Should we insert wearable tech into our bodies?

*Posted by **Santi Bolivar***

Humans have always looked for ways to become stronger, smarter, and more resilient. In fact, Elon Musk says that's exactly what all types of technology give us. Our smartphones enhance our mind just like glasses enhance our vision and pacemakers help people regulate their heartbeat. And every year, the gap between humans and machines gets narrower and narrower.

Right now, we are in front of the next generation of wearable and haptic devices. Scientists like Dr. Pedro Lopes are exploring the endless possibilities of how wearable technology could directly intervene with our bodily senses. And thanks to the popularization of IT outsourcing services, advanced software development has become fairly accessible to any company or researchers interested in the field.

The Biohacking Community

Believe it or not, there's actually a mainstream support movement for inserting wearable tech into our bodies, known as "Biohacking". Its supporters have a sort of do-it-yourself biology mindset and find that the logical endpoint of humanity's relationship with technology is full integration—or in other words, the augmentation of the human body with tech. Here's a quick rundown of popular tech biohacks:

Magnetic Skin

Biomagnets have become one of the most popular trends in biohacking, mainly because they require no fancy programming or computer chips. Just as the name implies, this augmentation consists of inserting disc-shaped or cylindrical magnets beneath your skin (ideally in palms and fingertips).

When the magnet encounters a magnetic field, it provokes slight reactions that stimulate tactile nerve endings, giving humans alternative ways to interact with their environment.

RFID Implants

An RFID (Radio-Frequency Identification) implant is a wireless identification tool that communicates with other devices through radio waves. When a reader is near a passive RFID transponder, it creates a magnetic field that induces a current in the transponder, powering it and wirelessly transmitting data from the transponder to the reader.

Today, RFID technology is mostly used for identification tags. The fact that the tag is implanted in your body gives it an extra level of security. That's why biohackers use it in all kinds of

authentication processes.

We are not just talking about opening doors and starting their cars- The data storage and information-sharing capabilities of RFID chips can also be used for other more-complicated processes such as contactless payment, storing cryptocurrency, and multiple-step biometric passwords.

Blood Monitoring

The first versions of blood monitoring implants were developed by researchers at the Swiss Federal Institute of Technology in Lausanne (EPFL), who designed the device to be used as a “personal blood testing laboratory”. Using several sensors, a radio transmitter, a basic power system, and an enzyme coating, the implant is able to monitor the level and distribution of substances in the bloodstream (such as lactate, glucose, and ATP).

The resulting data can then be sent to a doctor via Bluetooth or cellular network for further analysis. While the device remains in its prototype phase, for now, EPFL researchers believe that it will be commercially available within the next few years. And with the help of IT outsourcing companies, they could create powerful personalized software that revolutionizes at-home medicine and greatly diminishes the need for regular check-ups in high-risk patients.

So… Should We?

Biohacking comes down to choices. After all, people should be able to do with their own bodies what they please. But when individuals start opting to perform what should be medical procedures on themselves (following the DIY mentality mentioned earlier), there are almost no legal regulations. And since not everybody is a doctor, it is just a matter of time before people run into some unsafe advice.

While it is in everybody’s best interest that biohacking gets some regulations to make it safer, it doesn’t seem like it would happen anytime soon. In the same way, medical professionals (at least the ones most people are accustomed to see) need ethical approval from their industry before performing any kind of operation. I believe that, at least for now, Biohacking will remain a field sustained by smart individuals and universities who dare to dive deeper into the subject.

What worries me is the big picture. Let’s say a few years from now, someone invents brain implants that allow two people to suddenly communicate directly from one brain to the other. In some sense, technology like that would make us superhuman—and not just in the same way humans 100 years ago would think about us as superhumans because of smartphones.

So I will repeat this again: humans will continue to look for ways to become stronger, smarter, and more resilient—however, technology will always persevere. Just a couple of decades ago people

were scared about having doctors blasting lasers into their eyes. Today, that’s common practice. The same will happen with Biohacking and implant technology.