



Safer Pregnancy Epilepsy Drug with Rapamycin

Description

Sodium valproate and Pregnancy

A medicine called rapamycin might help prevent sodium valproate, a drug for epilepsy, from causing problems during pregnancy.

Sodium valproate is used for epilepsy and bipolar disorder, but it can harm babies if taken during pregnancy, causing birth defects and learning issues.

Scientists made mini spinal cords in the lab to study why sodium valproate is harmful. They found that the drug makes cells age quickly, which can lead to problems in babies.

Rapamycin, another drug, can stop this aging process in cells. When given with sodium valproate in tests with fish and cells, the harmful effects were reduced.

Instead of stopping sodium valproate for pregnant people with epilepsy, combining it with rapamycin could protect the baby. More research is needed before this can be recommended.

This discovery may help restore the importance of sodium valproate as an effective treatment for seizures. Further studies will determine its impact.

Vocabulary List:

1. **Sodium valproate** /'soʊ.di.əm 'væl.prə.ɪt/ (noun): A medication used to treat epilepsy and bipolar disorder.
2. **Epilepsy** /'ɛp.ɪ.lep.si/ (noun): A neurological disorder characterized by recurrent seizures.
3. **Harmful** /'hɑ:rm.fəl/ (adjective): Causing or capable of causing damage or injury.
4. **Defects** /'di:.fɛkts/ (noun): Imperfections or abnormalities that affect quality or function.
5. **Research** /'ri:.sɜ:rtʃ/ (noun): Systematic investigation to establish facts or principles.
6. **Discovery** /dɪs'kʌv.ər.i/ (noun): The act of finding or learning something for the first time.

Comprehension Questions

Multiple Choice



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1. What is the potential role of rapamycin in relation to sodium valproate and pregnancy?
 - Option: Enhancing birth defects
 - Option: Reducing harmful effects
 - Option: Increasing learning issues
 - Option: Inducing epilepsy

 2. Which conditions is sodium valproate commonly used to treat?
 - Option: Hypertension
 - Option: Epilepsy
 - Option: Diabetes
 - Option: Asthma

 3. What effect can sodium valproate have on babies if taken during pregnancy?
 - Option: Enhancing cognitive abilities
 - Option: Causing birth defects and learning issues
 - Option: Improving motor skills
 - Option: Boosting immunity

 4. According to the text, what did scientists find about the aging of cells caused by sodium valproate?
 - Option: Cells become younger
 - Option: Cells age quickly
 - Option: Cells remain unchanged
 - Option: Cells multiply rapidly

 5. What could be a potential implication of combining sodium valproate with rapamycin for pregnant individuals with epilepsy?
 - Option: Increased harm to the baby
 - Option: Decreased risk of seizures
 - Option: Protecting the baby
 - Option: Elevated learning issues

 6. What impact could the discovery related to sodium valproate and rapamycin have on the effectiveness of sodium valproate as a treatment for seizures?
 - Option: No impact
 - Option: Popularizing sodium valproate
 - Option: Restoring importance
 - Option: Decreasing effectiveness



True-False

7. Sodium valproate is primarily used to treat hypertension.
8. Rapamycin was found to have no impact on the aging process of cells caused by sodium valproate.
9. Stopping sodium valproate for pregnant people with epilepsy is recommended according to the text.
10. The harmful effects of sodium valproate were increased when tested with fish and cells.
11. Further research is needed before recommending the combination of sodium valproate and rapamycin for pregnant individuals with epilepsy.
12. The potential of restoring the importance of sodium valproate as an effective treatment for seizures may depend on future studies.

Gap-Fill

16. Combining sodium valproate with _____ could protect the baby, as per the text.
17. More research is required before recommending the use of _____ and rapamycin for pregnant individuals with epilepsy.
18. The impact of the discovery on the importance of sodium valproate for seizures will be determined by _____.

Answer

Multiple Choice: 1. Reducing harmful effects 2. Epilepsy 3. Causing birth defects and learning issues 4. Cells age quickly 5. Protecting the baby 6. Restoring importance

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

Gap-Fill: 16. rapamycin 17. sodium valproate 18. further studies

Vocabulary quizzes



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

1. Which medication is commonly used to treat epilepsy?
Option: Sodium valproate
Option: Ibuprofen
Option: Amoxicillin
Option: Aspirin

2. What prefix is commonly used to refer to things related to the internet or technology?
Option: Cyber
Option: Geo
Option: Bio
Option: Aero

3. Which term refers to measures taken to ensure safety and protection?
Option: Security
Option: Hospitality
Option: Flexibility
Option: Transparency

4. What are preserved remains or traces of ancient organisms called?
Option: Fossils
Option: Crystals
Option: Artifacts
Option: Inventions

5. What are the cells that transmit information in the nervous system?
Option: Neurons
Option: Platelets
Option: Fibroblasts
Option: Tendons

6. What term is used to describe an animal that is hunted and eaten by another?
Option: Prey
Option: Predator
Option: Herbivore
Option: Omnivore

7. What process converts information into a code to prevent unauthorized access?
Option: Encryption
Option: Decryption
Option: Transcription



Option: Translation

8. Which branch of science studies the structure of organisms and their parts?

Option: Anatomy

Option: Ecology

Option: Botany

Option: Astronomy

9. Which birds are known for their red breasts?

Option: Robins

Option: Crows

Option: Eagles

Option: Sparrows

10. What characteristic refers to the ability to walk on two legs?

Option: Bipedality

Option: Quadrupedality

Option: Flight

Option: Swimming

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

11. The company issued a product _____ due to safety concerns.

12. She was _____ to succeed in her career despite facing challenges.

13. The documentary _____ the harsh realities of the industry.

14. The new system proved to be more _____ than the old one.

15. The decision to close the factory was highly _____ among the employees.

16. The student was _____ for cheating on the exam.

17. She was deeply _____ in the local community activities.

18. The trade embargo was officially _____ by the government.

19. Smoking has been proven to have _____ effects on health.

20. The painting was a beautiful landscape _____ a scene from the countryside.



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

21. The of a new species in the rainforest excited the scientific community.
22. The system allows us to experience the world through touch taste and smell.
23. Despite his success he remained humble and in his values.
24. The new manufacturing process was more and cost-effective.
25. Over time humans into the dominant species on the planet.
26. The product was recalled due to manufacturing that could pose a safety risk.
27. Customer is important for improving products and services.
28. Individuals have the right to protect their and personal information.
29. is a neurological disorder characterized by recurrent seizures.
30. Scientific is essential for advancing medical knowledge and treatments.

Answer

- Multiple Choice:** 1. Sodium valproate 2. Cyber 3. Security 4. Fossils 5. Neurons 6. Prey 7. Encryption 8. Anatomy 9. Robins 10. Bipedality
Gap-Fill: 11. recall 12. determined 13. exposed 14. efficient 15. controversial 16. punished 17. involved 18. sanctioned 19. harmful 20. resembling
Matching sentence: 1. discovery 2. sensory 3. grounded 4. efficient 5. evolved 6. defects 7. feedback 8. privacy 9. Epilepsy 10. research

CATEGORY

1. Sci/Tech - LEVEL2

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