

Scientists have discovered that stress is one factor in turning our hair grey, white or silver - at least, in mice. Stem cell biologists from Harvard University in the USA conducted a series of tests on mice to ascertain the effects of stress on the rodents. The scientists injected the mice with an ingredient found in chili peppers that gives them their heat. The compound made the mice stressed. This caused a hair-colouring pigment in the mice to go into overdrive as a reaction to the stress and deplete colour-regenerating stem cells. This caused the mice's hair to rapidly turn white. Lead researcher, Professor Ya-Chieh Hsu, said: "The detrimental impact of stress that we discovered was beyond what I imagined."

People have wondered for centuries about the link between stress and greying hair. It is believed that France's Queen Marie Antoinette's hair turned white the night before she was beheaded during the French Revolution in the late-eighteenth century. More recently, we have witnessed the locks of presidents and other world leaders quickly lose colour. The strains of leadership seem to go to the roots of things, especially hair follicles. Professor Hsu said the loss of the pigment-regenerating stem cells cannot be reversed. She said: "Once they're gone, you can't regenerate pigment any more. The damage is permanent." Worryingly, she hypothesised that stress could be responsible for accelerating the aging process.

Paragraph 1

1. factor a. A component part or element of something.
2. stem cell b. A circumstance, fact, or influence that contributes to a result or outcome.
3. ascertain c. Find something out for sure; make sure of.
4. ingredient d. The natural coloring matter of animal or plant tissue.
5. compound e. Tending to cause harm.
6. pigment f. A cell which is capable of giving rise to millions more cells of the same type.
7. detrimental g. A thing that is composed of two or more separate elements; a mixture.

Paragraph 2

8. beheaded h. A state of tension or exhaustion resulting from severe demands on one's strength or resources.
9. witnessed i. Increase in speed, amount or extent.
10. locks j. Regrow new tissue to replace lost or injured tissue.
11. strain k. A piece of a person's hair.
12. follicles l. The bag of cells and connective tissue which surrounds the root of a hair.
13. regenerate m. Cut off the head off someone, especially for an execution.
14. accelerating n. Saw an event.