

Malaria breathalyzer test could help millions

10th November, 2017



Scientists have developed a breathalyzer to test people for malaria. The device could help detect the deadly disease much earlier than other methods and thus help millions of people around the

world. The researchers, from Washington University in St Louis, USA, say that people with malaria give off a distinctive "breath print". The breathalyzer detects the chemicals that malaria creates as the person breathes into the device. One of the odours the device detects is identical to a natural smell that attracts malaria-spreading insects such as mosquitos. The device is still in its early stages of development. The researchers say it could lead to a new, cheap and easy way to help diagnose malaria.

The prototype breathalyzer detects six different odours or chemical compounds to spot instances of malaria. The researchers did tests on 35 children in Malawi. They took breath samples using the breathalyzer to test the accuracy of the machine. It accurately identified 29 of the children as having malaria. This was a success rate of 83 per cent. Lead researcher Audrey Odom John said: "It's clear that if we had fast, easy-to-use, reliable diagnostic devices...we could reduce unnecessary antibiotic use. This would have a major impact on the control of malaria, because all current diagnostic methods require blood sampling." Malaria currently kills around 430,000 a year around the world.

Sources: bbc.com / nydailynews.com / iflscience.com

Writing

There will be no more diseases within 100 years. Discuss.

Chat

Talk about these words from the article.

scientists / breathalyzer / deadly / disease / malaria / device / insects / early / cheap prototype / chemical / instances / accuracy / success rate / reliable / impact / blood

True / False

- Building engineers developed a breathalyzer to test for malaria. T / F
- The breathalyzer could help detect malaria earlier than other methods. T / F
- The device detects unnatural smells in malaria-carrying insects. T / F
- The researchers say the breathalyzer will be very expensive. T / F
- Researchers did tests for malaria on 350 children. T / F
- The breathalyzer detected 29 children as having malaria. T / F
- The breathalyzer could reduce the use of antibiotics. T / F
- Malaria kills over 400,000 people globally each year. T / F

Synonym Match

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

- | | |
|-----------------------|---------------|
| 1. device | a. particular |
| 2. detect | b. precision |
| 3. distinctive | c. smells |
| 4. odours | d. cases |
| 5. diagnose | e. notice |
| 6. instances | f. specimens |
| 7. samples | g. dependable |
| 8. accuracy | h. gadget |
| 9. reliable | i. present |
| 10. current | j. identify |

Discussion – Student A

- What do you know about malaria?
- Why is malaria still such a big problem in the world?
- What do you think of the new breathalyzer?
- What is a 'breath print'?
- What do you think of mosquitos?
- What's the best way to keep mosquitos away?
- How might global warming affect malaria?
- Could this technology be used for any other diseases?

Phrase Match

- | | |
|--|-------------------------|
| 1. The device could help detect the | a. devices |
| 2. The breathalyzer detects the | b. of development |
| 3. a natural smell that attracts malaria- | c. impact |
| 4. The device is still in its early stages | d. chemicals |
| 5. a new, cheap and easy way to help | e. of the machine |
| 6. spot | f. spreading insects |
| 7. test the accuracy | g. sampling |
| 8. fast, easy-to-use, reliable diagnostic | h. instances of malaria |
| 9. This would have a major | i. diagnose malaria |
| 10. all current diagnostic methods require blood | j. deadly disease |

Discussion – Student B

- What do you think about what you read?
- Do you think malaria will be totally eradicated one day?
- What is wrong with antibiotics?
- What would happen if all the world's mosquitos disappeared?
- Do you do anything to avoid mosquitos?
- What are the signs and symptoms of malaria?
- What would a doctor do if you had malaria?
- What questions would you like to ask the researchers?

Spelling

- help dettec the deadly disease
- give off a tisvniietcd "breath print"
- iactnidel to a natural smell
- sracattt malaria-spreading insects
- The edveic is still in its early stages
- help sdoaenig malaria
- The oreptpoyt breathalyzer
- spot isesannct of malaria
- test the ycucaacr of the machine
- eeddifitin 29 of the children
- reduce unnecessary ttnoibiaic use
- blood gspaimln

Answers – Synonym Match

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

Role Play

Role A – Malaria Tester

You think a malaria tester is the most important health device. Tell the others three reasons why. Tell them what is wrong with their devices. Also, tell the others which is the least important of these (and why): a thermometer, weighing scales or a blood pressure monitor.

Role B – Thermometer

You think a thermometer is the most important health device. Tell the others three reasons why. Tell them what is wrong with their devices. Also, tell the others which is the least important of these (and why): a malaria tester, weighing scales or a blood pressure monitor.

Role C – Weighing Scales

You think weighing scales are the most important health device. Tell the others three reasons why. Tell them what is wrong with their devices. Also, tell the others which is the least important of these (and why): a thermometer, a malaria tester or a blood pressure monitor.

Role D – Blood Pressure Monitor

You think a blood pressure monitor is the most important health device. Tell the others three reasons why. Tell them what is wrong with their devices. Also, tell the others which is the least important of these (and why): a thermometer, weighing scales or a malaria tester.

Speaking – Devices

Rank these with your partner. Put the best health devices at the top. Change partners often and share your rankings.

- | | |
|-------------------|--------------------------|
| • malaria tester | • X-ray machine |
| • thermometer | • pacemaker |
| • weighing scales | • pregnancy tester |
| • stethoscope | • blood pressure monitor |

Answers – True False

a	F	b	T	c	F	d	F	e	F	f	T	g	T	h	T
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Answers to Phrase Match and Spelling are in the text.