

Back from the dead

Level 1 | Elementary

1 Key words

Fill the gaps by using these key words from the text.

pandemic
experiment

virus
laboratory

lethal
lungs

immune
worried

1. If something is _____, it is very dangerous and could kill you.
2. People use their _____ when they breathe.
3. If you think something bad will happen, you feel _____.
4. A _____ is an infectious disease that almost everyone in a very large area catches.
5. If you are _____ to a disease, you are safe from it and you will not catch it.
6. An _____ is a scientific test to find out what happens to something.
7. A _____ is a building or a large room where people do scientific experiments.
8. A _____ is a simple living thing that can enter your body and make you ill.

2 Find the information

Look in the text and find this information as quickly as possible.

1. When was the Spanish flu pandemic?
2. How many people died in the Spanish flu pandemic?
3. Where did the scientists produce a copy of the Spanish flu virus?
4. How much weight did the laboratory mice lose?
5. How quickly did the laboratory mice die?
6. What is H5N1?

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By Ian Sample

Many people today are worried about bird flu. They are afraid that it will pass from birds to humans and that thousands of people will die in a pandemic. In 1918 a flu virus killed about 50 million people around the world. The virus was called Spanish influenza (or Spanish flu, for short) because Spanish newspapers first described the disease. Now, after nine years of work, scientists in an American laboratory in Atlanta, Georgia, have produced a copy of the Spanish flu virus. They are also going to publish the genetic sequence of the virus on the internet and some experts are afraid that other laboratories could copy the virus.

Scientists have copied the virus because they want to understand why the 1918 Spanish flu pandemic killed so many people. In a report in the journal *Science*, Dr Jeffery Taubenberger and a team of scientists in the USA show that the copied virus is extremely powerful. The scientists injected the virus into mice and the mice began to lose weight very quickly. They lost 13% of their weight in two days and all of the mice died within six days.

"I didn't expect it to be as lethal as it was," Dr Terrence Tumpey, one of the scientists in the team, told the journal *Nature*. In another experiment, they injected more mice with a normal type of flu. The mice lost weight at first but then they got better and did not die. The experiments showed that the mice with the Spanish flu virus had 39,000 times more flu virus in their bodies than the second group of mice.

The scientists who copied the virus say their work has already provided important information about the virus and helps to explain why it is so lethal. But other experts are worried that the virus could escape from

the laboratory. "Some people will think that they have really created a biological weapon," said Professor Ronald Atlas of the University of Louisville in Kentucky. "I am even more worried now than I was before about the possibility of a flu pandemic. The 1918 flu pandemic started with bird flu and that might happen again today with Asian bird flu."

Some scientists are worried about the publication of the genetic sequence on the internet. They are afraid that biologists could copy the virus using the information on the internet. This could be very dangerous.

It took a long time to copy the virus. Scientists used material taken from the lungs of people who died from the flu virus in 1918. In a second report in *Nature*, Taubenberger and his colleagues analyzed the genetic make-up of the virus. They were surprised to find that it was completely different from all the normal human flu viruses. This probably means that Spanish flu jumped from birds to humans and did not mix with a human virus first. This is very worrying for scientists because in the past everyone believed that a pandemic was only possible if a bird flu virus mixed with a human flu virus.

Taubenberger says it is very important to know what changes in the virus caused the 1918 Spanish flu virus. This will help scientists to work out which viruses might cause a pandemic. The H5N1 bird flu in Asia is already changing and it could infect humans, he said.

Viruses have escaped from high-security labs before. The Sars virus escaped at least twice, once in Taiwan and once in Singapore. But some scientists believe a pandemic will not happen even if the virus escapes, because most people are naturally immune and there are now a lot of drugs which protect people from flu.

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3 Comprehension check

Match the beginnings and endings of the sentences.

1. Some scientists are worried because ...
 2. They copied the virus because ...
 3. Some scientists believe a pandemic will not happen because ...
 4. Scientists copied the Spanish flu virus ...
 5. The 1918 flu pandemic ...
 6. Bird flu ...
-
- a. ... they wanted to find out why it was so lethal.
 - b. ... by using material from the lungs of people who died from the virus.
 - c. ... started with bird flu.
 - d. ... the Spanish flu virus might escape from the laboratory.
 - e. ... might pass from birds to humans.
 - f. ... most people are naturally immune.

4 Vocabulary 1 - Prepositions

Fill the gaps using prepositions. Check your answers in the text.

1. escape _____
2. inject _____
3. worried _____
4. information _____
5. die _____
6. mix _____
7. protect _____
8. different _____

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5 Vocabulary 2 - Adjectives

Fill in the missing letters to make adjectives from the text.

1. i _ p _ _ t _ _ t
2. w _ _ r _ _ d
3. _ f r _ _ d
4. s _ _ p _ _ s _ d
5. p _ w _ r _ _ _
6. d _ _ g _ _ o _ s
7. d _ _ f _ r _ n t
8. p _ s _ _ b l _

6 Word stress

Put these words from the text into the correct column according to their word stress.

powerful
naturally
internet

publication
dangerous
security

laboratory
influenza
biologist

a. o o O o
information

b. O o o
scientist

c. o O o o
experiment

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KEY

1 Key words

- | | |
|-------------|---------------|
| 1. lethal | 5. immune |
| 2. lungs | 6. experiment |
| 3. worried | 7. laboratory |
| 4. pandemic | 8. virus |

2 Find the information

1. 1918
2. About 50 million
3. Atlanta, Georgia, USA (in a laboratory)
4. 13% of their body weight
5. Within 6 days
6. A bird flu virus

3 Comprehension check

1. d; 2. a; 3. f; 4. b; 5. c; 6. e

4 Vocabulary 1 - Prepositions

- | | |
|----------|---------|
| 1. from | 5. from |
| 2. into | 6. with |
| 3. about | 7. from |
| 4. about | 8. from |

5 Vocabulary 2 - Adjectives

- | | |
|--------------|--------------|
| 1. important | 5. powerful |
| 2. worried | 6. dangerous |
| 3. afraid | 7. different |
| 4. surprised | 8. possible |

6 Word stress

- a. publication, influenza
- b. powerful, naturally, internet, dangerous
- c. laboratory, biologist, security