

# Cutting edge equipment helps rehabilitate spinal cord injured

By Alexander Baker

Doctor Avi Nativ is a charming man, highly educated and successful in his field – but he is also someone you may not want to meet.

That is because Dr. Nativ specializes in rehabilitating severe neurological and spinal chord injuries by using equipment and technologies unique to his clinics.

“Every time someone has an injury but we don’t have a machine to help them, I try to solve that problem,” he said. “No matter how good a storyteller I am, I can’t just tell you how to ride a bike. We have to develop the technique, the training procedure and the equipment.”

Which is exactly what the 56-year-old Dr. Nativ has been doing for the past two decades.

After coming to Canada from Israel in 1981, he went to the University of Waterloo to get a PhD in kinesiology. It was there, while working for a small gym, that he discovered what would become his passion.

“Someone came to me and said, ‘I have a 17-year-old girl with a head injury. Can you help her?’ So I started to research the theory and practice of the rehab industry,” he said. “I was reviewing what was state-of-the-art technology at the time and it wasn’t up to line with the knowledge, the theory in the field. I wanted to update the field, be a bridge between academia and the clinical field.”

However, even before that experience Dr. Nativ knew he wanted to make a difference.

“When I decided to go to school, I looked for where I could make the best contribution to the human race,” he said, “so I went to learn how the brain works so I could help people.”

Since 1997, Dr. Nativ has been combining all of his skills to do just that.

After stints at four different universities in Israel, the United States and Canada – including Waterloo and Western Ontario – Dr. Nativ was able to combine many elements to create the cutting edge rehabilitation clinic he runs



**Dr. Avi Nativ demonstrates his NeuroGym Trainer, a device that strengthens muscles with repeated movements. Patients play special video games that measure and record results on-screen.**

(OJB photo: Alexander Baker)

today, called NeuroGym.

Using his experience as a phys-ed school teacher, some university engineering classes, his kinesiology doctorate from Waterloo and his practical experience in rehabilitation, Dr. Nativ now designs, builds and operates rehab equipment that is unique in the world.

Dr. Nativ said his machines try to “combine standing support with movement training,” because repetition of movements is key for people recovering from spinal chord injuries who have lost mobility.

“When you play tennis, for example, the brain learns a skill and creates connections in the neurons that weren’t there before,” he said. “Not by telling [the patient] what to do, but by creating and enabling the environment where they can do the movement, and then get feedback, we can see real progress.”

While his cutting-edge equipment will

soon be available all over the world, Dr. Nativ admits it was difficult getting where he is today.

“It’s been a long struggle against convention, a paradigm shift for the industry, and it didn’t happen as quickly as I thought,” he said.

Nevertheless, he has his wife Janet – who runs the NeuroGym sister company that handles all Dr. Nativ’s technology research and development – and his 13-year-old daughter Anna to help him through his challenges.

Today, the 56-year-old – whose parents and older brother survived the Holocaust – is content with his place in life.

“What has kept me here, rather than going to academia, is that I can give people hope that’s not superficial.

“Seeing people improve is a satisfaction I can’t describe.”

