



Evolution Links Red Hair Genes to Vitamin D Advantage

Description

A new study shows that our DNA has changed a lot through natural selection. This study comes from a team at Harvard University. They looked at how our genes have evolved over time.

Natural selection is how some traits help organisms survive and have babies. Earlier, many scientists thought our DNA stopped changing after we changed from hunting to farming. They found only 21 parts of DNA affected in Europeans over 10,000 years.

Now, this new study found 479 genetic changes that have been strongly selected. These include genes linked to red hair and pale skin. The research helps us understand human evolution.

The study gathered DNA from nearly 16,000 people over the last 10,000 years. Researchers used a new method to find important gene changes. They studied how some genes helped survival. For example, genes linked to pale skin might help absorb more vitamin D from sunlight.

This research is important, but scientists remind us to be careful when making conclusions. They hope to use these methods to learn more about our genes and disease risks in different parts of the world.

Vocabulary List:

1. **selection** //sə'leɪkjən// (noun): process where helpful traits become common
2. **evolved** //ɪ'vɒlvd// (verb): changed slowly over many past generations
3. **genetic** //dʒə'netɪk// (adjective): relating to genes that parents pass on
4. **traits** //treɪts// (noun): qualities or features of a person or animal
5. **absorb** //əb'zɔrb// (verb): take in something such as light or liquid
6. **conclusions** //kən'kluzənz// (noun): ideas decided after looking at information

Comprehension Questions

Multiple Choice

1. How many genetic changes have been strongly selected according to the new study?

Option: 21



- Option: 479
- Option: 16,000
- Option: 10,000

2. What did scientists previously believe about DNA changes after transitioning from hunting to farming?

- Option: It continued to evolve
- Option: It stopped changing
- Option: It evolved at a faster rate
- Option: It changed only in certain populations

3. Which institution conducted the study on DNA changes?

- Option: Stanford University
- Option: Harvard University
- Option: MIT
- Option: Oxford University

4. What trait is linked to one of the genetic changes found in the study?

- Option: Blue eyes
- Option: Red hair
- Option: Tallness
- Option: Lactose tolerance

5. How many people's DNA was gathered for the study?

- Option: 10,000
- Option: 5,000
- Option: 21,000
- Option: 16,000

6. Which gene change is mentioned as important for absorbing vitamin D?

- Option: Gene linked to red hair
- Option: Gene linked to pale skin
- Option: Gene linked to height
- Option: Gene linked to eyesight

True-False

7. According to the study, DNA has not changed significantly through natural selection.

8. The new study challenges the earlier belief that DNA stopped changing after switching from hunting to



farming.

9. Researchers studied DNA from 479 people over the last 10,000 years.
10. Genetic changes might help in understanding human evolution.
11. The study confirms that all DNA changes are beneficial to survival.
12. Scientists hope to use the methods from the study to learn more about disease risks.

Gap-Fill

13. The study gathered DNA from nearly 16,000 people over the last _____ years.
14. Natural selection is how some traits help organisms _____ and have babies.
15. Earlier, many scientists believed our DNA stopped changing after we transitioned from hunting to _____.
16. The new study identified 479 genetic changes that have been strongly _____.
17. According to the study, genes linked to pale skin might help absorb more _____ from sunlight.
18. This research helps us understand human _____.

Answer

Multiple Choice: 1. 479 2. It stopped changing 3. Harvard University 4. Red hair 5. 16,000 6. Gene linked to pale skin

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

Gap-Fill: 13. 10,000 14. survive 15. farming 16. selected 17. vitamin D 18. evolution

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Author

aimeeyoung99

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