3D-Printed Adaptive Aids for Arthritis Patients

Researchers and students of Michigan Technological University have developed adaptive aids for arthritis patients using a 3D printer which allows people to perform their daily tasks such as opening doors or getting dressed. The device can be customisable for individual patients and an improved alternative on existing standards.

Adaptive aids are simple pieces of plastic that make it easier for arthritis patients to grip and manipulate objects. Other adaptive aids are very expensive but a 3D printed alternative could be a little cheaper option.

They have printed a wide range of devices and some of them meet or exceed the standard of commercial devices but at a lot lesser cost.

Source: www.mtu.edu

Smart Electronic Pill Releases Drugs on Demand

An electronic wireless device that can stay inside the gut for a lengthy period of time has been developed by researchers of an engineering company, MIT, Draper, and Harvard’s Brigham and Women’s Hospital. The device releases drugs into the body and measures various parameters.

The instrument has Bluetooth connectivity inbuilt and can share its readings and trigger the discharge of a drug by the use of a coupled smartphone app.

The swallowable instrument can stay in the body for about a month and it can be manufactured to different specifications since it is 3D printed.

Source: www.medgadget.com
World’s First Blood Pressure Smart Watch

The first smartwatch that can measure blood pressure from the wrist has been developed by the company Omron. It also monitors the heart rate and sleep quality throughout the night but it can not take BP readings while sleeping.

The watch syncs its data with an accompanying app, where users can store their blood pressure readings and heart rate history along with the quality of their sleep.

This watch is also cleared by the FDA and soon will be available in market for public use.

Source: www.forbes.com

Cellular Incubator for Implantation into Body

A new type of cell incubator that can be used to place lab-grown tissues into the body has been developed by researchers of Tomsk State University and Siberian State Medical University in Russia. The device is in the shape of a mesh made out of filaments of titanium nickelide (TiNi) that are only 25–40 μm in size, wound together by using a new manufacturing process.

The instrument can support a lot more cells as compared to previous incubators because of the large volume of the mesh. The new incubator can be seeded with a patient’s own cells and then spend time in a bioreactor where the seeds are promoted to grow and proliferate throughout the incubator. The device would then be transferred, as if it’s native tissue, into the patient to treat sites of injury and to treat a variety of diseases.

Source: www.medgadget.com