

**Supplementary Table 1.** Study visit timeline

	<b>Arrival 0800</b>	<b>Baseline 0900</b>	<b>30 minutes after ingestion</b>	<b>60 minutes after ingestion</b>	<b>120 minutes after ingestion</b>	<b>180 minutes after ingestion</b>
<b>Standard light breakfast</b>	x					
<b>Insertion of iv cannula</b>		x				
<b>Intake of frusemide 40mg tablet</b>		x				
<b>Blood sample</b>		30ml	15ml	15ml	15ml	15ml
<b>Urine sample</b>		x	x	x	x	x
<b>Blood pressure measurement</b>		x	x	x	x	x
<b>Water ingestion</b>	500ml					
<b>Water ingestion (equivalent to urine volume)</b>		x	x	x	x	x

**Supplementary Table 2.** *SLC2A9* rs11942223 analysis based on ancestral groups. ANCOVA p-values are shown (adjusted for age, sex, and baseline FEUA or serum urate as appropriate).

		<b>Change in FEUA</b>	<b>Change in serum urate</b>
<b>Māori and Pacific</b>	P <sub>SNP</sub>	0.23	0.66
	P <sub>time</sub>	<0.0001	0.03
	P <sub>time*SNP</sub>	0.29	0.09
<b>European</b>	P <sub>SNP</sub>	0.52	0.27
	P <sub>time</sub>	<0.0001	0.19
	P <sub>time*SNP</sub>	0.10	0.44

**Supplementary Table 3.** *SLC2A9* rs13129697 analysis based on ancestral groups. ANCOVA p-values are shown (adjusted for age, sex, and baseline FEUA or serum urate as appropriate).

		<b>Change in FEUA</b>	<b>Change in serum urate</b>
<b>Māori and Pacific</b>	P <sub>SNP</sub>	0.39	0.03
	P <sub>time</sub>	<0.0001	0.0006
	P <sub>time*SNP</sub>	0.45	0.67
<b>European</b>	P <sub>SNP</sub>	0.99	0.57
	P <sub>time</sub>	<0.0001	0.15
	P <sub>time*SNP</sub>	0.18	0.51

**Supplementary Table 4.** *SLC22A11* rs2078267 analysis based on ancestral groups. ANCOVA p-values are shown (adjusted for age, sex, and baseline FEUA or serum urate as appropriate).

		<b>Change in FEUA</b>	<b>Change in serum urate</b>
<b>Māori and Pacific</b>	P <sub>SNP</sub>	0.86	0.85
	P <sub>time</sub>	<0.0001	0.0023
	P <sub>time*SNP</sub>	0.71	0.081
<b>European</b>	P <sub>SNP</sub>	0.10	0.54
	P <sub>time</sub>	<0.0001	0.13
	P <sub>time*SNP</sub>	0.38	0.06

**Supplementary Table 5.** Correlations with change in fractional excretion of uric acid and serum urate concentrations at 60 and 180 minutes after frusemide intake.

		<b>Change in FEUA 60 min</b>	<b>Change in FEUA 180 min</b>	<b>Change in serum urate 60 min</b>	<b>Change in serum urate 180 min</b>
<b>Change in FEUA 60 min</b>	<b>r</b>	-	0.19	-0.09	-0.17
	<b>P</b>		0.06	0.41	0.10
<b>Change in FEUA 180 min</b>	<b>r</b>	0.19	-	-0.07	<b>-0.27</b>
	<b>P</b>	0.06		0.50	<b>0.009</b>
<b>Change in serum urate 60 min</b>	<b>r</b>	-0.09	-0.07	-	<b>0.62</b>
	<b>P</b>	0.41	0.50		<b>&lt;0.0001</b>
<b>Change in serum urate 180 min</b>	<b>r</b>	-0.17	<b>-0.27</b>	<b>0.62</b>	-
	<b>P</b>	0.10	<b>0.009</b>	<b>&lt;0.0001</b>	
<b>Change in FENa 60 minutes</b>	<b>r</b>	<b>0.40</b>	<b>-0.28</b>	<b>0.44</b>	0.18
	<b>P</b>	<b>&lt;0.0001</b>	<b>0.006</b>	<b>&lt;0.0001</b>	0.07
<b>Change in FENa 180 minutes</b>	<b>r</b>	0.16	<b>0.45</b>	<b>-0.28</b>	-0.04
	<b>P</b>	0.12	<b>&lt;0.0001</b>	<b>0.01</b>	0.71
<b>Change in FEK 60 minutes</b>	<b>r</b>	0.19	-0.14	<b>0.26</b>	0.12
	<b>P</b>	0.06	0.18	<b>0.01</b>	0.23
<b>Change in FEK 180minutes</b>	<b>r</b>	-0.04	<b>0.33</b>	-0.12	-0.04
	<b>P</b>	0.70	<b>0.0008</b>	0.25	0.70
<b>Urine volume 60 min</b>	<b>r</b>	0.10	<b>-0.34</b>	<b>0.35</b>	0.08
	<b>P</b>	0.31	<b>0.0006</b>	<b>0.0005</b>	0.45
<b>Urine volume 180 min</b>	<b>r</b>	0.13	0.01	-0.09	-0.15
	<b>P</b>	0.21	0.89	0.41	0.16

**Supplementary Table 6.** Stepwise regression models examining independent variables associated with change in fractional excretion of uric acid and serum urate concentrations at 60 and 180 minutes after frusemide intake. Variables with  $P < 0.05$  in the correlation analysis were included in the regression analysis. For the dependent variables measured at 60 minutes, only variables measured at 60 minutes were included in the regression model.

<b>Dependent variable</b>	<b>Predictors</b>	<b>Standardized <math>\beta</math></b>	<b>Partial <math>R^2</math> change</b>	<b>P</b>	<b>Model</b>	<b>Variables not included in final model</b>
<b>Change in FEUA at 60 minutes</b>	Change in FENa at 60 minutes	0.40	0.16	<0.001	$R^2=0.16$ ; $F=17.9$ ; $P < 0.0001$	-
<b>Change in FEUA at 180 minutes</b>	Change in FENa at 180 minutes	0.46	0.21	<0.001	$R^2=0.21$ ; $F=24.2$ ; $P < 0.0001$	Change in FEUA at 60 minutes Change in FEK at 180 minutes Urine volume at 180 minutes
<b>Change in serum urate at 60 minutes</b>	Change in FENa at 60 minutes	0.44	0.18	<0.001	$R^2=0.18$ ; $F=22.4$ ; $P < 0.0001$	Change in FEK at 60 minutes Urine volume at 60 minutes
<b>Change in serum urate at 180 minutes</b>	Change in serum urate at 60 minutes Change in FEUA at 180 minutes	0.59 -0.21	0.37 0.05	<0.001 0.009	$R^2=0.41$ ; $F=32.4$ ; $P < 0.0001$	-