

Implanting artificial limb in the body



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Summary of Implanting Artificial Limb in the Body Advances in prosthetics come as welcomed news to many, but certain risks are associated with the most cutting edge technology. New surgically implanted devices attach to the bone seem to be more effective solutions than traditional prosthetics which often cause significant discomfort impeding the purpose of the devices.

Osseo-integrated implants attach directly to the vacant part of the bone with a cylinder to persuade the bone to fuse with the metal. The prosthetic device connects to the metal protruding from the skin, but the protrusion encourages infections that often require follow-up surgeries. As healing occurs, the skin produces a pocket that gathers dirt which increases the probability of infection.

Scientists are developing methods to help make better connections between metal, bone, and flesh to reduce the risk of infection. They contend that an implant where bone-metal fusion has occurred prevents bacteria infecting the bone. As such, they concentrate on helping skin to form a firm closure about the embedded metal to reduce the risk of infection. They found deer antlers provided a clue about how to accomplish this. They do it by large pores in the bone just underneath the skin which helps the skin to stick. Scientists insert a similarly porous shim underneath the skin which helps the tissue to close.

Ultimately, scientists are seeking a solution that will last about 70 years. Nevertheless, the technology is not allowed in the U. S. yet. American scientists are trying to get authorization from the U. S. Food and Drug Administration to transport this expertise home. Even with the risks involved, surgically implanted prosthetics that attach to bone are more effective

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solutions than traditional prosthetics which often cause too much discomfort to be completely practical.

Technology as Human Creativity

We often regard technology as the brain-child of science, and we assume that science juxtaposed to art. We do not think of its application like we think of performing arts or visual arts as creative, but in many ways, technology is an expression of human creativity. The process of scientific research, development, and implementation are profoundly creative by definition. Scientific research is creative in that it gleans applicable knowledge from nature. The act of filtering what is unimportant or insignificant out from what really matters in terms of knowledge is creative in that the resultant understanding is synthesized from what is known and unknown. It is the process of teasing out what we need from reality creating a new reality by the nature of our endeavor.

The development process itself is an extension of this creativity. To acquire knowledge and apply it means creating methods where we can actually accomplish these tasks. This means making ways of studying phenomena and finding ways to put what we find to good use. Although much more strict in its procedures, this process of analysis and design is uniquely creative. Implementing these ideas is also an act of creativity. To put applications to use is where the hands blur between that of the logician and that of the traditional artisan. These new or improved things are often called masterpieces – similar to the products of a grand artisan. Nomenclature alone is enough to show how applied science is an art, but intuition speaks more loudly than words.

Perhaps, all we experience may be perceived as art. Clearly, technology is an

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expression of human creativity. From eddies in a stream to the ideas of the architect to the chisel of the sculptor, all is not necessarily beautiful.