

Ho CH, Yu HJ, Pu YS, Liu SP. Impaired postprandial glucose but not impaired fasting glucose is associated with low serum testosterone levels. *JOURNAL OF SEXUAL MEDICINE* 2012; 9:356.  
Ref ID: 23348

**Abstract:** Objective: We aimed to investigate whether pre-diabetic states, impaired fasting glucose (IFG) and impaired glucose tolerance (IGT), are associated with androgen deficiency. Methods: The prospective cohort study includes 774 men (aged 41 to 86) undergoing screening androgen deficiency during 2009. Serum levels of total testosterone (TT), albumin, and SHBG were measured. Symptoms related to androgen deficiency were surveyed by ADAM questionnaire. Multivariate analysis using logistic regression was performed to assess the association between androgen deficiency and different pre-diabetes/diabetes, adjusted for age, body mass index, cholesterol, blood pressure, triglyceride, high density lipoprotein, and c-reactive proteins. Results: Forty-seven (6.1%) with history of diabetes were excluded from the analyses for relationship between androgen deficiency and glucose. Multivariate analyses revealed that impaired postprandial glucose, but not impaired fasting glucose or glycated hemoglobin, was associated with a lower serum TT level. The odds ratio was 1.573 (95%CI: 0.994-2.488) in postprandial glucose of 140-199 mg/dl and 2.378 (95%CI: 1.250-4.523) in postprandial glucose of  $\geq 200$  mg/dl. The p-value for trend was 0.011. Adjusted proportions of low TT levels in normal, isolated IFG, isolated IGT, combined IFG/IGT, newly diagnosed DM, and known DM groups were 13.6%, 13.0%, 19.1%, 42.9%, 30.0%, and 22.6% respectively ( $p = 0.018$  by ANOVA). Conclusion: It has been suggested that IFG and IGT may represent different metabolic states of insulin secretion and/or sensitivity. They may belong to distinct metabolic disturbances or just represent two points of the same spectrum. Our data generally support the concept that IFG and IGT can be different with respect to not only the glucose metabolism but also the underlying mechanism contributing to the presentations. More researches are still required to elucidate the mechanisms linking abnormal glucose homeostasis and low serum testosterone levels. (Table Presented)