Clinical studies have shown that progestins influence lipid metabolism and this may translate to an increased risk of coronary heart disease. Acknowledging this concern with the increase use of Mirena-levonorgesterel-releasing intrauterine system (LNG-IUS), a randomized control study was done among 92 Asian women opting for the intrauterine device as contraception.

They were randomized to receive either Mirena (LNG IUS) or the non hormonal Ortho Gynae T380 device acting as a control. All the women were healthy and were not on any hormonal therapy. Fasting blood samples were taken pre-insertion and after 6, 12 and 18 months of intrauterine device use. The serum obtained was used to measure Total Cholesterol, Triglycerides, HDL and LDL Cholesterol, and Apolipoproteins.

There was a significant reduction in Total Cholesterol and Triglycerides in the women using LNG-IUS as compared to the control group using the Ortho Gynae T380 device. The HDL Cholesterol showed a significant reduction in the LNG-IUS group at 6 months but this reverted back to preinsertion values by the end of first year with no significant differences as compared to the control group. There were no significant changes in LDL-cholesterol levels between the 2 groups. HDL/TC; LCI/TC and HDL/LDL ratios all remained stable in both groups. Apolipoprotein A1 and Apolipoprotein B were significantly lower in the LNG-IUS group during the period of study. However their ratios remained stable and non significant throughout the study period.

The results of this randomized comparative study among our local Asian population clearly show that Mirena (LNG-IUS system) does not have any adverse effects on lipid metabolism.