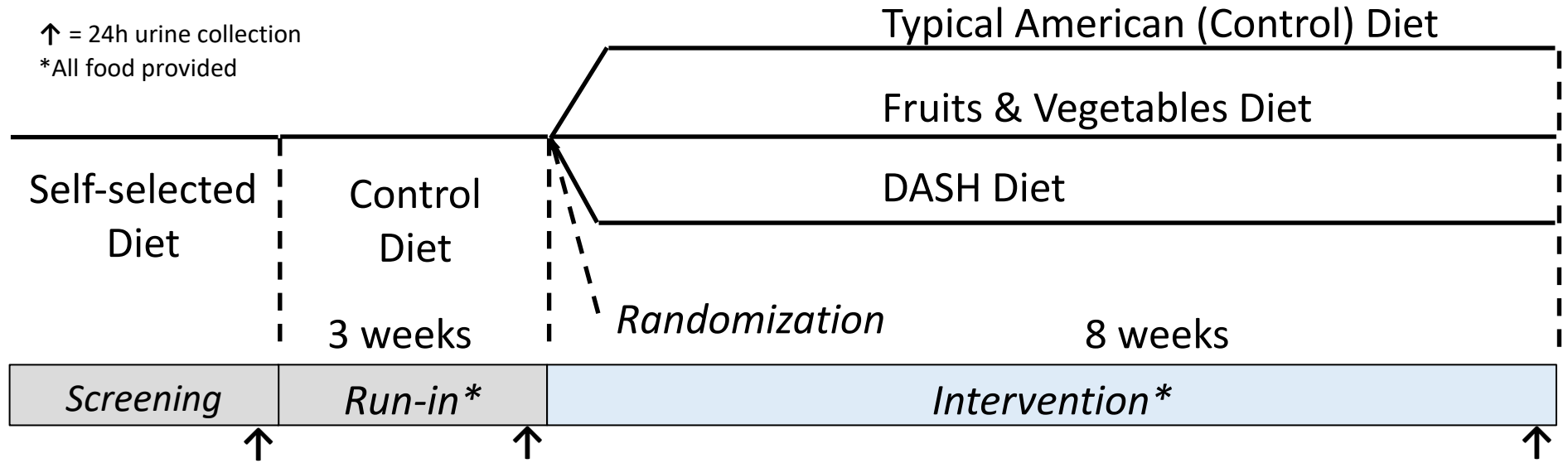


Supplemental Figure 1. Design of the DASH Trial.



## Supplementary data

Supplemental Table 1. Sample 2100kcal/d menus from the DASH Trial for control, FV, and DASH diets.

	Control	FV	DASH
<b>Dairy</b>			
<b>Dairy and Egg Products, g/d</b>	<b>63.4</b>	<b>25</b>	<b>803.3</b>
Butter, with salt, g/d	0	25	0
Butter, without salt, g/d	35	0	10
Cheese, parmesan, grated, g/d	0	0	10.5
Cheese, pasteurized process, American, with disodium phosphate, g/d	28.4	0	0
DASH Zucchini Lasagna (Composite for Lean Cuisine) , g/d	0	0	311.8
Milk, low fat, fluid, 1% fat, with added vitamin A, g/d	0	0	244
Yogurt, fruit, low fat, 9 grams protein per 237 mL, g/d	0	0	227
<b>Fruit/Veg</b>			
<b>Fruits and Fruit Juices, g/d</b>	<b>373</b>	<b>751</b>	<b>631.5</b>
Apple juice, canned or bottled, unsweetened, with added ascorbic acid, g/d	126	0	0
Apples, raw, with skin, g/d	0	0	138
Apricot nectar, canned, with added ascorbic acid, g/d	0	0	170.5
Bananas, raw, g/d	0	175	0
Orange juice, canned, unsweetened, g/d	134	534	267
Peaches, frozen, sliced, sweetened, g/d	56.5	0	0
Raisins, seedless, g/d	0	42	56
Strawberries, frozen, unsweetened, g/d	56.5	0	0
<b>Nut and Seed Products, g/d</b>	<b>0</b>	<b>0</b>	<b>25</b>
Nuts, almonds, dried, blanched, g/d	0	0	25
<b>Vegetables and Vegetable Products, g/d</b>	<b>97</b>	<b>281</b>	<b>208</b>
Carrots, raw, g/d	0	80	0
Lettuce, iceberg (includes crisphead types), raw, g/d	15	25	40
Pickles, cucumber, dill, g/d	12	36	48
Spinach, frozen, chopped or leaf, cooked, boiled, drained, without salt, g/d	0	100	0
Spinach, raw, g/d	0	0	70
Squash, summer, crookneck and straightneck, cooked, boiled, drained, without salt, g/d	70	0	0
Tomatoes, red, ripe, raw, year round average, g/d	0	40	50
<b>Grain</b>			
<b>Baked Products, g/d</b>	<b>188.3</b>	<b>144.8</b>	<b>151.8</b>
Bread, rolls, country style classic dinner rolls, Pepperidge farm, g/d	0	37.8	37.8
Bread, rolls, sandwich sliced w/sesame seeds, Pepperidge farm, g/d	45.5	0	0
Bread, white, commercially prepared (includes soft bread crumbs), g/d	56	0	0
Bread, whole wheat 100%, Pepperidge farm, g/d	0	68	114
Cookies, animal crackers (includes arrowroot, tea biscuits,), g/d	56.8	0	0
Cookies, chocolate chip, commercially prepared, regular, higher fat, enriched, g/d	30	0	0
Waffles, plain, frozen, ready-to-heat (includes buttermilk), g/d	0	39	0
<b>Breakfast Cereals, g/d</b>	<b>23</b>	<b>0</b>	<b>35</b>
Cereals ready-to-eat, Kellogg,., Kellogg's Complete Bran Flakes, g/d	0	0	35
Cereals, Quaker, corn grits, instant, plain, dry, g/d	23	0	0
<b>Cereal Grains and Pasta, g/d</b>	<b>100</b>	<b>0</b>	<b>0</b>
Rice, white, long-grain, parboiled, cooked, enriched, g/d	100	0	0
<b>Meat</b>			
<b>Beef Products, g/d</b>	<b>100</b>	<b>114</b>	<b>0</b>
Beef, round, eye of round, separable lean only, trimmed to zero visible fat, choice, cooked, roasted, g/d	100	114	0
<b>Finfish and Shellfish Products, g/d</b>	<b>0</b>	<b>0</b>	<b>85</b>
Finfish, tuna, light, canned in water, drained solids, g/d	0	0	85
<b>Poultry Products, g/d</b>	<b>0</b>	<b>198</b>	<b>0</b>
DASH Chicken Pot Pie (composite for Swanson), g/d	0	198	0

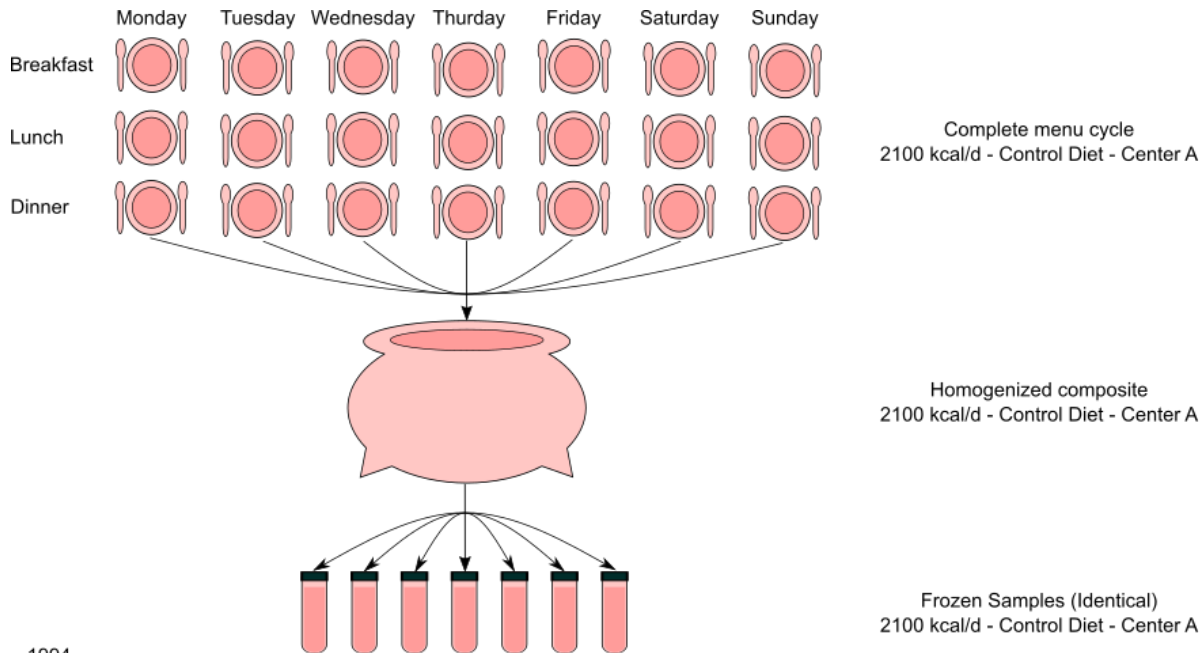
Supplementary data

	<b>Sausages and Luncheon Meats, g/d</b>	<b>60</b>	<b>0</b>	<b>0</b>
	Pastrami, turkey, g/d	60	0	0
<b>Other</b>				
	<b>Beverages, g/d</b>	<b>44</b>	<b>0</b>	<b>0</b>
	Fruit punch-flavor drink, powder, with added sodium, g/d	44	0	0
	<b>Fats and Oils, g/d</b>	<b>20</b>	<b>12</b>	<b>22</b>
	Oil, vegetable corn, salad or cooking, g/d	0	0	10
	Oil, vegetable safflower, salad or cooking, linoleic, (over 70%), g/d	8	0	0
	Salad dressing, mayonnaise, soybean oil, with salt, g/d	12	12	12
	<b>Snacks, g/d</b>	<b>0</b>	<b>56.8</b>	<b>0</b>
	Snacks, potato chips, plain, salted, g/d	0	56.8	0
	<b>Soups, Sauces, and Gravies, g/d</b>	<b>45</b>	<b>0</b>	<b>0</b>
	Gravy, beef, canned, g/d	45	0	0
	<b>Spices and Herbs, g/d</b>	<b>5</b>	<b>0</b>	<b>5</b>
	Mustard, prepared/yellow/salad, g/d	5	0	0
	Vinegar, cider, g/d	0	0	5
	<b>Sweets, g/d</b>	<b>14</b>	<b>0</b>	<b>0</b>
	Jellies, g/d	14	0	0

Fruit/Veg = Fruits and vegetables.

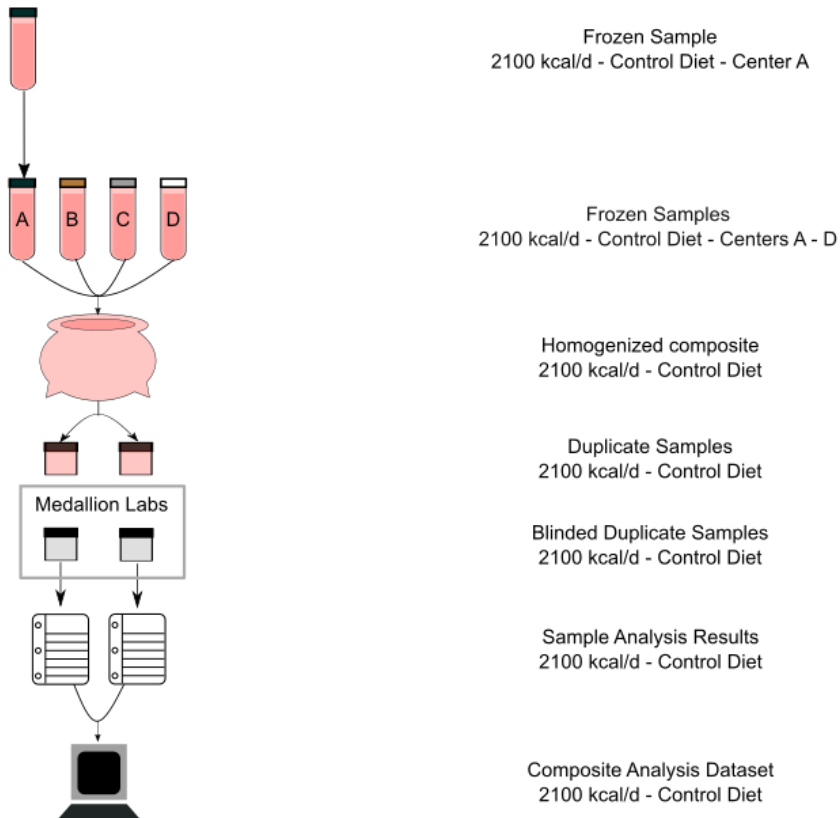
Supplementary data

Supplemental Figure 2. Composite sample analysis flow diagram using 2100 kcal/d control diet as an example. This process was repeated for each calorie level / diet combination.



1994

2018



Supplementary data

Supplemental Table 2. Amount of phosphorus contributed by different food groups in the three DASH Trial diets at the 2100 kcal/d energy level.

	Control	FV	DASH
<b>Dairy, mg P / 2100 kcal (% of total)</b>	<b>135 (10%)</b>	<b>72 (4%)</b>	<b>600 (28%)</b>
Dairy and Egg Products, mg P /2100 kcal	135	72	600
<b>Fruits and Vegetables, mg P / 2100 kcal (% of total)</b>	<b>52 (4%)</b>	<b>627 (36%)</b>	<b>551 (26%)</b>
Fruits and Fruit Juices, mg P /2100 kcal	18	133	125
Legumes and Legume Products, mg P /2100 kcal	0	212	143
Nut and Seed Products, mg P /2100 kcal	0	189	175
Vegetables and Vegetable Products, mg P /2100 kcal	35	94	108
<b>Grain, mg P / 2100 kcal (% of total)</b>	<b>298 (22%)</b>	<b>206 (12%)</b>	<b>258 (12%)</b>
Baked Products, mg P /2100 kcal	214	71	59
Breakfast Cereals, mg P /2100 kcal	14	61	103
Cereal Grains and Pasta, mg P /2100 kcal	70	74	95
<b>Meat, mg P / 2100 kcal (% of total)</b>	<b>793 (58%)</b>	<b>736 (42%)</b>	<b>669 (32%)</b>
Beef Products, mg P /2100 kcal	165	177	128
Finfish and Shellfish Products, mg P /2100 kcal	183	145	168
Pork Products, mg P /2100 kcal	155	167	111
Poultry Products, mg P /2100 kcal	173	128	166
Sausages and Luncheon Meats, mg P /2100 kcal	117	119	95
<b>Other, mg P / 2100 kcal (% of total)</b>	<b>95 (7%)</b>	<b>110 (6%)</b>	<b>30 (1%)</b>
Beverages, mg P /2100 kcal	21	0	2
Fats and Oils, mg P /2100 kcal	4	4	4
Snacks, mg P /2100 kcal	0	70	0
Soups, Sauces, and Gravies, mg P /2100 kcal	16	10	2
Spices and Herbs, mg P /2100 kcal	0	0	0
Sweets, mg P /2100 kcal	54	26	22
<b>Total, mg P / 2100 kcal</b>	<b>1373</b>	<b>1751</b>	<b>2108</b>

FV = Fruits and vegetables diet, DASH = DASH diet.

Supplemental Table 3. Participant characteristics by data completeness in adult participants of the DASH trial.<sup>1</sup>

		Run-in			Intervention			Change		
		Complete	Missing	<i>P</i> *	Complete	Missing	<i>P</i> *	Complete	Missing	<i>P</i> *
<i>n</i>		367	92		387	69		341	118	
Age, y		45.1 ± 10.7	42.2 ± 9.5	0.018	45.2 ± 10.7	40.8 ± 9.4	0.001	45.6 ± 10.8	41.7 ± 9.5	<0.001
Race				<0.001			<0.001			<0.001
	Non-black	162 (44.1)	22 (23.9)		169 (43.7)	14 (20.3)		152 (44.6)	32 (27.1)	
	Black	205 (55.9)	70 (76.1)		218 (56.3)	55 (79.7)		189 (55.4)	86 (72.9)	
Sex				0.11			0.058			0.017
	Female	173 (47.1)	52 (56.5)		182 (47.0)	41 (59.4)		156 (45.7)	69 (58.5)	
	Male	194 (52.9)	40 (43.5)		205 (53.0)	28 (40.6)		185 (54.3)	49 (41.5)	
Body mass intake, kg/m <sup>2</sup>		28.1 ± 3.9	28.6 ± 4.0	0.35						
Serum 1,25-dihydroxycholecalciferol, pg/mL		38 ± 9	34 ± 7	0.001	36 ± 10	37 ± 9	0.51	-2 ± 9	1 ± 7	0.006
Smoking Status				0.006			0.49			0.013
	Current	34 (22.4)	14 (46.7)		40 (25.5)	8 (32.0)		31 (22.0)	17 (41.5)	
	Not Current	118 (77.6)	16 (53.3)		117 (74.5)	17 (68.0)		110 (78.0)	24 (58.5)	
Energy intake, kcal/d		2579 ± 522	2412 ± 442	0.019	2643 ± 572	2436 ± 417	0.032	72 ± 229	58 ± 241	0.64
Study Site				<0.001			<0.001			<0.001
	A	120 (32.7)	4 (4.3)		118 (30.5)	6 (8.7)		115 (33.7)	9 (7.6)	
	B	71 (19.3)	43 (46.7)		73 (18.9)	40 (58.0)		65 (19.1)	49 (41.5)	
	C	60 (16.3)	32 (34.8)		75 (19.4)	15 (21.7)		51 (15.0)	41 (34.7)	
	D	116 (31.6)	13 (14.1)		121 (31.3)	8 (11.6)		110 (32.3)	19 (16.1)	
Diet Arm				0.48			0.55			0.66
	Control	120 (32.7)	34 (37.0)		126 (32.6)	27 (39.1)		111 (32.6)	43 (36.4)	
	FV	128 (34.9)	26 (28.3)		131 (33.9)	22 (31.9)		118 (34.6)	36 (30.5)	
	DASH	119 (32.4)	32 (34.8)		130 (33.6)	20 (29.0)		112 (32.8)	39 (33.1)	

<sup>1</sup>Values are mean ± sd or frequency (percent). \*Chi-square for categorical variables, t-test for continuous variables. FV = Fruits and vegetables diet, DASH = DASH diet.

## Supplementary data

Supplemental Table 4. Regression coefficients from a linear regression of subgroup characteristics on phosphorus outcomes for the change from end of run-in to end of intervention in adults participants of the DASH trial.<sup>1</sup>

		<i>n</i>	Dietary phosphorus intake, mg/d		Urinary phosphorus excretion, mg/d	Urinary phosphorus excretion, % of intake	
			Composite sample	Nutrient database		Composite sample	Nutrient database
Age, y	Crude <sup>2</sup>	341	-1.8 (-3.6, 0.0)*	-0.7 (-2.1, 0.7)	-1.4 (-4.4, 1.6)	-0.1 (-0.4, 0.1)	-0.2 (-0.4, 0.1)
	Adjusted <sup>3</sup>	333	-1.7 (-2.9, -0.6)*	-0.9 (-1.6, -0.1)*	-1.7 (-4.8, 1.4)	-0.2 (-0.4, 0.1)	-0.2 (-0.4, 0.1)
Body mass intake, kg/m <sup>2</sup>	Crude <sup>2</sup>	341	9.1 (4.2, 14.0)*	6.1 (2.3, 9.8)*	14.5 (6.4, 22.6)*	0.9 (0.2, 1.5)*	0.9 (0.2, 1.6)*
	Adjusted <sup>3</sup>	333	7.5 (4.4, 10.7)*	4.3 (2.3, 6.4)*	16.5 (8.2, 24.9)*	1.0 (0.4, 1.7)*	1.1 (0.4, 1.8)*
Energy intake, 100 kcal/d	Crude <sup>2</sup>	341	56.1 (50.0, 62.2)*	49.6 (45.8, 53.3)*	1.8 (-12.3, 16.0)	-1.7 (-2.9, -0.6)*	-1.9 (-3.1, -0.7)*
	Adjusted <sup>3</sup>	333	54.1 (48.8, 59.5)*	48.5 (44.9, 52.0)*	1.6 (-12.5, 15.8)	-1.7 (-2.9, -0.6)*	-1.8 (-3.0, -0.7)*
Race, black vs other	Crude <sup>2</sup>	341	-6.5 (-45.4, 32.5)	0.4 (-29.3, 30.1)	-49.3 (-113.6, 15.0)	-0.6 (-5.9, 4.6)	-1.7 (-7.2, 3.8)
	Adjusted <sup>3</sup>	333	15.4 (-13.3, 44.1)	10.7 (-8.2, 29.6)	-59.6 (-135.7, 16.5)	-0.9 (-7.1, 5.3)	-2.2 (-8.7, 4.2)
Serum 1,25-dihydroxycholecalciferol, pg/mL	Crude <sup>2</sup>	333	0.4 (-2.0, 2.7)	-0.2 (-2.0, 1.5)	-0.2 (-4.1, 3.7)	0.0 (-0.3, 0.3)	0.0 (-0.3, 0.3)
	Adjusted <sup>3</sup>	333	0.9 (-0.5, 2.4)	0.4 (-0.6, 1.4)	0.1 (-3.7, 4.0)	0.0 (-0.4, 0.3)	0.0 (-0.4, 0.3)
Sex, male vs female	Crude <sup>2</sup>	341	126.2 (89.7, 162.7)*	67.3 (38.5, 96.1)*	33.7 (-30.7, 98.0)	0.1 (-5.2, 5.3)	0.6 (-4.9, 6.0)
	Adjusted <sup>3</sup>	333	118.1 (92.2, 144.0)*	59.2 (42.2, 76.3)*	1.9 (-66.8, 70.6)	-1.2 (-6.8, 4.3)	-1.1 (-6.9, 4.7)
Smoking status, current smoker vs other	Crude <sup>2</sup>	141	-7.3 (-83.7, 69.2)	-7.8 (-66.4, 50.9)	-82.8 (-208.2, 42.7)	-5.2 (-15.1, 4.7)	-5.7 (-16.1, 4.6)
	Adjusted <sup>3</sup>	138	-8.6 (-56.2, 39.0)	-6.8 (-36.5, 22.8)	-84.5 (-217.8, 48.8)	-5.1 (-15.7, 5.6)	-5.8 (-16.9, 5.2)

<sup>1</sup>Values are means (95% CIs). <sup>2</sup>adjusted for randomization group <sup>3</sup>adjusted for age, body mass index (at baseline), race, sex, study center, randomization group, and change in energy intake and serum 1,25-dihydroxycholecalciferol (pg/mL). \*significantly different than zero, *P* < 0.05.