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Local health care company receives patent

Elizabeth Sehon

Fort Worth-based MedHab LLC has received a patent for technology the company says will allow for customized physical rehabilitation options for medical patients.

MedHab received its patent for StepRite, a wearable device that can be used both before and after surgery to help monitor patients.

Johnny Ross, co-founder and CEO for MedHab, was issued the patent in May for the orthopedic device to work in conjunction with physical therapy to help patients suffering from diabetes or any orthopedic injury to get back to their daily activities and regain mobility quicker than with traditional therapy alone.

“We got our patent in three years, which is relatively a short time period,” Ross said.

StepRite has the capability to measure body weight, pressure, gait, flexibility and thermal sensing of lower extremities using pressure sensing and accelerometer technology.

The device will provide accurate information pertaining to physical therapists to help with the healing process, Ross said.

Ross has worked for Johnson & Johnson for 15 years and said he’s no stranger to the health care field.

He started the idea of StepRite after suffering a knee injury, which changed his entire perspective about healing after a major operation.

After knee surgery, Ross began the rehabilitation process and was asked to follow a strict regimen of partial weight bearing and range of motion exercises.

Over time, he was able to place more weight on the affected limb starting with 20 percent of his body weight and graduating to higher amounts every two to three weeks until 100 percent of body weight was reached.

But reaching that goal and estimating how much weight was being placed on his injured leg was difficult to gauge.

Additionally, the range of motion was determined by employing a goniometer, which is a protractor hand held instrument and is subject to personal biases of the person making the measurements.

After the rehabilitation process was complete, which lasted nearly 12 weeks, Ross started contemplating ways to improve the system.

“Rehab just seems like it could be better,” Ross said.

After completing a partial design of the device, Ross called on a friend, Tim Sanghera, co-founder and COO of MedHab, an electrical engineer and computer scientist who was most recently was VP of sales for Mouser Electronics.

After reviewing the idea and drawings, Sanghera was confident he could build a version of the device to present to the U.S. Patent Office.

Within 30 days of learning about the device, Sanghera completed the breadboard or prototype version, which was taken to an intellectual property attorney and was submitted for a patent in 2008.

Along the way, the company has received support for its vision. In 2010, MedHab was named one of the most promising companies at the Rice Alliance for Technology and Entrepreneurship’s ninth annual Life Science Venture Forum at Rice University in Houston. MedHab was also a finalist for the recent Impact awards sponsored by Tech Fort Worth. In May, the company filed a \$1.8 million offering with the Securities and Exchange Commission to raise funds for the company.

Now that the patent has been submitted, Ross said he needs permission from the FDA to sell the product, which should occur in the fourth quarter of this year.

Ross also has sent the device overseas for regulation to sell it internationally.

Once StepRite is marketable, Ross said doctors will be able to prescribe the device and order it online.

After the patient receives it, Ross's company will contact the individual, insurance and make sure the device is molded just right for the patient.

"They'll have the device in conjunction with physical therapy and it'll (StepRite) make sure they're doing it right," he said.

Ross said StepRite is an example of how emerging technology can help change lives and he's excited to see how the product will impact and improve rehabilitation for patients.

"We want to help clients use technology to get back to life and become mobile again," he said.