Stress really does turn your hair grey

26th January, 2020

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 color. 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.

Sources: *thesun.co.uk / the-scientist.com / metro.co.uk*

Writing

Humans would lead better lives if they had no hair at all. Discuss.

Chat

Talk about these words from the article.

scientists / stress / biologists / effects / mice / chili peppers / hair colour / reaction / centuries / eighteenth century / presidents / world leaders / hair follicles / cells / aging

True / False

a) The article said scientists found three factors that turn our hair grey. T / F

b) Scientists did many tests on mice and monkeys. T / F

c) Scientists gave chilli pepper to mice to make them stressed. T / F

d) The test results were just what a researcher imagined they would be. T / F

e) A queen's hair supposedly went white the night before she lost her head. T / F

f) The article says the pressures of leadership turns hair white. T / F

g) The loss of the colouring pigment can be reversed. T / F

h) A professor said stress is the major cause of aging. T / F

Synonym Match

(The words in **bold** are from the news article.)

1.	**factor**	a.	hastening
2.	**conducted**	b.	use up
3.	**ingredient**	c.	decapitated
4.	**deplete**	d.	carried out
5.	**detrimental**	e.	colour
6.	**beheaded**	f.	harmful
7.	**strains**	g.	altered
8.	**reversed**	h.	element
9.	**pigment**	i.	stresses
10.	**accelerating**	j.	constituent

Discussion – Student A

a) What do you think about what you read?

b) Would life be better without hair?

c) What do you think of our hair turning grey?

d) What is the best way to deal with stress?

e) Would you quit a job that was turning your hair grey?

f) How can we best look after our hair?

g) Are you worried that stress could accelerate the aging process?

h) What questions would you like to ask the researchers?

Phrase Match

1.	Scientists have discovered that	a.	found in chili peppers
2.	Stem cell biologists	b.	permanent
3.	ascertain the effects of stress	c.	was beheaded
4.	an ingredient	d.	especially hair follicles
5.	The detrimental	e.	from Harvard University
6.	the night before she	f.	any more
7.	go to the roots of things,	g.	on the rodents
8.	you can't regenerate pigment	h.	the aging process
9.	The damage is	i.	stress is one factor
10.	responsible for accelerating	j.	impact of stress

Discussion – Student B

a) What do you think of your hair?

b) What is the best hair colour?

c) What stress is there in your life?

d) What is the best hair colour to have?

e) What do you think of people with grey hair?

f) Is grey hair better than being bald?

g) Would you dye your hair to cover the grey?

h) Would you wear a wig to hide your grey hair?

Spelling

1. Stem cell lstboisigo from Harvard University

2. the effects of stress on the drtosen

3. an indrteigne found in chili peppers

4. a hair-colouring igtpemn in the mice

5. deeeptl colour-regenerating stem cells

6. The rendmetailt impact of stress

7. People have enodewrd for centuries

8. deeahebd during the French Revolution

9. we have einsdwset the locks of

10. The irtssna of leadership

11. hair isllfloec

12. ticeenalacrg the aging process

Role Play

Role A – Money
You think money is the most stressful thing. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least stressful of these (and why): English level, public transport or family.

Role B – English Level
You think English level is the most stressful thing. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least stressful of these (and why): money, public transport or family.

Role C – Public Transport
You think public transport is the most stressful thing. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least stressful of these (and why): English level, money or family.

Role D – Family
You think family is the most stressful thing. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least stressful of these (and why): English level, public transport or money.

Speaking – Stress

Rank these with your partner. Put the most stressful things at the top. Change partners often and share your rankings.

- Money
- Exams
- Family
- Weight

- English level
- Family
- Neighbours
- Public transport

Answers – Synonym Match

1. h	2. d	3. j	4. b	5. f
6. c	7. i	8. g	9. e	10. a

Answers – True False

a F	b F	c T	d F	e T	f T	g F	h F

Answers to Phrase Match and Spelling are in the text.