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# New Study Reveals Tomatoes Pose No Harmful Threat

## Description

Nightshade berries are very poisonous and may have killed a Roman emperor. Tomatoes are part of the same plant family and also have harmful toxins, but they don't usually harm us.

Tomatoes were once believed to be poisonous, but they have evolved to make their toxins less harmful. Scientists have discovered the genes that help tomatoes do this.

Other plants in the same family, like potatoes, also have toxins to protect themselves from pests. Humans can get sick if they eat too much of these toxins.

Animals help spread the seeds of these plants by eating the fruit. As the fruit ripens, the toxic chemicals turn into something tasty for animals to eat.

Tomatoes have a protein called DML2 that helps make their toxic chemicals less harmful. This change happened during the domestication of tomatoes, making them safe for us to eat.

Overall, tomatoes have become a safe and healthy food for people to enjoy all around the world.

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## Vocabulary List:

1. **Poisonous** /'pɔɪ.zən.əs/ (adjective): Containing substances that can cause illness or death if ingested.
2. **Toxins** /'tɒk.sɪnz/ (noun): Poisonous substances produced by living cells or organisms.
3. **Evolved** /ɪ'vɒlvd/ (verb): Developed gradually especially from a simple to a more complex form.
4. **Domestication** /də'mɛs.tɪ'keɪ.jən/ (noun): The process of adapting wild plants and animals for human use.
5. **Ripens** /'raɪ.pənz/ (verb): To become ripe or mature especially regarding fruit.
6. **Chemicals** /'kɛmɪkəlz/ (noun): Substances with a defined composition often used in processes such as reactions or manufacturing.

## Comprehension Questions

### Multiple Choice

1. Which plant family do tomatoes belong to?

Option: Nightshade



- Option: Rose
- Option: Daisy
- Option: Cactus

2. What protein in tomatoes helps make their toxic chemicals less harmful?

- Option: DML2
- Option: Beta-carotene
- Option: Chlorophyll
- Option: Hemoglobin

3. What type of fruit helps spread the seeds of nightshade plants?

- Option: Animals
- Option: Humans
- Option: Wind
- Option: Water

4. What is the purpose of toxins in plants like tomatoes and potatoes?

- Option: Protect from pests
- Option: Attract pollinators
- Option: Enhance flavor
- Option: Promote growth

5. What has helped tomatoes evolve to be less harmful to humans?

- Option: Genes
- Option: Watering
- Option: Sunlight
- Option: Pesticides

6. What historical figure may have been killed by nightshade berries?

- Option: Roman emperor
- Option: Greek philosopher
- Option: Egyptian pharaoh
- Option: Viking king

### True-False

7. Tomatoes are generally harmful to humans.



8. Potatoes belong to the same plant family as tomatoes.
9. Toxic chemicals in nightshade plants become tasty as the fruit ripens.
10. Animals play a role in spreading the seeds of tomatoes.
11. Tomatoes are safer to eat due to a protein called Chlorophyll.
12. The evolution of tomatoes helped make their toxins less harmful.

### Gap-Fill

14. Tomatoes were once believed to be poisonous, but they have evolved to make their toxins less harmful. Scientists have discovered the genes that help \_\_\_\_\_ do this.
15. Overall, tomatoes have become a safe and healthy food for people to enjoy all around the \_\_\_\_\_.
16. Tomatoes have a protein called DML2 that helps make their toxic chemicals less \_\_\_\_\_. This change happened during the domestication of tomatoes, making them safe for us to eat.
17. Animals help spread the seeds of these plants by eating the \_\_\_\_\_.
18. Other plants in the same family, like \_\_\_\_\_, also have toxins to protect themselves from pests.

### Answer

**Multiple Choice:** 1. Nightshade 2. DML2 3. Animals 4. Protect from pests 5. Genes 6. Roman emperor  
**True-False:** 7. False 8. True 9. True 10. True 11. False 12. True  
**Gap-Fill:** 14. tomatoes 15. world 16. harmful 17. fruit 18. potatoes

### CATEGORY

1. Health - LEVEL2



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