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Level 6 – 26th January, 2020

Stress really does turn your hair grey

FREE online quizzes, mp3 listening and more for this lesson here:

<https://breakingnewsenglish.com/2001/200126-grey-hair.html>

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Please try Levels 4 and 5 (they are easier).

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THE ARTICLE

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

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: <https://www.thesun.co.uk/news/10800966/stress-cause-hair-to-go-grey/>
<https://www.the-scientist.com/news-opinion/stress-turns-hair-gray-by-depleting-pigment-producing-stem-cells-67004>
<https://metro.co.uk/2020/01/23/yes-stress-really-turn-hair-grey-12107764>

WARM-UPS

1. GREY HAIR: Students walk around the class and talk to other students about grey hair. Change partners often and share your findings.

2. CHAT: In pairs / groups, talk about these topics or words from the article. What will the article say about them? What can you say about these words and your life?

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

Have a chat about the topics you liked. Change topics and partners frequently.

3. NO HAIR: Students A **strongly** believe having no hair is better than having hair; Students B **strongly** believe the opposite. Change partners again and talk about your conversations.

4. HAIR: What can we do about these hair problems? How worried are you about them? Complete this table with your partner(s). Change partners often and share what you wrote.

	What We Can Do	How Worried Are You?
Greying		
Balding		
Split ends		
Dandruff		
Greasy hair		
Unmanageable hair		

5. MICE: Spend one minute writing down all of the different words you associate with the word "mice". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

6. 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

VOCABULARY MATCHING

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. |

BEFORE READING / LISTENING

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

1. TRUE / FALSE: Read the headline. Guess if a-h below are true (T) or false (F).

- 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**

2. SYNONYM MATCH:

Match the following synonyms. 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 |

3. PHRASE MATCH: (Sometimes more than one choice is possible.)

- | | |
|------------------------------------|------------------------------|
| 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 |

GAP FILL

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

Scientists have discovered that stress is one (1) _____ in turning our hair grey, white or silver - at (2) _____, in mice. Stem cell biologists from Harvard University in the USA conducted a (3) _____ of tests on mice to ascertain the effects of stress on the (4) _____. The scientists injected the mice with an ingredient found in chili peppers that gives them their heat. The (5) _____ made the mice stressed. This caused a hair-colouring pigment in the mice to go into (6) _____ as a reaction to the stress and deplete colour-regenerating stem cells. This caused the mice's hair to (7) _____ turn white. Lead researcher, Professor Ya-Chieh Hsu, said: "The detrimental impact of stress that we discovered was (8) _____ what I imagined."

least
rodents
beyond
factor
overdrive
series
rapidly
compound

People have wondered for (9) _____ 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 (10) _____ during the French Revolution in the late-eighteenth century. More recently, we have (11) _____ the locks of presidents and other world leaders quickly lose color. The (12) _____ of leadership seem to go to the roots of things, especially hair (13) _____. Professor Hsu said the loss of the pigment-regenerating stem cells cannot be reversed. She said: "Once they're gone, you can't (14) _____ pigment any more. The damage is (15) _____." Worryingly, she hypothesised that stress could be responsible for accelerating the aging (16) _____.

strains
beheaded
permanent
follicles
process
centuries
witnessed
regenerate

LISTENING – Guess the answers. Listen to check.

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

- 1) conducted a series of tests on mice to ascertain the effects of stress _____
 - a. on the residents
 - b. on the recent
 - c. on the rodents
 - d. on the rodeo nuts
- 2) injected the mice with an ingredient found in chili peppers that gives _____
 - a. them their hot
 - b. them their warm
 - c. them their heating
 - d. them their heat
- 3) go into overdrive as a reaction to the stress and deplete colour-regenerating _____
 - a. stem cells
 - b. storm cells
 - c. stern cells
 - d. stone cells
- 4) This caused the mice's hair to _____ white
 - a. rapidly turns
 - b. rapidly turn
 - c. rapidly turned
 - d. rapidly turning
- 5) The detrimental impact of stress that we discovered was _____ imagined
 - a. be yonder what I
 - b. by yonder what I
 - c. beer yond what I
 - d. beyond what I
- 6) Queen Marie Antoinette's hair turned white the night before _____
 - a. she was bearded
 - b. she was behest
 - c. she was beyond
 - d. she was beheaded
- 7) strains of leadership seem to go to the roots of things, especially _____
 - a. hair folly calls
 - b. hair folly cells
 - c. hair follicles
 - d. hair falling calls
- 8) Professor Hsu said the loss of the pigment-regenerating stem cells _____
 - a. cannot be reserved
 - b. cannot be regaled
 - c. cannot be resealed
 - d. cannot be reversed
- 9) She said: "Once they're gone, you can't regenerate _____ more"
 - a. pig meant any
 - b. pigment any
 - c. pig mint any
 - d. pigging any
- 10) hypothesised that stress could be responsible for accelerating the _____
 - a. age in process
 - b. aching process
 - c. aging process
 - d. raging process

LISTENING – Listen and fill in the gaps

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

Scientists have discovered that stress is one (1) _____ our hair grey, white or silver - at least, in mice. Stem cell biologists from Harvard University in the USA (2) _____ of tests on mice to ascertain the effects of stress on the rodents. The scientists injected the mice with (3) _____ in chili peppers that gives them their heat. The compound made the mice stressed. This caused a hair-colouring pigment in the mice to (4) _____ as a reaction to the stress and (5) _____ 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 (6) _____ I imagined."

People have (7) _____ 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 (8) _____ the French Revolution in the late-eighteenth century. More recently, we have (9) _____ of presidents and other world leaders quickly lose color. The strains of leadership seem to go to (10) _____ 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 (11) _____. The damage is permanent." Worryingly, she hypothesised that stress could be responsible for accelerating (12) _____.

COMPREHENSION QUESTIONS

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

1. How many hair-greying factors did scientists discover?
2. What university conducted this research?
3. What did researchers inject an ingredient of into test mice?
4. What happened to colour-regenerating stem cells after an injection?
5. What did a researcher say about the detrimental impact of stress?
6. For how long have people worried about stress and greying hair?
7. Whose locks have we seen lose colour in recent times?
8. Where do the strains of leadership go to besides the roots of things?
9. What did the researcher say about the damage to the pigment?
10. What other thing did the researcher say stress might accelerate?

MULTIPLE CHOICE - QUIZ

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

- 1) How many hair-greying factors did scientists discover?
 - a) four
 - b) one
 - c) three
 - d) two
- 2) What university conducted this research?
 - a) Beijing
 - b) Sorbonne
 - c) Harvard
 - d) Oxford
- 3) What did researchers inject an ingredient of into test mice?
 - a) pepper
 - b) tea
 - c) salt
 - d) chili peppers
- 4) What happened to colour-regenerating stem cells after an injection?
 - a) they made the mice run faster
 - b) they were depleted
 - c) they revived
 - d) they changed colour
- 5) What did a researcher say about the detrimental impact of stress?
 - a) it was beyond what she imagined
 - b) nothing
 - c) she was not surprised
 - d) she was impressed
- 6) For how long have people worried about stress and greying hair?
 - a) centuries
 - b) dozens of years
 - c) millennia
 - d) decades
- 7) Whose locks have we seen lose colour in recent times?
 - a) teenagers
 - b) babies
 - c) actors
 - d) presidents
- 8) Where do the strains of leadership go to besides the roots of things?
 - a) split ends
 - b) the scalp
 - c) hair follicles
 - d) dandruff
- 9) What did the researcher say about the damage to the pigment?
 - a) it was interesting
 - b) nothing
 - c) it isn't a problem
 - d) it is permanent
- 10) What other thing did the researcher say stress might accelerate?
 - a) poor eyesight
 - b) ageing
 - c) weight gain
 - d) dementia

ROLE PLAY

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

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.

AFTER READING / LISTENING

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

1. WORD SEARCH: Look in your dictionary / computer to find collocates, other meanings, information, synonyms ... for the words 'grey' and 'hair'.

grey	hair

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

2. ARTICLE QUESTIONS: Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

3. GAP FILL: In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning...?

4. VOCABULARY: Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

5. TEST EACH OTHER: Look at the words below. With your partner, try to recall how they were used in the text:

<ul style="list-style-type: none">• factor• series• rodents• heat• compound• beyond	<ul style="list-style-type: none">• link• night• locks• roots• gone• process
--	---

GREY HAIR SURVEY

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

Write five GOOD questions about grey hair in the table. Do this in pairs. Each student must write the questions on his / her own paper. When you have finished, interview other students. Write down their answers.

	STUDENT 1 _____	STUDENT 2 _____	STUDENT 3 _____
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

GREY HAIR DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

1. What did you think when you read the headline?
2. What images are in your mind when you hear the word 'grey'?
3. What do you think of your hair?
4. What is the best hair colour?
5. What stress is there in your life?
6. What is the best hair colour to have?
7. What do you think of people with grey hair?
8. Is grey hair better than being bald?
9. Would you dye your hair to cover the grey?
10. Would you wear a wig to hide your grey hair?

Stress really does turn your hair grey – 26th January, 2020
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GREY HAIR DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

11. Did you like reading this article? Why/not?
12. What do you think of when you hear the word 'hair'?
13. What do you think about what you read?
14. Would life be better without hair?
15. What do you think of our hair turning grey?
16. What is the best way to deal with stress?
17. Would you quit a job that was turning your hair grey?
18. How can we best look after our hair?
19. Are you worried that stress could accelerate the aging process?
20. What questions would you like to ask the researchers?

DISCUSSION (Write your own questions)

STUDENT A's QUESTIONS (Do not show these to student B)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

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DISCUSSION (Write your own questions)

STUDENT B's QUESTIONS (Do not show these to student A)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

LANGUAGE - CLOZE

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

Scientists have discovered that stress is one factor (1) _____ turning our hair grey, white or silver - at least, in mice. Stem cell biologists from Harvard University in the USA conducted a (2) _____ of tests on mice to ascertain the effects of stress on the rodents. The scientists (3) _____ the mice with an ingredient found in chili peppers that gives them their (4) _____. 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 (5) _____ 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 (6) _____ what I imagined."

People have (7) _____ 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 (8) _____ during the French Revolution in the late-eighteenth century. More recently, we have witnessed the (9) _____ of presidents and other world leaders quickly lose color. The strains of leadership seem to go to the roots of things, especially hair (10) _____. Professor Hsu said the loss of the pigment-regenerating stem cells cannot be (11) _____. 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 (12) _____ accelerating the aging process.

Put the correct words from the table below in the above article.

- | | | | | |
|-----|---------------|----------------|-----------------|---------------|
| 1. | (a) on | (b) in | (c) by | (d) at |
| 2. | (a) cereal | (b) series | (c) serial | (d) serious |
| 3. | (a) dejected | (b) infected | (c) conjectured | (d) injected |
| 4. | (a) warm | (b) heat | (c) hot | (d) heating |
| 5. | (a) complete | (b) deplete | (c) replete | (d) pleat |
| 6. | (a) yonder | (b) behest | (c) beyond | (d) behind |
| 7. | (a) wandered | (b) winded | (c) wondered | (d) wounded |
| 8. | (a) bedecked | (b) bejewelled | (c) beheaded | (d) behemoth |
| 9. | (a) licks | (b) lacks | (c) looks | (d) locks |
| 10. | (a) follicles | (b) particles | (c) rallies | (d) popsicles |
| 11. | (a) reversed | (b) backed | (c) reserved | (d) backward |
| 12. | (a) of | (b) at | (c) for | (d) on |

SPELLING

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

Paragraph 1

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

Paragraph 2

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

PUT THE TEXT BACK TOGETHER

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

Number these lines in the correct order.

- () ascertain the effects of stress on the rodents. The scientists injected the mice with an ingredient found in
- () Queen Marie Antoinette's hair turned white the night before she was beheaded during the French Revolution in the late-
- () least, in mice. Stem cell biologists from Harvard University in the USA conducted a series of tests on mice to
- () eighteenth century. More recently, we have witnessed the locks of presidents and other world
- () "The detrimental impact of stress that we discovered was beyond what I imagined."
- () permanent." Worryingly, she hypothesised that stress could be responsible for accelerating the aging process.
- () leaders quickly lose color. The strains of leadership seem to go to the roots of things, especially hair
- () pigment in the mice to go into overdrive as a reaction to the stress and deplete colour-regenerating stem
- () chili peppers that gives them their heat. The compound made the mice stressed. This caused a hair-colouring
- () follicles. Professor Hsu said the loss of the pigment-regenerating stem cells cannot be
- () cells. This caused the mice's hair to rapidly turn white. Lead researcher, Professor Ya-Chieh Hsu, said:
- (**1**) Scientists have discovered that stress is one factor in turning our hair grey, white or silver - at
- () reversed. She said: "Once they're gone, you can't regenerate pigment any more. The damage is
- () People have wondered for centuries about the link between stress and greying hair. It is believed that France's

PUT THE WORDS IN THE RIGHT ORDER

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

1. one Scientists is discovered factor . that stress have
2. injected scientists mice ingredient . the with The an
3. a Go to stress . overdrive reaction into as
4. caused white . mice's the This to hair turn
5. that stress impact detrimental The discovered . we of
6. wondered the link . about People have for centuries
7. beheaded . night was before the white Turned she
8. to to Seem of things . the roots go
9. stem cannot cells The reversed . be pigment-regenerating
10. responsible . stress Worryingly, that she could be hypothesised

CIRCLE THE CORRECT WORD (20 PAIRS)

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

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

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

Talk about the connection between each pair of words in italics, and why the correct word is correct.

INSERT THE VOWELS (a, e, i, o, u)

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

S c__ n t_s t_s h_v_ d_s c_v_r_d t h_t s t r_s s _s
n f_c t_r _n t_r n_n g __ r h__ r g_r y , w h_t _r
s_l v_r - _t l__ s t , _n m_c_. S t_m c_l l b__
l_g_s t_s f_r_m H_r v_r_d U n_v_r s_t y _n t h_ U S A
c_n d_c t_d _ s_r__ s _f t_s t_s _n m_c_ t_s c_r
t__ n t h_ f_f c_t s _f s t r_s s _n t h_ r_d_n t_s . T
h_ s c__ n t_s t_s _n j_c t_d t h_ m_c_ w_t h _n _n g
r_d__ n t f__ n d _n c h_l_ p_p p_r s t h_t g_v_s t
h_m t h__ r h__ t . T h_ c_m p__ n d m_d_ t h_
m_c_ s t r_s s_d . T h_s c__ s_d _ h__ r - c_l__ r_n g
p_g m_n t _n t h_ m_c_ t_ g__ n t_ v_r d r_v_ _s _
r__ c t__ n t_ t h_ s t r_s s _n d d_p l_t_ c_l__ r -
r_g_n_r_t_n g s t_m c_l l s . T h_s c__ s_d t h_
m_c_' s h__ r t_r p_d l y t_r n w h_t . L__ d
r_s__ r c h_r , P r_f_s s_r Y - C h__ h H s_ , s__ d :
" T h_ d_t r_m_n t_l _m p_c t _f s t r_s s t h_t w_
d_s c_v_r_d w_s b_y_n d w h_t I _m_g_n_d . "

P__ p l_ h_v_ w_n d_r_d f_r c_n t_r__ s _b__ t t h_
l_n k b_t w__ n s t r_s s _n d g_r y_n g h__ r . I t
_s b_l__ v_d t h_t F r_n c_' s Q__ _n M_r__ A n t__
n_t t_' s h__ r t_r n_d w h_t t h_ n_g h t b_f_r s
h_ w_s b_h__ d_d d_r_n g t h_ F r_n c h R_v_l_t__ n
n t h l_t_-__ g h t__ n t h c_n t_r y . M_r_ r_c_n t_l
y , w_ h_v_ w_t n_s s_d t h_ l_c k_s _f p_r_s_d_n t_s
_n d _t h_r w_r l_d l__ d_r s q__ c_k l y l_s_ c_l_r .
T h_ s t r__ n s _f l__ d_r s h_p s__ m t_ g_ t_ t h_
r__ t_s _f t h_n g s , _s p_c__ l l y h__ r f_l l_c l s .
P r_f_s s_r H s_ s__ d t h_ l_s s _f t h_ p_g m_n t -
r_g_n_r_t_n g s t_m c_l l s c_n n_t b_ r_v_r s_d . S
h_ s__ d : " O n c_ t h_y 'r_ g_n_ , y__ c_n ' t
r_g_n_r_t_ p_g m_n t _n y m_r_ . T h_ d_m_g_ _s p_r
m_n_n t . " W_r r_y_n g l y , s h_ h_y p_t h_s_s_d t h_t
s t r_s s c__ l d b_ r_s p_n s_b l_ f_r _c_c_l_r_t_n g t
h_ _g_n g p_r_c_s s .

PUNCTUATE THE TEXT AND ADD CAPITALS

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

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 haircolouring pigment in the mice to go into overdrive as a reaction to the stress and deplete colourregenerating stem cells this caused the mices hair to rapidly turn white lead researcher professor yachieh 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 frances queen marie antoinettes hair turned white the night before she was beheaded during the french revolution in the lateeighteenth 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 pigmentregenerating stem cells cannot be reversed she said once theyre gone you cant regenerate pigment any more the damage is permanent worryingly she hypothesised that stress could be responsible for accelerating the aging process

PUT A SLASH (/) WHERE THE SPACES ARE

From <https://breakingnewsenglish.com/2001/200126-grey-hair.html>

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 effect of stress on the rodents. The scientists injected the mice with an ingredient found in chili pepper 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 root 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 anymore. The damage is permanent." Worryingly, she hypothesised that stress could be responsible for accelerating the aging process.

HOMework

1. VOCABULARY EXTENSION: Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.

2. INTERNET: Search the Internet and find out more about this news story. Share what you discover with your partner(s) in the next lesson.

3. GREY HAIR: Make a poster about grey hair. Show your work to your classmates in the next lesson. Did you all have similar things?

4. NO HAIR: Write a magazine article about everyone getting rid of their hair to save time, money and stress. Include imaginary interviews with people who are for and against this.

Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

5. WHAT HAPPENED NEXT? Write a newspaper article about the next stage in this news story. Read what you wrote to your classmates in the next lesson. Give each other feedback on your articles.

6. LETTER: Write a letter to an expert on grey hair. Ask him/her three questions about it. Give him/her three of your opinions on hair. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

VOCABULARY (p.4)

1. b 2. f 3. c 4. a 5. g 6. d 7. e
8. m 9. n 10. k 11. h 12. l 13. j 14. i

TRUE / FALSE (p.5)

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

SYNONYM MATCH (p.5)

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

COMPREHENSION QUESTIONS (p.9)

1. One
2. Harvard
3. Chili peppers
4. They were depleted
5. It was beyond what she imagined
6. Centuries
7. Presidents and world leaders
8. Hair follicles
9. It is permanent
10. The aging process

WORDS IN THE RIGHT ORDER (p.20)

1. Scientists have discovered that stress is one factor.
2. The scientists injected the mice with an ingredient.
3. Go into overdrive as a reaction to stress.
4. This caused the mice's hair to turn white.
5. The detrimental impact of stress that we discovered.
6. People have wondered for centuries about the link.
7. Turned white the night before she was beheaded.
8. Seem to go to the roots of things.
9. The pigment-regenerating stem cells cannot be reversed.
10. Worryingly, she hypothesised that stress could be responsible.

MULTIPLE CHOICE - QUIZ (p.10)

1. b 2. c 3. d 4. b 5. a 6. a 7. d 8. c 9. d 10. b

ALL OTHER EXERCISES

Please check for yourself by looking at the Article on page 2.
(It's good for your English ;-)