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# Serum Testosterone and Postprandial Lipids in Relation to Sexual Dysfunction in Males with Cardiovascular Disease

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## Abstract

**Background** Earlier studies have suggested that total testosterone (Testo) concentrations influence lipid metabolism. Whether these concentrations are prospectively associated with an adverse lipid profile and an increased risk of incident dyslipidemia has not yet been investigated.

**Objective** Test the hypothesis that increased levels of postprandial triglycerides (TG) are associated with hypogonodism in male patients with cardiovascular disease (CVD).

**Methods** Forty male patients with CVD aged 30-60 years and 46 normal healthy controls were studied. Postprandial blood glucose, lipid profile, urea and creatinine were measured. In addition, Total testosterone, sex hormone binding globulin (SHBG), luteinizing hormone and follicle stimulating hormone were done by Enzyme-Linked Immuno-Sorbent Assay. Body mass index was calculated.

**Results** Negative correlation between Testo, and postprandial TG in both CVD and control groups was found with significant differences in Testo between these two groups, while SHBG correlated negatively with postprandial TG, in control group.

**Conclusion** Postprandial triglyceride levels were associated with risk of CVD. These findings are particularly interesting and may contribute to an explanation for the higher cardiovascular disease risk in men with lower total testosterone concentrations.

**Key words** CVD, Dyslipidemia, postprandial TG, Testosterone.

## Introduction:

Causes of cardiovascular disease (CVD) are diverse but atherosclerosis and/or hypertension are the most common. Although cardiovascular disease usually affects elderly, the antecedents of cardiovascular disease, notably atherosclerosis begins in early life, making primary prevention efforts necessary from childhood [(1)].

There is therefore increased emphasis on preventing atherosclerosis by modifying risk factors, such as healthy eating, exercise, and avoidance of smoking. Almost all CVD in a population can be explained in terms of a limited number of risk factors. Dyslipidemia may come at the top of the list [(2,3)]. Dyslipidemia is a disorder of lipoprotein metabolism, including lipoprotein overproduction or deficiency. It may be manifested by elevation of serum total cholesterol, the low density lipoprotein cholesterol (LDL-c) and the triglyceride (TG), and a decrease in serum high density lipoprotein cholesterol (HDL- c). Definitions of dyslipidemia are based on guidelines from the World Health Organization: HDL < 0.9 mmol/l or TG ≥ 1.7 mmol/l [(4)].