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HIV virus a step ahead of body's defences

http://www.breakingnewsenglish.com/0903/090302-hiv_aids.html

Contents

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THE ARTICLE

A group of American and British scientists have discovered that the HIV virus is cleverer than they thought. Their research found the virus adapts very quickly to keep a step ahead of the body's immune system. Their conclusions make it very clear that finding a vaccine is a huge challenge. One of the reasons for this is because the virus has many faces. The researchers believe the virus creates 14 different "escape routes" when it is attacked. This means the virus can adapt itself quickly and easily to beat any vaccine. Professor Philip Goulder of Oxford University calls this "high speed evolution". He says: "Even in the short time that HIV has been in the human population, it is doing an effective job of evading our best efforts."

The research team analyzed data from more than 2,800 HIV-infected patients across five continents. They found the virus is adapting differently with different races. This makes the virus similar to separate armies, all adapting to their different environments. It is possible every HIV-infected person might need his or her own unique vaccine. American researcher Dr. Richard Kaslow warned "the challenge ahead in vaccine design is formidable". Another American, Dr. Bruce Walker, said: "It's very clear there's a battle going on between humans and this virus, and the virus is evolving to become unrecognized by the immune system." HIV has killed 25 million people worldwide. An estimated 33 million currently live with the virus.

WARM-UPS

1. VIRUSES: Walk around the class and talk to other students about viruses. 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.

> *scientists / being clever / immune system / vaccines / challenges / escape routes / analyzing data / continents / armies / unique / formidable things / battles / evolving*

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

3. KILLERS: How can we stop the world's major killers? Talk about solutions with your partner(s). Change partners and share what you wrote.

Killer	Solutions	Barriers to your solutions
HIV/AIDS		
Wars		
Poverty		
Traffic accidents		
Smoking		
Crime		

4. VACCINE: Students A **strongly** believe scientists will never find a vaccine for HIV; Students B **strongly** believe scientists will find a vaccine one day. Change partners again and talk about your conversations.

5. HUGE CHALLENGES: Rank the following into which is the biggest challenge for the world. Talk about your rankings with your partner(s). Change partners.

_____ a cure for HIV/AIDS
_____ melting ice sheets
_____ obesity
_____ drugs
_____ banks that work
_____ violence in societies
_____ computer viruses
_____ corruption

6. IMMUNE: Spend one minute writing down all of the different words you associate with the word 'immune'. 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 found the HIV virus is not as clever as they first believed. T / F
b. Scientists think it will be quite easy to find a vaccine for HIV. T / F
c. The virus has 14 different ways to escape the body's immune system. T / F
d. HIV has affected humans for tens of thousands of years. T / F
e. The research was carried out on HIV-infected people in the USA only. T / F
f. The virus reacts the same with everyone, regardless of skin colour. T / F
g. A scientist believes there is no single vaccine for everyone. T / F
h. More people have died from HIV than those who live with it today. T / F

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

1.	discovered	a.	obvious
2	adapts	b.	defeat
3.	huge	c.	found
4.	beat	d.	examined
5.	evading	e.	individual
6.	analyzed	f.	changes
7.	need	g.	steering clear of
8.	unique	h.	presently
9.	clear	i.	enormous
10.	currently	j.	require

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

1.	the HIV virus is cleverer	a.	quickly and easily
2	keep a step ahead of the body's	b.	huge challenge
3.	finding a vaccine is a	c.	unrecognized
4.	the virus can adapt itself	d.	is formidable
5.	an effective job of evading	e.	than they thought
6.	2,800 HIV-infected patients across	f.	live with the virus
7.	the challenge ahead in vaccine design	g.	our best efforts
8.	there's a battle	h.	immune system
9.	the virus is evolving to become	i.	going on
10.	33 million currently	j.	five continents

WHILE READING / LISTENING

GAP FILL: Put the words into the gaps in the text.

A group of American and British scientists have discovered that the HIV virus is _____ than they thought. Their research found the virus adapts very quickly to keep a step ahead of the body's _____ system. Their conclusions make it very clear that finding a vaccine is a huge _____. One of the reasons for this is because the virus has many faces. The researchers believe the virus _____ 14 different "escape routes" when it is attacked. This _____ the virus can adapt itself _____ and easily to beat any vaccine. Professor Philip Goulder of Oxford University calls this "high speed evolution". He says: "Even in the _____ time that HIV has been in the human population, it is doing an effective job of evading our _____ efforts."

means

challenge

best

short

cleverer

creates

immune

quickly

The research team analyzed _____ from more than 2,800 HIV-infected patients across five _____. They found the virus is adapting differently with different races. This makes the virus similar to separate armies, all adapting to their different environments. It is _____ every HIV-infected person might need his or her own unique _____. American researcher Dr. Richard Kaslow warned "the challenge _____ in vaccine design is formidable". Another American, Dr. Bruce Walker, said: "It's very clear there's a _____ going on between humans and this virus, and the virus is evolving to become unrecognized by the immune system." HIV has _____ 25 million people worldwide. An estimated 33 million currently _____ with the virus.

ahead

continents

vaccine

killed

data

live

possible

battle

LISTENING: Listen and fill in the spaces.

A group of American and British scientists have discovered _____ is cleverer than they thought. Their research found the virus adapts very quickly _____ ahead of the body's immune system. Their conclusions make it very clear that _____ is a huge challenge. One of the reasons for this is because the virus has many faces. The researchers believe _____ 14 different "escape routes" when it is attacked. This means the virus can adapt itself quickly and _____ any vaccine. Professor Philip Goulder of Oxford University calls this "high speed evolution". He says: "Even in the short time that HIV has been in the human population, it is doing _____ evading our best efforts."

The research team analyzed data _____ 2,800 HIV-infected patients across five continents. They found the virus is adapting differently with different races. This makes the _____ separate armies, all adapting to their different environments. It is possible every HIV-infected person might need _____ unique vaccine. American researcher Dr. Richard Kaslow warned "the challenge ahead in _____ formidable". Another American, Dr. Bruce Walker, said: "It's very clear _____ going on between humans and this virus, and the virus is evolving to become unrecognized by the immune system." HIV has killed 25 million people worldwide. An estimated 33 million _____ the virus.

AFTER READING / LISTENING

1. WORD SEARCH: Look in your dictionaries / computer to find collocates, other meanings, information, synonyms … for the words **'step'** and **'ahead'**.

step	**ahead**

- 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:

• group • step • clear • faces • easily • short	• five • races • unique • ahead • clear • 33

STUDENT VIRUS SURVEY

Write five GOOD questions about viruses 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.

VIRUSES 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 'virus'?

c) Are you surprised about what you read in this article?

d) What three adjectives would you use to describe HIV?

e) Do you think scientists will find a vaccine one day?

f) How much effort do you think governments should put into HIV and AIDS prevention?

g) What do you know about HIV? What does it mean?

h) Do you think schoolchildren should learn about the dangers of HIV?

i) Would you like to be a scientist working on an HIV vaccine?

j) What do you think of the expression "high-speed evolution"?

VIRUSES DISCUSSION

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

a) Did you like reading this article?

b) What viruses do you think are the most deadly and the most scary?

c) What makes the HIV virus so difficult to find a vaccine for?

d) What would happen if every HIV-infected person needed his or her own unique vaccine?

e) What's the most formidable challenge you've faced?

f) What was the last virus you caught?

g) Has your computer ever had a virus?

h) Do you think all viruses will disappear in the future?

i) What do you think about the numbers at the end of the article?

j) What questions would you like to ask the researchers?

LANGUAGE

A group of American and British scientists have (1) _____ that the HIV virus is cleverer than they thought. Their research found the virus adapts very (2) _____ to keep a step ahead of the body's immune system. Their conclusions make it very (3) _____ that finding a vaccine is a huge challenge. One of (4) _____ reasons for this is because the virus has many faces. The researchers believe the virus creates 14 different "escape routes" when it is attacked. This means the virus can adapt itself quickly and easily to beat (5) _____ vaccine. Professor Philip Goulder of Oxford University calls this "high speed evolution". He says: "Even in the short time that HIV has been in the human population, it is doing an effective job (6) _____ evading our best efforts."

The research team analyzed data from more than 2,800 HIV-infected patients (7) _____ five continents. They found the virus is adapting differently with different races. This makes the virus similar (8) _____ separate armies, all adapting to their different environments. It is possible every HIV-infected person might need his or her (9) _____ unique vaccine. American researcher Dr. Richard Kaslow warned "the challenge (10) _____ in vaccine design is formidable". Another American, Dr. Bruce Walker, said: "It's very clear there's a battle going (11) _____ between humans and this virus, and the virus is evolving to become unrecognized by the immune system." HIV has killed 25 million people worldwide. An estimated 33 million currently (12) _____ with the virus.

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

1.	(a)	discovering	(b)	discovery	(c)	discovers	(d)	discovered
2.	(a)	quickly	(b)	quicken	(c)	quicker	(d)	quick
3.	(a)	clarity	(b)	clear	(c)	clears	(d)	clearing
4.	(a)	this	(b)	these	(c)	the	(d)	that
5.	(a)	many	(b)	some	(c)	any	(d)	all
6.	(a)	from	(b)	of	(c)	for	(d)	at
7.	(a)	at	(b)	through	(c)	along	(d)	across
8.	(a)	to	(b)	for	(c)	by	(d)	at
9.	(a)	owner	(b)	own	(c)	owns	(d)	owning
10.	(a)	future	(b)	front	(c)	forward	(d)	ahead
11.	(a)	of	(b)	as	(c)	on	(d)	up
12.	(a)	live	(b)	alive	(c)	life	(d)	living

WRITING:

Write about **viruses** for 10 minutes. Correct your partner's paper.

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 HIV and AIDS. Share what you discover with your partner(s) in the next lesson.

3. VIRUSES: Make a poster about different viruses around the world. How do they affect people and societies? Show your work to your classmates in the next lesson. Did you all have similar things?

4. HIV: Write a magazine article about a possible HIV vaccine. Include imaginary interviews with a doctor who believes more money is needed and a government leader who doesn't want to give a lot of money.

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 the researchers. Ask them three questions about HIV. Tell them three things the world needs to do to help them. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

TRUE / FALSE:

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

SYNONYM MATCH:

1.	discovered	a.	found
2	adapts	b.	changes
3.	huge	c.	enormous
4.	beat	d.	defeat
5.	evading	e.	steering clear of
6.	analyzed	f.	examined
7.	need	g.	require
8.	unique	h.	individual
9.	clear	i.	obvious
10.	currently	j.	presently

PHRASE MATCH:

1.	the HIV virus is cleverer	a.	than they thought
2	keep a step ahead of the body's	b.	immune system
3.	finding a vaccine is a	c.	huge challenge
4.	the virus can adapt itself	d.	quickly and easily
5.	an effective job of evading	e.	our best efforts
6.	2,800 HIV-infected patients across	f.	five continents
7.	the challenge ahead in vaccine design	g.	is formidable
8.	there's a battle	h.	going on
9.	the virus is evolving to become	i.	unrecognized
10.	33 million currently	j.	live with the virus

GAP FILL:

HIV virus a step ahead of body's defences

A group of American and British scientists have discovered that the HIV virus is **cleverer** than they thought. Their research found the virus adapts very quickly to keep a step ahead of the body's **immune** system. Their conclusions make it very clear that finding a vaccine is a huge **challenge**. One of the reasons for this is because the virus has many faces. The researchers believe the virus **creates** 14 different "escape routes" when it is attacked. This **means** the virus can adapt itself **quickly** and easily to beat any vaccine. Professor Philip Goulder of Oxford University calls this "high speed evolution". He says: "Even in the **short** time that HIV has been in the human population, it is doing an effective job of evading our **best** efforts."

The research team analyzed **data** from more than 2,800 HIV-infected patients across five **continents**. They found the virus is adapting differently with different races. This makes the virus similar to separate armies, all adapting to their different environments. It is **possible** every HIV-infected person might need his or her own unique **vaccine**. American researcher Dr. Richard Kaslow warned "the challenge **ahead** in vaccine design is formidable". Another American, Dr. Bruce Walker, said: "It's very clear there's a **battle** going on between humans and this virus, and the virus is evolving to become unrecognized by the immune system." HIV has **killed** 25 million people worldwide. An estimated 33 million currently **live** with the virus.

LANGUAGE WORK

1 - d 2 - a 3 - b 4 - c 5 - c 6 - b 7 - d 8 - a 9 - b 10 - d 11 - c 12 - a