

Exercise in a pill: have scientists really found a drug that's as good for you as a 10km run?

Level 3: Advanced

Article summary: This article presents a new drug that mimics the effects of exercise and explores its advantages and limitations.

Time: 60 minutes

Skills: Reading, Speaking

Language focus: Reduced relative clauses with past participles

Materials needed: One copy of the worksheet per student

- b. Before reading the article carefully, students use the key words to fill the gaps in the sentences to ensure that they know how the words are used in other contexts.

Key:

- | | |
|---------------------|-----------------|
| 1. surge | 9. appetite |
| 2. pellets | 10. nickname |
| 3. tolerance | 11. mimic |
| 4. endurance | 12. obese |
| 5. free fatty acids | 13. ongoing |
| 6. self-esteem | 14. infirm |
| 7. genes | 15. counterpart |
| 8. supplement | 16. suppress |

1. Warmer

- a. This activity aims to let students discuss the benefits of doing exercise and having a healthy diet but also the challenges of having a regular exercise habit and maintaining a healthy diet. Ask them to share experiences of their own and / or those of people they know. End by having students brainstorm the easiest way they can imagine to stay healthy. Encourage them to be very imaginative in their proposed ideas.

2. Key words

- a. Ask students to do this task individually and then compare their answers in pairs or small groups. As an extension activity, ask students to highlight the key words in the article.

Key:

- | | |
|------|-------|
| 1. l | 9. f |
| 2. h | 10. m |
| 3. e | 11. b |
| 4. k | 12. a |
| 5. d | 13. o |
| 6. n | 14. j |
| 7. p | 15. i |
| 8. c | 16. g |

3. Comprehension check

- a. Students answer the questions based on the information in the article. If possible, encourage students to add more explanatory information when they answer, e.g. in item 2, they may say, 'Three mimetics are mentioned: LaKe, 516 and Compound 14' or something similar.

Key:

Suggested answers:

1. The first mimetic was developed in 2008.
2. Three mimetics are mentioned: LaKe, 516 and Compound 14.
3. Lance Armstrong Mouse had more endurance and was slimmer.
4. Rats and mice
5. Changes in levels of lactate and beta-hydroxybutyrate reduce levels of free fatty acids in the blood and appetite.
6. SLU-PP-332 helps dieters maintain muscle mass during weight loss, or older people avoid sarcopenia.
7. 516 generated cancer cells and LaKe shows no signs of toxicity.
8. Exercise improves mood while reducing stress.
9. Mimetics are most useful for people who are elderly, ill or not able to do the real thing.
10. Against; but thinks they are useful for people who can't easily exercise.

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4. Key language

- a. This activity helps students see how past participles can be used to describe events from the present or the past. As an extension activity, ask students to look for these examples in the article and encourage them to look for the context that tells them when the event happens / happened.

Key:

1. *Pa*
2. *Pa*
3. *Pr*
4. *Pr*
5. *Pr*
6. *Pr*

- b. Students complete the sentence using the phrases they have just studied from task a.

Key:

1. *which were*
2. *which was*
3. *which is*
4. *which is*
5. *which are*
6. *which is*

- c. Students write two sentences using past participles for present or past events. Invite students to challenge themselves and get creative as they write their own sentences. Save some time for students to share examples of their work.

5. Discussion

- a. Students discuss the statements related to the article and give their reasons and justifications for each answer, referring to their own experiences wherever possible.

6. In your own words

- a. Ask students to think about the advantages and disadvantages of pills like LaKe. If possible, have students research more information about these kinds of pills. Ask them to consider the long-term effects of using pills like LaKe and encourage them to use the questions provided so that they think about the possible psychological and physical effects of these pills.

- b. Students then present their ideas to the class. Encourage students to talk both about the physical effects of the drugs and how these effects could help people. This will enable them to use past participles to describe the chemicals, molecules, genes and physical effects. Encourage students to look at the examples provided of phrases they can include when presenting their ideas.