

**Supplementary Table 1. Statistical comparisons to determine differences between clusters: numerical variables**

Variables in gray met significance and fold change criteria. Comparisons were performed with Kruskal Wallis test. Post-hoc comparisons were performed with the Wilcoxon Rank Sum test. P values displayed here have not been adjusted.

Variable	Description	% Complete	<i>P</i> value	<i>P</i> <sub>1</sub> C1 vs. C2	<i>P</i> <sub>2</sub> C1 vs. C3	<i>P</i> <sub>3</sub> C2 vs. C3	<i>Fold Change</i> C1 vs. C2/C3	<i>Fold Change</i> C2 vs. C1/C3	<i>Fold Change</i> C3 vs. C1/C2
V00CESD	CES-D: Center for Epidemiologic Studies Depression Scale (CES-D) Score (calc)	99.1	3.3E-12	1.7E-02	1.8E-11	9.5E-08	0.47	0.69	2.48
P01BPBEDCV	How many days stay in bed due to back pain, past 30 days (calc)	99.5	6.2E-10	7.8E-03	3.4E-10	1.9E-04	0.25	0.66	3.54
V00FIBVGFR	Block Brief 2000: daily dietary fiber from vegetables and fruits (g) (calc)	100.0	1.2E-09	4.0E-06	1.5E-02	9.1E-08	0.91	1.62	0.63
V00DTDFIB	Block Brief 2000: daily nutrients from food, total dietary fiber (g) (calc)	100.0	1.8E-09	1.4E-07	1.3E-01	2.3E-06	0.86	1.52	0.73
V00SRVVEG	Block Brief 2000: daily servings of vegetables (calc)	100.0	2.9E-08	8.4E-05	6.8E-03	8.6E-07	0.99	1.52	0.62
V00DTVITK	Block Brief 2000: daily nutrients from food, vitamin K (ug) (calc)	100.0	4.2E-08	1.2E-05	1.9E-01	1.2E-06	0.89	1.71	0.60
V00SRVFRT	Block Brief 2000: daily servings of fruits and fruit juices (calc)	100.0	6.4E-08	2.2E-03	1.9E-03	1.7E-07	1.01	1.71	0.51
V00DTLUT	Block Brief 2000: daily nutrients from food, lutein (carotenoid) (ug) (calc)	100.0	4.8E-07	8.3E-06	1.0E+00	4.2E-05	0.82	1.75	0.64
V00SUPVITC	Block Brief 2000: average daily nutrients supplements, vitamin C (mg) (calc)	100.0	1.1E-06	1.0E+00	4.3E-06	4.7E-06	2.25	1.45	0.11
V00FIBBEAN	Block Brief 2000: daily dietary fiber from beans (g) (calc)	100.0	1.4E-06	1.0E-04	1.7E-01	3.6E-05	0.89	1.74	0.59
V00SUPBCAR	Block Brief 2000: average daily nutrients from vitamin supplements, beta-carotene (ug) (calc)	100.0	1.6E-06	1.0E+00	1.1E-05	2.5E-06	2.69	1.12	0.14
V00SUPFOL	Block Brief 2000: average daily nutrients from vitamin supplements, folate (mcg) (calc)	100.0	1.7E-06	1.0E+00	1.0E-05	4.0E-06	1.44	1.70	0.28
V00SUPSE	Block Brief 2000: average daily nutrients from vitamin supplements, selenium (mcg) (calc)	100.0	1.8E-06	1.0E+00	9.4E-06	4.1E-06	1.96	1.53	0.15
V00SUPVITE	Block Brief 2000: average daily nutrients from vitamin supplements, vitamin E (a-TE) (calc)	100.0	4.5E-06	1.0E+00	1.6E-05	1.4E-05	1.99	1.32	0.23
V00SUPVITA	Block Brief 2000: average daily nutrients from vitamin supplements, vitamin A (IU) (calc)	100.0	5.7E-06	1.0E+00	1.2E-04	4.9E-06	1.39	1.67	0.31
V00SUPVITD	Block Brief 2000: average daily nutrients from vitamin supplements, vitamin D (IU) (calc)	100.0	2.3E-05	1.0E+00	1.9E-04	1.9E-05	1.39	1.53	0.37
V00SUPB1	Block Brief 2000: average daily nutrients from vitamin supplements, B1 (mg) (calc)	100.0	2.5E-05	1.0E+00	2.0E-04	2.6E-05	1.48	1.86	0.21
V00SUPB2	Block Brief 2000: average daily nutrients from vitamin supplements, B2 (mg) (calc)	100.0	2.5E-05	1.0E+00	2.0E-04	2.6E-05	1.47	1.84	0.22
V00SUPNIAC	Block Brief 2000: average daily nutrients from vitamin supplements, niacin (mg) (calc)	100.0	2.5E-05	1.0E+00	2.0E-04	2.6E-05	1.46	1.82	0.23
V00SUPB6	Block Brief 2000: average daily nutrients from vitamin supplements, B6 (mg) (calc)	100.0	3.4E-05	1.0E+00	2.6E-04	3.5E-05	1.42	1.73	0.27
V00SUPB12	Block Brief 2000: average daily nutrients from vitamin supplements, B12 (ug) (calc)	100.0	4.3E-05	1.0E+00	3.4E-04	4.3E-05	1.42	1.71	0.28
V00SUPZINC	Block Brief 2000: average daily nutrients from vitamin supplements, zinc (mg) (calc)	100.0	6.6E-05	1.0E+00	6.2E-04	5.6E-05	1.35	1.59	0.37
V00SUPMG	Block Brief 2000: average daily nutrients from vitamin supplements, magnesium (mg) (calc)	100.0	8.2E-05	1.0E+00	5.8E-04	8.8E-05	1.35	1.57	0.37

V00SUPCU	Block Brief 2000: average daily nutrients from vitamin supplements, copper (mg) (calc)	100.0	8.2E-05	1.0E+00	5.8E-04	8.8E-05	1.35	1.57	0.37
V00DTSF	Block Brief 2000: grams of solid food (g), per week (calc)	100.0	1.4E-09	4.1E-09	1.0E+00	3.9E-05	0.82	1.48	0.79
V00HSMSS	SF-12: mental summary scale for the MOS 12-item short-form health survey (SF-12) v2 (calc)	97.2	4.4E-09	4.8E-02	1.0E-08	1.1E-05	1.19	1.08	0.77
V00DTB6	Block Brief 2000: daily nutrients from food, vitamin B6 (mg) (calc)	100.0	9.5E-09	9.6E-07	2.3E-01	2.3E-06	0.89	1.49	0.72
V00HSPSS	SF-12: physical summary scale for the MOS 12-item short-form health survey (SF-12) v2 (calc)	97.2	1.1E-08	1.6E-03	2.8E-08	2.4E-03	1.29	1.00	0.76
V00DTFOL	Block Brief 2000: daily nutrients from food, folate (mcg) (calc)	100.0	6.3E-08	2.5E-06	4.1E-01	1.1E-05	0.88	1.47	0.75
V00DTPOTA	Block Brief 2000: daily nutrients from food, potassium (mg) (calc)	100.0	7.1E-08	1.1E-06	4.6E-01	3.8E-05	0.87	1.44	0.77
V00DTAIU	Block Brief 2000: daily nutrients from food, vitamin A (IU) (calc)	100.0	1.4E-07	1.7E-04	2.1E-02	2.0E-06	0.96	1.44	0.69
V00DTARE	Block Brief 2000: daily nutrients from food, vitamin A (RE) (calc)	100.0	1.6E-07	2.8E-04	1.7E-02	1.5E-06	0.96	1.43	0.70
V00DTMG	Block Brief 2000: daily nutrients from food, magnesium (mg) (calc)	100.0	1.7E-07	1.4E-06	6.9E-01	1.0E-04	0.85	1.46	0.78
V00DTBCAR	Block Brief 2000: daily nutrients from food, beta-carotene (ug) (calc)	100.0	2.4E-07	3.3E-05	9.3E-02	1.2E-05	0.90	1.47	0.72
V00DTPROA	Block Brief 2000: daily nutrients from food, carotene, provitamin A carotenoids (ug) (calc)	100.0	3.0E-07	2.6E-04	3.9E-02	2.6E-06	0.95	1.46	0.69
V00TIMET2	Q2.20-meter walk: trial 2 time to complete (sec.hundredths/sec)	96.3	4.3E-07	3.1E-02	8.7E-07	7.3E-04	0.85	0.96	1.21
V00DTVITE	Block Brief 2000: daily nutrients from food, vitamin E a-TE (calc)	100.0	7.7E-07	1.0E-04	1.2E-01	1.8E-05	0.94	1.44	0.71
V0020MPACE	20-meter walk: pace (m/sec) (calc)	97.7	8.0E-07	2.9E-02	1.1E-06	2.1E-03	1.16	1.01	0.85
V00TIMET1	Q1.20-meter walk: trial 1 time to complete (sec.hundredths/sec)	97.7	8.5E-07	2.4E-02	1.2E-06	2.6E-03	0.84	1.02	1.15
V00DTVITC	Block Brief 2000: daily nutrients from food, vitamin C (mg) (calc)	100.0	1.7E-06	5.2E-05	3.5E-01	7.3E-05	0.86	1.49	0.75
V00CSTIME1	Repeated chair stands: trial 1 time (sec.hundredths/sec)	87.4	3.4E-06	3.2E-04	7.6E-05	2.8E-01	0.73	1.02	1.32
V00DTMETH	Block Brief 2000: daily nutrients from food, methionine (mg) (calc)	100.0	5.2E-06	2.9E-06	1.0E+00	1.5E-02	0.76	1.42	0.90
V00DTB1	Block Brief 2000: daily nutrients from food, thiamin (B1) (mg) (calc)	100.0	5.4E-06	1.5E-05	1.0E+00	1.0E-03	0.84	1.37	0.85
V00DTCARB	Block Brief 2000: daily nutrients from food, carbohydrate (g) (calc)	100.0	5.4E-06	3.2E-06	1.0E+00	1.1E-02	0.77	1.31	0.97
V00DTRIBO	Block Brief 2000: daily nutrients from food, riboflavin (B2) (mg) (calc)	100.0	6.7E-06	3.7E-05	1.0E+00	5.4E-04	0.89	1.39	0.79
V00DTACAR	Block Brief 2000: daily nutrients from food, alpha-carotene (ug) (calc)	100.0	7.2E-06	1.6E-01	9.2E-04	7.9E-06	1.17	1.44	0.54
V00DTNIAC	Block Brief 2000: daily nutrients from food, niacin (mg) (calc)	100.0	7.8E-06	2.2E-05	1.0E+00	1.4E-03	0.82	1.44	0.82
V00DTPROT	Block Brief 2000: daily nutrients from food, protein (g) (calc)	100.0	7.8E-06	6.7E-06	1.0E+00	6.7E-03	0.79	1.43	0.86
V00DTCYST	Block Brief 2000: daily nutrients from food, cysteine (mg) (calc)	100.0	8.0E-06	4.7E-06	1.0E+00	1.2E-02	0.76	1.40	0.91
V00CSPACE	Repeated chair stand: pace in stands/sec (calc)	87.4	8.1E-06	7.3E-04	9.9E-05	3.2E-01	1.33	0.94	0.78
V00DTKCAL	Block Brief 2000: daily nutrients from food, calories (Kcal) (calc)	100.0	1.1E-05	4.6E-06	1.0E+00	3.7E-02	0.76	1.31	0.98
V00CSTIME2	Repeated chair stands: trial 2 time (sec.hundredths/sec)	83.3	1.2E-05	3.1E-04	3.1E-04	1.0E+00	0.76	1.11	1.17
V00DTZINC	Block Brief 2000: daily nutrients from food, zinc (mg) (calc)	100.0	1.2E-05	3.5E-05	1.0E+00	1.4E-03	0.86	1.43	0.78

V00DTFE	Block Brief 2000: daily nutrients from food, iron (mg) (calc)	100.0	1.2E-05	9.9E-05	1.0E+00	4.9E-04	0.89	1.40	0.78
V00DTPHOS	Block Brief 2000: daily nutrients from food, phosphorus (mg) (calc)	100.0	1.6E-05	3.3E-05	1.0E+00	2.4E-03	0.83	1.39	0.84
V00DTCHOL	Block Brief 2000: daily nutrients from food, cholesterol (mg) (calc)	100.0	1.9E-05	2.4E-05	1.3E-02	1.0E+00	0.67	1.29	1.11
V00SRVMEAT	Block Brief 2000: daily servings of meat, fish, poultry, beans and eggs (calc)	100.0	2.5E-05	1.2E-05	1.9E-01	2.5E-01	0.68	1.43	0.99
V00DTNA	Block Brief 2000: daily nutrients from food, sodium (mg) (calc)	100.0	4.6E-05	1.5E-05	9.5E-01	1.2E-01	0.75	1.31	0.99
V00DTCALC	Block Brief 2000: daily nutrients from food, calcium (mg) (calc)	100.0	5.8E-05	7.6E-04	6.6E-01	6.8E-04	0.92	1.38	0.76
V00DTSFAT	Block Brief 2000: daily nutrients from food, saturated fat (g) (calc)	100.0	7.2E-05	3.5E-05	1.6E-01	5.1E-01	0.70	1.31	1.05
V00DTFAT	Block Brief 2000: daily nutrients from food, total fat (g) (calc)	100.0	1.0E-04	4.6E-05	2.7E-01	3.8E-01	0.71	1.32	1.04
V00DTANZN	Block Brief 2000: daily nutrients from food, zinc from animal sources (mg) (calc)	100.0	1.1E-04	7.0E-05	1.0E+00	5.0E-02	0.78	1.42	0.87
V00FIBGRN	Block Brief 2000: daily dietary fiber from grains (g) (calc)	100.0	1.2E-04	2.9E-04	1.0E+00	5.1E-03	0.82	1.38	0.86
V00DTLIN	Block Brief 2000: daily nutrients from food, polyunsaturated fat (g) (calc)	100.0	1.8E-04	8.6E-05	1.0E+00	6.7E-02	0.73	1.34	0.99
V00SUPCA	Block Brief 2000: average daily nutrients from vitamin supplements, calcium (mg) (calc)	100.0	2.1E-04	1.0E+00	9.5E-04	2.0E-04	1.54	1.25	0.44
V00NUMSTOP	Q4.400-meter walk: total number rest stops	87.4	2.2E-04	1.5E-01	2.1E-04	7.0E-02	0.00	0.30	13.33
V00DTOLEC	Block Brief 2000: daily nutrients from food, monounsaturated fat (g) (calc)	100.0	2.3E-04	1.1E-04	2.3E-01	5.7E-01	0.69	1.30	1.07
V00SRVFAT	Block Brief 2000: daily servings of fats, oils, sweets and sodas (calc)	100.0	2.4E-04	3.0E-04	1.0E+00	1.7E-02	0.80	1.35	0.90
P01BMI	Body mass index (calc)	100.0	3.0E-04	1.7E-02	8.4E-04	2.5E-01	0.91	1.01	1.09
V00STEPST2	Q2.20-meter walk: trial 2 number of steps	96.3	3.0E-04	1.4E-01	4.0E-04	2.7E-02	0.93	0.99	1.08
V00DTB12	Block Brief 2000: daily nutrients from food, vitamin B12 (ug) (calc)	100.0	4.2E-04	1.7E-03	1.0E+00	4.6E-03	0.87	1.44	0.76
V00PCTALCH	Block Brief 2000: daily percent of calories from alcoholic beverages (kcal) (calc)	100.0	4.2E-04	1.7E-03	7.7E-03	1.0E+00	1.49	0.65	0.97
V00WKHR7CV	Occupational activities: number of hours worked, past 7 days (calc)	100.0	5.3E-04	1.0E+00	7.8E-04	1.1E-03	1.66	1.26	0.38
V00STEPST1	Q1.20-meter walk: trial 1 number of steps	97.7	5.9E-04	7.9E-02	7.5E-04	1.0E-01	0.92	1.02	1.06
V00SRVGRN	Block Brief 2000: daily servings of bread, cereals, rice and pasta (calc)	100.0	7.3E-04	5.2E-04	1.0E+00	8.1E-02	0.79	1.33	0.93
V00SRVDRY	Block Brief 2000: daily servings of milk, yogurt and cheese (calc)	100.0	1.6E-03	1.0E-01	1.0E-01	2.3E-03	1.04	1.38	0.66
V00DTLYC	Block Brief 2000: daily nutrients from food, lycopene (carotenoid) (ug) (calc)	100.0	2.2E-03	3.2E-02	5.0E-01	4.5E-03	0.89	1.39	0.79
V00400MTIM	400-meter walk: total time at 400-m or at stop (sec) (calc)	87.4	3.1E-03	2.0E-01	7.6E-03	4.8E-02	0.89	0.95	1.17
V00DTRET	Block Brief 2000: daily nutrients from food, retinol (preformed Vit. A, ug) (calc)	100.0	3.5E-03	8.1E-02	3.6E-01	4.0E-03	0.98	1.34	0.74
V00PASE	Physical Activity Scale for the Elderly (PASE) score (calc)	100.0	6.0E-03	1.0E+00	7.5E-03	1.5E-02	1.20	1.18	0.68
V00COMORB	Comorbidity Score (calc)	98.6	7.1E-03	1.8E-01	6.2E-03	4.1E-01	0.46	0.94	1.96
V00HRB4WLK	400-meter walk: heart rate before walk	87.9	7.7E-03	5.4E-02	1.8E-02	1.0E+00	0.92	1.02	1.07
V00DTCRYP	Block Brief 2000: daily nutrients from food, cryptoxanthin (carotenoid) (ug) (calc)	100.0	9.5E-03	1.8E-02	1.0E+00	5.6E-02	0.80	1.45	0.83
V00SMKPKYR	Pack-years of smoking cigarettes (calc)	94.4	9.5E-03	3.9E-01	8.2E-03	2.2E-01	0.55	0.88	1.82
V00AGE	Age (calc, used for study eligibility)	100.0	2.0E-02	1.0E+00	2.1E-02	8.8E-02	1.05	1.02	0.93

V00SUPFE	Block Brief 2000: average daily nutrients from vitamin supplements, iron (mg) (calc)	100.0	2.4E-02	1.0E+00	8.4E-02	2.0E-02	1.17	1.16	0.72
P01WEIGHT	Current scale weight (kg) (calc)	100.0	4.3E-02	2.6E-01	5.8E-02	1.0E+00	0.93	1.01	1.06
V00PCTPROT	Block Brief 2000: daily percent of calories from protein (kcal) (calc)	100.0	4.3E-02	5.8E-01	3.3E-01	4.6E-02	1.03	1.08	0.90
V00BPDIAS	Q6.Blood pressure: diastolic (mm Hg)	100.0	4.5E-02	2.3E-01	7.5E-02	1.0E+00	0.95	1.00	1.05
V00DTCAFFN	Block Brief 2000: daily nutrients from food, caffeine (mg) (calc)	100.0	4.6E-02	1.0E+00	4.7E-02	2.4E-01	0.44	0.69	2.60
V00ABCIRC	Abdominal circumference (cm) (calc)	98.1	5.5E-02	1.5E-01	1.6E-01	1.0E+00	0.96	1.00	1.03
V00RPAVG	Radial pulse: average beats per minute	100.0	6.9E-02	9.7E-02	3.3E-01	1.0E+00	0.95	1.03	1.03
V00WTMAXKG	Maximum adult weight, self-reported (kg) (calc)	98.6	7.3E-02	1.3E-01	2.7E-01	1.0E+00	0.94	1.02	1.04
V00HR400WK	400-meter walk: heart rate at 400-m or at stop	87.4	7.6E-02	8.0E-02	7.2E-01	1.0E+00	0.95	1.03	1.01
V00400MTR	400-meter walk: total meters walked (calc)	87.4	8.1E-02	8.5E-01	7.6E-02	6.4E-01	1.05	1.02	0.93
V00RLWGT	Q5.Isometric strength: right leg weight (N)	81.4	1.0E-01	1.8E-01	1.0E+00	2.5E-01	1.04	0.90	1.06
V00PCTFAT	Block Brief 2000: daily percent of calories from fat (kcal) (calc)	100.0	1.0E-01	6.9E-01	1.4E-01	6.9E-01	0.95	1.00	1.05
V00BAPPROT	Block Brief 2000: daily percent of calories from protein, alcoholic beverages excluded from denominator (kcal) (calc)	100.0	1.3E-01	1.0E+00	2.5E-01	1.7E-01	1.04	1.06	0.90
V00BAPFAT	Block Brief 2000: daily percent of calories from fat, alcoholic beverages excluded from denominator (kcal) (calc)	100.0	1.4E-01	1.0E+00	1.7E-01	2.9E-01	0.97	0.98	1.06
V00BPSYS	Q6.Blood pressure: systolic (mm Hg)	100.0	1.8E-01	1.0E+00	2.4E-01	3.9E-01	0.98	0.98	1.04
V00LLWGT	Q16.Isometric strength: left leg weight (N)	81.4	2.2E-01	7.9E-01	1.0E+00	2.7E-01	1.01	0.92	1.08
V00RX30NUM	Q49a.MIF: total number of medications recorded	89.3	2.2E-01	2.6E-01	9.3E-01	1.0E+00	0.84	1.08	1.09
V00DTVITD	Block Brief 2000: daily nutrients from food, vitamin D (IU) (calc)	100.0	2.5E-01	1.0E+00	7.8E-01	3.1E-01	0.97	1.20	0.85
P01HEIGHT	Average height (mm) (calc)	98.6	2.7E-01	7.7E-01	4.3E-01	1.0E+00	1.01	1.00	0.99
V00HT25MM	Height at age 25, self-reported (mm) (calc)	96.3	2.8E-01	5.1E-01	6.3E-01	1.0E+00	1.01	1.00	0.99
P01BPDAYCV	How many days limit activities due to back pain, past 30 days (calc)	100.0	3.1E-01	1.0E+00	3.8E-01	1.0E+00	1.05	1.01	0.94
V00PCTSWT	Block Brief 2000: daily percent of calories from sweets, desserts (kcal) (calc)	100.0	3.6E-01	1.0E+00	1.0E+00	4.7E-01	0.82	0.74	1.56
V00BAPCARB	Block Brief 2000: daily percent of calories from carbohydrate, alcoholic beverages excluded from denominator (kcal) (calc)	100.0	4.0E-01	1.0E+00	5.6E-01	9.9E-01	1.02	1.01	0.97
P01BPTOT	Total days in bed and/or limited activity due to back pain, past 30 days (calc)	100.0	4.6E-01	1.0E+00	7.4E-01	7.9E-01	0.96	0.97	1.07
V00WTMINKG	Minimum adult weight, self-reported (kg) (calc)	99.1	6.1E-01	1.0E+00	9.9E-01	1.0E+00	1.03	1.01	0.96
V00DTDAID	Block Brief 2000: daily nutrients from food, daidzein (ug) (calc)	100.0	6.4E-01	1.0E+00	1.0E+00	1.0E+00	0.61	0.47	2.72
V00DTGEN	Block Brief 2000: daily nutrients from food, genistein (ug) (calc)	100.0	6.4E-01	1.0E+00	1.0E+00	1.0E+00	0.61	0.47	2.72
V00PCTCARB	Block Brief 2000: daily percent of calories from carbohydrate (kcal) (calc)	100.0	6.5E-01	1.0E+00	1.0E+00	1.0E+00	1.01	1.01	0.98
V00PSMKYR	Years of smoking pipe, cigars or cigarillos (calc)	89.8	9.6E-01	1.0E+00	1.0E+00	1.0E+00	1.59	1.85	0.17
V00WT25KG	Weight at age 25, self-reported (kg) (calc)	99.5	9.6E-01	1.0E+00	1.0E+00	1.0E+00	1.01	0.99	1.01