



The down low
What to know



iPain
Avoid tablet injury

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PHYSICAL THERAPY

“When a patient begins treatment with a PT early, their overall health care costs are lower.”

Dan Rootenberg, DPT, CSCS

CARE FOR YOUR
BODY
TAKE ACTION
NOW

ACHIEVE YOUR GOALS

How emerging technology is helping Colby Helffrich, a partial-hand amputee, accomplish his dream of becoming a physical therapist

INSPIRATION

Question: How did a partial hand amputation effect Colby Helffrich's career path?

Answer: It reinforced his decision to become a physical therapist because he could empathize with his patients.

A future within grasp

LEADER TO LEADER

At 21, Colby Helffrich was a typical college student. Then an accident on March 26, 2009 changed his life.

"I was struck as a pedestrian by a train," he says. "It resulted in my left hand being partially amputated."

Only Helffrich's palm and his thumb remained. He also broke his ribs, his clavicle and bones in his back. He was hospitalized for a month before going to a rehabilitation hospital for another month.

"At first it was shocking and depressing," says Helffrich who wanted to be a physical therapist even before the accident. "I

didn't know what would happen—could I be a physical therapist? Or what could I still do?"

Embracing technology

Then Helffrich found out he could be a candidate for a prosthesis, an artificial device to replace his missing fingers.

"His level of amputation is really difficult," says Helffrich's prosthetist, Rob Dodson, a Certified Prosthetist Orthotist. "The challenge has always been the size of the components."

Helffrich was fitted with a high tech prosthesis, where each finger has a different processor and electrodes touch the palm of his hand.

"I flex and contract that mus-

cle and the electrode picks it up and sends an impulse," he says. "It responds very quickly."

Feeling grateful

Helffrich is one of the first patients to use this new technology. As a former high school football player, he's grateful his prosthesis helps him enjoy several activities like shooting pool and daily activities as well.

"My main thing is to carry two things at once, like carrying a plate and a glass," he says, noting he wears his prosthesis for about eight hours a day.

Since Helffrich is an adult, he won't outgrow this prosthesis, but it will need maintenance and it must be charged daily. He



Innovative prosthesis technology Individually articulating electronic fingers are a break-through in prosthetic technology. PHOTO: COURTESY OF ADVANCED ARM DYNAMICS

also has a silicone glove to cover the amputation, which he can wear anytime he's not using his prosthesis.

"Most people had no idea about electric fingers," he says.

"Everyone's surprised and fascinated by me!"

Pursuing his passion

Nowadays, Helffrich is fulfilling his dream by studying to be a physical therapist, a program he's set to complete in 2014.

"I think the perspective will give me much more empathy," he explains. "I realize how different things are. I'll be able to be patient with people because I've been there."

Dodson is proudly watching Helffrich's progress too: "The fact he's getting into physical therapy school as an amputee is exciting!"

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NEWS IN BRIEF

Make a splash!

Aquatic therapy is a lot like traditional physical therapy with one exception—it's done in the water!

■ Why water?

"You weigh less in water," says Charlotte Norton, DPT, ATC, CSCS. "You're able to work on functional activities sooner than what you can tolerate on land."

■ What it treats

The therapy, which can improve strength, balance, flexibility and range of motion, treats many conditions including multiple sclerosis and fibromyalgia.

"As soon as they get in the water, they're free," says Aaron Huppert, PT, Cert MDT. "Often, we see incredible progress."

■ What to know

A doctor prescribes the treatments, which must be administered by physical therapists. Each session lasts about 30 minutes to an hour. Most patients see benefits in the first few sessions.

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iPAIN

Smart phones and tablets, as well as laptop and desktop computers are essential tools in the modern world. But the technology can cause strains and pains.

■ Common tech injuries

Tech users often get Repetitive Stress Injuries, known as RSI which can develop over weeks and months from overuse of certain muscles and joints.

One of the most common RSI? "I call it texting thumb," says physical therapist Melody Bautista, CLP, CKTP. "They get it by overusing the thumb, which can damage it."

■ Symptoms

Symptoms of a technology-induced injury include joint pain and swelling, numbness and dif-

ficulty gripping.

Tech users can also develop shoulder, neck and elbow pain because of overuse or improper use of devices such as cell phones and computers. Bautista advises tech users to avoid bad posture, and craning of the neck.

"If you keep injuring it over and over again, it can lead to another injury like carpal tunnel and when you get older, arthritis," says Bautista who recommends a five minute break for every 30 minutes of tech activity.

■ Treatments

Conservative treatments include resting and icing the injury every day. If a tech injury doesn't improve, other treatments are available, such as splints and steroid injections.

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