

## The science of smiling

1 Why do you think these people have pencils between their teeth? Watch the video and check your ideas.



2 Now watch again and answer the following questions.

- 1 Why is the programme being filmed in Edinburgh?
- 2 What is the woman at 1.10 a bit concerned about?
- 3 What are the two possible scientific reasons why fake smiling can lead to real happiness?

### 3 Discussion questions

- 1 How are you feeling today on a scale of 1-10? Why?
- 2 Do you often smile even when you don't feel particularly happy? Why/why not?
- 3 Try smiling with a pencil in your teeth for at least a minute. Does it change your mood?

4 Reading What similarities can you find in the text with what you learnt from the video? What else do you learn?

### Can smiling really make you happier?

Those of us with a naturally serious expression may be fed up with people telling us, 'Smile, it might never happen', but, in fact, it does seem that smiling, even when we don't feel particularly happy, can actually improve our mood.

This isn't a new idea. In fact, it was back in the 1870s that Charles Darwin first suggested that facial expressions didn't just express emotions, but could actually induce them.. Since then there have been a number of studies into the area, all appearing to show that changing our facial expressions can change our mood.

In 1989, for example, the psychologist, Robert Zajonc described how subjects asked to make a long 'eee' sound, which involves smiling, felt better than those asked to make a long 'uuu' sound. Other similar experiments, with similar results, were carried out using pencils gripped between the teeth.

In another study, participants were asked to do one of three things. 1. Look at different facial expressions 2. Copy those expressions themselves. 3. Copy the expressions themselves while looking in a mirror. The subjects were asked questions before and after the experiment, designed to find out about their emotional states. Interestingly, those who saw themselves smile were happier than those who only smiled. Both groups were happier than those who didn't smile but simply looked at pictures.



The key question is why smiling makes us feel happier. It might simply be because the brain connects smiling with being happy, a kind of learned response. The fact that people who saw themselves smiling felt happier than those who just smiled would support this theory- perhaps they associated the action and the feeling more strongly..

However, there may be another explanation. Robert Zajonc's latest theory is that smiling affects the flow of blood to the brain, and that this has an impact on how we feel. Zajonc explains that when the temperature of any part of the body goes up or down, this changes chemical activities in that part of the body. When the brain is cooler, he says, our emotions are more positive, and when it's hotter, they are more negative. Smiling causes muscles to reduce blood supply to the brain, and less volume means that the temperature goes down. This has the effect of cooling the brain, and thus makes us feel happier.

Conversely, when we frown angrily, blood flow to the brain is increased, which raises the temperature and makes us feel more anxious or negative.

Fascinatingly, our language reflects this idea. We talk about getting hot under the collar, or that something made our blood boil when we feel angry. If we need someone to calm down, we might tell them to 'chill out.'

Ultimately though, whether Zajonc is right or wrong, there is certainly plenty of evidence that smiling can and does make you feel happier. So 'give us a smile, love.'

### 5 Read the summary and underline the part of the text which each sentence is summarising.

The idea that facial expressions can 1\_\_\_\_\_ emotions, rather than simply express them is not particularly new. In fact, several research studies have shown that carrying out any physical activity which involves 2\_\_\_\_\_ can make you feel happier.

In one experiment, researchers found that people who saw their own happy facial expression in a 3\_\_\_\_\_ felt particularly good. One explanation for this is that their minds 4\_\_\_\_\_ smiling with feeling happier, and seeing this reinforced the feeling.

Another possibility is that smiling actually cuts down on the 5\_\_\_\_\_ going to our brains. This would reduce the 6\_\_\_\_\_, making the brain cooler, and thus happier. However, when we get cross, we 7\_\_\_\_\_, and this muscle action causes more blood to rush to the 8\_\_\_\_\_, having the opposite effect.

Now complete the summary using 1-2 words from the text for each gap. Do not change the form of the words.

### 6 Which *four* idioms describing emotions can you find in the text? (One is near the beginning).

Now look at the idioms in the box. Which refer to feeling angry, happy, sad, frightened?

to hit the roof    to be thrilled to bits    to fly off the handle    to be down in the dumps  
to be on top of the world    to get steamed up (about sthg)    to be on cloud nine    to be scared stiff

### 7 Work in pairs or small groups. How would these situations make you feel? What might you do? Try to use some of the idioms above, and explain why you'd feel that way.

You lost something important to you.    You heard someone gossiping about you.    You were made redundant.

A friend you'd lost touch with contacted you online.    You were asked to give a speech.    Someone told you to shut up

You were asked to run a marathon.    You overheard someone making a racist or sexist comment.

Would you react in the same way as your partner(s)? Why/why not?



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## Key

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1 Because (supposedly) people are more miserable there than anywhere else in the UK.

2 She's a bit worried about all the other people who have had the pencils in their mouths (The presenter replies that they have been sterilised)

3 1. That your brain has learnt to associate smiling with pleasure 2. That tightened muscles in the face are altering the blood flow to the brain and thus triggering feelings of pleasure.

5 This is a typical IELTS task, though the text is easier and shorter than in the exam. It's good practice to get students to identify the areas being summarised first, and then they can look for the right word(s) to put in the gap.

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... 5 Smiling causes muscles to **reduce blood supply to the brain**, and 6 **less volume means that the temperature goes down**. This has the effect of cooling the brain, and thus makes us feel happier.

7&8 Conversely, **when we frown angrily, blood flow to the brain is increased**, which raises the temperature and makes us feel more anxious or negative.

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Another possibility is that smiling actually cuts down on the 5 *blood supply* going to our brains. This would reduce the 6 *temperature*, making the brain cooler, and thus happier. However, when we get cross, we 7 *frown*, and this muscle action causes more blood to rush to the 8 *brain*, having the opposite effect.

6 Fed up, getting hot under the collar, something made our blood boil chill out.

**Angry:** To hit the roof- get very angry and probably start shouting.

To fly off the handle - to react in an angry way to something someone says or does.

To get steamed up about something – to get agitated about something

**Happy:** To be on top of the world/To be on cloud nine- to be feeling extremely happy and joyful

To be thrilled to bits- to feel happy and excited about something specific (e.g. having done well in an exam)

**Frightened:** To be scared stiff – to be very frightened

**Sad:** To be down in the dumps- to be gloomy, depressed

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