

Pneumex launches bid for FDA approval

By DAVID GUNTER
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SANDPOINT — Jeffrey Sanderson is difficult to understand. His speech impediment is a legacy from a nearly fatal automobile accident that left his head crushed and his words severely slurred.

The doctors managed to cobble his skull back together with the help of a large plate, leaving deep scars that left the 41-year-old's head looking like a partially finished puzzle with pieces that approximate completion without quite fitting together.

Trying to pick out complete sentences is tricky, but, when the focus shifts to keywords, the ear begins to wrap around Jeffrey's speech patterns and make sense of the meaning.

His eyes are searching, insistent, as he repeats a phrase and waits for a response. Each time, his

face contorts in effort before he releases a strained breath and says the words again. "Lift" and "leg" are discernible and then it becomes obvious that this is just what he is doing. With everything he has, Jeffrey is straining to lift his left leg up from the footrest in his reclining wheelchair.

His foot quivers and his whole leg shakes as he picks it up a few inches and holds it there until the limb collapses back into place.

"I can lift my leg now," the big man says, his words emerging as if from a fog as the listener grows accustomed to speech that was fractured in the accident. "I can lift it up."

"It's been almost seven years since he moved that leg," says his mother, Marjorie Guynn, who sits nearby with her husband and daughter. The family was on its seventh trip to Sandpoint to visit Pneumex's Faster clinic, where Jeffrey is about to be "unweighted" so that he can be raised into an upright stance to undergo physical therapy.

"At home, they wouldn't even give him physical therapy," his mother said. "They told us he had to lose 100 pounds first."

In the years after his accident, the already large man had grown corpulent as half of his body fell into disuse. According to his family, doctors told them it was only a matter of time before he died of a heart attack. Searching for some way to exercise the muscles that still worked in Jeffrey's body, the Guynns began researching gear that might hoist him up so that he could begin some form of rehabilitation.

When they learned that Faster developed the equipment and was using it in its Sandpoint research and



Jeffrey Sanderson, center, is fitted into a harness by Pneumex Faster clinic staff Tyronne Larson, left, and Dr. Steven Tham in preparation for being "unweighted" and placed upon a vibrating plate. (Photo by DAVID GUNTER)

development center, the family traveled east from Gig Harbor, Wash., for the first of multiple visits to the facility.

Unweighting Jeffrey

“That leg he’s lifting right now is supposed to be completely paralyzed,” said Dr. Steven Tham, rehab director for Faster.

Tham, a chiropractic doctor, was working alongside the firm’s fitness director, certified personal trainer Tyrone Larson, to lay out a matrix of harnesses that would crisscross Jeffrey’s torso and prepare him to be lifted into a standing position for his therapy session.

Larson went into a deep squat and hugged the client to his chest to transfer him from the wheelchair onto a nearby therapy table. Jeffrey’s chin rested on the trainer’s shoulder, his arms hanging limp at his sides, as the two men cinched the harness around him. Within minutes, stiff foam wedges had been placed under Jeffrey’s feet to isolate his left leg so that it was forced to work and he was hoisted up — unweighted — atop a large vibrating plate.

Once Tham and Larson were satisfied that their client’s stance was placed correctly, they began lowering him to a point where he would bear part of his own weight.

The exercise, they explained, would be to stand straight for a full 10 seconds. Jeffrey puffed out his cheeks like an Olympic weightlifter as he moved slowly to a standing position.

“There you go,” Tham coaxed as the big man arched his back, bowed his neck and began counting. “You can do this.”

At 10, he dropped his weight down into the harness cradle and looked around at the trainers beside him.

“That was all you, Jeffrey,” Tham said. “We only took off 120 pounds and you did the rest of it.”

On his next attempt, Jeffrey worked just as hard to get into standing position, but this time he was smiling with the knowledge that he had just supported more than two-thirds of his own weight, compared with only weeks earlier when he had to be almost fully unweighted to get the same results.

As he stood, his legs shook from the work at hand and in reaction to the vibrating plate under his feet.

“Keep it up, Jeffrey,” Larson said as he knelt and prodded different parts of Sanderson’s left leg with his fingertips. “We’ve got those muscles firing now!”

Good Vibrations

Founded in 1987, Pneumex hit the scene when owners Gerry and Karin Cook developed a pneumatic cylinder that evolved into sports equipment used by the Seattle Supersonics and later was incorporated into back rehabilitation gear.

The company gained wider recognition when it rolled out its unweighting system, which was seen as a breakthrough in rehab for patients with back pain or problems with standing or keeping balance.

It was the addition of vibration, however, that transformed Pneumex — a transformation that almost didn’t happen when former Boeing engineer Gerry Cook first saw the vibrating plate apparatus at a trade show.

“I looked at it for a while and then I walked away and said, ‘Ah, that’s crazy,’” the company co-founder said. “That’s the response a lot of people still have. It’s a totally unexplored area.”

When the company that manufactured the vibrating system later contacted Pneumex about trading vibrating plates for unweighting equipment, Cook gave it a go. He began to read the research papers about the effects of vibration on muscle strength and balance improvement and how different frequencies appeared to trigger fast-twitch and slow-twitch muscle response.

And then something very interesting happened — local clients began to see dramatic results in pain relief and hints of strength in muscles that had all but atrophied. Based solely on word-of-mouth, people started visiting Faster to see what this “vibration thing” was all about. Some who had been shuffling around in a slumped over state were walking briskly, while others who had relied on canes and walkers were getting around without them.

Retired Sandpoint High School teacher and coach John Knowles came to Faster after MRIs revealed that his spine was damaged to the point where his doctor told him he had two options -- back surgery or a lifetime of gobbling pain pills.

As it turned out, Knowles, who had been walking bent over from back pain, recovered to the point where he now does custom building. He still trains at Faster, he said, but now it's because he feels the vibrating system accelerates results from his workouts.

"It really maximizes the exercise," he said. "When you're a little kid, you run and jump and crawl around -- you use all of these muscles. As you grow up, you stop using them. This stuff stirs them all up again."

Awaiting Approval

Even in the face of mounting evidence, Gerry Cook remained an early skeptic about vibration as the first wave of success stories was being written in Sandpoint. It wasn't until the company combined unweighting and vibration on a larger scale -- in sports training and physical therapy clinics around the western U.S. -- and started to get reports of similar outcomes that he realized the potential for the program.

"We've got a stack of X-rays showing that people are regaining disk height," he said. "Historically, back surgery had been the only option for those people. We're getting to a point where we could eliminate a lot of those surgeries.

"It's a phenomenon right now," Cook added. "Until we get FDA approval, we can't claim anything."

On April 29, a multi-state, controlled study got underway at 15 sports therapy and chiropractic clinics that use Pneumex's technology. The three-phase study, scheduled for completion in late November, could allow anecdotal stories from these sites to enter the books as bona fide medical claims if the FDA signs off on the findings.

"The other clinics are seeing results like we're seeing in Sandpoint, but we need to validate them," the Pneumex co-founder said. "We're all seeing strength gains and balance gains. When somebody comes in, this is what we expect any more.

"Right now, we're in neutral by design until we get the first phase of the study done," he continued. "The next phase will be to commercialize it and getting the FDA on board will be a big part of that."

Pneumex, located at 2605 N. Boyer Ave., will host a free informational workshop and Faster clinic tour on May 7, from 5:30-7 p.m. Information: 263-3100.