Background: One of strong risk factor of type 2 diabetes is having family history of diabetes. Many studies, mostly done in Caucasians, have shown that individuals with family history of diabetes have heightened risk of type 2 diabetes compared to people without family history of diabetes, which are shown by their insulin resistance, although still having normal glucose tolerance. Indonesia is currently in the second position of countries with largest number of diabetics in western pacific, but very few studies existed to examine the risk of first degree relatives in Indonesia.

Method: Fourteen office workers in East Jakarta, age 22–38 years, identified as first degree relatives were grouped as FHD (having first degree relation with T2D patients), and thirteen individuals without any family history of type 2 diabetes were age- and sex-matched to the FHD, designed as the control group (CON). Body composition (measured by bio-impedance analysis using InBody 720), glucose tolerance using OGTT and insulin resistance were evaluated in first degree family relatives of diabetics having normal glucose tolerance and people without family history of diabetes.

Result: Individuals in FDR group had higher body weight, fat mass, percent body fat, waist-to-hip ratio, estimated visceral fat, and significantly higher BMI compared to people without family history of diabetes (p = 0.037). With both groups having normal glucose tolerance, compared to CON group, individuals in FDR group was more insulin resistant (0.69 vs 0.65, p = 0.119), and had higher HOMA2-B (92.67 vs 80.80; p = 0.158) than CON group. Although differences between groups for those parameters were not statistically significant, but these results were comparable in values observed in much larger studies. The assessment to their physical activity levels measured by IPAQ showed that FDR group had significantly lower physical activity levels measured by total walking and vigorous activity compared to CON.

Conclusion: The result supported the evidence that individuals being first degree relatives to diabetics had worse body composition compared to individuals without family history of diabetes. This was observed also in this study with relatively young Indonesians. With regard to the data showing Indonesia as one of the country with high number of diabetics, this study also suggested the importance to educate first-degree relatives about their heightened risk.

Reference(s)
using Cockroft-Gault equation. Correlation between blood lipid profiles and renal function was statistically analyzed by Pearson test.

**Result:** The samples included 137 T2DM patients (76 male subjects and 51 female subjects) with mean age (62±11.35) years old. Mean of eGFR was 76±27.03 ml/min/1.73 m². The laboratory result of tot-Chol was 203±49.09 mg/dL, triglyceride was 186±163.56 mg/dL, LDL-Chol was 123±41.79 mg/dL, HDL-Chol was 47±13.55 mg/dL. There was no significant correlation between tot-Chol versus body fat mass index (BMI), increased body fat mass are related to increased insulin resistance and may account for the increased prevalence of type 2 diabetes mellitus (T2DM) in Asians. Prior epidemiologic studies also have shown that increasing BMI is associated with higher total cholesterol, triglyceride and low-density lipoprotein cholesterol (LDL-Chol). However, these studies were limited by under-representation of obese subjects. Although obesity in people is more likely to occur among countries with high economic standards, its prevalence is growing rapidly in developing countries including Indonesia. With the increasing trend of prevalence of obesity and its risk factors in adult and since obesity is related with cardiovascular diseases (CVD), much attention has been given to obesity in Indonesia. Hyperlipidaemias are common in patients with diabetes and further increase the risk of ischaemic heart disease, especially in T2DM. Detection and control of hyperlipidaemia can reduce myocardial infarction, coronary deaths, and overall mortality. Indeed, even when LDL-Chol concentration is normal or slightly raised in T2DM (the major abnormalities being low HDL cholesterol and high triglyceride concentrations), the LDL-Chol particles may be qualitatively different and more atherogenic than those in non-diabetic patients. Aim of this study is to determine correlation between blood lipid profiles and BMI of patients with T2DM.

**Method:** This was a cross sectional analytical study which has enrolled patients with T2DM who were on routine follow up in private diabetic clinic. Body mass index (BMI) and blood lipid profiles (total cholesterol (tot-chol), LDL-Chol, triglyceride) were measured. Correlation between BMI and blood lipid profiles was statistically analyzed by Pearson test.

**Result:** The samples included 137 T2DM patients (76 males and 51 females) with mean age 62±11.35 years, mean BMI 27.56±3.8 kg/m². The laboratory result of tot-chol was 203±49.09 mg/dL, triglyceride was 186±163.56 mg/dL, LDL-Chol was 123±41.79 mg/dL. The triglyceride, LDL level increased with increasing BMI (p = 0.044; p = 0.016 respectively), but there was no significant correlation between tot-chol versus body mass index (p = 0.255).

**Conclusion:** There was a significant correlation between BMI with triglyceride and LDL-Chol, but not with tot-chol in patients with T2DM.