

## **LOWER EDUCATION AS A RISK FACTOR FOR ALZHEIMER'S DISEASE - NATURE OR NURTURE?**

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**Background:** Numerous studies linked lower education levels to a higher risk for developing Alzheimer's disease (AD). Higher education levels seem to have some protective effects against this disease. Recent clinical studies however recorded intriguing results: according to the DESCRIPA study conducted in Romania, the ratio of higher education patients exceeds previous predictions of European studies; according to our data, subjects with higher education levels tend to be more prone to develop AD than lesser educated patients. A Greek study had similar results.

**Method:** One or more environmental factors, common for Romania and Greece, may be responsible. We therefore studied the influence of several factors (genetics, history, economic development, food habits, addressability to doctors etc) on a 60 patient cohort (males & females).

**Results:** The common features of the educational systems in these countries may account (at least in part) for such results. The selection and assessment of students may have resulted in a different ratio of intelligence phenotypes in higher education subjects, based on different brain biochemistry. Higher cholesterol levels were associated with better scores in mathematics, while hypoglycaemias lead to better creativity.

**Conclusions:** Confirming this original hypothesis may lead to major changes in AD risk factors and therefore should radically influence the AD therapeutic management. Particular brain biochemistry may account for a phenotype which favours a higher education (in some education systems) at earlier stages of life leading to protective effects against AD later in life.