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# Weight-Loss Drugs May Reduce Alzheimer's Protein Buildup

## Description

Researchers at Anglia Ruskin University in the UK have reviewed studies suggesting potential benefits of GLP-1 drugs in reducing some markers of dementia. These drugs, used for diabetes and weight loss, might affect Alzheimer's disease indicators seen in lab tests.

The review analysed 30 studies on cell cultures and animals and focused on four GLP-1 drugs' effects on amyloid-beta and tau proteins, linked to Alzheimer's. Results showed 22 studies found a reduction in amyloid-beta, and 19 in tau proteins. These proteins can harm brain cells in Alzheimer's.

However, evidence from human trials is limited. Only two small trials were found, showing mixed results. One noted some brain function preservation, while the other saw reduced amyloid-beta outside brain cells, but neither showed a reduction in the proteins within the brain.

GLP-1 drugs, such as Ozempic and Wegovy, mimic a hormone that affects appetite and insulin release. The review noted that liraglutide was the most consistent in reducing harmful proteins, while exenatide had the smallest effect.

Despite limited human data, some findings suggest these drugs could have preventative effects against cognitive decline, rather than helping those with existing conditions. More comprehensive trials are needed to verify these outcomes.

Further research is planned to understand how these drugs might reduce dementia risk by lowering inflammation and improving insulin signals in the brain. Larger clinical trials could confirm their effectiveness in Alzheimer's prevention.

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## Vocabulary List:

1. **dementia** //dɪ'mɛnʃə// (noun): a serious loss of memory and thinking
2. **indicators** //ˈɪndɪˌkeɪtəz// (noun): signs that show a condition or problem
3. **cognitive** //ˈkɒgnətɪv// (adjective): related to thinking, memory, and understanding
4. **inflammation** //ˌɪnflə'meɪʃən// (noun): swelling and pain in body tissue
5. **trials** //ˈtraɪəlz// (noun): tests to see if something works safely
6. **mimic** //ˈmɪmɪk// (verb): to copy the way something works or acts

## Comprehension Questions



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## Multiple Choice

1. What is the focus of the review conducted by researchers at Anglia Ruskin University?  
Option: Effects of exercise on dementia  
Option: Benefits of GLP-1 drugs in reducing dementia markers  
Option: Impact of diet on Alzheimer's  
Option: Role of genetic factors in dementia
2. How many studies did the review analyse regarding GLP-1 drugs?  
Option: 10  
Option: 20  
Option: 30  
Option: 40
3. Which two GLP-1 drugs are mentioned in the review?  
Option: Saxenda and Victoza  
Option: Ozempic and Wegovy  
Option: Exenatide and Long-acting insulin  
Option: Metformin and Sitagliptin
4. What is the link between amyloid-beta and tau proteins and Alzheimer's disease?  
Option: They are beneficial for brain health  
Option: They are linked to brain cell damage  
Option: They are irrelevant to dementia  
Option: They improve brain function
5. Which GLP-1 drug was noted for being the most consistent in reducing harmful proteins?  
Option: Exenatide  
Option: Liraglutide  
Option: Ozempic  
Option: Wegovy
6. What common feature do GLP-1 drugs have in relation to their function?  
Option: They reduce inflammation  
Option: They mimic a hormone affecting appetite and insulin release  
Option: They increase amyloid-beta levels  
Option: They are used solely for diabetes treatment



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### True-False

7. The review found that 22 studies showed an increase in amyloid-beta levels.
8. Human trials of GLP-1 drugs have provided substantial evidence of their effectiveness against Alzheimer's.
9. Exenatide has the largest effect among the GLP-1 drugs on reducing harmful proteins.
10. The researchers plan further studies to explore how GLP-1 drugs might reduce dementia risk.
11. Limited human data indicate that GLP-1 drugs might help individuals with existing Alzheimer's disease effectively.
12. The review suggests that GLP-1 drugs may have preventative effects against cognitive decline.

### Gap-Fill

13. The review focused on four GLP-1 drugs' effects on amyloid-beta and tau proteins linked to \_\_\_\_\_.
14. The review found that \_\_\_\_\_ studies found a reduction in amyloid-beta.
15. Only two small trials were found that showed \_\_\_\_\_ results.
16. Larger clinical trials could confirm their effectiveness in \_\_\_\_\_ prevention.
17. The GLP-1 drugs might reduce dementia risk by lowering inflammation and improving \_\_\_\_\_ signals in the brain.
18. The review noted liraglutide as the most consistent in reducing harmful \_\_\_\_\_.

### Answer

**Multiple Choice:** 1. Benefits of GLP-1 drugs in reducing dementia markers 2. 30 3. Ozempic and Wegovy 4. They are linked to brain cell damage 5. Liraglutide 6. They mimic a hormone affecting appetite and insulin release

**True-False:** 7. False



8. False 9. False 10. True 11. False 12. True

**Gap-Fill:** 13. Alzheimer's 14. 22 15. mixed 17. insulin 18. proteins

## CATEGORY

1. Health - LEVEL4

## POST TAG

1. Alzheimer's
2. B2
3. ESL learning
4. esl news
5. L4
6. Level 4
7. ScienceAlert
8. weight loss

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## Date Created

2026/05/01

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