Objective. The aim of this study was to evaluate the association between lipids and insulin concentration in adolescents. Material and Methods. A cross-sectional study of 350 adolescents aged 14-19 years old from a public high school in Guadalajara, in the state of Jalisco, Mexico, was conducted. Fasting insulin concentration was determined using microparticle enzyme immunoassay; total cholesterol and triglycerides were detected by standard enzymatic procedures; and low- and high-density lipoproteins were found using standard precipitation methods. Statistical analysis included linear multivariate regression. Results. Serum triglycerides were associated positively with insulin fasting (β= 0.003, p= 0.0001) and high-density lipoprotein cholesterol was negatively associated with insulin fasting in male adolescents 18-19 years old (β= -0.03, p= 0.012). Conclusions. The relationships between triglycerides and insulin and between high-density lipoprotein cholesterol and insulin are already present in adolescence.

Keywords
triglycerides, high-density lipoprotein cholesterol, lipids, insulin, obesity, adolescents, Mexico.