



Neanderthals' Genetic Crisis Triggered Their Extinction 100,000 Years Ago

Description

The extinction of Neanderthals is a big mystery. Scientists think many things could have caused it. These include climate change and conflicts with modern humans.

Some experts wonder if Neanderthals didn't have enough genetic variety to survive. A new study supports this idea. It suggests a big drop in their genetic diversity happened before they disappeared.

Researchers used ear canal shapes and Neanderthal genetics to find clues. They found signs of less genetic variety about 100,000 years ago.

By comparing the ear shapes of Neanderthals and modern humans from different areas, they learned about differences in human types. The study focused on fossils from places like Croatia and France.

It seems something caused a big drop in their population before they went extinct around 40,000 years ago. This study does not explain why this happened, but factors like climate change and competition could be reasons.

The researchers want to look at more fossils to learn more about Neanderthals. Their findings are published in the journal *Nature Communications*.

Vocabulary List:

1. **Extinction** /ɪk'stɪŋkʃən/ (noun): The state or process of a species family or larger group being or becoming extinct.
2. **Diversity** /daɪ'vɜːrsɪti/ (noun): The state of being diverse; variety.
3. **Genetic** /dʒə'netɪk/ (adjective): Relating to genes or heredity.
4. **Comparison** /kəm'pærɪsən/ (noun): The act of comparing; the state of being compared.
5. **Fossil** /'fɔːsəl/ (noun): The remains or impression of a prehistoric organism preserved in petrified form or as a mold or cast in rock.
6. **Population** /ˌpɒpjʊ'leɪʃən/ (noun): All the inhabitants of a particular town area or country.

Comprehension Questions



Multiple Choice

1. What are some possible reasons for the extinction of Neanderthals according to scientists?

- Option: Climate change
- Option: Conflicts with modern humans
- Option: Lack of genetic variety
- Option: All of the above

2. When did the drop in genetic diversity of Neanderthals occur as mentioned in the study?

- Option: Around 100,000 years ago
- Option: Around 40,000 years ago
- Option: Around 50,000 years ago
- Option: Around 10,000 years ago

3. Which method did researchers use to find clues about Neanderthals?

- Option: Ear canal shapes
- Option: Fingerprints
- Option: DNA sequencing
- Option: Hair samples

4. Where did the study focus on fossils of Neanderthals and modern humans?

- Option: Croatia and France
- Option: Italy and Spain
- Option: Germany and Sweden
- Option: Japan and Australia

5. What do researchers want to do to learn more about Neanderthals?

- Option: Study more fossils
- Option: Study modern humans
- Option: Build a time machine
- Option: Forget about Neanderthals

6. Which journal published the findings of the researchers?

- Option: Nature Communications
- Option: Science Daily
- Option: National Geographic
- Option: Journal of Archaeology



True-False

- 7. Neanderthals had enough genetic variety to survive.
- 8. The study focused on genetic diversity in Neanderthal ear canal shapes.
- 9. The extinction of Neanderthals occurred around 40,000 years ago.
- 10. The researchers are not interested in studying more fossils of Neanderthals.
- 11. Climate change is not considered as a possible reason for Neanderthals' extinction.
- 12. The drop in Neanderthals' population occurred around 10,000 years ago.

Gap-Fill

- 13. The big drop in Neanderthals' genetic diversity happened before they disappeared around _____ years ago.
- 14. Researchers used ear canal shapes and Neanderthal genetics to find clues about the lack of genetic variety approximately _____ years ago.
- 15. The study focused on fossils from places like _____ and France.
- 16. Factors like climate change and competition could be reasons for the big drop in Neanderthals' _____.
- 17. The researchers want to look at more fossils to learn more about _____.
- 18. The findings of the researchers are published in the journal _____.

Answer

Multiple Choice: 1. All of the above 2. Around 100,000 years ago 3. Ear canal shapes 4. Croatia and France 5. Study more fossils 6. Nature Communications

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

Gap-Fill: 13. 40,000



14. 100,000 15. Croatia 16. population 17. Neanderthals 18. Nature Communications

Vocabulary quizzes

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

1. What is the distance around a circle called?

- Option: Radius
- Option: Diameter
- Option: Circumference
- Option: Area

2. Which type of food should be limited in a healthy diet?

- Option: Fresh
- Option: Processed
- Option: Organic
- Option: Homemade

3. What is physical activity done to improve health called?

- Option: Break
- Option: Exercise
- Option: Rest
- Option: Diet

4. What is the possibility of something bad happening called?

- Option: Award
- Option: Risk
- Option: Reward
- Option: Challenge

5. Which type of factors are inherited from parents?

- Option: Environmental
- Option: Genetic
- Option: Lifestyle
- Option: Dietary

6. What term describes a person who is significantly overweight?



- Option: Underweight
- Option: Obese
- Option: Athletic
- Option: Average

7. What term refers to a range of different things?

- Option: Uniformity
- Option: Diversity
- Option: Similarity
- Option: Consistency

8. What are the activities related to selling products or services?

- Option: Production
- Option: Sales
- Option: Innovation
- Option: Distribution

9. What is the total number of people living in a specific area?

- Option: Traffic
- Option: Population
- Option: Immigration
- Option: Territory

10. What encompasses the social behavior and norms of a specific group?

- Option: Music
- Option: Culture
- Option: Science
- Option: Sport

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

- 11. Education is _____ for personal growth and development.
- 12. Due to climate change the frequency of extreme weather events is _____.
- 13. The system can perform _____ updates without user intervention.
- 14. Developing good study _____ can improve academic performance.
- 15. Regular exercise provides numerous health _____.



16. Excessive workload can lead to high levels of _____.
17. People _____ festivals to mark special occasions.
18. Setting an alarm is a useful _____ to wake up on time.
19. Online shopping offers the _____ of shopping from home.
20. Hard work is often recognized with _____ and promotions.
21. It is important to _____ junk food consumption.

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

22. Scientists who conduct experiments and studies to expand knowledge in their field.
23. Individuals involved in a research study or an event.
24. Eating fruits and vegetables is for overall health.
25. The disappearance of a species from the Earth.
26. Evaluating similarities and differences between two or more things.
27. Remnants or impressions of ancient organisms preserved in rock.
28. A decline in cognitive function beyond normal aging.
29. The way in which two or more people or things are connected.
30. A series of actions or steps taken to achieve a particular result.
31. A feeling of emotional or physical tension.

Answer

Multiple Choice: 1. Circumference 2. Processed 3. Exercise 4. Risk 5. Genetic 6. Obese 7. Diversity 8. Sales 9. Population 10. Culture

Gap-Fill: 11. Important 12. Increasing 13. Automatic 14. Habits 15. Benefits 16. Stress 17. Celebrate 18. Reminder 19. Convenience 20. Rewards 21. Limit

Matching sentence: 1. Researchers 2. Participants 3. Beneficial 4. Extinction 5. Comparison 6. Fossil 7. Dementia



8. Relationship 9. Process 10. Stress

CATEGORY

1. Health - LEVEL1

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