

## Concurrent Session 9

### The evaluation of a brief pilot nutrition and exercise intervention for the prevention of weight gain in general practice patients

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**Background** - The Active Script Program (ASP) is a brief physical activity intervention that is available for use by approximately 1200 General Practitioners (GPs) in Victoria. Twenty-six out of 31 divisions of general practice have reported using the ASP. However, more effective health promotion lifestyle advice could include both nutrition and physical activity recommendations.

**Objective** - To pilot test a brief written prescription (script) recommending lifestyle (nutrition and physical activity) changes delivered by GPs to their patients.

**Design** - The script included five nutrition messages and personalized exercise advice for a healthy lifestyle and/or the prevention of weight gain. GPs volunteered to participate from practices across metropolitan Melbourne. GPs were asked to administer 10 scripts over 4 weeks to 10 adult patients with a body mass index (BMI) of between 23 and 30 kg/m<sup>2</sup>. Information recorded on the script consisted of patients' weight, height, waist circumference, gender, date of birth, type and frequency of physical activity prescribed, and the nutrition messages selected by the GP. GPs also recorded reasons for administering the script. Interviews recorded GPs views on using the script.

**Outcomes** - Nineteen GPs (63% female) provided a median of nine scripts over four weeks. Scripts were administered to 145 patients (mean age: 54 ± 13.2 years; mean BMI: 31.7 ± 6.3 kg/m<sup>2</sup>; 57% female), 52% of whom were classified as obese (BMI ≥ 30 kg/m<sup>2</sup>). GPs cited 'weight reduction' as a reason for writing the script for 78% of patients. All interviewed GPs (90%, n=17) indicated that the messages were clear and simple to deliver.

**Conclusion** - GPs found the ANS provided clear nutrition messages that were simple to deliver. However, GPs administered the script to obese patients for weight loss rather than to prevent weight gain among the target group. This has important implications for future health promotion interventions designed for general practice.

### The effect of weight loss on blood pressure response to acute mental stress

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**Background** - Blood pressure (BP) responses to stress have been associated with the development of hypertension.

**Objective** - To assess the effect of weight loss on BP responses to stress.

**Design** - Sixty-four men completed a baseline mental stress test (13 minutes resting, 7 minutes stress, 36 minutes recovery) and then either participated in a 12 week weight loss program incorporating diet and exercise (intervention group, n=33) or maintained weight (control group, n=31). Both groups underwent a final stress test after 10-12 weeks.

**Outcomes** - Fifty-five men completed the study [intervention (n=28), controls (n=27)]. At baseline there were no differences between the groups in mean ± SEM age (48.7 ± 1.7 versus 49.9 ± 2.1 years), Body Mass Index (30.0 ± 0.4 versus 28.8 ± 0.6 kg/m<sup>2</sup>) or resting BP (126.8 ± 1.5/ 83.0 ± 1.0 versus 125.4 ± 1.4/ 84.3 ± 1.5 mmHg). Weight fell by 4.3 ± 0.5 (mean ± SEM) kg (*P* < 0.05) in the intervention group and was unchanged in the controls (+0.4 ± 0.3 kg). The intervention group had a greater fall in resting systolic BP (SBP) and diastolic BP (DBP) following weight loss when compared to controls (mean between group difference of change: SBP: -4.6 ± 1.8 mmHg, *P* < 0.05; DBP: -3.2 ± 1.6 mmHg, *P* = 0.05). Following weight loss, there were no differences in the stress induced change (stress minus resting values) in SBP, DBP and pulse rate between the groups. After weight loss, the intervention group returned to resting SBP levels in less time than the controls (15.2 ± 1.8 versus 20.9 ± 1.9 minutes, *P* < 0.05) and SBP was significantly lower in the first 24 minutes post stress (*P* < 0.05).

**Conclusion** - A 5% loss of weight can lead to a general reduction in BP during mental stress and importantly assists to reduce the length of time that SBP remains elevated after a stressful event. These favorable reductions in BP responses to stress are likely to reduce the time that BP is raised during the day and potentially improve cardiovascular risk, as impaired post-stress recovery has been found to predict longitudinal increases in blood pressure in middle-aged men and women.<sup>1</sup>

#### References

1. Steptoe A, Marmot M. Impaired cardiovascular recovery following stress predicts 3-year increases in blood pressure. *J Hypertens* 2005; 23:529-36.