

CLINICAL REHAB *perspectives*

Sister Kenny® Rehabilitation Institute, located at 28th Street and Chicago Avenue in Minneapolis, Minn., is the leading rehabilitation provider in the region. The Institute provides programs and services at five Allina hospitals — Abbott Northwestern in Minneapolis, United in St. Paul, Unity Hospital in Fridley, Mercy in Coon Rapids and Buffalo Hospital in Buffalo — and outpatient care at 18 community-based Sister Kenny Sports & Physical Therapy Centers.

Sister Kenny Foundation's Third Annual Art Gala and Auction will be on Tuesday, June 14, at the Minnetonka Center for the Arts. The event, a fundraiser to benefit the Sister Kenny Rehabilitation Institute, includes live and silent auctions for original work from local artists and other unique items. The event also features live music, wine and an hors d'oeuvre buffet. More than 200 people attended last year's event, which raised more than \$50,000 to fund the Institute's innovative patient services, clinical research, advanced technology and professional education. To learn more, call 612-863-4145.

The Sister Kenny Rehabilitation Institute Golf Tournament for Individuals with Physical Disabilities will be held on Friday, Aug. 26, at the Braemar Golf Course in Edina, Minnesota. Competitors can play on the regulation 18-hole or executive 9-hole course. For more information about the tournament and how to participate, call 612-863-5712.

Constraint-induced movement therapy: New therapy helps patients regain arm function

After a stroke or brain injury, many patients are challenged to regain strength, function and dexterity in the affected arm and hand. A new form of therapy available at Sister Kenny Rehabilitation Institute has been shown to be effective in improving functional ability for such patients.

The Constraint-Induced Movement Therapy (CIMT) Program is an intensive, two-week program that includes therapy for six hours a day. Participants must wear a restraint device (mitt) on the non-affected hand for 90 percent of the time they are awake. This includes time in the clinic, at home and in the community when it is safe to do so. The patient then uses his or her weak arm to perform a variety of activities, ranging from simple games to everyday tasks such as eating, dressing and writing.

The therapy is based on documented brain research on learned non-use and neuroplasticity, said Stacey DeSouza, OT, an occupational therapist at United Hospital.

"Learned non-use is a big concern with patients recovering from stroke and brain injury," said DeSouza. "If patients don't use their affected arm, their function and frequency of use of the extremity will decline."

In addition, researchers have learned that the brain's neuroplasticity is greater than what was once thought. "The part of the brain affected by a stroke may always be damaged, but with forced use, the adjacent areas can learn to take over those functions," said DeSouza.

Researchers at the University of Alabama have found that in the first two weeks of therapy, patients generally regain 20 percent to 40 percent of function. In addition, the therapy can be helpful even years after a stroke or brain injury occurs.

Criteria for admission to the program include:

- at least four months post stroke/brain injury
- over 16 years old
- ability to move affected arm
- ability to open and close hand voluntarily, at least to some extent
- ability to communicate needs, answer questions and follow directions
- freedom from other serious medical conditions.

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FUMT research investigates new treatment strategy for stroke patients

The effectiveness of constraint-induced movement therapy (CIMT) in improving function in the upper extremities (see article on cover) has led therapists at Sister Kenny Rehabilitation Institute to search for a similar approach for lower extremity rehabilitation.

Therapists at Abbott Northwestern Hospital and United Hospital are investigating whether forced use movement therapy (FUMT) can help individuals with a history of stroke improve strength, weight bearing and balance on the affected limb.

“Since you can’t safely constrain a lower extremity like CIMT does for the upper extremity, the challenge has been to find a way to creatively force the use of a weaker leg,” said Trevor Carlson, MS, PT, a physical therapist at United Hospital.

To force use of the weaker leg, subjects will perform many tasks, such as one-legged bicycling and biases lunges, and have shoe lifts added to enhance weight shifting to the weaker side.

According to Carlson, the investigators hope to learn if FUMT can be effectively applied to the lower extremities and, if so, determine what therapy techniques are the most beneficial. As part of the study, subjects are tested before participating in an intensive two-week therapy program. They are re-tested following the program and again three months later.

“With this study and other projects, we hope to stay on the cutting edge of stroke rehabilitation,” said Carlson. The research is being funded by a grant from the Sister Kenny Foundation.



A letter from our leader

As part of our ongoing mission to improve the quality and safety of patient care, Sister Kenny Rehabilitation Institute (as part of Allina Hospitals & Clinics) has begun implementation of an extensive electronic medical record system. Once each of our sites has transitioned to this new system, caregivers from any of the Institute’s sites — located at five hospitals and 18 outpatient clinics — will be able to conveniently access one electronic medical record system that provides a patient’s complete medical history at Sister Kenny. This means patients will only need to provide their information once — not during each visit at a Sister Kenny location — and gives caregivers timely access to patients’ medical information.

Another exciting development is the opening of two rehabilitation clinics in the

new Heart Hospital and Neuroscience/Orthopaedic/Spine Center building on the Abbott Northwestern Hospital campus. The clinics provide state-of-the-art equipment and specially-designed facilities, including a kitchen, a car, and a bathtub and shower. Occupational and physical therapists work with patients in these areas to prepare them for performing daily activities once they’re discharged from the hospital.

For more information about what’s happening at Sister Kenny Rehabilitation Institute, visit www.sisterkennyinstitute.com.

Roberta (Bobbie) Dressen, vice president, Sister Kenny Rehabilitation Institute

Supporting the Institute's mission of "making lives work"

The Sister Kenny Foundation is a nonprofit, charitable organization that distributes philanthropic funds to foster and support innovative patient services, clinical research, professional education and advanced technologies at Sister Kenny Rehabilitation Institute. Over the past few years, the Foundation has funded more than \$1.5 million in projects and services for the Institute.

The Foundation is managed by board members who are local leaders in business, health care and the community. The board of directors are Michele R. Keith, chair; M. Patricia Hoven, vice chair; Mary Lee Dayton, vice chair; Elyn Wolfenson, secretary; and Lewis P. Zeidner, treasurer. Members of

the 2004-05 board include Joanne Ames, John Fox Blackshaw, Thomas Borman, Ann Dayton, Mary Des Roches, Mark Dixon, Roberta Antoine Dressen, Ann Ellwood, Stephen F. Hirshfeld, PhD, Christine Kaehler, Rita G. Kaplan, Robin Landy, Ross McGlasson, Judy Schroeder, Amy Silvermann, Beth Sjoblad, Jennine L. Speier, MD, Kay Wangard and Robert Wieland, MD. The Foundation is staffed by John Greving, executive director; and Janelle Shiner, development associate.

For more information about the Foundation and its work to support innovative rehabilitation at Sister Kenny Rehabilitation Institute, visit www.sisterkennyinstitute.com or call 612-863-4145.

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Specialized technology helps patients improve walking ability

Mobility is a key to independence — and after a stroke, brain injury or spinal cord injury, regaining the ability to walk is a primary concern.

Sister Kenny Rehabilitation Institute offers a range of therapies to improve walking ability. One method, partial weight bearing (PWB) gait therapy, employs a new technology called the LiteGait™ System.

The LiteGait System uses a harness to allow an individual to safely walk on a treadmill while supporting some of the person's body weight. It allows the therapist to assist the patient in regaining the ability to walk by:

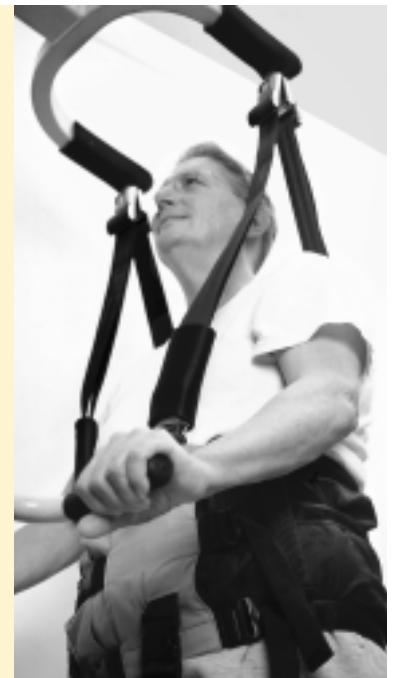
- reducing weight bearing loads
- providing an environment free from falls
- supporting optimal upright posture
- beginning gait training much earlier in the rehabilitation process

- beginning gait training at a lower level of ability
- allowing correction of improper walking patterns.

"The partial weight bearing gait therapy provides a more normal sensory experience of walking. The patient doesn't have to worry about falling or supporting themselves with their hands, so there's more repetition of a normal walking pattern. The more we can facilitate that, the better the body will respond," says Tiffany Trelstad, PT, a physical therapist at Abbott Northwestern Hospital.

The therapy also offers cardiovascular benefits as patients gradually increase their speed and endurance on the treadmill.

PWB gait therapy is available at Abbott Northwestern Hospital in Minneapolis and United Hospital in St. Paul. To make a referral or for more information, call 612-863-1924.



"The partial weight bearing gait therapy provides a more normal sensory experience of walking." — Tiffany Trelstad, PT, ANH

Focus on a facility: United Hospital

Sister Kenny Rehabilitation Institute at United Hospital, located in St. Paul, offers a comprehensive range of inpatient and outpatient rehabilitation programs, including:

- inpatient stroke rehabilitation
- outpatient services for individuals with brain injury
- programs for individuals with speech and language disorders, including aphasia, apraxia, dysarthria, communication and cognitive disorders following a stroke or brain injury, and voice disorders
- advanced technologies, including partial weight bearing gait therapy (see related article on p. 3) and constraint-induced movement therapy (see related article on cover).

Patients who are admitted to United's inpatient rehabilitation unit participate in a 24-hour a day intensive rehab program of nursing care by specially-trained nurses, three hours of therapy, counseling, education and a daily visit by a physician who specializes in physical medicine and rehabilitation.

Features of Sister Kenny Rehabilitation Institute at United include:

- a bright, cheerful environment with patient rooms arranged for easy observation by nursing staff
- continuity of care in which patients who need therapy after leaving the hospital work with the same therapist who treated them at the hospital
- a therapeutic kitchen that features high- and low-tech solutions to common problems
- a conveniently located family lounge that offers patients and their families time to be together and relax during the rehabilitation process.

The Institute also offers orthopaedic physical therapy clinics near United Hospital, including Woodbury, White Bear Lake, Downtown St. Paul and Eagan. Two new clinics will also soon open in Shoreview and Forest Lake (see related article below).

For more information, visit www.unitedhospital.com or call 612-863-4457.

New PT clinics to open in Shoreview and Forest Lake

Two new Sister Kenny Sports & Physical Therapy Center clinics will open this year. Each clinic will have specially-trained physical therapists on staff to treat everything from everyday sprains to major injuries. The clinics will be located in:

Shoreview — Opening in May. The clinic is adjacent to the Allina Medical Clinic-

Shoreview and is located at 4180 N. Lexington Ave. 651-241-1455.

Forest Lake — Opening in July. The clinic will be located at 555 W. Broadway Ave., midway between Lake and Highway 35.

For more information, visit www.sisterkennyinstitute.com.

Researchers at the University of Alabama have found that in the first two weeks of therapy, patients generally regain 20 percent to 40 percent of function.

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“Patients who are experiencing high levels of spasticity may benefit more from the program once the spasticity is managed with medications or other treatment,” said DeSouza. “The minimum requirement for the program is basic grasp and release of an object.”

DeSouza also said that participants should be prepared for the program's intensity. “It's a demanding program and requires a big commitment from the participant. But most people

can expect to see significant improvement during the program — and those who continue to use the mitt and challenge themselves following the program will continue to regain arm and hand function.”

To make a referral or for more information about CIMT, call Abbott Northwestern Hospital at 612-863-7555 or United Hospital at 651-241-8292.

Lymphedema Management Program offers comprehensive care

While lymphedema can range from mild to severe, this chronic condition always deserves special attention from physicians. Appropriate, early treatment can keep the condition from progressing and can teach patients important self-care techniques that will help them avoid serious complications.

Lymphedema develops when the lymph pathways are impaired. It can result from surgery when the lymph nodes are damaged or removed for cancer staging or other problems, and it can also result from a congenital deformity. “The practice of sentinel node biopsy makes lymphedema less likely after surgery, but it can still happen,” said Bobbi Vogt, PT, CLT-LANA, a physical therapist at United Hospital.

“Patients with chronic venous insufficiency can also develop lymphedema as the lymph system becomes overloaded as it tries to make up for the veins,” said Vogt.

Sister Kenny Rehabilitation Institute offers a Lymphedema Management Program at Abbott Northwestern Hospital in Minneapolis, United Hospital in St. Paul, and Unity Hospital in Fridley.

“Lymphedema can be treated but it

cannot be cured,” said Vogt. Therapists certified in lymphedema care provide treatment based on the individual’s needs. The treatment may include:

- manual lymph drainage
- compression bandaging
- exercise
- education
- compression garment

The goals of therapy are to:

- reduce swelling and infection
- establish new pathways for the lymph fluid
- reduce scar tissue
- improve strength, range of motion and use of the arm or leg.

According to Vogt, patient education is a critical part of the program. “We teach patients to take meticulous care of the skin — even something as simple as a mosquito bite can result in an infection.”

Learning how to live with the condition is also emphasized in the program. “For example, it’s important for patients to stay active, but they need to be cautious about not overdoing it,” said Vogt.

Physiatrists associated with the Lymphedema Management Program are available for consultation with primary physicians and to assist with diagnostic and treatment plans.

Appropriate, early treatment can keep lymphedema from progressing and help patients avoid serious complications.

Lymphedema services designed specifically for breast cancer patients

Post-operative lymphedema services are available for breast cancer patients at Unity, United and Abbott Northwestern hospitals.

A specialized service, the Lymphedema and Rehabilitation Clinic is a collaboration between Sister Kenny® Rehabilitation Institute and Abbott Northwestern Hospital’s Piper Breast Center.

At the clinic, Nancy Hutchison, MD, a specialist in physical medicine and rehabilitation with Sister Kenny Rehabilitation Associates, evaluates patients for lymphedema and other physical rehabilitation concerns related to the treatment of breast cancer. This may include tight or weakened muscles of the chest wall and shoulder, bound down scars, pain and limited physical function.

Referrals from patients and professionals can be made to this specialized service, whose staff works with the patient’s own local treatment team. For more information, call 612-863-3150.

For more information, call the Lymphedema Management Program at these locations:

Abbott Northwestern Hospital	612-863-4446
United Hospital	651-241-8290
Unity Hospital	763-236-3000



Julie Liebelt, PT, CHT

Clinician profile: Julie Liebelt, physical therapist

Physical therapist Julie Liebelt has worked at Sister Kenny Rehabilitation Institute for the past 25 years.

“Years ago, my mother had polio and was actually treated with Sister Kenny techniques of hot packs, stretching and exercise,” said Liebelt. “She always spoke highly of physical therapists and her treatment, so she was thrilled when I came to work at the Institute.”

Liebelt started her career performing general physical therapy. In 1990, Liebelt and her colleague Marcia Sitz — both of whom were in the first group to pass the hand therapy certification test — opened the Institute’s Hand Therapy Clinic. Today, the majority of patients

Liebelt works with are musicians who have experienced injuries that affect their ability to play.

“I’ve always been fascinated by hands and how they work — there’s a lot of complexity within such a small area.”

In addition to hand injuries, Liebelt also specializes in treating nerve compression in the neck and shoulder area, as well as complex regional pain syndrome in the arm.

“Working at Sister Kenny Rehabilitation Institute has given me the opportunity to develop a specialty area I find fulfilling,” said Liebelt. “I particularly like helping people get back to what they enjoy doing as well as what they need to do.”

June 10

Stroke Conference
at Abbott Northwestern Hospital
in Minneapolis

A stroke conference will be held on Friday, June 10, at Abbott Northwestern Hospital in Minneapolis. Presentation topics include acute stroke treatment; post-stroke fatigue; driving issues related to stroke; partial weight bearing gait therapy; lingraphica treatment for aphasia; constraint induced

movement therapy; sexuality and stroke; and visual scanning. The conference costs \$75 and is intended for case managers, qualified rehabilitation consultants, social workers, nurses and therapists. For more information, call 612-863-5495.

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