



# New Study Reveals Surprising Gut Bacteria Treatment for Parkinson's

## Description

Scientists have thought for a while that our gut and brain are connected to Parkinson's disease.

A new study found certain gut bacteria linked to low levels of riboflavin (vitamin B2) and biotin (vitamin B7), suggesting a simple treatment: B vitamins.

Adding riboflavin and biotin could help some Parkinson's patients with gut issues, according to Nagoya University researcher Hiroshi Nishiwaki.

Over 10 million people worldwide have Parkinson's, a disease that affects movement and memory.

Early symptoms like constipation and sleep trouble can lead to more serious issues like dementia.

Changes in gut bacteria can happen years before other symptoms, affecting the body's B vitamin production.

A lack of B vitamins can lead to problems in the intestines, causing nerve damage and inflammation in the brain.

Taking B vitamins might help protect against these issues and reduce problems from toxins in the environment.

Individual treatments might be needed based on gut health analysis.

The study was published in a journal called *npj Parkinson's Disease*.

This article was originally published in June 2024.

## Vocabulary List:

1. **Parkinson** /'pɑːr.kɪn.sən/ (noun): A progressive neurological disease that affects movement and can lead to cognitive impairment.
2. **Riboflavin** /ˌraɪ.bəʊ'fleɪ.vɪn/ (noun): A B vitamin that is important for energy production and cellular function.
3. **Biotin** /'baɪ.ə.tɪn/ (noun): A B vitamin essential for fat and carbohydrate metabolism.
4. **Inflammation** /ˌɪn.flə'meɪ.ʃən/ (noun): A biological response to harmful stimuli characterized by redness heat swelling and pain.
5. **Dementia** /dɪ'men.jə/ (noun): A group of symptoms affecting memory thinking and social abilities interfering with daily life.
6. **Toxins** /'tɒk.sɪnz/ (noun): Poisonous substances that can cause harm to biological systems.



## Comprehension Questions

### Multiple Choice

1. What do scientists think is connected to Parkinson's disease?  
Option: The heart and lungs  
Option: The gut and brain  
Option: The liver and kidneys  
Option: The skin and muscles
2. What do certain gut bacteria levels indicate for Parkinson's patients according to the study?  
Option: Low levels of vitamin A  
Option: Low levels of riboflavin  
Option: Low levels of calcium  
Option: Low levels of vitamin D
3. How many people worldwide are affected by Parkinson's disease?  
Option: 5 million  
Option: 10 million  
Option: 20 million  
Option: 50 million
4. What can early symptoms of Parkinson's like constipation and sleep issues lead to?  
Option: Cardiovascular disease  
Option: Lung cancer  
Option: Memory loss and dementia  
Option: Skin rashes
5. How can a lack of B vitamins affect the body?  
Option: Cause hair loss  
Option: Lead to skin discoloration  
Option: Result in nerve damage and brain inflammation  
Option: Cause joint pain
6. What might taking B vitamins help protect against?  
Option: Muscle weakness



- Option: Digestive disorders  
Option: Problems from toxins in the environment  
Option: Respiratory infections

### True-False

7. Parkinson's disease only affects a small portion of the population.
8. Changes in gut bacteria occur simultaneously with other Parkinson's symptoms.
9. B vitamins do not play a role in gut health according to the study.
10. A lack of B vitamins can cause nerve damage in the intestines.
11. Taking individual treatments based on gut health analysis is unnecessary according to the study.
12. The study on gut bacteria and B vitamins was published in a journal named npj Parkinson's Disease.

### Gap-Fill

14. Changes in gut bacteria can occur years before other \_\_\_\_\_.
15. A lack of B vitamins can lead to problems in the \_\_\_\_\_, causing nerve damage.
16. Taking B vitamins might help protect against problems from \_\_\_\_\_ in the environment.
17. Individual treatments might be needed based on gut health \_\_\_\_\_.
18. The study was published in a journal called npj \_\_\_\_\_ Disease.

### Answer

**Multiple Choice:** 1. The gut and brain 2. Low levels of riboflavin 3. 10 million 4. Memory loss and dementia 5. Result in nerve damage and brain inflammation 6. Problems from toxins in the environment

**True-False:** 7. False 8. False 9. False 10. True 11. False 12. True

**Gap-Fill:** 14. symptoms 15. intestines 16. toxins 17. analysis 18. Parkinson's



## Vocabulary quizzes

### Multiple Choice ( Select the Correct answer for each question. )

1. What drives progress in various fields and industries?  
Option: Dormancy  
Option: Advancements  
Option: Technology  
Option: Ancestors
2. Who studies the properties and interactions of matter and energy?  
Option: Memory  
Option: Researchers  
Option: Physicists  
Option: Particles
3. Which disease affects the central nervous system and can cause tremors and difficulty with movement?  
Option: Resist  
Option: Dementia  
Option: Parkinson  
Option: Inflammation
4. What are the elementary particles that combine to form protons and neutrons?  
Option: Gluons  
Option: Quarks  
Option: Neutrons  
Option: Particles
5. What branch of physics deals with the behavior of very small particles like photons and electrons?  
Option: Visceral  
Option: Active  
Option: Quantum  
Option: Subcutaneous
6. Which B vitamin is essential for converting food into energy?  
Option: Toxins  
Option: Biotin  
Option: Riboflavin  
Option: Memory
7. In what way do different species live together without causing harm to each other?



- Option: Resilient
- Option: Survive
- Option: Resist
- Option: Coexist

8. Who conducts systematic investigations to establish facts or reach new conclusions?

- Option: Memory
- Option: Active
- Option: Quantum
- Option: Researchers

9. What term is used to describe finding or learning something previously unknown or unseen?

- Option: Similar
- Option: Discovery
- Option: Planned
- Option: Ancestors

10. What is the ability of an organism to adjust to its environment for survival?

- Option: Adapt
- Option: Particles
- Option: Gluons
- Option: Quarks

**Gap-Fill ( Fill in the blanks with the correct word from the vocabulary list. )**

11. In biology organisms that share \_\_\_\_\_ characteristics are often classified together.

12. Alzheimer's disease is associated with a decline in cognitive function and \_\_\_\_\_ loss.

13. Genetic traits are passed down from our \_\_\_\_\_ and can influence our physical appearance.

14. Organisms with advantageous traits are more likely to \_\_\_\_\_ and reproduce in a given environment.

15. Regular physical exercise helps to keep the body \_\_\_\_\_ and healthy.



16. Exposure to environmental pollutants and harmful substances can lead to the accumulation of \_\_\_\_\_ in the body.
17. Chronic \_\_\_\_\_ in the body can contribute to the development of various diseases.
18. Older adults may experience cognitive decline and memory loss as a result of \_\_\_\_\_.
19. The construction of a new city is a complex project that requires careful \_\_\_\_\_ and execution.
20. Antibiotics are used to help the body \_\_\_\_\_ bacterial infections.

**Matching Sentences ( Match each definition to the correct word from the vocabulary list. )**

21. Subatomic particles found in the nucleus of an atom along with protons.
22. Fundamental units of matter that make up the universe and interact through forces.
23. Quantum particles that mediate the strong force which holds quarks together.
24. The ability to recover from difficulties and maintain stability and adaptability.
25. Located or placed just beneath the skin such as a subcutaneous injection.
26. Connect or associate one thing with another due to a relationship or connection.
27. A B vitamin that plays a key role in metabolism and energy production.
28. A state of minimal activity or reduced metabolic rate often to survive harsh conditions.
29. Technological and scientific progress leading to new innovations and discoveries.
30. Past generations from which individuals or species are descended.

## Answer

**Multiple Choice:** 1. Advancements 2. Physicists 3. Parkinson 4. Quarks 5. Quantum 6. Riboflavin 7. Coexist 8. Researchers 9. Discovery 10. Adapt

**Gap-Fill:** 11. Similar 12. Memory 13. Ancestors 14. Survive 15. Active 16. Toxins 17. Inflammation 18. Dementia



19. Planned 20. Resist

**Matching sentence:** 1. Neutrons 2. Particles 3. Gluons 4. Resilient 5. Subcutaneous 6. Linked 7. Biotin  
8. Dormancy 9. Advancements 10. Ancestors

## CATEGORY

1. Health - LEVEL2

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