The short answer is **no**. Cutting out part of the amygdala (a procedure called an *amygdalotomy* or *amygdalectomy*) does not cause Alzheimer's disease.

While both involve the same part of the brain, the relationship between them is often misunderstood. Here is the breakdown of why surgery and the disease are distinct.

1. The Cause vs. The Effect

Alzheimer's disease is a **neurodegenerative condition** caused by the progressive build-up of toxic proteins (amyloid-beta and tau) that spread throughout the brain and kill neurons.[1] It is a biological "poisoning" of the brain cells over many years.

In contrast, cutting out part of the amygdala is a **localized physical change**. While this can affect how you process emotions, it does not trigger the biological protein-spreading process that defines Alzheimer's.

2. The Amygdala as a "Victim" of Alzheimer's

One reason for the confusion is that the amygdala is often one of the first areas to shrink (atrophy) when a person has Alzheimer's.[2]

Looks like helen is fucked...

- **In Alzheimer's:** The disease causes the amygdala to waste away.[3]
- **In Surgery:** The surgeon removes part of it to treat specific conditions like severe epilepsy or intractable aggression.[4]

Because the amygdala shrinks so early in the disease, doctors often use its size as a "biomarker" to help diagnose Alzheimer's. However, the shrinkage is a **symptom** of the disease, not the cause of it.

3. What actually happens if part of the amygdala is removed?

If a person undergoes an amygdalectomy, they don't experience the progressive memory loss of Alzheimer's. Instead, they typically experience specific changes in **emotional processing**, such as:

- **Reduced fear or aggression:** This is the most common reason the surgery is performed.
- **Difficulty recognizing facial expressions:** Specifically, struggling to "read" fear or anger in others.
- **Muted emotional responses:** A general "taming" effect on strong emotions.[5]

4. Surgery and General Risk

It is worth noting that any major surgery in elderly patients carries a small risk of **Post-Operative Cognitive Dysfunction (POCD)**.[6] This is a temporary "brain fog" or confusion caused by anesthesia or inflammation. While this can sometimes make existing (but undiagnosed) dementia more obvious, it is still not the same as causing Alzheimer's disease.

Summary Table

Feature	Alzheimer's Disease	Amygdala Surgery
Origin	Protein build-up (Amyloid/Tau)	Physical medical procedure
Progression	Gets worse over time; spreads	Static; change happens at surgery
Primary Effect	Memory loss & cognitive decline	Emotional changes (e.g., less fear)
Cure/Fix	No current cure	Used as a treatment for other issues

Would you like me to look into the specific long-term cognitive effects of epilepsy surgery involving the temporal lobe?