

NEBRASKA ORTHOTIC



& PROSTHETIC SERVICES

Report

Brought to You by Nebraska Orthotic & Prosthetic Services ... Partners in Rehabilitation Care

Accurate, Comfortable Fittings Provided with BioSculptor

The BioSculptor™ System, the latest in orthotic and prosthetic technology that optimizes fittings through computer scanning, arrived at the offices of Nebraska Orthotic & Prosthetic Services (NOPS) in January.

The BioSculptor System increases the accuracy and efficiency of socket and frame design through laser technology. It

allows practitioners to make precise modifications, unique to each patient, then using software, create a 3-D model of the prosthesis or orthosis.

“Our main goal is ultimate comfort for all our patients,” says Tadd Meyer, CP. “As technology in the industry keeps advancing, using the BioSculptor System helps us stay on top of those advancements and fits in well with our progressive approach to care.

“The BioSculptor System also is a time-saving device,” he continues. “What used to take up to three hours to prepare a prosthesis or orthosis for fabrication, now only takes 15 to 20 minutes to scan, modify and design.”



Left: Tadd Meyer, CP, scans Gale Newbury's residual limb for an accurate fit using the BioScanner™. Below: Using the BioScanner™ from the BioSculptor System™ creates digital scans within 0.004 inch of a model. (Photo courtesy of BioSculptor).



All Patients Served

Practitioners at NOPS are piloting the BioSculptor System at its Omaha office, but say they will use the system on all of its patients. Its portability allows NOPS practitioners to bring the system to hospitals and doctors' offices for patient scans.

“It allows us to spend more time with each patient and evaluate other issues they might have,” says Julian Wells, CPO.

More Comfortable Fit

The BioSculptor System is helping with creating more comfortable prostheses and orthoses. Tadd and Julian are approaching this common situation for

below-knee amputees by taking the exact scans from the BioSculptor system and leaving a ¼-inch gap on the bottom of the socket. From here, a patient stands and bears weight on the prosthesis while silicone is injected into the bottom area of the socket. The silicone sets around the limb, creating a more comfortable fit.

“The fit is more comfortable because

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The BioScanner™ from the BioSculptor System™ operates with dual cameras and a laser imager, mapping precise measurements. This technology is available to all NOPS patients.

we are taking an exact picture of a patient's limb," Tadd says.

Creating models with the BioSculptor System means there's no need to use plaster because the dual cameras that work with a laser imager take all the precise measurements that are needed. It is possible for deficiencies to be present when forming a cast from plaster, but the BioSculptor System is accurate within 0.004 inch of the model. After making any necessary modifications to a model, NOPS then sends it to a mill for finishing.

"It's a lot less messy than using plaster," Tadd says. "Sometimes patients will have open incision lines on their residual limbs and plaster can get inside them, using the BioSculptor System is a lot cleaner. Ideally, we'd like to eliminate plaster techniques because the BioSculptor System takes such an accurate picture, whereas, the cast can sometimes be deformed."

Using laser imaging may not be for all patients though. "We will continue to use casting for knee-ankle-foot-orthoses patients because the carving machines are not tall enough to carve the molds," Tadd says.

The BioSculptor System will likely be valuable to patients over time as well, since NOPS practitioners electronically save the exact measurements of a model and can produce this information for patients who are in need of an updated

prosthesis or orthosis, and if they need to show this documented information to their insurance companies.

"There have been attempts at computer-aided design and computer-aided manufacturing before, but the BioSculptor System is different in that it is developed by engineers, and it's very accurate," Tadd says.

Improved Mobility

Gale Newbury, a bilateral below-knee amputee from Lincoln, is one of the first patients at NOPS to be fitted with prostheses made from the BioSculptor System. In January 2006, both of Gale's limbs were amputated at the VA Medical Center in Omaha after a microorganism was found that infected both limbs and caused them to deteriorate. Following surgery, he was fitted with prostheses at NOPS.

When he went for a follow-up checkup earlier this year, he was asked if he would like to be one of the first patients to be fitted with the BioSculptor System.

"That's the best thing I ever did," Gale says. "The BioSculptor System allowed my prosthetist to give me a better fit and use lighter-weight material. I'm feeling very comfortable with it."

Gale, 63, and a Vietnam War veteran, says even with arthritis in both knees, his everyday mobility has improved since being fitted with the BioSculptor System;

his wife, Pat, even noticed he is more mobile than in the past. He adds his new prostheses also are easier to put on and take off.

A Unique Experience

Gale says his last office visit was a unique experience for all since he was among the first patients to be fitted using the system.

"It was interesting to watch the BioScanner (comprised of dual cameras and an imager) because you could see what it was doing on the computer screen," Gale says.

Even though Gale jokes that he is now shorter with the new prostheses, he says the staff at NOPS is really professional and helpful during the entire process, adding Tadd made several trips with the BioSculptor System to Lincoln from the Omaha office, where his prosthetist, Randy Brown, introduced the BioSculptor System to him.

"It seems like they all went out of their way to help me, and to make sure it was done right, where I was comfortable with it," Gale says. "I'm very happy with how everything turned out and I would recommend it to anybody who needs a prosthesis."

Jim Friedel, a below-knee amputee from Stuart, Nebraska, is another patient recently fitted with a prosthesis made from the BioSculptor System.

Jim has already adapted well, Julian says, adding that by the fourth day of wearing his prosthesis, Jim was able to walk without any ambulatory aid, which is mostly attributed to the comfort in his socket and the security it gives him.

"First and foremost, this technology will lead to less maintenance and Jim will be able to go a longer length of time between visits," Julian says. "The new type of socket we fitted him with will keep him more comfortable."

The socket type, called hypertrophy, is flexible, allowing Jim's muscles to contract, which is not the case with an atrophy socket. Using the hypertrophy socket leads to maintaining muscle mass over a long period of time.

Jim is gradually getting acclimated to his new prosthesis on a day-to-day basis. "I'm eager to get back to fishing," he says.

Professional Staff Expands at NOPS

Nebraska Orthotic & Prosthetic Services (NOPS) welcomes Tadd Meyer, CP; Bill Brown, CPO; and Andy Wolfe, CO to its staff of certified practitioners.

TADD MEYER

Tadd is the newest staff member, joining NOPS earlier this year. He specializes in lower-extremity amputees and is certified in the C-Leg® and Harmony® volume management systems. Tadd is seeing patients at the Omaha facility, located at 14747 California St.

Prior to joining NOPS, Tadd was the practice manager at Hanger Prosthetics and Orthotics in Omaha. Following his graduation from the University of Nebraska-Kearney in 1990 with a bachelor's degree in exercise and physiology, he worked with disabled children, specializing in wheelchair seating at OSI/NovaCare in Omaha. He then pursued his studies in prosthetics at Century College, White Bear Lake, Minn., in its post-baccalaureate certificate program. He became certified by the American Board for Certification (ABC) in 1994.

"I like interacting with patients and solving problems specific to their needs," Tadd says. "It's rewarding to see the results and a patient leaving the office happy because they have achieved mobility again."

Tadd, and his wife, Tammy, have three children and reside in Omaha.

MEET MORE NOPS STAFF

Since our last newsletter, two more practitioners have joined the office, and we'd like to introduce them to our readers.

BILL BROWN

Joining NOPS in early 2006, Bill is responsible for fitting and fabricating prostheses and orthoses for patients of all ages. He is certified by the Board of



Omaha Staff: Tadd Meyer, CP, (center), joins Julian Wells, CPO, (left), Andy Wolfe, CO, (right), and Office Administrator Jean Jackson.

Certification (BOC) and the American Board for Certification in Orthotics and Prosthetics (ABC). Bill is seeing patients at the Hastings facility, located at 618 N. Denver.

Bill has been in the field for more than 20 years, following in the footsteps of his father, who also was a practitioner. Prior to joining NOPS, Bill worked as an orthotist and prosthetist in Boulder, Colo. "Orthotics and prosthetics is a much needed service," Bill says. "I enjoy helping people and being able to make a difference in their lives."

A native of Boulder, Bill now resides in Donovan with his wife, Gerri.

ANDY WOLFE

Andy joined the Omaha office in late 2005, and specializes in pediatric orthotics.

Previously, he was the director of The Brace Place at the Munroe-Meyer Institute/University of Nebraska Medical Center where he clinically managed orthotics, prosthetics, seating, and ECU systems.

Andy is ABC- and BOC-certified, and he also holds professional certificates from the Boston Brace Spinal Course, Steeper RGO System, LSU RGO System, Stance Control Orthotic Knee Joint, Horton

System, and Jobst Compression/Burn Garments.

In addition to studying physical sciences at the University of Nebraska at Omaha and his current business management studies at Bellevue University in Omaha, Andy holds a patent for a Wrist-Hand-Finger-Orthoses contracture management system.

"It is important to recognize that many of the individuals we serve have very unique orthotic or prosthetic challenges, requiring our best efforts as practitioners," Andy says. "It is at this level of care that we find our greatest satisfaction in problem solving, as we maximize the potential mobility and function of these individuals."

Andy has more than 30 years experience in orthotics and prosthetics at VAMC Hospital (Denver), Rocky Mountain Prosthetics Orthotics (Colorado Springs), and Rocky Mountain Medical Equipment (Denver).

Andy's long-term goal is to help underserved orthotics patients in Nicaragua, where he is in the process of developing a non-profit organization for orthotics education and training.

Andy and his wife, Barbie, live in Omaha and have eight children.



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ABC-accredited Care Expanded Through NOPS Statewide Clinics

The ABC-certified staff at Nebraska Orthotic & Prosthetic Services use the latest technology and individualized care for its patients, including custom prosthetic design and fitting, orthopedic bracing, and foot orthotics and footwear for patients with diabetic and arthritic conditions.

To make routine follow-up care convenient for all its patients statewide, especially to those who live in rural areas, appointments can be scheduled at any of the following fully staffed, ABC-accredited facilities, as part of the network of weekly NOPS clinics:

- Beatrice, call 888-234-3036 for more information
- York General Hospital, 2222 Lincoln Ave., York, Neb., 402-362-6671
- McCook Community Hospital (Specialty Clinic), 1301 East H Street, McCook, Neb., 888-253-2800
- Platte River Rehabilitation, 210 McNeel Lane, North Platte, Neb., 888-253-2800
- Columbus Community Hospital (Rehab Services – third floor), 4600 38th St., Columbus, Neb., 402-562-3333
- Norfolk Medical Group, 301 North 27th St., Suite No. 1, Norfolk, Neb., 866-508-5538

The clinics are within close proximity to physical therapists, hospitals with specialty physicians, and nursing homes. Care provided at these ABC-certified facilities is accepted under Medicare provisions.

“We can be the eyes and ears in the field, which may prove to be necessary in case we notice a change in a patient’s condition, such as change in strength and coordination that may necessitate another round of physical therapy,” Brad Rosenberger, CPO, FAAOP, says.

The key is to providing convenient follow-up care to all NOPS patients, Brad says.

“If our patients feel they need to see us, we encourage them to call one of the weekly clinics to schedule an appointment. This way, they’ll never wait more than a week for follow-up care and our patients who live in rural areas don’t have to make the long drive to our offices,” Brad says.

Call any of the phone numbers above to make an appointment.

For more information on NOPS, visit www.NOPSONline.com.