TedEd-30

Could a Breathalyzer Detect Cancer?

ENGLISH BELL online

VOCABULARY

*__Breathalyzer__ – a special bag or electronic device that the police use to test whether a driver has drunk too much alcohol

*__Ethanol__ – another name for alcohol

*__Volatile__ – liquid or substance that will quickly change into a gas

*__Acetic Acid__ – a colourless acid. It is the main substance in vinegar

*__Invasive Diagnostic__ – medical procedure that involves operating on a patient or examining the inside of their body

*__Glycolysis__ – the breakdown of glucose by enzymes into pyruvic and lactic acids with the liberation of energy

COMPREHENSION

1. How many different types of volatile organic compounds does exhaled human breath typically contain?

2. What are volatile organic compounds?

3. Which of the volatile organic compounds are the most interesting ones for disease detection?

4. What is the typically expected influence of a disease on the composition of volatile organic compounds in exhaled human breath?

5. What is the “Warburg Effect”?

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LET'S TALK

1. If detecting cancer can be as simple as measuring alcohol levels in a person's breath, what could be the consequences?

2. If the technology is sensitive enough, breath analysis might be able to detect diseases even before any symptoms occur. Curse or blessing?

3. What are the advantages/disadvantages of breath analysis compared to other diagnostic tools?

4. Do you think it is beneficial to develop new diagnostic tools that would allow for extended screening for slowly progressing disease like cancer?