North Memorial Medical Center: 
A Pacesetter for Plastic and 
Reconstructive Surgery
By Carrie Frye

FROM THE MOST COMPLEX LIMB REATTACHMENTS FOLLOWING A TRAUMA TO THE SIMPLEST MOLE REMOVALS, NORTH MEMORIAL MEDICAL CENTER’S PLASTIC AND RECONSTRUCTIVE SURGERY TEAM DELIVERS COMPREHENSIVE CARE TO THE UPPER MIDWEST AND BEYOND.

THE PROGRAM INITIALLY gained national recognition in 1992 with its groundbreaking successful double reattachment of a North Dakota patient’s arms, which had been severed in a farm accident. The further development of the program and its care protocols has since significantly contributed to North Memorial’s status as a Level 1 Trauma Center.

Pioneering Plastics

The founder of North Memorial Medical Center’s Plastic and Reconstructive Surgery Program, Allen L. Van Beek, MD, FACS, Adjunct Professor of Surgery at the University of Minnesota Medical School, placed an early emphasis on mentorship in order to make the program self-sustaining. This collaborative effort flourished into a plastic surgery team — most of whose members were trained by Dr. Van Beek — capable of advanced and innovative care and that is supported by a dedicated and experienced ancillary staff. The team is now under the leadership of Director Jennifer L. Harrington, MD, Adjunct Professor at the University of Minnesota Medical School.

“Our team includes 10 independent plastic surgeons,” Dr. Harrington says. “We are independent outside the program, but we come together at North Memorial Medical Center to serve the Upper Midwest with a unique quality of care designed to shorten surgery times and improve patients’ lives.”

Vascular Microsurgery and Supra-microsurgery

North Memorial Medical Center’s plastics team routinely employs high-level microsurgical and supra-microsurgical — a term used for describing repairs to structures less than 0.5mm in size — techniques using a microscope and miniaturized instrumentation, which allows them to reconnect blood vessels as narrow as 1/50 of an inch in outside diameter. Those capabilities faced a unique challenge with the reattachment of the fingers of a newborn.
“There is nothing too simple or too complex for us to address with the depth and expertise of the Plastic and Reconstructive Surgery Program at North Memorial Medical Center. If there’s a procedure I personally haven’t had experience with, there is a surgeon on our team who has. We have strength in our numbers, and our team is always available for consultations and is standing by on-call for trauma cases.”

— Jennifer L. Harrington, MD, Director of the Plastic and Reconstructive Surgery Program at North Memorial Medical Center and Adjunct Professor at the University of Minnesota Medical School

PROVIDING THE FULL SPECTRUM OF PLASTICS EXPERTISE

AT NORTH MEMORIAL MEDICAL CENTER’S certified Level 1 Trauma Center, expert plastic and reconstructive surgeons provide the gamut of plastic and reconstructive surgical procedures, including:

+ Body contouring after weight loss: arm, buttock and thigh lifts and panniculectomy
+ Breast reconstruction after cancer: staged, implant-based, latissimus flap and transverse rectus abdominis myocutaneous flap approaches to reconstruction
+ Breast augmentation, mastopexy and reduction
+ Cleft lip and palate repair
+ Complex trauma reconstruction
+ CoolSculpting, laser and IPL application
+ Cosmetic procedures: liposuction abdominoplasty, blepharoplasty, facelift, neck lifts, rhinoplasty and otoplasty
+ Fat-transfer grafting
+ Injections: Botox, Radiesse and fillers
+ Labiaplasty
+ Male breast reduction
+ Microvascular free flaps
+ Microvascular reattachment surgery
+ Nerve injury repair, nerve compression and facial palsy corrections
+ Skin cancer excision and reconstruction

“During an urgent C-section in North Dakota, an OB-GYN inadvertently severed two of the infant’s fingers,” Dr. Van Beek explains. “The baby — who ultimately was the youngest patient in the world to undergo finger reattachment — was transported to North Memorial Medical Center, and using supra-microsurgery, we were able to reattach her fingers, and they worked. That procedure was the most difficult microsurgical case I have ever performed and the ultimate in supra-microsurgery.”

Patients throughout the region have seen the benefits of the North Memorial Medical Center program, from a deaf 6-year-old whose fingers were reattached, enabling her to use sign language, to the very recent reattachment of an art professor’s thumb, which was lost while working with her favorite horse.

“We have reattached legs, arms, hands, fingers, ears, scalps and penises,” Dr. Van Beek says. “Replantation has been our beginning, and we are not far from transplanting faces and extremities for those patients who have suffered terrible consequences from injury and disease.”

Reconstructive and Aesthetic Surgery

As the North Memorial Medical Center Plastic and Reconstructive Surgery Program continually expands its procedural capabilities, care extends beyond treatment of trauma patients.

“Trauma was the initial impetus of the program, but it has matured,” Dr. Van Beek says. “Because of North Memorial’s favorable pricing for cosmetic surgery, we are performing breast augmentation, liposuction, face-lifts, fat transfer for wrinkles, and post-bariatric surgery body contouring. The vision of the hospital’s leadership enables us to expand the scope of what we can accomplish for those individuals who entrust their care to our plastic surgery team.”

Another groundbreaking upcoming procedure involving the plastic surgery team is a breast reconstruction implant from...
Reaching the Region and Beyond

The plastic surgery team’s work extends around the globe, performing reconstructions and correcting deformities through mission efforts in Africa, Guatemala and Peru.

“The whole North Memorial team has been involved internationally,” Dr. Harrington says. “We have this unique group of plastic surgeons who, for example, travel to Lima, Peru, every year to take care of patients with burns and cleft lips and palates.”

In addition, Dr. Van Beek leads a team that travels to a children’s hospital established in Peru to teach microsurgical techniques to Peruvian plastic surgeons and their trainees.

“Thirty-five percent of plastic surgeons in the United States go on a mission trip to take care of patients in another part of the world on an annual basis, and that’s the highest rate of volunteerism for any specialty that I’m aware of,” Dr. Van Beek says. “This shows the benevolence and compassion of these physicians. In Minnesota, that percentage is probably even higher.”

Plastic Surgery Referrals

North Memorial Medical Center’s plastic surgery team is available for consultation for all potential plastic and reconstructive surgery cases, regardless of the level of complexity.

“If a patient has a burn and cannot move his or her arm, we can help,” Dr. Harrington adds. “The care afterward is equally important. North Memorial has a staff that knows and understands these types of patients. Our lead registered nurse, Lisa Sorenson, has 21 years of experience, but the dedication doesn’t end with our nursing team. The entire team of hospital caregivers embraces the spirit of this program, particularly after seeing patients like 2-year-old Parker Sebens survive and thrive after having both arms reattached. Everyone played a part and genuinely cares about him. I spoke at his high school graduation this year. All these years later, we are still involved in his life.”

EXPANDING THE BOUNDARIES OF SERVICE

THE ADDITION OF medical helicopter rapid transport to North Memorial Medical Center’s Plastic and Reconstructive Surgery Program is a determining factor in its growth.

“North Memorial Medical Center has six medical helicopters ready and waiting, which expands the availability of our Plastic and Reconstructive Surgery Program’s expertise throughout the Midwest, to best serve critical patients with amputated extremities,” says Allen L. Van Beek, MD, FACS, Adjunct Professor of Surgery at the University of Minnesota Medical School and Founder of the Plastic and Reconstructive Surgery Program at North Memorial Medical Center. “If a mutilation occurs in the Arrowhead area, we need to have rapid transport. Our medical helicopters expedite the retrieval of patients, enabling us to perform these life- and limb-saving treatments.”

Collaborative Care

The team employs a multidisciplinary approach to patient care, collaborating with general and orthopedic surgeons to reduce surgical times and lessen the amount of anesthesia required.

“For complex cases, an orthopedic team may work on the patient’s amputated arm bones while a plastic surgeon obtains vein grafts from the leg, and the general surgery trauma and anesthesia teams evaluate and stabilize the patient,” Dr. Van Beek says. “It is like a well-tuned string ensemble with perfect pitch. This kind of teamwork delivered while our patients are going through a crisis is incredible and builds the spirit of the entire hospital community.”

After surgery, North Memorial’s experienced ancillary care team is a vital component, monitoring for any complications.

“The operation is only one part of the process,” Dr. Harrington adds. “The care afterward is equally important. North Memorial has a staff that knows and understands these types of patients. Our lead registered nurse, Lisa Sorenson, has 21 years of experience, but the dedication doesn’t end with our nursing team. The entire team of hospital caregivers embraces the spirit of this program, particularly after seeing patients like 2-year-old Parker Sebens survive and thrive after having both arms reattached. Everyone played a part and genuinely cares about him. I spoke at his high school graduation this year. All these years later, we are still involved in his life.”

For more information about North Memorial Medical Center’s Plastic and Reconstructive Surgery Program, visit northmemorial.com.

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