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Concurrent Session 2: Dietary Intake

Dietary intake and 24-hour excretion of sodium and potassium
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Background – There is little recent data on the dietary intake of sodium (Na) and potassium (K) in the Australian population. The best method for assessing dietary Na is 24-hour urine collections, which require a high level of subject co-operation. Dietary assessment can provide an estimate of Na intake but the association between dietary assessment and urinary measurement in Australian community dwelling adults is not known.

Objective – To determine the dietary intake of Na and K measured by 24-hr urinary excretion (UNa and UK) and 24-hr dietary recall (Diet Na and Diet K).

Design – Adults recruited to dietary intervention studies had dietary intake measured using a 24-hr recall (analysed with FoodWorks) and provided a single 24-hr urine collection, whilst on their usual diets.

Outcomes – Of the 144 participants, 85% (54 females (F), 69 males (M)) had UNa over the suggested dietary target (SDT) of 70mmol/day and 62% (32 F, 57 M) were over the upper limit (UL) of 100mmol/day.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Age (yrs)</th>
<th>BMI (kg/m²)</th>
<th>UNa (mmol)</th>
<th>Diet Na (mmol)</th>
<th>UK (mmol)</th>
<th>Diet K (mmol)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>79</td>
<td>52.7 (11.4)</td>
<td>28.5 (3.4)</td>
<td>169.2 (48.7)</td>
<td>137.6 (57.1)</td>
<td>83.6 (23.8)</td>
<td>107.7 (28.6)</td>
</tr>
<tr>
<td>F</td>
<td>65</td>
<td>58.3 (6.3)</td>
<td>30.0 (4.3)</td>
<td>119.6 (49.3)</td>
<td>106.2 (14.7)</td>
<td>65.5 (21.6)</td>
<td>82.5 (22.1)</td>
</tr>
</tbody>
</table>

*All values mean (SD)

Only 19% of participants (5 F, 23 M) met the SDT for K (120mmol/d). Those with two 24hr recalls at baseline (n=88), Diet Na and Diet K were significantly correlated with UNa and UK (r=0.391; B(se)=0.018(0.005); P=0.0001 and r=0.579; B(se)=0.500(0.076); P=0.0001, respectively). BMI was also significantly correlated with UNa (r=0.397; B(se)=5.293(1.318); P=0.0001).

Conclusions – Most participants exceeded the UL for Na and few met the SDT for K. Dietary assessment was correlated with urinary output. Body size was a predictor of UNa and with the increasing BMI of the population, meeting the SDT for Na and K presents a great challenge.