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IS ALZHEIMER'S DISEASE A TYPE OF DIABETES?

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Alzheimer's disease (AD) is a progressive neurodegenerative disease characterized by loss of memory and impairment of multiple cognitive functions, to the detriment of hippocampal and cortical neurons. It is reported that neuronal loss may contribute to a 20-30% decrease in brain weight loss in patients with AD. This impairment in the counting and functionality of neurons occurs as a consequence of the accumulation of β -amyloid protein (β -A) and neurofibrillary tangles. β -A protein is found in neuritic plaques of the brain with AD and is generated by abnormal processing of amyloid precursor protein (APP) in neurons. The cause of abnormal APP processing and subsequent accumulation of β -A protein is unknown. There have been a growing number of studies that support the concept that AD essentially represents a metabolic disease with impairment in energy production and utilization of glucose by the brain. The metabolic abnormalities present in the disease in question are related to insulin resistance and insulin-like growth factor (IGF) and thus to the breakdown of signaling pathways that regulate the survival of neurons, energy production, gene expression and plasticity. Therefore, it is suggested that therapeutic strategies designated for treatment of type II diabetes mellitus, obesity and insulin resistance may be useful in slowing the progression or reducing the severity of AD.