Appendix H. Table 1. Followup urine biochemical measures for diet trials

| **Study** | **Treatment Groups, Urine Collection Method**  | **Calcium,****Oxalate,****Ca-Ox Product,** **Ca-Ox Supersaturation** | **Uric Acid, Uric-A Supersaturation** | **Phosphate, Ca-P Supersaturation** | **Citrate, Sodium, Magnesium** | **Potassium (K), Volume, pH** |
| --- | --- | --- | --- | --- | --- | --- |
| Dussol, 20081 | A. Low animal protein diet, decrease intake of animal protein by limiting consumption of meat and fish to 3 servings per week and to not exceed 100 g/day of milk products. The target was to obtain a daily contribution of protein to energy of <13% (n=55).B. High fiber diet, increase intake of fruits and vegetables and to substitute their usual cereals with whole grain dietary products in order to limit the increase in energy. The target was to obtain a 25-g/day increase in fiber intake.Subjects were not instructed to exclude fruits and vegetables particularly rich in oxalate (n=60).C. Controls (usual diet) (n=60)24 hour collection | CALCIUMBaselineMean mmol (SD): A (n=55) 6.8 (3.1)B (n=60) 6.8 (3.1)C (n=60) 6.8 (3.1)% hyperCa: NRF/u Time 1: 12 mo.Mean mmol (SD): A (n=41) 6.0 (2.4)B (n=45) 6.9 (3.0)C (n=37) 5.8 (3.0)% hyperCa: NROXALATEBaselineMean mmol (SD): A (n=55) 0.30 (0.1)B (n=60) 0.31 (0.2)C (n=60) 0.32 (0.1)% hyperOx: NRF/u Time 1: 12 mo.Mean mmol (SD): A (n=41) 0.25 (0.1)B (n=45) 0.29 (0.1)C (n=37) 0.27 (0.1)% hyperOx: NRCA-OX PRODUCTBaselineNMean (SD): NRTime 1: mo. | URIC ACIDBaselineNMean (SD): NR% hyperUA: NRF/u Time 1: mo.NMean (SD): NR% hyperUA: NRURIC-A SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | PHOSPHATEBaselineNMean (SD): NR% hyperP: NRF/u Time 1: mo.NMean (SD): NR% hyperP: NRCA-P SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | CITRATEBaselineMean mmol (SD): A (n=55) 2.9 (1.9)B (n=60) 3.3 (3.2)C (n=60) 3.2 (2.5)% hypoCit: NRF/u Time 1: 12 mo.Mean mmol (SD): A (n=41) 2.8 (1.1)B (n=45) (2.3 (1.2)C (n=37) 2.6 (1.2)% hypoCit: NRSODIUMBaselineMean mmol (SD): A (n=55) 149 (44)B (n=60) 163 (58)C (n=60) 164 (56)% hyperNa: NRF/u Time 1: 12 mo.Mean mmol (SD): A (n=41) 167 (46)B (n=45) 144 (70)C (n=37) 146 (64)% hyperNa: NRMAGNESIUMBaselineNMean (SD): NR% hypoMg: NR | POTASSIUMBaselineNMean (SD): NR% hypoK: NRF/u Time 1: mo.NMean (SD): NR% hypoK: NRVOLUMEBaselineMean L (SD): A (n=55) 1.9 (0.8)B (n=60) 2.0 (0.7)C (n=60) 1.8 (0.7)F/u Time 1: 12 mo.Mean L (SD): A (n=41) 2.0 (0.9)B (n=45) 2.0 (0.7)C (n=37) 1.8 (0.6)pHBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR |

| Appendix H. Table 1. Followup urine biochemical measures for diet trials (continued) |
| --- |
| **Study** | **Treatment Groups, Urine Collection Method**  | **Calcium,****Oxalate,****Ca-Ox Product,** **Ca-Ox Supersaturation** | **Uric Acid, Uric-A Supersaturation** | **Phosphate, Ca-P Supersaturation** | **Citrate, Sodium, Magnesium** | **Potassium (K), Volume, pH** |
|  | Study reported any data on participant compliance/adherence: No | NMean (SD): NRCA-OX SUPERSATBaselineNMean (SD): NRTime 1: mo.NMean (SD): NR |  |  | F/u Time 1: mo.NMean (SD): NR% hypoMg: NR |  |
| Borghi, 20023 | A. Low calcium diet (<10 mmol) (n= 60)B. Low protein (<93 g) and low sodium (50 mmol) diet (n=60)24 hour collectionStudy reported any data on participant compliance/adherence: Yes (urine specimen obtained one week after randomization was analyzed to check compliance with the dietary regimen, but no data was reported) | CALCIUMBaselineMean mmol (SD): A (n=60) 11.0 (2.5)B (n=60) 11.5 (2.5)% hyperCa: NRF/u Time 1: 12 mo.Mean mmol (SD): A (n=51) 7.6 (2.9)B (n=53) 7.3 (2.5)% hyperCa: NROXALATEBaselineMean µmol (SD): A (n=60) 367 (136)B (n=60) 411 (132)% hyperOx: NRF/u Time 1:12 mo.Mean µmol (SD): A (n=51) 422 (144)B (n=53) 344 (92) [p<0.001]% hyperOx: NRCA-OX PRODUCTBaselineMean molX10-6/L (SD): A (n=60) 2.07 (2.11)B (n=60) 1.82 (1.26)Time 1: 12 mo.Mean molX10-6/L (SD): A (n=51) 1.25 (1.17)B (n=53) 0.70 (0.48) [p<0.01]CA-OX SUPERSATBaselineMean (SD): A (n=60) 10.1 (5.5)B (n=60) 9.6 (4.2)Time 1: 12 mo.Mean (SD): A (n=51) 7.3 (4.3)B (n=53) 5.1 (2.5) [p<0.01] | URIC ACIDBaselineNMean (SD): NR% hyperUA: NRF/u Time 1: mo.NMean (SD): NR% hyperUA: NRURIC-A SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | PHOSPHATEBaselineNMean (SD): NR% hyperP: NRF/u Time 1: mo.NMean (SD): NR% hyperP: NRCA-P SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | CITRATEBaselineNMean (SD): NR% hypoCit: NRF/u Time 1: mo.NMean (SD): NR% hypoCit: NRSODIUMBaselineMean mmol (SD): A (n=60) 227 (59)B (n=60) 241 (67)% hyperNa: NRF/u Time 1: 12 mo.Mean mmol (SD): A (n=51) 210 (55)B (n=53) 130 (85) [p<0.001]% hyperNa: NRMAGNESIUMBaselineNMean (SD): NR% hypoMg: NRF/u Time 1: mo.NMean (SD): NR% hypoMg: NR | POTASSIUMBaselineNMean (SD): NR% hypoK: NRF/u Time 1: mo.NMean (SD): NR% hypoK: NRVOLUMEBaselineMean mL (SD): A (n=60) 1755 (844)B (n=60) 1852 (643)F/u Time 1: 12 mo.Mean mL (SD): A (n=51) 1905 (713)B (n=53) 2095 (623)pHBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR |
| Di Silverio, 20004 | A. “Fiuggi water’” oligo-mineral water with a calcium content of 15 mg/I, 2 liters within a 24-hour period (n=192)B. tap water with a calcium content between 55 and 130 mg/l, 2 liters within a 24-hour period (n=192)24 hour collectionStudy reported any data on participant compliance/adherence: No | CALCIUMBaselineMean mg (SD): A (n=192) 270.67B (n=192) 283.09% hyperCa: NRF/u Time 1: mo.NMean (SD): NR% hyperCa: NROXALATEBaselineNMean (SD): NR% hyperOx: NRF/u Time 1: mo.NMean (SD): NR% hyperOx: NRCA-OX PRODUCTBaselineNMean (SD): NRTime 1: mo.NMean (SD): NRCA-OX SUPERSATBaselineNMean (SD): NRTime 1: mo.NMean (SD): NR | URIC ACIDBaselineMean mg (SD): A (n=192) 554.95B (n=192) 577.45% hyperUA: NRF/u Time 1: mo.NMean (SD): NR% hyperUA: NRURIC-A SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | PHOSPHATEBaselineMean mg (SD): A (n=192) 768.92B (n=192) 841.08% hyperP: NRF/u Time 1: mo.NMean (SD): NR% hyperP: NRCA-P SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | CITRATEBaselineNMean (SD): NR% hypoCit: NRF/u Time 1: mo.NMean (SD): NR% hypoCit: NRSODIUMBaselineMean mmol (SD): A (n=192) 186.3B (n=192) 181.1% hyperNa: NRF/u Time 1: mo.NMean (SD): NR% hyperNa: NRMAGNESIUMBaselineMean mg (SD): A (n=192) 107.4B (n=192) 105.8% hypoMg: NRF/u Time 1: mo.NMean (SD): NR% hypoMg: NR | POTASSIUMBaselineNMean (SD): NR% hypoK: NRF/u Time 1: mo.NMean (SD): NR% hypoK: NRVOLUMEBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NRpHBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR |
| Kočvara, 19995 | A. Tailored diet (n=113)B. General diet (n=94)24 hour collectionStudy reported any data on participant compliance/adherence: No | CALCIUMBaselineMean mmol (SD): A (n=113) 5.09 (2.36)B (n=94) NR% hyperCa: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=113) 5.77 (2.30) [p<0.01]B (n=94) NR% hyperCa: NROXALATEBaselineMean µmol (SD): A (n=88) 351 (156)B (n=94) NR% hyperOx: NRF/u Time 1:6 mo.Mean µmol (SD): A (n=88) 334 (138)B (n=94) NR% hyperOx: NRCA-OX PRODUCTBaselineNMean (SD): NRTime 1: mo.NMean (SD): NRCA-OX SUPERSATBaselineNMean (SD): NRTime 1: mo.NMean (SD): NR | URIC ACIDBaselineMean mmol (SD): A (n=113) 3.74 (1.18)B (n=94) NR% hyperUA: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=113) 3.62 (1.34)B (n=94) NR% hyperUA: NRURIC-A SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | PHOSPHATEBaselineNMean (SD): NR% hyperP: NRF/u Time 1: mo.NMean (SD): NR% hyperP: NRCA-P SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | CITRATEBaselineMean mmol (SD): A (n=113) 3.08 (1.54)B (n=94) NR% hypoCit: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=113) 2.99 (1.43)B (n=94) NR% hypoCit: NRSODIUMBaselineNMean (SD): NR% hyperNa: NRF/u Time 1: mo.NMean (SD): NR% hyperNa: NRMAGNESIUMBaselineMean mmol (SD): A (n=113) 4.13 (1.44)B (n=94) NR% hypoMg: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=113) 4.78 (1.94) [p<0.01]B (n=94) NR% hypoMg: NR | POTASSIUMBaselineNMean (SD): NR% hypoK: NRF/u Time 1: mo.NMean (SD): NR% hypoK: NRVOLUMEBaselineMean mL (SD): A (n=113) 2354 (645)B (n=94) NRF/u Time 1: 6 mo.Mean mL (SD): A (n=113) 2342 (693)B (n=94) NRpHBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR |
| Borghi, 19966 | A. Achieve urine volume >2 liters/day.Urine volume to be measured every 2 months to ensure high volume (n=110)B. No treatment (n=110)24 hour collectionStudy reported any data on participant compliance/adherence: No | CALCIUMBaselineMean mg (SD): A (n=110) 244 (109)B (n=110) 266 (112)% hyperCa: NRF/u Time 1: mo.NMean (SD): NR% hyperCa: NROXALATEBaselineMean mg (SD): A (n=110) 28.7 (9.5)B (n=110) 28.6 (10.5)% hyperOx: NRF/u Time 1: mo.NMean (SD): NR% hyperOx: NRCA-OX PRODUCTBaselineNMean (SD): NRTime 1: mo.NMean (SD): NRCA-OX SUPERSATBaselineMean (SD): A (n=110) 10.1 (4.9)B (n=110) 11.2 (5.3)Time 1: 12 mo.Mean (SD): A (n=110) 5.2 (3.2) [p<0.0001]B (n=110) 8.1 (5.2) | URIC ACIDBaselineMean mg (SD): A (n=110) 588 (183)B (n=110) 572 (211)% hyperUA: NRF/u Time 1: mo.NMean (SD): NR% hyperUA: NRURIC-A SUPERSATBaselineMean (SD): A (n=110) 3.48 (2.95)B (n=110) 3.64 (3.08)F/u Time 1: 12 mo.Mean (SD): A (n=110) 1.72 (1.49) [p<0.001]B (n=110) 2.66 (2.3) | PHOSPHATEBaselineNMean mg (SD): NRA (n=110) 707 (250)B (n=110) 670 (255)% hyperP: NRF/u Time 1: mo.NMean (SD): NR% hyperP: NRCA-P SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | CITRATEBaselineMean mg (SD): A (n=110) 512 (207)B (n=110) 530 (259)% hypoCit: NRF/u Time 1: mo.NMean (SD): NR% hypoCit: NRSODIUMBaselineMean mmol (SD): A (n=110) 158 (52)B (n=110) 162 (55)% hyperNa: NRF/u Time 1: mo.NMean (SD): NR% hyperNa: NRMAGNESIUMBaselineMean mg (SD): A (n=110) 85 (31)B (n=110) 88 (33)% hypoMg: NRF/u Time 1: mo.NMean (SD): NR% hypoMg: NR | POTASSIUMBaselineMean mmol (SD): A (n=110) 47 (14)B (n=110) 47 (15)% hypoK: NRF/u Time 1: mo.NMean (SD): NR% hypoK: NRVOLUMEBaselineMean mL (SD): A (n=110) 1068 (240)B (n=110) 1008 (231)F/u Time 1: mo.Mean mL (SD): A (n=110) 2127 (546) [p<0.0001]B (n=110) 1258 (292)pHBaselineNMean (SD): A (n=110) 5.91 (0.49)B (n=110) 5.90 (0.5)F/u Time 1: mo.NMean (SD): NR |
| Hiatt, 19967 | A. Low animal protein and high fiber diet: Decrease intake of animal protein (56 to 64 gm/day) and of purine containing foods (75 mg/day); increase fruits,vegetables, and whole grains; and add 1/4 cup bran/day (n= 51, 50 included in study, 1 excluded post randomization)B. Standard advice instructed on fluid intake and adequate calcium intake(n=51, 49 included in study 2 excluded post randomization)24 hour collectionStudy reported any data on participant compliance/adherence: No | CALCIUMBaselineMean mmol (SD): A (n=42) 5.21 (0.36)B (n=37) 5.24 (0.49)% hyperCa: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=31) 5.5B (n=28) 5.9% hyperCa: NROXALATEBaselineMean mmol (SD): A (n=41) 445 (32)B (n=35) 474 (43)% hyperOx: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=32) 470B (n=28) 620% hyperOx: NRCA-OX PRODUCTBaselineNMean (SD): NRTime 1: mo.NMean (SD): NRCA-OX SUPERSATBaselineNMean (SD): NRTime 1: mo.NMean (SD): NR | URIC ACIDBaselineMean mmol (SD): A (n=43) 4.36 (0.22)B (n=37) 4.40 (0.29)% hyperUA: NRF/u Time 1: 6 mo.Mean mmol (SD): A (n=32) 3.8B (n=28) 4.2% hyperUA: NRURIC-A SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | PHOSPHATEBaselineNMean (SD): NR% hyperP: NRF/u Time 1: mo.NMean (SD): NR% hyperP: NRCA-P SUPERSATBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR | CITRATEBaselineNMean (SD): NR% hypoCit: NRF/u Time 1: mo.NMean (SD): NR% hypoCit: NRSODIUMBaselineNMean (SD): NR% hyperNa: NRF/u Time 1: mo.NMean (SD): NR% hyperNa: NRMAGNESIUMBaselineNMean (SD): NR% hypoMg: NRF/u Time 1: mo.NMean (SD): NR% hypoMg: NR | POTASSIUMBaselineNMean (SD): NR% hypoK: NRF/u Time 1: mo.NMean (SD): NR% hypoK: NRVOLUMEBaselineMean mL (SD): A (n=43) 1510 (111)B (n=37) 1459 (105)F/u Time 1: 6 mo.Mean mL (SD): A (n=29) 1800B (n=32) 1950pHBaselineNMean (SD): NRF/u Time 1: mo.NMean (SD): NR |

**Abbreviation:** NR = not reported