Reading 3

Skills:

- Details
- Main idea
- Understand vocabulary in context
- Understand language function

Getting started: What kind of things can be implanted into a human body nowadays?

THE FUTURE OF MICROCHIP IMPLANTS IN HUMANS



As technology evolves, devices continue to grow smaller and more compact. Electronic devices once limited to the household, such as phones and computers, can now be carried around in our pockets. Now, for some people, the concept of portable and convenient technology has taken a step further with microchip implants. In Sweden, a country known for its technological innovations, thousands have already implanted microchips into their bodies. The Swedish firm, Biohax International, was founded six years ago by former professional body piercer, Jowan Osterlund, and currently dominates this market. "Having different cards and tokens verifying your

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identity to a bunch of different systems just doesn't make sense," says Osterlund. He further adds that chip implants can simplify everyday tasks through enhanced connectivity.

The trend has even caught on the United States with Three Square Market, a Wisconsin based vending-solutions company, which surgically implanted chips into more than 50 volunteers employed at the company in 2017. Microchip implants represent the latest evolution in convenient technology. For instance, the chips offered by Biohax International are designed primarily to reduce the time it takes users to perform specific daily routines. Individuals with implants can access their homes, offices, and gyms by simply **swiping their hands** against a digital reader.

Biohax chip implants can also be used to store emergency contacts, social media profiles, house keys, and even e-tickets for events and public transportation. In 2017, government-owned passenger train company SJ became the first travel company in the world to allow people to use microchip implants **in lieu** of paper train tickets. Biohax has also implied that users will soon be able to use the chips for store and restaurant payments.

While using microchip implants for convenience is certainly a modern idea, perhaps the biggest proponent for this type of technology is its potential to revolutionize health monitoring and medical diagnosis. Dr. Michael J. Mirro, medical director at the Clinical Research Center of Parkview Hospital, has been working closely with the Three Square Market team to develop prototypes with the ability to continually monitor an individual's vitals. This has the potential to allow both doctors and patients to access accurate medical data in real-time. In June 2018, the U.S. Food and Drug Administration (FDA) also approved a fully implantable Continuous Glucose Monitoring (CGM) system for adults with diabetes. This is one of many technological innovations in the medical industry nowadays.

Nevertheless, Brian Green, director of technology ethics at Santa Clara University, has expressed concerns over the ethics of microchip implants. While microchips aren't new technology with pets, Green states that in a world where retailers, credit card companies, and employers require mandatory implants, the country can become a "surveillance state." Green also predicts that **should** the surveillance state nightmare come to reality, individuals who decline microchip

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implants could be marginalized from modern conveniences. He adds that individuals should always have the right to make any kind of decision, for example regarding implants, without fear of persecution. Like other types of electronic devices, there are also growing concerns that microchip implants may be vulnerable to hacking. By using a WiFi connection, the possibility exists that hackers infect chips with viruses and even gain access to stored confidential information. Thus, one important question remains: is this technology really necessary?

Kayla Heffernan, a researcher at the Melbourne's School of Engineering, sees the adoption of chip implants as a "chicken and egg problem." She explains that microchips aren't widely used because they aren't yet useful enough. And since there is no market, the devices remain relatively unchanged. However, continuous research and development by companies like Biohax International and Three Square Market are aiming to increase the adoption rates of this new technology while attempting to change the view of skeptics.

**Adopted from https://www.thomasnet.com/insights/the-future-of-microchip-implants-in-humans/*

Answer the following questions:

1. Which sentence represents the main idea of this text?
    a. Implanting chips into the body can bring benefits but also negative effects.
    b. Chips could be used to heal any possible disease in the future.
    c. There are a lot of deep concerns about the use of body implants.
    d. Chip implants will benefit all the population of the planet in different aspects.

2. According to paragraph 1, how can chip implants be useful?
    a. They can help create new technological systems.
    b. They can help companies dominate the market.
    c. They can help people do some activities easily.
    d. They can help enhance internet connections.

3. What is stated in paragraph 2?
    a. Biohax International employed more than 50 workers in 2017.
    b. Three Square Market chips allow employees to access their offices.
    c. Sweden and the USA are the only countries where these chips are made.
    d. Chips are beneficial as they help people do certain activities more quickly.

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4. What does the phrase **swiping their hands** in paragraph 2 imply?
    a. To touch your hands carefully.
    b. To exercise your hands at the gym.
    c. To pass your hands through another object.
    d. To clean your hands before touching a book.

5. The phrase **in lieu** in paragraph 3 is closest in meaning to
    a. whether
    b. instead
    c. before
    d. against

6. What is the author's purpose in paragraph 4?
    a. To point out the use of chips is controversial.
    b. To describe how chips are used at Parkview Hospital.
    c. To explain how chips can be used to help people's health.
    d. To warn the reader how chips are implemented to monitor people.

7. The word **should** in paragraph 5 is closest in meaning to
    a. if
    b. must
    c. shall
    d. have

8. What are **two** reasons Brian Green gives to disagree with the use of microchips implants?
    a. They could be used to invade people's privacy.
    b. They can cause harm to various types of animals.
    c. They could exclude people from certain activities.
    d. They can be used to hack into credit card companies.

9. What is stated in the last paragraph?
    a. As there's no market for these chips, they probably won't be used in the future.
    b. The adoption costs of these implants might be high.
    c. Microchip implants aren't useful at all.
    d. Some companies will carry on proving that this kind of technology can be useful.

What do you think?

Do you think these kinds of implants should generate a moral debate?

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