



Discover How This Drug Replicates High Altitude Health Benefits

Description

Scientists are making a new drug that acts like thin "mountain air." This drug can help people breathe better.

The drug is called HypoxyStat. It helped mice live longer by reducing too much oxygen in their brains. A team from Gladstone Institutes, the University of California San Francisco, and Maze Therapeutics worked on this drug.

In tests, HypoxyStat helped sick mice recover, even when they were very ill. It improved their movement and strength.

Leigh syndrome is a rare disease that makes it hard for cells to use oxygen. This can cause brain damage and could lead to early death. Most children with this disease do not live long.

HypoxyStat helps red blood cells carry oxygen better. This means there is less oxygen in the tissues but more in the blood. This is similar to how people feel at high altitudes.

The researchers are excited about this drug. They hope it can help people with serious diseases in the future.

The study was published in the journal *Cell*.

Vocabulary List:

1. **HypoxyStat** /haɪ'pɒk.si.stæt/ (noun): A new drug that mimics high altitude conditions to aid breathing.
2. **Sick** /sɪk/ (adjective): Having a disease or illness that affects health and well-being.
3. **Recovery** /rɪ'kʌv.ər.i/ (noun): The process of regaining health or strength after illness or injury.
4. **Oxygen** /'ɒk.sɪ.dʒən/ (noun): A chemical element essential for respiration in living organisms.
5. **Tissues** /'tɪʃ.u:z/ (noun): Groups of cells that work together to perform a specific function in the body.
6. **Researchers** /rɪ'sɜːr.tʃərz/ (noun): Individuals who conduct studies or investigations to discover new information.

Comprehension Questions

Multiple Choice



1. What is the name of the new drug being developed by scientists to help people breathe better?
Option: AirHypo
Option: Hypoxygen
Option: HypoxyStat
Option: OxyBreathe

2. How did HypoxyStat help mice in the tests conducted by the research team?
Option: Improved their vision
Option: Reduced oxygen in their brains
Option: Increased their body weight
Option: Strengthened their bones

3. What disease is mentioned in the text that makes it hard for cells to use oxygen?
Option: Hypertension
Option: Leigh syndrome
Option: Malaria
Option: Diabetes

4. What effect does HypoxyStat have on red blood cells according to the information provided?
Option: Makes them produce more oxygen
Option: Helps them carry oxygen better
Option: Reduces their ability to carry oxygen
Option: Causes them to release carbon dioxide

5. Where was the study on the new drug published?
Option: Science
Option: Nature
Option: Cell
Option: Journal of Medicine

6. What is the similarity mentioned in the text between the effects of HypoxyStat and high altitudes?
Option: Both increase oxygen in tissues
Option: Both reduce oxygen in tissues
Option: Both have no impact on oxygen levels
Option: Both increase carbon dioxide levels

True-False



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7. HypoxyStat is proven to help mice live longer by increasing oxygen in their brains.
 8. Leigh syndrome is a common disease that affects a large portion of the population.
 9. The researchers are not hopeful about the potential of HypoxyStat in treating serious diseases.
 10. HypoxyStat is the result of collaboration between teams from various organizations including Gladstone Institutes.
 11. Most children with Leigh syndrome live a long and healthy life.
 12. The primary goal of HypoxyStat is to improve strength and movement in sick individuals.

Gap-Fill

13. HypoxyStat helped sick mice recover, even when they were very ill. It improved their _____ and _____.
14. HypoxyStat helps red blood cells carry oxygen better, resulting in less oxygen in the tissues but more in the _____.
15. The team from Gladstone Institutes, the University of California San Francisco, and Maze Therapeutics collaborated on the development of HypoxyStat to address the challenges of _____ syndrome.
16. Scientists are excited about the potential of HypoxyStat to help people with serious diseases in the _____.
17. The study on HypoxyStat was published in the journal _____.
18. HypoxyStat reduces oxygen in tissues similar to how people feel at high _____.

Answer

Multiple Choice: 1. HypoxyStat 2. Reduced oxygen in their brains 3. Leigh syndrome 4. Helps them carry oxygen better



5. Cell 6. Both reduce oxygen in tissues

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

Gap-Fill: 13. movement, strength 14. blood 15. Leigh 16. future 17. Cell 18. altitudes

CATEGORY

1. Health - LEVEL1

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