Why Do Fingers Wrinkle in Water?

Skin soaking up water is not the full story: a finger with nerve damage stays smooth. How the nervous system makes wrinkles, and why their purpose is still debated.

Name: Date: Score: ____ / 18

A. Fill in the blanks

1. Fingers with ____ damage do not wrinkle normally.

2. During wrinkling, fingertip blood vessels ____.

3. Wrinkling is controlled by the ____ system.

4. The fingertip's ____ falls, and the skin is pulled into folds.

5. The grip benefit found in 2013 was not repeated in ____.

B. True or False

6. Wrinkling is only water soaking into the skin. True / False

7. Doctors can use wrinkling to check nerve function. True / False

8. The purpose of wrinkles is proven. True / False

9. The 2013 study found no benefit for dry objects. True / False

C. Assertion and reason

10. Assertion (A): Wrinkling is not just water absorption.
Reason (R): Fingers with nerve damage do not wrinkle normally.

(a) Both A and R are true, and R explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, R is false
(d) A is false, R is true

Answer: _____

11. Assertion (A): Fingertip skin folds in water.
Reason (R): Narrowed vessels reduce fingertip volume.

(a) Both A and R are true, and R explains A
(b) Both A and R are true, but R does not explain A
(c) A is true, R is false
(d) A is false, R is true

Answer: _____

D. Choose the correct option

12. Blood vessels narrowing is called:

(a) vasodilation
(b) vasoconstriction
(c) digestion
(d) diffusion

Answer: _____

13. Wrinkles are compared to:

(a) tyre grooves
(b) bricks
(c) mirrors
(d) magnets

Answer: _____

14. What happens first?

(a) skin folds
(b) nerve signal
(c) volume falls
(d) vessels narrow

Answer: _____

15. Cause and purpose of wrinkling:

(a) both unknown
(b) both proven
(c) cause known, purpose debated
(d) purpose known, cause unknown

Answer: _____

E. Short answer questions

16. Write the steps of wrinkling in order.

17. Why is the grip idea called a hypothesis?

F. Match the columns

18. Match each item in Column A with the correct item in Column B.

Column A	Column B	Your answer
1. Signal	(a) result not repeated	1 → ____
2. Narrowing	(b) blood vessels	2 → ____
3. Grooves	(c) tyre	3 → ____
4. 2014	(d) nervous system	4 → ____

Detailed solutions

1. nerve

2. narrow

3. nervous

4. volume

5. 2014

6. False. Working nerves are needed.

7. True. It is a simple bedside test.

8. False. It is still debated.

9. True. The difference was only for wet objects.

10. (a) R explains A.

11. (a) R explains A.

12. (b) vasoconstriction. Narrowing reduces blood flow.

13. (a) tyre grooves. Grooves may channel water away.

14. (b) nerve signal. The signal starts the chain.

15. (c) cause known, purpose debated. Nerves are the cause; the purpose is open.

16. Nerve signal, blood vessels narrow, fingertip volume falls, skin is pulled into wrinkles.

17. A 2013 study supported it, but a 2014 study could not repeat the result.

18. 1 → (d), 2 → (b), 3 → (c), 4 → (a). Each word matches its link.