| **Study** | **Participants** | **Exposure** | **Intake Status Ascertainment** | **Results** |
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| Cook, 2009125; Satterfield, 199122; Hebert, 1995107; Cook, 201631; Cook, 2014126  Location: US  Setting: Community  Design: Prospective Cohort study  Study Name: TOHP Follow-up (TOHP I and TOHP II)  . | Study of: Adults N: 625  % Male: 69.4 Mean Age/Range/Age at Baseline: Men: 30-44y, 915; 45-54y, 686; Women: 30-44y, 366; 45-55y, 339. Race: Men: white 1418; Black, 139; Other, 44; Women: white 504; Black, 183; Other, 18 Systolic BP: Men: < 125, 762; >= 125, 839; women: <125, 298; >= 125, 407 Diastolic BP: Men: 80-84, 894; 85-89, 707; women: 80-84, 387; 85-89, 318. Magnesium: NR Calcium: NR Other Minerals: NR Mean BMI: Men: < 25, 238; 25 to <30. 777; >= 30 586; Women, <25 138; 25 to <30 279; >= 30 288. % with Hypertension: NR % with history of CVD: NR % with Type 2 diabetes: NR % with Kidney disease: NR % with history of Kidney stones: NR  Inclusion: Participants who had not been randomized to an active sodium reduction intervention in TOHP I and II were included. Exclusion: Participants who had CVD events during the trial periods, and who had no valid urinary excretion measures were excluded. | Exposure Type: Sodium to Potassium Excretion Ratio Exposure Unit: linear  Duration(in months): 120 to 180 (10 to 15 years) Exposure to Follow Up Time: 10 years after the end of TOHP I and 5 years after the end of TOHP II  Dose format: NR NR, Dose: NR | Sodium measure: More than one 24-hour urinary analysis without reported quality control measure Best sodium measure recorded: twice, at 5 (life- style interventions) or 7 (nutritional supplement interventions) scheduled collections in TOHP I and at 3 to 5 scheduled collections during TOHP II Potassium measure: More than one 24-hour urinary analysis without reported quality control measure\_1 Best potassium measure recorded: twice, at 5 (life- style interventions) or 7 (nutritional supplement interventions) scheduled collections in TOHP I and at 3 to 5 scheduled collections during TOHP II Mortality Outcomes-Method of Ascertainment: National death index CVD, CHD, stroke, kidney stones/disease Outcomes-Method of ascertainment: medical records | Cardiovascular Events (Including stroke, myocardial infarction (MI), coronary artery bypass graft, percutaneous transluminal coronary angioplasty, and death from cardiovascular causes) (linear/Outcome): Median, 5; range, 1-7 in TOHP I; median, 4; range, 1-5 in TOHP II FU NR cases: 25, total: 625 Adjustment: Clinic,treatment assignment, age, sex, race/ethnicity, education status, family history of cardiovascular disease, baseline weight, alcohol, smoking, exercise, and changes in weight, smoking, and exercise Among female participants, no association between sodium to potassium excretion ratio and risk of CVD adjusting for treatment assignment. |
| O'Donnell, 2014124  Location: 17 low-, middle-, and high-income countries  Setting: Community  Design: Prospective Cohort study  Study Name: The Prospective Urban and Rural Epidemiology (PURE) study  . | Study of: Adults N: 101945  % Male: 42.5 Mean Age/Range/Age at Baseline: mean 51.01 (SD 9.72) years Race: 48.4 Asian Systolic BP: mean 131.7 (SD 22.30) Diastolic BP: mean 82.24 (SD 15.65) Magnesium: NR Calcium: NR Other Minerals: NR Mean BMI: NR % with Hypertension: 41.5 % with history of CVD: 8.3 % with Type 2 diabetes: 9.1 % with Kidney disease: NR % with history of Kidney stones: NR  Inclusion: Study selected a number of countries representing different economic levels, and selected urban and rural communities based on predetermined guidelines. Households and individuals were selected to fulfill maximum representativeness. Selected individuals aged between 35-70. Exclusion: Excluded those who refused to participate. | Exposure Type: Estimated Potassium Excretion (Kawasaki equation) Exposure Unit: g/day  Exposure Type: Estimated Sodium Excretion (Kawasaki equation) Exposure Unit: g/day  Duration: NR Exposure to Follow Up Time: mean 3.7 years  Dose format: range G1, Dose: <3 G2, Dose: 3-5.99 G3, Dose: >=6 Q1, Dose: <1.50 Q2, Dose: 1.50-1.99 Q3, Dose: 2.00-2.49 Q4, Dose: 2.50-3.00 Q5, Dose: >3.00 | Sodium measure: Partial or spot urine with validated prediction equation Best sodium measure recorded: collected one morning fasting midstream urine sample (Kawasaki formula) Sodium, Method of Validation: A validation study using the Kawasaki formula with actual 24-hour urine collection in 1,083 people from 11 countries showed an intraclass correlation coefficient of 0.71 (95% confidence interval (CI), 0.65 to 0.76). Potassium measure: Partial or spot urine with validated prediction equation\_1 Best potassium measure recorded: collected one morning fasting midstream urine sample (Kawasaki formula) Potassium, Method of Validation: A validation study using the Kawasaki formula with actual 24-hour urine collection in 1,083 people from 11 countries showed an intraclass correlation coefficient of 0.71 (95% confidence interval (CI), 0.65 to 0.76). Mortality Outcomes-Method of Ascertainment: Standardized case-report forms (adjudicated by trained physicians using standardized definitions, Contact family members, Captured best available information from reliable sources CVD, CHD, stroke, kidney stones/disease Outcomes-Method of ascertainment: Interview with participant or proxy, Standardized case-report forms (adjudicated by trained physicians using standardized definitions), Captured best available information from reliable sources | All-cause mortality and Major Cardiovascular Event (g/day/Outcome): Mean 3.7 y FU G1 cases: NR, total: 10810, G2 cases: NR, total: 67794, G3 cases: NR, total: 23341 Adjustment: All analyses adjusted for age, sex, education, ethnicity (Asian versus non-Asian), alcohol intake, diabetes mellitus, body mass index, a history of cardiovascular events and current smoking, using logistic regression with generalized estimating equation models. The association between estimated sodium excretion and the composite outcome was strongest among participants with hypertension, with an increased risk at an estimated sodium excretion of 6.00 g or more per day.  All-cause mortality and Major Cardiovascular Event (g/day/Outcome): Mean 3.7 y FU Q1 cases: NR, total: 14262, Q2 cases: NR, total: 31466, Q3 cases: NR, total: 30956, Q4 cases: NR, total: 17171, Q5 cases: NR, total: 8032 Adjustment: All analyses adjusted for age, sex, education, ethnicity (Asian versus non-Asian), alcohol intake, diabetes mellitus, body mass index, a history of cardiovascular events and current smoking, using logistic regression with generalized estimating equation models. No significant association between potassium intake and risk of death and major CVD events among female participants. |