It has been shown that subjects with normal fasting glucose (NFG) and normal glucose tolerance (NGT), whose plasma glucose concentration does not return to their fasting plasma glucose (FPG) level within 2 hours following standard oral glucose tolerance test (OGTT), have higher risk of progression into type 2 diabetes (T2D) than NFG/NGT subjects whose glucose returns to FPG level after OGTT. Although the development of T2D during the life of women with polycystic ovary syndrome (PCOS) is nowadays assumed to be higher than previously thought, the exact reason for that is still unknown.

None of the PCOS subjects had T2D and none of the controls had either IFG or IGT. In PCOS group, IFG was diagnosed in 3/193 (1.6%) and IGT in 6/193 (3.1%). All PCOS women with IFG had NGT, while all PCOS subjects with IGT had NFG. When only NGT/NFG subjects were analyzed (184 PCOS and 53 Controls), PCOS had higher prevalence of higher postload glucose than FPG in comparison to Controls (67% vs. 50%, respectively p=0.045).

Higher postload glucose level than fasting plasma glucose level could be a useful marker of risk for the development of T2D in women with PCOS.