

New powder whitens, repairs and protects teeth

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White teeth are widely revered in many countries. Hollywood, advertising, and social media have helped to make ultra-white teeth a must-have, and even an obsession. For decades, people have used peroxide-based

chemical whiteners in an attempt to get a perfect set of "pearly whites". However, these chemicals can damage the teeth and gums. Help is now at hand for those of us who have stained or off-white teeth. Researchers in China say they have created an effective teeth-whitening ceramic powder. Researcher Min Xing said it is "a safe, at-home teeth-whitening strategy integrating whitening, enamel repair, and microbiome balance for long-term oral health".

The researchers wrote about how their new powder works. It is activated by electric toothbrush vibrations, which create a small electric field over the teeth. This causes a reaction known as "reactive oxygen species". These are compounds that break down stain-causing molecules. The researchers said their laboratory trials were very promising. They tested human teeth that were artificially discoloured with tea and coffee. After four hours of brushing, there was visible whitening. After 12 hours of cleaning, the teeth were 50 per cent whiter than those brushed with saline. The researchers said the next step is to incorporate the powder into a toothpaste.

Sources: dentistry.co.uk / msn.com / scitechdaily.com

Writing

A nice smile with pearly-white teeth is important to get you places in life. Discuss.

Chat

Talk about these words from the article.

white teeth / Hollywood / chemical whiteners / gums / stained teeth / oral health / electric toothbrush / laboratory trials / tea / coffee / saline / brushing / toothpaste

True / False

- 1) The article says white teeth are unrivalled in many countries. T / F
- 2) The article says white teeth are a must-have in many countries. T / F
- 3) The article says teeth-whitening chemicals can strengthen our gums. T / F
- 4) A researcher said the new powder can repair tooth enamel. T / F
- 5) The powder reacts to vibrations from electric toothbrushes. T / F
- 6) The powder attacks molecules that cause stains on our teeth. T / F
- 7) Four hours of brushing with the powder resulted in visible whitening. T / F
- 8) The powder is now in many toothpastes we can buy in stores. T / F

Synonym Match

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

- | | |
|-----------------------|---------------------|
| 1. revered | a. started |
| 2. obsession | b. close |
| 3. attempt | c. encouraging |
| 4. at hand | d. combining |
| 5. integrating | e. cherished |
| 6. activated | f. amalgams |
| 7. compounds | g. noticeable |
| 8. promising | h. fixation |
| 9. visible | i. course of action |
| 10. step | j. effort |

Discussion – Student A

- a) What do you think about what you read?
- b) Is an electric or regular toothbrush best?
- c) What can we eat that is good for our teeth?
- d) What do we eat that is bad for our teeth?
- e) What's your favourite toothpaste, and why?
- f) Will you be using the new teeth-whitening powder?
- g) What do you think when you see a perfect smile?
- h) What questions would you like to ask a dentist?

Phrase Match

1. White teeth are widely
 2. make ultra-white teeth a
 3. people have used peroxide-based
 4. Help is now at
 5. long-term
 6. It is activated by electric toothbrush
 7. compounds that break down stain-
 8. their laboratory trials were very
 9. teeth that were artificially
 10. incorporate the powder
- a. causing molecules
 - b. chemical whiteners
 - c. vibrations
 - d. into a toothpaste
 - e. revered in many countries
 - f. discoloured with tea
 - g. hand
 - h. oral health
 - i. must-have
 - j. promising

Discussion – Student B

- a) What do you think of your teeth?
- b) What do you think of having white teeth?
- c) What do you think of having straight teeth?
- d) Why are white teeth so revered?
- e) Can teeth be too white?
- f) Would you use teeth-whitening chemicals?
- g) What do you do to look after your teeth?
- h) What do you think of going to the dentist?

Spelling

1. White teeth are widely eererdv
2. a must-have, and even an ebosnisso
3. peroxide-based lciemha whiteners
4. a safe, at-home teeth-whitening tgartyse
5. igtgiennar whitening
6. alneme repair
7. activated by electric toothbrush obitasivr
8. This causes a aetocnir
9. compounds that break down stain-causing ellscemou
10. oloabrraty trials
11. aiftirylcia discoloured with tea
12. whiter than those brushed with eainsl

Answers – Synonym Match

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

Comprehension Questions

Listen to / read the news article. Answer these questions.
(Answers are on p. 27 of the 27-page PDF.)

1.	Where does the article say white teeth are revered?
2.	What kind of chemicals whiteners have people used for a long time?
3.	What can chemical whiteners damage besides our teeth?
4.	What kind of powder have researchers created?
5.	What did a researcher say the powder can repair?
6.	What do vibrations from an electric toothbrush help the powder create?
7.	What did the researchers say about their laboratory trials?
8.	What did the researchers stain teeth with?
9.	How much whiter were teeth after 12 hours of cleaning with the powder?
10.	What did a researcher say the powder should be incorporated into?

Speaking – Perfect Smile

Rank these with your partner. Put the best things about having the perfect smile at the top. Change partners often and share your rankings.

- First impressions
- Confidence
- Youthful appearance
- Dating advantages
- Looks professional
- Job interviews
- Signals good health
- You look kinder

Answers – True False

1 F	2 T	3 F	4 T	5 T	6 T	7 T	8 F
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Answers to Phrase Match and Spelling are in the text.