Reading Unit 6

Read the blog post again. Match the questions (1-8) with the paragraphs (A, B, C or D).

Which paragraph in the article:

1. Says that the price of artificial limbs is a problem?
2. Gives a definition of prostheses?
3. Mentions how bionic arms can make children feel?
4. Explains why there was a minimum age for prostheses?
5. Indicates a change in the writer's opinion on the design of prostheses?
6. Predicts what artificial body parts won't be able to do?
7. Suggests the disadvantages of early designs?
8. Explains how modern artificial limbs work?

A

Once upon a time, bionic arms were only seen in movies. But nowadays, real people are starting to have prostheses, (artificial body parts that replace missing ones) that look a lot more like superheroes' body parts. Prostheses are important for people who have a lost a limb through illness or an accident, or, like me, had a birth defect that meant an arm or leg didn't grow. They let us have a better quality of live, simply by allowing us to do things that other people can do without any challenge. Prostheses have changed over time. Fortunately, the original prosthetic limbs were before any time, so I didn't have to suffer the embarrassment of wearing an uncomfortable wooden arm. However, for some time modern replacements weren't much better. I got my first prosthetic arm as a teenager, when I started to get self-conscious about looking different from my friends and classmates. I was so excited about it, but that soon turned to disappointment. My first prosthesis looked like an arm, but it didn't act like one. When I got older, I upgraded to a super light carbon fibre arm, but I was still very aware that I had a 'fake arm'. I felt like nothing would come close to matching the real thing.

B

The guys at Open Bionics felt the same as me, and decided to do something about it. Open Bionics is a UK start-up company that designs artificial limbs after attending one of my talks on living with prostheses that I regularly give there. Using 3D printers, they create prostheses that are affordable – 30 times cheaper than other prostheses on the market, in fact. These prostheses operate using sensor attached to the skin to detect muscle movements control the hand and open and close fingers. Different control settings can be installed, giving wearers more flexibility. These all mean that the arm can be used in a more natural way, so it feels more like part of your body.

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C

Open Bionics co-founders Samantha Payne and Joel Gibbard want to make it possible for people with missing limbs to have more independence and freedom by making bionic technology more accessible. This is hugely important, because prostheses are simply too expensive for many people. Open Bionics is breaking that cost barrier with its bionic limbs. It is currently working on bionic limbs for children as young as eight, who had previously been unable to have them fitted until their body was big enough. For the company, which tried hundreds of designs before finalizing their prosthetic arm, working closely with wearers was important to help them get the best possible solution. Open Bionics' arms take roughly 40 hours to 3D print. The person's limb is scanned with a tablet and then design of the prosthetic is planned out. Finally, the prosthetic is 3D printed.

D

After hearing accounts of wearers being ashamed and embarrassed by their prosthetic limb, Open Bionics started to focus on the design as well as the functionality. Now, their Hero Arm comes with stylish covers that can be customized, which the co-founders say allows them to show the personality of the person wearing them. Through a special deal with Disney, the company can offer arms that come straight out the movies with covers form Marvel, Disney and Stars Wars franchises. This changes the image of prostheses from medical devices to bionic arms that kids can be proud of. It is unlikely that patients fitted with bionic limbs will ever benefit from advancements that will allow them to lift up buildings, run faster than the speed of light, have X-Ray vision or any of the superhuman abilities that bionically-enhanced movie characters develop. Even so, the future of bionic limbs is very exciting.

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