

Vitamin B: A New Ally Against Glaucoma

Description

A recent study suggests that a common vitamin supplement might hold the key to slowing the progression of glaucoma, a degenerative eye disease. This intriguing research highlights that Vitamin B, abundant in whole grains, dark leafy greens like kale and broccoli, eggs, fish, and dairy, may alleviate the damage this condition causes.

Glaucoma affects nearly 700,000 individuals in the UK, resulting from an abnormality in the eye's drainage system. This defect leads to fluid accumulation, increasing pressure on the optic nerve. Primarily impacting older adults and those genetically predisposed, glaucoma can cause blurred vision and even blindness if left untreated. Typically, it is managed by reducing eye pressure via drops, surgery, or laser treatments.

Researchers administered supplements of vitamins B6, B9, and B12 to rodents suffering from glaucoma. In rats with a severe form, the progression of optic nerve damage was significantly slowed. Remarkably, in mice with a slower onset of the disease, the damage was completely halted.



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A common vitamin supplement may slow the progression of glaucoma, a study reveals.

Scientists postulate that the increased eye pressure could alter the retina's vitamin utilization, vital for maintaining healthy vision. Dr. James Tribble from the Karolinska Institute in Sweden, who led the study,



remarked, "The results are so promising that we've initiated a clinical trial and are currently recruiting patients."

Previously, a 2019 study indicated that vitamin B3 might also prevent glaucoma. Researchers at The Jackson Laboratory in Maine, US, added B3 to the water of mice genetically inclined to develop the condition, which helped maintain their eye health longer than those on plain water.

Vocabulary List:

1. **Glaucoma** /glɑʊ'kɒs.mə/ (noun): A degenerative eye disease characterized by increased pressure in the eye leading to damage of the optic nerve.
2. **Degenerative** /dɪ'dʒɛn.ər.ə.tɪv/ (adjective): Relating to the deterioration of a body part or system over time.
3. **Alleviate** /ə'li:.vi.eɪt/ (verb): To make (suffering deficiency or a problem) less severe.
4. **Optic** /'ɒp.tɪk/ (adjective): Relating to the eye or vision.
5. **Postulate** /'pɒs.tʃʊ.leɪt/ (verb): To suggest or assume the existence fact or truth of something as a basis for reasoning or belief.
6. **Genetically** /dʒɛ'nɛtɪkli/ (adverb): In a way that relates to genes or genetics.

Comprehension Questions

Multiple Choice

1. Which vitamin supplement is suggested to potentially slow down the progression of glaucoma?
Option: Vitamin A
Option: Vitamin C
Option: Vitamin D
Option: Vitamin B
2. What types of food are mentioned as sources of Vitamin B in the article?
Option: Fruits only
Option: Vegetables only
Option: Whole grains, dark leafy greens, eggs, fish, and dairy
Option: Meat only
3. How does glaucoma primarily impact individuals?
Option: Children and teenagers



- Option: Middle-aged adults
- Option: Older adults and genetically predisposed individuals
- Option: No specific age group

4. What methods are typically used to manage glaucoma?

- Option: Home remedies
- Option: Diet changes only
- Option: Reducing eye pressure via drops, surgery, or laser treatments
- Option: Physical therapy

5. What vitamins were administered to rodents suffering from glaucoma in the study?

- Option: Vitamins A, E, K
- Option: Vitamins B6, B9, B12
- Option: Vitamins C, D, F
- Option: Vitamins X, Y, Z

6. What did researchers find regarding the effect of Vitamin B3 on mice genetically inclined to develop glaucoma?

- Option: No effect
- Option: Shortened their lifespan
- Option: Caused negative side effects
- Option: Helped maintain their eye health longer

True-False

- 7. Glaucoma is a condition that primarily affects children and teenagers.
- 8. Researchers administered Vitamin C to rodents suffering from glaucoma.
- 9. The study mentioned in the article was conducted by Dr. James Tribble from Harvard University.
- 10. Glaucoma can cause blurred vision and even blindness if left untreated.
- 11. The article suggests that Vitamin B may alleviate the damage caused by glaucoma.
- 12. Researchers at The Jackson Laboratory in Maine, US, conducted a study on the effect of Vitamin B3 on eye health.



Gap-Fill

13. Glaucoma affects nearly 700,000 individuals in the UK, resulting from an abnormality in the eye's drainage system. This defect leads to fluid accumulation, increasing pressure on the optic nerve. Glaucoma primarily impacts older adults and those genetically predisposed, and can cause blurred vision and even blindness if left untreated. Typically, it is managed by reducing eye pressure via drops, surgery, or _____ treatments.

14. Researchers administered supplements of vitamins B6, B9, and B12 to rodents suffering from glaucoma. In rats with a severe form, the progression of optic nerve damage was significantly _____. Remarkably, in mice with a slower onset of the disease, the damage was completely halted.

15. Dr. James Tribble from the Karolinska Institute in Sweden led the study on the potential benefits of Vitamin B for glaucoma. The results of the study were so promising that they initiated a clinical trial and are currently recruiting _____.

16. Previously, a 2019 study indicated that vitamin B3 might also prevent glaucoma. Researchers at The Jackson Laboratory in Maine, US, added B3 to the water of mice genetically inclined to develop the condition, which helped maintain their eye health longer than those on plain _____.

17. A recent study suggests that a common vitamin supplement might hold the key to slowing the progression of glaucoma, a degenerative eye disease. This intriguing research highlights that Vitamin B, abundant in whole grains, dark leafy greens like kale and broccoli, eggs, fish, and _____, may alleviate the damage this condition causes.

18. The increased eye pressure associated with glaucoma could alter the retina's vitamin utilization, which



is vital for maintaining healthy _____.

Answer

Multiple Choice: 1. Vitamin B 2. Whole grains, dark leafy greens, eggs, fish, and dairy 3. Older adults and genetically predisposed individuals 4. Reducing eye pressure via drops, surgery, or laser treatments 5. Vitamins B6, B9, B12 6. Helped maintain their eye health longer

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

Gap-Fill: 13. laser 14. slowed 15. patients 16. water 17. dairy 18. vision

Vocabulary quizzes

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

1. Which body system is primarily responsible for the circulation of blood throughout the body?

Option: Digestive system

Option: Respiratory system

Option: Cardiovascular system

Option: Nervous system

2. Which eye condition is characterized by optic nerve damage often associated with increased intraocular pressure?

Option: Cataracts

Option: Myopia

Option: Glaucoma

Option: Astigmatism

3. What term is used to describe a disease that is regularly found and maintained at a certain level in a specific geographic area?

Option: Epidemic

Option: Endemic

Option: Pandemic

Option: Seasonal

4. Which type of treatment is intended to heal or relieve symptoms of a disease?

Option: Preventive

Option: Therapeutic

Option: Diagnostic

Option: Holistic



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5. What term refers to biological processes that follow a daily cycle often influenced by light and darkness?
Option: Circadian
Option: Nocturnal
Option: Diurnal
Option: Biannual
6. What is the body's ability to resist or defend against a specific disease or infection?
Option: Resistance
Option: Adaptability
Option: Immunity
Option: Vulnerability
7. Which term describes a sudden and significant increase in something such as cases of a particular disease?
Option: Declined
Option: Stabilized
Option: Fluctuated
Option: Surged
8. Which term refers to individuals in the stage of development between childhood and adulthood?
Option: Infants
Option: Teenagers
Option: Adolescents
Option: Elderly
9. What term is used for drugs or other substances used to treat cure or prevent diseases or medical conditions?
Option: Prescription
Option: Medication
Option: Supplement
Option: Placebo
10. Which term refers to statistical data relating to the population and particular groups within it?
Option: Geography
Option: Demographics
Option: History
Option: Economics

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

11. The researchers _____ a new gene associated with the rare disorder.



12. The patient underwent surgery and _____ recovered from the illness.
13. The doctor prescribed medication to help _____ the patient's pain.
14. The scientist will _____ a theory to explain the unusual results.
15. The heavy traffic _____ the progress of the emergency vehicles.
16. The disease is believed to be _____ inherited from parents.
17. The company takes a _____ approach to prevent accidents in the workplace.
18. Regular exercise can help boost the _____ .
19. The medication may cause _____ side effects in some patients.
20. The lack of funding _____ the progress of the research project.

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

21. This condition leads to the gradual deterioration of organs or tissues over time.
22. The study patterns causes and effects of health and disease conditions in defined populations.
23. The project came under intense from various regulatory bodies.
24. The new policy has a wide range of stakeholders.
25. The government introduced new to control pollution levels in urban areas.
26. The unexpected results of the study could completely existing theories.
27. The field of deals with the properties of light and vision.
28. The storm was by strong winds and heavy rain.
29. data can help businesses target specific consumer groups more effectively.
30. The teacher kept the importance of thorough research in the academic field.



Answer

Multiple Choice: 1. Cardiovascular system 2. Glaucoma 3. Endemic 4. Therapeutic 5. Circadian 6. Immunity
7. Surged 8. Adolescents 9. Medication 10. Demographics

Gap-Fill: 11. identified 12. subsequently 13. alleviate 14. postulate 15. impeded 16. genetically 17. proactive
18. immune system 19. adverse 20. hindered

Matching sentence: 1. degenerative 2. epidemiologist 3. scrutiny 4. impacted 5. regulation 6. upend 7. optics
8. preceded 9. Demographics 10. emphasizing

CATEGORY

1. Health - LEVEL4

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Author

aimeeyoung99

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