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# Spicy Chilies Soothe Inflammation: Gut Health Benefits

## Description

Editor's Note: This article has been republished from its original publication date of May 15, 2017.

Recent research has uncovered that hot chilies may offer relief for individuals suffering from inflammatory bowel disease (IBD). It's important to note that IBD is distinct from inflammatory bowel syndrome (IBS), which is a less severe condition that does not cause ulcers or intestinal damage like IBD.

IBD is an autoimmune disorder with potentially serious implications, affecting nearly 3 million Americans, with approximately 70,000 new cases diagnosed annually. The increase in diagnoses could be attributed to various factors such as genetics, environmental influences, dietary habits, and changes in the gut microbiome. The significance of the microbiome is so crucial that it may be used as a diagnostic tool by healthcare professionals.

While enhancing the microbiome is pivotal in managing symptoms, substances like capsaicin and endocannabinoids may also play a role in alleviating symptoms by regulating the neuroimmune axis. Understanding this mechanism requires knowledge of the condition itself.

IBD entails chronic inflammation of parts or the entire intestinal tract, leading to symptoms like ulcers, bloody diarrhea, vomiting, and weight loss. The condition can be debilitating and even life-threatening. There are two main types of IBD: Crohn's disease and ulcerative colitis. Both are more prevalent in developed countries, with distinct risk factors such as smoking history.

Individuals with IBD face stigma, fear, and isolation due to the symptoms associated with the condition. Although there isn't a definitive cure, various strategies can help manage or alleviate symptoms.

The potential of hot chilies in calming the gut is supported by research showing that capsaicin, the compound responsible for the heat in chili peppers, reduces gut inflammation in animal models. Capsaicin triggers the local production of anandamide, which acts through the cannabinoid receptor 2 (CB2) to enhance immune responses in the gut. This interaction between capsaicin and endocannabinoids in the gut underscores their immunological role in maintaining gut health.

The emergence of CBD, a non-psychoactive compound derived from the cannabis plant, has sparked interest in its therapeutic potential for various conditions. Studies have highlighted CBD's anti-inflammatory, antioxidant, and neuroprotective properties, positioning it as a promising treatment option for IBD and other disorders.

CBD's influence on the gut-brain connection offers insights into how it can mitigate inflammatory responses in the intestinal tract without causing psychoactive effects. Moreover, CBD's favorable side-effect profile compared to conventional medications for IBD underscores its potential as a safer therapeutic approach.

In conclusion, while pharmacological interventions remain limited, exploring natural remedies and dietary modifications can offer valuable support in managing IBD symptoms. By focusing on gut health, incorporating probiotic-rich foods, antioxidants like blueberries, anti-inflammatory agents such as coconut oil, and CBD, individuals can potentially improve their overall well-being and mitigate the impact of



conditions like IBD.

## Vocabulary List:

1. **inflammation** /ˌɪn.fləˈmeɪ.ʃən/ (noun): A localized physical condition characterized by redness swelling heat and pain often a response to injury or infection.
2. **autoimmune** /ˌɔː.tʃʊ.ɪˈmjuːn/ (adjective): Relating to a condition in which the immune system attacks the body's own tissues.
3. **microbiome** /ˌmaɪ.kroʊ.baɪˈoʊm/ (noun): The collection of microorganisms such as bacteria fungi and viruses living in a particular environment especially the gut.
4. **capsaicin** /ˈkæp.seɪ.ɪ.sɪn/ (noun): The active component of chili peppers that produces a burning sensation and has pain-relief properties.
5. **neuroimmune** /ˌnjʊə.roʊ.ɪˈmjʊn/ (adjective): Relating to the interactions between the nervous system and the immune system.
6. **therapeutic** /ˌθerəˈpiː.tɪk/ (adjective): Relating to the treatment of a disease or the administration of a remedy.

## Comprehension Questions

### Multiple Choice

1. What does recent research suggest about hot chilies and inflammatory bowel disease (IBD)?  
Option: They may offer relief for individuals with IBD  
Option: They worsen the symptoms of IBD  
Option: They have no impact on IBD  
Option: They are not recommended for IBD patients
2. Which type of condition is inflammatory bowel syndrome (IBS), as mentioned in the article?  
Option: A less severe condition than IBD  
Option: An equally severe condition as IBD  
Option: A more severe condition than IBD  
Option: A condition that causes ulcers
3. What is one of the risk factors associated with Crohn's disease and ulcerative colitis?  
Option: Smoking history  
Option: Diet high in fiber  
Option: Regular exercise



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Option: Low stress levels

4. Which compound responsible for the heat in chili peppers may reduce gut inflammation?

Option: Anandamide

Option: Capsaicin

Option: CB2 receptor

Option: CBD

5. What role do endocannabinoids play in maintaining gut health according to the article?

Option: Reducing gut inflammation

Option: Triggering local production of anandamide

Option: Enhancing immune responses in the gut

Option: All of the above

6. What is highlighted as a promising treatment option for IBD and other disorders in the article?

Option: Capsaicin

Option: Antioxidants

Option: CBD

Option: Coconut oil

## Answer

**Multiple Choice:** 1. They may offer relief for individuals with IBD 2. A less severe condition than IBD 3. Smoking history 4. Capsaicin 5. All of the above 6. CBD

## Vocabulary quizzes

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

1. What term is used to describe controlling or maintaining a certain process or action?

Option: Elevated

Option: Mitigate

Option: Regulate

Option: Interconnected

2. Which term relates to the heart and blood vessels?

Option: Nutrient

Option: Cardiovascular

Option: Inflammation



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Option: Autoimmune

3. Which term refers to compounds found in plants known for their antioxidant properties?

Option: Polyphenols

Option: Caloric

Option: Resurgence

Option: Micronutrient

4. What term describes the proportion of a nutrient that is absorbed and used by the body?

Option: Imperative

Option: Bioavailability

Option: Validity

Option: Compatibility

5. Which term means being present appearing or found everywhere?

Option: Ubiquitous

Option: Scrutinize

Option: Therapeutic

Option: Inversely

6. What term describes a condition where the body's immune system mistakenly attacks its own tissues?

Option: Inflammation

Option: Autoimmune

Option: Nutritional

Option: Predetermined

7. Which substance gives chili peppers their spicy heat?

Option: Neuroimmune

Option: Capsaicin

Option: Therapeutic

Option: Extrapolated

8. Which term pertains to the process of providing or obtaining the food necessary for health and growth?

Option: Nutritional

Option: Therapeutic

Option: Caloric

Option: Pondered

9. What term means to make something less severe harmful or painful?



- Option: Inflammation
- Option: Mitigate
- Option: Micronutrient
- Option: Valid

10. Which term describes the body's response to injury infection or irritation characterized by redness swelling and heat?

- Option: Compatibility
- Option: Interconnected
- Option: Inflammation
- Option: Elevated

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

11. The software must be checked for \_\_\_\_\_ with different operating systems.
12. She \_\_\_\_\_ the meaning of the poem for hours.
13. There has been a \_\_\_\_\_ of interest in vinyl records in recent years.
14. Please provide a \_\_\_\_\_ email address for account verification.
15. In the digital age devices are becoming more \_\_\_\_\_.
16. The outcome of the experiment was not \_\_\_\_\_ and surprised the researchers.
17. The spa offers \_\_\_\_\_ massages for relaxation and pain relief.
18. The auditor will \_\_\_\_\_ the company's financial records.
19. The mountain climbers reached an \_\_\_\_\_ height of 8,000 feet.
20. Reducing \_\_\_\_\_ intake is essential for weight loss.

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

21. Understanding traffic rules is for safe driving.
22. Based on the data collected the researchers the potential outcomes of the study.
23. Vitamins and minerals are examples of essential required in small amounts by the body.



24. The doctor prescribed a treatment to alleviate the patient's symptoms.
25. In the study researchers found that the level of activity was related to obesity.
26. A balanced diet should provide essential to support overall health.
27. Type 1 diabetes is considered an disorder where the immune system attacks insulin-producing cells.
28. The collection of bacteria viruses fungi and other microorganisms living in the gut forms the intestinal .
29. Efforts to reduce carbon emissions are essential to the impact of climate change.
30. The professor aimed to the complex concepts of physics through practical examples.

## Answer

**Multiple Choice:** 1. Regulate 2. Cardiovascular 3. Polyphenols 4. Bioavailability 5. Ubiquitous 6. Autoimmune 7. Capsaicin 8. Nutritional 9. Mitigate 10. Inflammation

**Gap-Fill:** 11. Compatibility 12. pondered 13. resurgence 14. valid 15. interconnected 16. predetermined 17. therapeutic 18. scrutinize 19. elevated 20. caloric

**Matching sentence:** 1. Imperative 2. Extrapolated 3. Micronutrient 4. Therapeutic 5. Inversely 6. Nutrient 7. Autoimmune 8. Microbiome 9. Mitigate 10. Elucidate

## CATEGORY

1. Health - LEVEL6

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