



## Can Alzheimer's Patients Receive and Store Information in Late Stage of the Disease and Can Memory be Restored if the Amyloid Plaques are Removed?

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### Letter to Editor

Never underestimate an Alzheimer's patient. Patients with Alzheimer's disease may be able to use information from the past and also use information that was accumulated during the disease if they get rid of the amyloid plaques. Recently the removal of beta amyloid plaques in a mouse model has been reported. Beta amyloid plaques accumulates in the spaces between neurons and interfere with communication between them. The mice were exposed to scanning ultrasound treatment and 75% of cleared plaques were observed. In addition they were noted to have memory function that was restored and equivalent to the levels seen in healthy mice. These mice showed improved performance in three different memory tasks [1].

Amyloid plaques could interfere with the outgoing signals from the neurons and the further distribution of these signals the brain. Researchers have noted that strings of the magnetic compound magnetite together with prions are involved in memory storage in the brain [2,3]. The role of prion biology is still poorly understood [4]. As noted in the mouse mode the basic memory system is more or less intact but that the signals leaving the neurons are disturbed. In addition the possibility for the patients to store incoming information without being able to use it [5]. Therefore it should be possible to restore memory in Alzheimer patient if the amyloid plaques could

be removed. The latest results from clinical trials of two antibody drugs with the "exotic" names solanezumab and aducanumab, could provide a path forward. They both resulted in improvements of the patient's situation and slowed down the progression of the disease. The results also demonstrated that slowing amyloid deposition can slow down cognitive decline [6].

### References

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