

[Molecules](#). 2008 Dec 31;14(1):141-59.

Selenium status and cardiovascular risk profile in healthy adult Saudi males.

[Alissa EM](#), [Ahmed WH](#), [Al-ama N](#), [Ferns GA](#).

Faculty of Medicine, King Abdul Aziz University, Jeddah, Kingdom of Saudi Arabia. em_alissa@yahoo.com

Abstract

The purpose of this research was to investigate the relationship between selenium levels, thyroid function and other coronary risk factors in 140 Saudi subjects without overt coronary heart disease stratified by age. Demographic data and serum fasting lipid profile, glucose, thyroid function tests, selenium status and dietary intake was assessed. The relationships between selenium status, thyroid function and cardiovascular risk factors were assessed by univariate and multivariate analysis. The results showed that thyroid hormone levels did not differ with age. Erythrocyte glutathione peroxidase (GPx) levels were significantly higher in the youngest vs. oldest tertile ($p < 0.0001$). Selenium and iodine intake did not differ significantly with age tertile, but the average intake for the population sample was below the estimated average requirements for both elements. Serum lipoprotein (a) concentrations correlated with selenium ($r = 0.417$, $p < 0.0001$) and TSH ($r = 0.172$, $p < 0.05$). After adjustment for confounding variables; serum fT(4) and erythrocytes GPx remained significant determinants of serum TSH levels, whilst serum selenium and TSH were determinants of serum fT(4) levels. Serum Lp(a), a coronary risk factor, was strongly related to measures of selenium status. A significant relationship between measures of selenium status and thyroid function was found. Serum Lp(a) a known risk factor for cardiovascular disease was also related to selenium status in our population