Scientists develop pill to replace exercise


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4th August, 2008
US researchers say they have developed a pill that makes you fit without exercising. Scientists at California's Salk Institute for Biological Studies tested a new drug on genetically engineered “marathon mice” that could run non-stop for hours. They then developed a pill that could reproduce the positive effects of the running. Researcher Professor Ronald Evans said the pill helps cells burn fat quicker and at the same time boosts energy levels. The new discovery could benefit those who do not get the recommended 40 minutes of exercise per day. Professor Evans said: "If you're out of shape, and most of us are...you have to do some exercise....If there was a way to mimic exercise, it would make the quality of exercise [we] have much more efficient."

Fitness experts are unconvinced by the new discovery. They say there is no substitute for real exercise and a balanced, healthy diet. However, it seems there would be enormous appeal for a pill that does away with the need for strenuous workouts or sweating it out jogging. If the effects can be reproduced in humans, it could become one of science’s biggest money-spinners. It could additionally reduce a large number of diseases related to obesity and seriously cut the number of hospital patients. Scientists also say such a medicine could be used to treat muscle-wasting diseases. The pills are still in the experimental stage and the researchers are not working with any drug manufacturer.
**WARM-UPS**

1. **FITNESS:** Walk around the class and talk to other students about fitness. Change partners often. After you finish, sit with your partner(s) and share your findings.

2. **CHAT:** In pairs / groups, decide which of these topics or words from the article are most interesting and which are most boring.

   - researchers / pills / genetically engineered mice / marathons / burning fat / energy / fitness / healthy diet / sweating / money-spinners / obesity / hospital patients

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

3. **THREE TIMES A DAY AFTER MEALS:** Would you like an exercise pill? Look at the pills below. Write down what you hope they could do and how your life might change if you took them. Change partners and share your thoughts.

<table>
<thead>
<tr>
<th>Type of pill</th>
<th>What they could do</th>
<th>How my life might change</th>
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<tbody>
<tr>
<td>Exercise pill</td>
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<td>Better looks pill</td>
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<td>English pill</td>
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<td>No-sleep pill</td>
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4. **QUICK DEBATE:** Students A strongly believe that taking a pill to replace exercise is dangerous; Students B strongly believe an exercise pill is the best thing since sliced bread. Change partners again and talk about your roles and conversations.

5. **PILLS:** Rank the pills below in the order you most want them. Discuss your rankings and reasons with your partner(s).

   - _____ exercise pill
   - _____ intelligence pill
   - _____ better looks pill
   - _____ music pill
   - _____ personality pill
   - _____ health pill
   - _____ English pill
   - _____ no-sleep pill

6. **EXERCISE:** Spend one minute writing down all of the different words you associate with the word ‘exercise’. Share your words with your partner(s) and talk about them. Together, put the words into different categories.
BEFORE READING / LISTENING

1. TRUE / FALSE: Look at the article’s headline and guess whether these sentences are true (T) or false (F):

   a. Scientists have developed an exercise pill that could make us all fit.  
      T / F
   b. Laboratory mice were able to run without stopping for a very long time.  
      T / F
   c. Scientists say jogging and other exercise will be a thing of the past.  
      T / F
   d. The pill will increase the efficiency of any exercise we do.  
      T / F
   e. Fitness specialists are very excited about the new discovery.  
      T / F
   f. The pill could make its developers extremely rich.  
      T / F
   g. There could be fewer people staying in hospitals because of the pill.  
      T / F
   h. The pills will be on pharmacy store shelves within the next 3 months.  
      T / F

2. SYNONYM MATCH: Match the following synonyms from the article:

   1. pill  
      a. exhausting
   2. fit  
      b. copy
   3. reproduce  
      c. specialists
   4. mimic  
      d. in good shape
   5. efficient  
      e. tablet
   6. experts  
      f. test
   7. appeal  
      g. imitate
   8. strenuous  
      h. cure
   9. treat  
      i. attraction
   10. experimental  
      j. productive

3. PHRASE MATCH: Match the following phrases from the article (sometimes more than one combination is possible):

   1. makes you fit  
      a. effects of the running
   2. run non- 
      b. related to obesity
   3. reproduce the positive  
      c. shape
   4. boosts  
      d. for real exercise
   5. out of  
      e. stop for hours
   6. experts are unconvinced  
      f. need for strenuous workouts
   7. there is no substitute  
      g. without exercising
   8. a pill that does away with the  
      h. muscle-wasting diseases
   9. reduce a large number of diseases  
      i. energy levels
   10. used to treat  
      j. by the new discovery
US researchers say they have developed a pill that ______ you fit without exercising. Scientists at California's Salk Institute for Biological Studies tested a new drug ______ genetically engineered “marathon mice” that could run non-stop for ______. They then developed a pill that could reproduce the ______ effects of the running. Researcher Professor Ronald Evans said the pill helps cells burn fat ______ and at the same time boosts energy levels. The new discovery could benefit those who do not ______ the recommended 40 minutes of exercise per day. Professor Evans said: "If you're ______ of shape, and most of us are...you have to do some exercise....If there was a way to mimic exercise, it would make the quality of exercise [we] have ______ more efficient."

Fitness ______ are unconvinced by the new discovery. They say there is no substitute for real exercise and a balanced, healthy ______. However, it seems there would be enormous appeal for a pill that does away with the ______ for strenuous workouts or sweating it out jogging. If the effects can be reproduced in humans, it could become one of science’s ______ money-spinners. It could additionally reduce a large number of diseases ______ to obesity and seriously ______ the number of hospital patients. Scientists also say such a medicine could be used to ______ muscle-wasting diseases. The pills are still in the experimental ______ and the researchers are not working with any drug manufacturer.
LISTENING: Listen and fill in the spaces.

US researchers say they have developed a pill that ______________ without exercising. Scientists at California's Salk Institute for Biological Studies tested ______________ genetically engineered “marathon mice” that could run non-stop for hours. They then developed a pill that could reproduce the positive ______________ running. Researcher Professor Ronald Evans said the pill helps cells burn fat quicker and at the same ______________ levels. The new discovery could benefit those ______________ the recommended 40 minutes of exercise per day. Professor Evans said: "If you're ______________, and most of us are...you have to do some exercise....If there ______________ mimic exercise, it would make the quality of exercise [we] have much more efficient."

Fitness experts are ______________ the new discovery. They say there is no substitute for real exercise and a balanced, healthy diet. However, ______________ would be enormous appeal for a pill that ______________ the need for strenuous workouts or sweating it out jogging. If the effects can be reproduced in humans, it could become ______________ biggest money-spinners. It could additionally reduce a large number of diseases related to obesity and ______________ number of hospital patients. Scientists also say such a medicine could be ______________ muscle-wasting diseases. The pills ______________ experimental stage and the researchers are not working with any drug manufacturer.
AFTER READING / LISTENING

1. WORD SEARCH: Look in your dictionaries / computer to find collocates, other meanings, information, synonyms … for the words ‘exercise’ and ‘pill’.

| exercise | pill |

• 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:

| fit | marathon | burn | 40 | shape | mimic | discovery | diet | appeal | money | cut | stage |

Scientists develop pill to replace exercise – 4th August, 2008
**STUDENT EXERCISE PILL SURVEY**

Write five GOOD questions about exercise pills 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.

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<th>STUDENT 1</th>
<th>STUDENT 2</th>
<th>STUDENT 3</th>
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<td>Q.3.</td>
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<td>Q.4.</td>
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<td>Q.5.</td>
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• 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.
DISCUSSION

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

a) What did you think when you read the headline?
b) What springs to mind when you hear the word ‘exercise’?
c) Do you think an exercise pill is a good thing?
d) Do you think the pills would work?
e) Would you prefer to get fit through exercise or through taking a pill?
f) Would you like to have the pills and take up marathon running?
g) Do you get enough exercise every day?
h) Do you think this pill will make us all lazier?
i) What do you think are the negative effects of an exercise pill?
j) What pills do you think scientists will or should discover next?

DISCUSSION

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

a) Did you like reading this article?
b) Why do you think fitness experts are unconvinced by the new pill?
c) Do you think the pill could be a substitute for real exercise?
d) Why do you think people like strenuous exercise like jogging and working out?
e) Do you like sweating with exercise?
f) Do you think the pill could change the world’s health?
g) Would you like to do away with the need for exercise?
h) Are you excited at this news?
i) Will you try the new pills if they go on sale?
j) What questions would you like to ask Professor Ronald Evans?
US researchers say they have developed a pill that makes you (1) fit without exercising. Scientists at California's Salk Institute for Biological Studies tested a new drug (2) by genetically engineered “marathon mice” that could run non-stop for (3) hours. They then developed a pill that could reproduce the positive effects of the running. Researcher Professor Ronald Evans said the pill helps cells (4) burn fat quicker and at the same time boosts energy levels. The new discovery could benefit (5) them who do not get the recommended 40 minutes of exercise per day. Professor Evans said: "If you're (6) out of shape, and most of us are...you have to do some exercise....If there was a way to mimic exercise, it would make the quality of exercise [we] have much more efficient."

Fitness experts are unconvinced by the new discovery. They say there is (7) no substitute for real exercise and a balanced, healthy diet. However, it seems there would be enormous appeal for a pill that does (8) away with the need for strenuous workouts or sweating it out jogging. If the effects can be reproduced in (9) everyone, it could become one of science’s biggest money-spinners. It could additionally reduce a large number of diseases related (10) to obesity and seriously cut the number of hospital patients. Scientists also say such a medicine could be used to (11) treat muscle-wasting diseases. The pills are (12) still in the experimental stage and the researchers are not working with any drug manufacturer.

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

1. (a) fitness (b) fit (c) fitted (d) fittest
2. (a) by (b) at (c) on (d) in
3. (a) hours (b) hour (c) hourly (d) hour-long
4. (a) burns (b) burning (c) burnt (d) burn
5. (a) them (b) these (c) those (d) this
6. (a) out (b) off (c) down (d) not
7. (a) non- (b) never (c) not (d) no
8. (a) soon (b) away (c) for (d) over
9. (a) everyone (b) us (c) we (d) humans
10. (a) by (b) at (c) to (d) on
11. (a) treatment (b) treat (c) treating (d) treaty
12. (a) still (b) yet (c) until (d) up
WRITING:

Write about **fitness and exercise** for 10 minutes. Correct your partner’s paper.

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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 the exercise pill. Share what you discover with your partner(s) in the next lesson.

3. DISCOVERIES: Make a poster about some wonder drugs that have been discovered in the past. Show your work to your classmates in the next lesson. Did you all have similar things?

4. A FITTER WORLD: Write a magazine article about how the pills changed the world. Include imaginary interviews with people whose lives changed after taking the pills.

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. LETTER: Write a letter to Professor Evans. Ask him three questions about the exercise pills. Make three suggestions on what pills he should discover next. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.
ANSWERS

TRUE / FALSE:
a. T  b. T  c. F  d. T  e. F  f. T  g. T  h. F

SYNONYM MATCH:
1. pill  a. tablet
2. fit  b. in good shape
3. reproduce  c. copy
4. mimic  d. imitate
5. efficient  e. productive
6. experts  f. specialists
7. appeal  g. attraction
8. strenuous  h. exhausting
9. treat  i. cure
10. experimental  j. test

PHRASE MATCH:
1. makes you fit  a. without exercising
2. run non-stop  b. stop for hours
3. reproduce the positive  c. effects of the running
4. boosts  d. energy levels
5. out of  e. shape
6. experts are unconvinced  f. by the new discovery
7. there is no substitute  g. for real exercise
8. a pill that does away with the  h. need for strenuous workouts
9. reduce a large number of diseases  i. related to obesity
10. used to treat  j. muscle-wasting diseases

GAP FILL:

Scientists develop pill to replace exercise

US researchers say they have developed a pill that makes you fit without exercising. Scientists at California’s Salk Institute for Biological Studies tested a new drug on genetically engineered “marathon mice” that could run non-stop for hours. They then developed a pill that could reproduce the positive effects of the running. Researcher Professor Ronald Evans said the pill helps cells burn fat quicker and at the same time boosts energy levels. The new discovery could benefit those who do not get the recommended 40 minutes of exercise per day. Professor Evans said: “If you’re out of shape, and most of us are...you have to do some exercise....If there was a way to mimic exercise, it would make the quality of exercise [we] have much more efficient.”

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LANGUAGE WORK