**Dietary Patterns in Early Young Adulthood Predicted Risks of Abnormal Blood Lipids in Later Young Adults: Evidence From a Prospective Cohort Study**

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**Objectives:** *Background and aims*: The extent to which dietary patterns influence the risk of abnormal blood lipids throughout young adulthood remains unclear. the aim of this is study is to investigate whether early young adulthood dietary patterns predict the risk of abnormal blood lipids during later young adulthood.

**Methods:** We used data from a long running birth cohort study in Australia. Western dietary pattern rich in meats, processed foods and high-fat dairy products and prudent pattern rich in fruit, vegetables, fish, nuts, whole grains and low-fat dairy products were derived using principal component analysis at the 21-year follow-up from dietary data obtained using a food frequency questionnaire. After 9-years, fasting blood samples of all participants were collected and their total, low-density lipoprotein (LDL) and high-density lipoprotein (HDL) cholesterols and triglyceride (TG) levels were measured. Abnormal blood lipids were based on clinical cut-offs for total, LDL and HDL cholesterols, and TG and relative distributions for total: HDL and TG: HDL cholesterols ratios. Log-binomial models were used to estimate risk of each outcome in relation to dietary patterns

**Results:** Greater adherence to the Western pattern predicted increased risks of high LDL (RR: 1.47; 95%CI: 1.06, 2.03) and TG (1.90; 1.25, 2.86), and high ratios of total: HDL (1.48; 1.00, 2.19) and TG: HDL (1.78; 1.18, 2.70) cholesterols in fully adjusted models. Conversely, a prudent pattern predicted reduced risks of low HDL (0.58; 0.42, 0.78) and high TG (0.66; 0.47, 0.92) and high total: HDL (0.71; 0.51, 0.98) and TG: HDL (0.61; 0.45, 0.84) cholesterols ratios.

**Conclusions:** This is the first prospective study to show greater adherence to an unhealthy Western diet predicted increased risks of abnormal blood lipids, whereas a healthy prudent diet predicted lower risks in young adults. Addressing diets in the early course may improve the cardiovascular health of young adults.

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