



Cocoa: Your Defense Against Fatty Foods and Stress

Description

In moments of stress, individuals often gravitate toward comfort foods, which, regrettably, may not be beneficial for overall health. However, a delightful revelation from researchers indicates that consuming a high-fat meal alongside a specific type of cocoa can mitigate some of the detrimental health effects associated with such indulgences.

Research underscores that even brief episodes of heightened stress can transiently impair arterial function. While fatty foods may provide immediate comfort, evidence suggests that saturated fats can intensify cardiovascular strain, thereby extending recovery times.

Encouragingly, scientists believe a remedy may lie in enjoying a post-meal dessert: cocoa powder rich in antioxidants. In a randomized, double-blind trial conducted at the University of Birmingham, researchers discovered that a cocoa drink abundant in flavanols—antioxidants prevalent in various fruits, tea, and certain nuts—has the potential to counteract the vascular impairments triggered by dietary fat and stress.

The study involved 23 participants who consumed a breakfast of buttery croissants and whole milk. Half of the group sipped a high-flavanol cocoa beverage, while the others received a low-flavanol counterpart. Subsequently, all participants faced a universally stressful task: a mental math examination.

Results indicated that, following the fatty meal and stressful event, participants experienced significant enlargement in the brachial and carotid arteries—key conduits for oxygenated blood. However, those who consumed the low-flavanol cocoa exhibited prolonged recovery in their brachial artery response, persisting for up to 90 minutes post-meal, a condition linked to an increased risk of cardiovascular issues.

Conversely, participants who ingested the high-flavanol cocoa demonstrated a notable resilience to these impairments, with better arterial response to blood flow variations. “This is the first study indicating that high-flavanol cocoa can reduce stress-induced declines in vascular function following a fatty meal,” stated physiologist Rosalind Baynham.

Despite the promising results, further research is imperative, particularly given that many on a Western diet fail to meet the recommended daily intake of flavanols, equivalent to two cups of green or black tea. This trial’s high flavanol dose corresponds to 5.5 tablespoons of unprocessed cocoa, 300 grams (10.6 ounces) of berries, or two cups of green tea, potentially supporting cardiovascular and cognitive well-being.

As Jet Veldhuijzen van Zanten, a biological psychologist, posits, “For those in high-pressure situations who frequently choose convenient foods, these small dietary adjustments could yield significant benefits.” The findings, however, did not indicate a corresponding enhancement in cerebral blood flow or oxygenation, suggesting that future studies with larger cohorts could elucidate these dynamics, given prior evidence pointing to flavanol benefits for cognitive health.



Nutritional scientist Catarina Rendeiro emphasized the potential of flavanol-rich foods to alleviate the vascular repercussions of poor dietary choices during stressful times, enabling individuals to make more informed nutritional decisions. The results of this study were published in *Food and Function*.

Vocabulary List:

1. **Mitigate** /'mɪt.i.geɪt/ (verb): To make less severe serious or painful.
2. **Transiently** /'trænz.jənt.li/ (adverb): In a way that lasts only for a short time.
3. **Impairments** /ɪm'peə.mənts/ (noun): Conditions that interfere with normal function.
4. **Indulgences** /ɪn'dʌl.dʒənsɪz/ (noun): The act of allowing oneself to enjoy something.
5. **Resilience** /rɪ'zɪl.i.əns/ (noun): The capacity to recover quickly from difficulties.
6. **Cognitive** /'kɒg.nɪ.tɪv/ (adjective): Related to mental processes of perception memory judgment and reasoning.

Comprehension Questions

Multiple Choice

1. What type of beverages can help counteract the vascular impairments triggered by dietary fat and stress?
Option: Green tea
Option: Cocoa rich in flavanols
Option: Black coffee
Option: Fruit smoothies
2. How many participants were involved in the study mentioned?
Option: 15
Option: 23
Option: 30
Option: 40
3. What is a potential benefit of consuming high-flavanol cocoa after a fatty meal?
Option: Enhanced stress levels
Option: Improved arterial response
Option: Reduced cognitive function
Option: Increased recovery time



4. What did the study suggest regarding the impact of low-flavanol cocoa on cardiovascular risks?

- Option: Increased risks
- Option: Decreased risks
- Option: No impact
- Option: Uncertain impact

5. According to the text, what is the recommended daily intake of flavanols?

- Option: One cup of green tea
- Option: Two cups of green tea
- Option: Five cups of black tea
- Option: Three cups of coffee

6. What factor did the study not show an enhancement in after consuming high-flavanol cocoa?

- Option: Cognitive ability
- Option: Vascular function
- Option: Blood flow variations
- Option: Oxygenation levels

True-False

7. Consuming high-flavanol cocoa can reduce stress-induced declines in vascular function following a fatty meal.

8. Low-flavanol cocoa consumption extended the recovery in brachial artery response as compared to high-flavanol cocoa.

9. Western diet consumers usually meet the recommended daily intake of flavanols.

10. The study included a group of participants who faced a physical endurance challenge post-meal.

11. High-flavanol cocoa was found to have a positive impact on cerebral blood flow.

12. The study results indicated that dietary changes during stressful times can have no impact on vascular health.

Gap-Fill

13. Participants who ingested the high-flavanol cocoa exhibited notable resilience to impairments in arterial response to blood flow variations compared to those who consumed the low-flavanol cocoa, showing a



better _____ .

14. The trial's high flavanol dose corresponds to 5.5 tablespoons of unprocessed cocoa, 300 grams (10.6 ounces) of berries, or two cups of _____ tea.

15. Catarina Rendeiro emphasized the potential of flavanol-rich foods to alleviate the vascular repercussions of poor dietary choices during stressful times, enabling individuals to make more informed nutritional _____ .

16. Further research is deemed imperative due to many individuals on a Western diet failing to meet the recommended daily intake of _____ , which is equivalent to two cups of green or black tea.

17. The study conducted at the University of Birmingham involved a randomized, double-blind trial with participants consuming a breakfast of buttery croissants and whole _____ .

18. Nutritional scientist Catarina Rendeiro underlined the potential benefits of flavanol-rich foods in alleviating the vascular repercussions of poor dietary choices during _____ times.

Answer

Multiple Choice: 1. Cocoa rich in flavanols 2. 23 3. Improved arterial response 4. Increased risks 5. Two cups of green tea 6. Oxygenation levels

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

Gap-Fill: 13. arterial 14. green 15. decisions 16. flavanols 17. milk 18. stressful

Vocabulary quizzes

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

1. What is a term used to describe something mysterious or puzzling?

Option: Secret code



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- Option: Electrophysiological
Option: Resilience
Option: Indulgences
2. Which plant is known for its medicinal and recreational uses?
Option: Fungi
Option: Cannabis
Option: Correlations
Option: Resilience
3. What is the term for taking action to reduce the severity or risk of something?
Option: Inclusive
Option: Mitigate
Option: Proliferation
Option: Susceptibility
4. Which term refers to the ability of an individual or entity to govern itself independently?
Option: Potent
Option: Autonomy
Option: Chronic
Option: Epidemiology
5. What is the collection of chemical compounds that guide the functioning of our genes?
Option: Causation
Option: Enhancing
Option: Epigenome
Option: Propensity
6. Which term describes the rising again or renewal of an activity after a period of dormancy?
Option: Transiently
Option: Impairments
Option: Resurgence
Option: Propagation
7. What does the term "propensity" refer to?
Option: Identification
Option: Enhancing
Option: Resilience
Option: Propensity
8. What are acts of satisfying desires without restraint called?
Option: Phenomena
Option: Correlations



Option: Indulgences

Option: Mitigate

9. Which term refers to a group of organisms that includes mushrooms yeasts and molds?

Option: Enigma

Option: Transients

Option: Fungi

Option: Telophase

10. Which term means to improve or increase the quality value or extent of something?

Option: Enhancing

Option: Propagation

Option: Susceptibility

Option: Identification

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

11. The _____ of the novel won numerous awards for their captivating storytelling.

12. The study focused on the _____ responses of the brain to different stimuli.

13. Prolonged stress can lead to various _____ health conditions.

14. The team analyzed the genetic factors influencing _____ to certain diseases.

15. The scientist studied natural _____ to understand underlying principles.

16. Effective _____ measures can reduce the impact of environmental disasters.

17. Water _____ in the region serve as crucial sources for agriculture.

18. The report outlined strategies for the rapid _____ of renewable energy sources.

19. The forensic team used DNA _____ to determine the victim of the crime.

20. The study established strong _____ between diet and overall health.

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

21. The research project aims to develop a new generation of medical implants using living cells and organic materials.



22. The community showed great in rebuilding after the natural disaster.
23. The policy was designed to be of all members of society regardless of background or status.
24. The new drug demonstrated a effect in treating the rare disease.
25. Long-term smoking can lead to respiratory diseases.
26. The migratory birds were considered in the region only staying for a short period each year.
27. Public health officials relied on data to track the spread of the contagious disease.
28. The rapid of rumors led to widespread misinformation within the community.
29. Individuals with weakened immune systems have increased to infections.
30. In times of stress people often seek as a form of comfort and escape.

Answer

Multiple Choice: 1. Secret code 2. Cannabis 3. Mitigate 4. Autonomy 5. Epigenome 6. Resurgence 7. Propensity 8. Indulgences 9. Fungi 10. Enhancing

Gap-Fill: 11. Author 12. Electrophysiological 13. Chronic 14. Susceptibility 15. Phenomena 16. Mitigation 17. Reservoirs 18. Propagation 19. Identification 20. Correlations

Matching sentence: 1. Biohybrid 2. Resilience 3. Inclusive 4. Potent 5. Chronic 6. Transients 7. Epidemiology 8. Propagation 9. Susceptibility 10. Indulgences

CATEGORY

1. Sci/Tech - LEVEL5

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