Methods: A cross-sectional study among 1463 young adults was conducted in Klang valley area, Malaysia. Body Mass Index was used to determine the weight status of the respondents. Modifiable questionnaires on food habits were used to assess the breakfast and late dinner habits.

Results: In total, 1463 young adults aged 18–24 years participated in the study, (34.2%) were either overweight or obese. (86.1%) taking breakfast daily and (63.3%) said they never ate late dinner. There is no relation between obesity and breakfast skipping, taking late dinner (p = 0.742, p0.118) respectively.

Conclusion: The foods habits of young adults Malaysian is still considered healthy as majority of them eat breakfast daily, do not eat late dinner. Prevalence of overweight and obese is considered high and new strategies for prevention should be taken by policy makers.

T5:S25.79
Healthy Kids programme Malaysia develops a nutrition education package for prevention of obesity amongst primary school children

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The paramount importance of empowering school children with appropriate knowledge of healthy eating and active living has long been recognized. To this end, Healthy Kids Programme Malaysia, as part of Nestle Healthy Kids Global programme, conducted a 3-year longitudinal school-based intervention study to develop, implement and evaluate a nutrition education package appropriate for primary school children. It is envisioned that the educational package developed can be implemented in all primary schools in the country to arrest the increasing prevalence of overweight and obesity among school children. A total of 250 (143 intervention, 107 control) year 3 students were recruited from 12 selected primary schools in Klang Valley, Malaysia. The intervention group were taught 6 modules each year. Till end of 2012, the intervention group has received 12 educational sessions, throughout Year 1 (2011) and Year 2 (2012). Each year, a pre-intervention and a post-intervention survey was carried out to determine the level of the children's nutrition knowledge, attitude and practices (KAP). Significant improvement was seen in the intervention group children's mean knowledge (from 54.6 ± 10.1 to 68.0 ± 14.1, p < 0.001) and practice score (from 71.9 ± 8.9 to 76.1 ± 8.4, p < 0.001). The improvement of the mean knowledge score among the intervention group was significantly higher than that of the control group (F(4.9), p < 0.01). The mean attitude (F(1.7), p > 0.05) and practice scores (F(1.7), p > 0.05) of the intervention group was also higher than the control group, but these differences were not statistically significant. The Year 3 (2013) intervention sessions commenced at early of 2013 and were just completed.

T5:S25.80
Lipid lowering effect of *Alternanthera sessilis* Red

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Background: The *Alternanthera sessilis* Red is an underutilised plant, and it is often called as Hongtyang Wu (Chinese) by the Malaysian and Singaporean. Traditionally, this plant is believed to be able to reduce the risk of cardiovascular disease.

Aim: The aim of this study was to investigate the effect of *Alternanthera sessilis* Red ethanolic extracts (ASREE) on lipid profiles and body weight in diet-induced obese rats that have distinct characteristics in fat mass.

Key Methods: Inducing obesity of male Sprague-Dawley rats was done using high a fat diet. Body weight was measured weekly to ensure the development of obesity. The DEXA scan was used to measure the fat mass. ASREE at dose of 175 mg kg-1 body weight (ASLC) and 350 mg kg-1 body weight (ASHC) were orally garvaged to obese rats for 8 weeks. The orlistat at dose 5 mg kg-1 body weight (COR) was used as a positive control. The control normal (CNO) and control obese (COB) rats were received 0.3 gL-1 carboxymethylcellulose (CMC). Blood was collected before (baseline) and after (final) 8 weeks of treatment. Total cholesterol, triglycerides, LDL, HDL, aspartate aminotransferase (AST), alanine aminotransferase (ALT), adiponectin and leptin were measured.

Results: Group treated with ASLC exhibited the highest mean percentage reduction from baseline in total cholesterol and triglycerides compared to the COB group. In addition, group treated with ASHC showed the highest mean percentage reduction of LDL.

Conclusions: In diet-induced obese rats, supplementation of ASREE could help to reduce the level of total cholesterol, triglycerides and LDL in blood, thus, lowering the cardiovascular disease risk.

T5:S25.81
Behahavioural and metabolic associations with BMI (body mass index) in a representative population living in Macau, China

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Abstract: As obesity is increasing in Asia we investigated factors associated with being overweight in a random household survey of 1410 residents aged 18–93 from Macau, China. Demography, physical activity and sleep, alcohol and dietary patterns were surveyed by interview administered questionnaire. Height, weight and blood pressure (SBP and DBP) were individually measured and blood samples were taken on a sub-sample (n = 569) and triglycerides, glucose and cholesterol (LDL and HDL) were analyzed. In this population 38 % were overweight (BMI ≥ 24) and 9 % obese (BMI ≥ 26). Demographically BMI increased with higher age (β = 0.16 p < 0.001); lower social class (β = −0.07 p < 0.001) and being married (β = 0.12 p < 0.001). Independent behavioural associations with increased BMI were; less sleep (β = −0.15 p < 0.001); less physical activity, measured as total METs/ day (β = −0.10 p = 0.009) and more alcohol consumption (β = 0.10 p < 0.001). Interestingly, less meat (β = −0.04 p < 0.001), and milk consumption (β = −0.08 p < 0.001) were also associated with higher BMI. Independent metabolic associations with increased BMI were increased SBP (β = 0.16 p < 0.001), DBP (β = 0.08 p = 0.002), higher LDL (β = 0.17 p < 0.001), higher triglycerides (β = 0.07 p < 0.001), higher glucose (β = 0.05 p = 0.01) and lower HDL(β = −0 .23 p < 0.001). The major findings of this study in Macau are that obesity is increasing compared to mainland China and this is reflected in impaired metabolic blood values and increased blood pressure rates. Increased physical activity, less sitting and better sleep and drinking habits may help reduce