# Myeloperoxidase Activity, Lipid Profile and Thyroid Function in Patients Who Suffer from Alzheimer´s Disease.

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## Abstract

**Introduction:** Alzheimer´s disease increases its global incidence and prevalence, the WHO includes the disease among the main problems in public health today. Cuba is not apart from this reality. Biochemical markers pretend to enhance its early diagnosis. **Objective:** to determine myeloperoxidase activity, lipid profile and thyroid function, in patients who suffer from Alzheimer´s disease.

**Materials and methods:** a case and control analytic observational study was done, in patients from the Santa Clara polyclinic. The MPO activity, total cholesterol, LDL-c, HDL-c, total triglycerides, VLDL, total $T_3$ and $T_4$, and TSH were determined in serum of both groups. **Results:** no association was found between myeloperoxidase activity and the presence of the disease ($p = 0.348$). There was an almost absolute predominance of low levels of HDL-c, more evident in cases (0.43 mmol/L), the levels of $T_3$ tended to be close to the lower limit of the physiological range (1.46 nmol/L), a relevant finding was a general presence of subclinical hypothyroidism (23.75 %), with no significant differences between groups.

**Conclusions:** The Alzheimer´s disease keeps showing its increasing with age and it is more common in females. High levels of LDL-c and low of HDL-c are frequent in the elderly. Higher levels of HDL-c and $T_3$, this last one into the physiological range, act as protectors against the disease. The subclinical hypothyroidism is present and remains hidden in many of the elder with Alzheimer or not. In a high number of patients coexisted Alzheimer´s disease and some diseases from the metabolic syndrome, as dyslipidemias.

**Key words:** Alzheimer´s disease, myeloperoxidase activity, oxidative stress, lipid profile, dyslipidemias, thyroid function.