

Effects of consuming yellowstripe scad versus salmon on lipid profile, fasting glucose, body weight status and blood pressure among healthy overweight Malaysian adults

ABSTRACT

Introduction: This is a preliminary result of an on-going randomised cross-over trial to compare the effects of consuming yellowstripe scad (YSS) and salmon, both rich in omega-3 fatty acids, on lipid profile, fasting glucose, body weight status, and blood pressure among healthy overweight adults. **Methods:** Fifty healthy overweight Malaysians aged 21-55 years were recruited voluntarily through advertisements. During the first period of intervention, subjects were randomised equally to receive eight weeks of either steamed whole YSS fish (YSS group) or salmon fillet (salmon group), three days per week, obtaining approximately 7000 mg EPA+DHA per week. The diets were switched after an eight-week washout period. Lipid profile, fasting glucose, body mass index, and blood pressure were evaluated before and after each intervention period. **Results:** The mean ages of YSS group (n=25) and salmon (n=25) group were 30.6 ± 9.1 and 27.9 ± 7.1 years respectively. Both groups had no statistically significant differences on socio-demographic characteristics ($p > 0.05$). After the first intervention period, there was a significant increase in total cholesterol within the YSS group ($p < 0.05$) but not within the salmon group ($p > 0.05$). Both YSS and salmon groups had significantly higher HDL-cholesterol levels after 8 weeks compared to baseline ($p < 0.05$). There was no significant between-group difference in all the variables after eight weeks (time x group interaction, $p > 0.05$). However, there was a significant effect of time on diastolic blood pressure ($p < 0.05$). **Conclusion:** These preliminary findings indicate that YSS and salmon may have similar beneficial effects on HDL-cholesterol level among healthy overweight adults. The second intervention period is on-going to confirm these findings.

Keyword: Dietary fish; Healthy overweight adults; Lipid profile; Omega-3 fatty acids; Randomised cross-over trial