

EUROPEAN SOCIETY OF HYPERTENSION LONDON, UK, 26–29 APRIL

Study supports healthy diet advice

Both high sodium and low potassium intake are associated with an increased risk of stroke. These findings, which further support European cardiovascular prevention guidelines (Perk et al, 2012), come from a meta-analysis of prospective population studies presented at the 22nd European Meeting on Hypertension and Cardiovascular Protection (Strazzullo et al, 2012).

In 10 sodium studies including 192 973 participants, higher compared to lower consumption (2.10 g/day difference) increased the risk of

stroke (relative risk 1.20, 95% confidence interval (95% CI) 1.04–1.39). There was also a trend to higher total cardiovascular risk (relative risk 1.13, 95% CI 0.98–1.31), which achieved statistical significance after excluding a single cohort on sensitivity analysis (relative risk 1.17, 95% CI 1.01–1.34).

The analysis of 10 potassium studies (268 276 participants) found that 1.6 g/day difference in intake was inversely associated with stroke risk (relative risk 0.80, 95% CI 0.71–0.91). In five studies (78 401 participants),

Phosphate highlights mortality risk in hypertensive patients

Higher baseline serum phosphate increases the risk of death in hypertensive patients and reduces the likelihood of achieving target diastolic blood pressure, according to a study of 8269 patients followed up at the Glasgow Blood Pressure Clinic.

Investigators grouped patients according to their baseline serum phosphate level: ≤ 0.93 mmol/litre, 0.93–1.06 mmol/litre, 1.07–1.20 mmol/litre and > 1.21 mmol/litre. Compared to the lowest phosphate quartile, each higher quartile was independently associated with a respectively 16%, 24% and 38% higher risk of all-cause mortality.

The lowest initial serum phosphate of ≤ 0.93 mmol/litre was independently associated with the greatest likelihood of achieving target diastolic

blood pressure compared to the highest phosphate quartile (> 1.21 mmol/litre) (hazard ratio 5.14, 95% confidence interval 2.31–11.42).

The likelihood of achieving target diastolic blood pressure fell with higher baseline phosphate levels (0.94–1.06 mmol/litre: hazard ratio 2.09, 95% confidence interval 0.91–4.81; 1.07–1.20 mmol/litre: hazard ratio 2.76; 95% confidence interval 1.28–5.97). Time taken to achieve target systolic blood pressure of < 140 mmHg, but not target diastolic blood pressure of < 90 mmHg, was an independent predictor of death in these patients.

Sue Lyon

Patel P, Stevens K, Schneider A et al (2012) Baseline serum phosphate independently predicts mortality and time to reach target diastolic blood pressure in hypertensive patients. Abstract 4B.01



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there was a non-significant, positive association between urinary sodium:potassium ratio and total cardiovascular risk (relative risk 1.14, 95% CI 0.97–1.35), which became a pooled estimate of 1.21 (95% CI 1.02–1.43) after excluding a single outlier.

Commenting during the meeting, Professor Tony Heagerty, Manchester, said: 'The UK has been in the vanguard of non-pharmacological intervention, in particular salt restriction. The cardiovascular community has been instrumental in putting pressure on the government, which in turn has demanded that the food industry reduce the salt content of preserved foods and bread – which provide a great deal of our daily salt intake.'

Revised European guidelines on cardiovascular disease prevention recommend a daily intake of < 5 g/day salt.

Sue Lyon

Perk J, De Backer G, Gohlke H et al (2012) European guidelines on cardiovascular disease prevention in clinical practice (version 2012). *Eur Heart J* 3 May [epub ahead of print]

Strazzullo P, D'Elia L, Cappuccio FP (2012) Sodium and potassium intake and risk of cardiovascular accidents: updated meta-analysis. Abstract 8D.05

Blood pressure control still a problem in chronic kidney disease

Hypertension is a major risk factor for cardiovascular morbidity and mortality, as well as disease progression, in people with chronic kidney disease. However, it is difficult to achieve recommended target blood pressures, especially among black patients, concluded investigators at the Low-Clearance (Predialysis) Clinic at King's College Hospital, London.

The study included 238 chronic kidney disease patients (58.4% male), 95.0% of whom were hypertensive. Nearly all (99.1%) patients were being treated, but less than half (48.2%) were controlled to recommended target blood pressure ($< 140/90$ mmHg), while only 26.2% were controlled to the more stringent $< 130/80$ mmHg target. On multiple linear regression analysis, only black race was independently and inversely associated with blood pressure control ($\beta = -0.202$, $P = 0.018$).

Diastolic blood pressure goals of < 140 mmHg and < 130 mmHg were achieved in 67.7% and 91.2% of patients respectively. Systolic blood pressure was less likely to be controlled.

Sue Lyon

Sarafidis P, Sharpe CC, Wood E et al (2012) Prevalence, treatment and control of hypertension in predialysis patients with chronic kidney disease. Abstract 2A.05