

# Possibilities

## Sports Injury Clinic partners with RunSMART to get runners back on the road

Long time endurance athlete John Sippola earned second place in a 10K in April and competed in Grandma's Marathon in Duluth, Minn. in June — two accomplishments that didn't seem likely six months ago. But that was before he connected with the team at Sister Kenny Rehabilitation Institute.

A runner since high school, Sippola began actively training for endurance races in November 2009, returning to Nordic skiing — a sport he had participated in competitively in high school — to vary his endurance workouts. Like many runners, he periodically experienced injuries that interrupted his training. In early 2011, Sippola was having significant lower back pain, likely due to the running, skiing and perhaps shoveling (due to record snowfall). A colleague referred Sippola to Sister Kenny Rehabilitation Institute's Running and Endurance Sports Injury Clinic run by

Dr. Marie-Christine Leisz, Doctor of Osteopathic Medicine.

In his initial visit, Sippola, 38, was impressed by the thorough exam he received. Leisz spent more than an hour assessing Sippola's injury and range of movement, documenting his weaknesses and inquiring about his fitness goals. She analyzed his running on a treadmill, gathered a thorough history and focused on the impact of his back pain.

### Playing the role of detective

Though Leisz is certified in physical medicine and rehabilitation with a subspecialty in sports medicine, she believes that if she understands a sport and actually participates in the sport, she is more effective at treating the athlete. She was a runner for 30 years and now bicycles and Nordic skis.

Leisz's approach to her patients is like that

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### Summer 2011

The Sister Kenny Foundation, a nonprofit charitable organization, raises, stewards and distributes philanthropic funds to support the quality and innovative rehabilitation services and research of Sister Kenny® Rehabilitation Institute.

Competitive runner, John Sippola, receives a running evaluation as a part of the RunSMART Program (Skilled Movement and Rehabilitation Team) at Sister Kenny Rehabilitation Institute.



# Advocacy in Action

## Sister Kenny Rehabilitation Institute expands services to meet community needs



I turned 50 this year — a milestone that prompted me to review my health situation and decide to make some changes. I resolved to return to the weight on my driver’s license, and to do that, I must lose twelve more pounds. I also set a goal to improve my strength and flexibility through a Pilates training program twice weekly. Ironically, for 20 years, I have referred patients for this treatment, but had never done it myself.

**I am not alone in understanding and prioritizing the importance of exercise to augment both the quality and quantity of years of my life. There is increasing appreciation on the part of Americans that improved diet, activity and social participation lead to better health and well-being. Unfortunately, there is no magic pill or wand to improve physical status. Building strength, endurance and balance requires focused training and rehabilitation when problems arise.**

In this issue of *Possibilities*, you will read about Sister Kenny Rehabilitation Institute’s extensive services in physical injury prevention and treatment. My colleague, Chris Leisz, DO, leads the Sister Kenny Running and Endurance Sports Injury Clinic with services at Abbott Northwestern and United hospitals. Additionally, Dr. Leisz recognizes that evaluation and management of athletes involves finding them where they congregate. Her passion for learning more and helping athletes stay active takes her to community sports venues beyond the clinic and outside of typical office hours.

I am pleased to be a patient of Dr. Leisz. Along with many others, I have found her treatment

approach therapeutic. With her guidance, I can continue to add mileage on my new running shoes to achieve my weight loss goal. Sister Kenny also offers specialized services for runners through its RunSMART Program. Prevention of injuries is always a hallmark of good musculoskeletal practice; and, I hope as you read this issue you’ll see how recovery and prevention go hand in hand.

As members of our community continue to put heel to pavement, the clinicians of Sister Kenny Rehabilitation Institute are working throughout the Twin Cities to develop individualized treatment plans to restore and protect those who seek physical activity for health. The Institute also hopes to expand its services to include brain remediation for adults with age or situation-related cognitive decline. Individuals with “chemo brain,” cognitive change related to menopause, normal aging or dementia can all benefit from different styles and types of cognitive restoration therapy and remediation to return to robust intellectual and social lives.

Indeed, physical and cognitive health are inextricably linked. People who are physically fit tend to have less cognitive loss in their older years; and, people with high cognitive function tend to continue to participate in activity and exercise.

The dedicated clinicians of Sister Kenny Rehabilitation Institute look forward to many years of service to the people of the upper Midwest, helping them maintain healthy bodies and minds and create for themselves a pervading sense of well-being.

Sincerely yours,

**Karl Sandin, MD, MPH**

Physician-in-chief

Sister Kenny Rehabilitation Institute

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## Sports Injury Clinic (continued from cover)

of a detective, determining “which part of the body is the victim and which is the culprit.” A dynamic balance test showed weakness on Sippola’s left side. She determined that his back pain was the result of weakness. It was causing pain due to all the new activity, like skiing and shoveling, and was further exacerbated by the degree of his activity.

As a rehabilitation specialist, Leisz’s perspective on runners’ injuries began to evolve when she started noticing that most runners with injuries had problems on one side of their body and had more balance problems on the side that was injured. “I was interested in finding out why this was,” she explains. “I knew that many runners had poor balance and wondered why such strong athletes would have poor control of their bodies.”

“Talking with rehabilitation professionals around the country who were observing similar trends confirmed my intuition,” Leisz says. They determined that, most often, the problem wasn’t necessarily with the part of the body that was injured. “We looked at what the imbalance meant for the gluteal muscles,

pelvic muscles, abdominal muscles; and, we found weaknesses in those areas. We found that when we treated and strengthened the core, those issues that were distant could improve,” she explains. “We began to look at the body in terms of what is the victim (knee or ankle) and what is the culprit (weakness in the core), and found that when we worked on the culprit, the victim improved.”

### Personalized Treatment and Training

After her thorough analysis of Sippola, Leisz referred him to physical therapist Jeff Gorzek, who is a member of the RunSMART Program (Skilled Movement and Rehabilitation Team) at Sister Kenny Sports & Physical Therapy Center. RunSMART is designed by runners, for runners, to help them recover from injuries and prevent future injuries to avoid interruption of training schedules. “I work daily with patients improving their aches and pains from musculoskeletal injuries,” Gorzek explains, “treating everything from post-surgical conditions to chronic pains to athletes trying to get back to their sport.”

Gorzek had an extensive background working with runners and was himself a runner. “My initial impression of John,” says Gorzek, “was that he was a seasoned runner who had done what many runners have done — pushed through their injuries over the years until they come to a point where it hurts to run and they can't run anymore.”

“I did a detailed evaluation — looking at range of motion of low back, hips, knees, feet; at strength of abdominals, hips, knees, ankles; his running pattern; and, his general posture. I designed an exercise program specific to his needs and his weaknesses.” Gorzek also used manual therapy on Sippola’s hip joints and calf muscles to “improve his motion and relieve restrictions to allow full and appropriate mobility of that tissue.” Gorzek says he’s learned a lot from research over the past three

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Dr. Chris Leisz evaluates low back pain on John Sippola in Sister Kenny Rehabilitation Institute’s Running and Endurance Injury Clinic.



## Bri Ski Golf Classic: A tribute from family and friends



It is often misfortune that provides people with an introduction to Sister Kenny Rehabilitation Institute. That couldn't be truer for the family and friends of Brian Szulczewski who experienced a brain aneurism in October 2006. But, Brian didn't receive care at the Institute — the aneurism took his 49-year life in a matter of seconds.

Still mourning Brian's passing the following summer, Szulczewski's mother, Jan, and sister, Sue, deliberated about how they might honor his legacy. Aside from being a hotshot bartender at T.G.I.Friday's®, Szulczewski was a low-handicap golfer. A golf tournament seemed to be the perfect tribute to their son and brother, but the family struggled to identify the beneficiary of event proceeds.

Maybe it was a coincidence or a gesture from a higher power that the Sister Kenny Golf Program for Individuals with Physical Disabilities was featured in the July 24, 2007, *Star Tribune*. As the Szulczewski's discussed potential beneficiaries, the

senior Szulczewski paged through the newspaper and came upon the inspirational article. As they say, the rest is history.

The Bri Ski Golf Classic has become an annual event. The third golf classic, just as the first, took on a somber tone following Jan Szulczewski's sudden passing. Her handmade quilts were a coveted entry in the event's silent auction. She was assembling another work of art when an unexpected reoccurrence of cancer took her life in May 2009. "Members of mom's quilting club knew what the quilt meant to her and to its revenue-generating capabilities in the auction, so the quilting club rallied to finish the quilt and contributed another quilt to the fourth annual event, as well," shared Sue Szulczewski.

Volunteers are the lifeblood of the event maximizing needed philanthropic support for the Sister Kenny Golf Program. "When we started this event, I knew little about the Institute. My dad has since survived a stroke and I intimately know the value of Sister Kenny," notes Randy Erickson, event volunteer and close friend of the Szulczewski family.

**The 5th Annual Bri Ski Golf Classic will be hosted on Thursday, September 15, 2011, at Deer Run Golf Course in Victoria, Minn.**

Proceeds from this tournament are projected to push the event's cumulative net proceeds upwards of \$40,000.

For more information or to register, please contact the Sister Kenny Foundation at 612-863-4145.

## Sports Injury Clinic (continued from page 3)

years and with that knowledge has changed how he assesses and treats runners.

"Jeff developed a great care plan, gave me advice for taking care of acute injury and addressed previous injuries as well," explains Sippola. "He and Dr. Leisz took a real interest in my form and even did research on cadence. They looked at the biomechanics of my movement, they pinpointed problem areas, devised a plan and within six weeks I was healthy."

"I attribute a lot of my improvement to exercises that strengthened my core," Sippola adds. "They addressed muscle imbalance and problems with my running form that contributed to my injury. As a result, I've

changed my running style, increased my cadence and become a mid-foot striker."

Sippola appreciates the individualized attention that he received at Sister Kenny Institute, noting that Dr. Leisz took time to research Nordic skiing and gave him specific advice related to each sport. "I went in for a specific injury," he adds, "but the most valuable thing I got out of it was preventative. I gained a solid framework to prevent injuries in the future."

Leisz believes she has "a handle on a new way to treat old injuries and get athletes back on the road sooner because that's what they want more than anything."

The RunSMART team serves patients at 14 locations throughout the Twin Cities and surrounding communities. Visit [sisterkennyinstitute.com](http://sisterkennyinstitute.com) for more details.

## Fully-equipped gait and balance lab will benefit patients, clinicians and researchers

If you would like to make a gift to support the Gait and Balance Lab, please contact the Sister Kenny Foundation at 612-863-4145.

In just three years, Lars Oddsson, PhD, has established the Sister Kenny Research Center (SKRC) as a “learning lab for innovations in rehabilitative care and treatment,” hiring first-rate researchers to work with patients and securing funding to support their research. And, as the director of research of the SKRC, Oddsson is just getting started.

Part of his vision for the SKRC is to establish a state-of-the-art gait and balance lab. “We have the lab space built out for it,” explains Oddsson, noting the 5,200 square foot Sister Kenny research facility. Now he’s looking to furnish the lab with the highest quality instrumentation to meet a variety of clinical and research needs.

According to Oddsson, equipping the lab will help address the therapeutic needs of patients with acute and chronic conditions such as stroke, Parkinson’s disease, diabetes and amputation. He also sees significant potential benefit for the elderly, for whom lack of balance and the potential for falls are significant concerns.

State-of-the-art instrumentation that can detect minute movements is crucial to conducting effective biomechanical analysis, as well as prescribing treatment and designing new devices that can help patients. The equipment on Oddsson’s wish list for the lab includes:

- Force platform — to measure forces in three dimensions
- GAITRite Pressure Mat — to measure stride length and gait width
- Electromyography system — to measure electrical activities of muscles during movement
- Motion analysis system — uses cameras to detect fine movements of the body
- F-scan® insole pressure system — to measure pressure points at high resolution under the foot.

“We have the patient populations and the laboratory space for treatment, research and device development,” Oddsson explains. “Fully equipping the lab would first and foremost help clinicians better serve the patients who have entrusted the Institute with their care. An added benefit is that a lab equipped with gold standard equipment would make the SKRC more competitive in the federal grants arena and attract more research funding.” In time, SKRC would see an increase in collaborations with partner institutions and yield a greater investment in projects with the biomedical research community, as well as with industry.

Oddsson envisions expanding the research center’s approach to therapy design that integrates patients, clinicians and researchers together under one roof. One of his goals is to engage with med-tech entrepreneurs to explore and leverage opportunities through the SKRC. He sees SKRC becoming “the ‘go to’ place for start-up companies to develop and bring ideas to market. Patients will benefit, clinicians benefit with the support of the latest technologies, and companies can refine device design and further test devices and interventions,” Oddsson explains.

In light of the large wave of aging Baby Boomers, establishing a comprehensive program and facility dedicated to helping patients improve gait and balance is of great value to the medical field and the community-at-large. Equipment for the gait and balance lab will cost an estimated \$175,000. “Our goal with this and all of our research is for Sister Kenny Research Center to maintain a focus on innovation in the area of safe mobility and physical function, thereby improving people’s general health, wellness and quality of life,” explains Oddsson.

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## Sister Kenny Research Center product semi-finalist in Minnesota Cup



More than 1,000 aspiring entrepreneurs and inventors entered the 7th Annual Minnesota Cup. The Sister Kenny Research Center and its business entity, RxFunction, featuring the WALKASINS™, are one of 10 semi-finalists in the event's BioSciences Division.

WALKASINS™ are socks that vibrate to provide wearers with a new sense of balance. The patent-pending technology in WALKASINS™ employs pressure sensors on the bottom of the foot that measure changes in pressure as a person stands or walks. This information is transferred to multiple vibrators that provide instant balance cues that are effortlessly interpreted as a new balance sense. The average "at-risk" faller would see improved results in gait and balance after one session and about 15 minutes of training.

The Minnesota Cup presents its winners, across six divisions, with a unique opportunity to secure seed capital and hours of pro bono professional service. Beyond the monetary awards, participants gain exposure for their ideas, strengthen their business plans and make strong connections in the business community. The payoff is real: 2009 and 2010 Minnesota Cup finalists have secured more than \$15 million in capital and have brokered important business partnerships, collaborations and distribution agreements.

The Minnesota Cup is a shining example of what is possible when government, academia and the business community work together to help facilitate real business growth. Watch for competition updates at [www.allina.com/ahs/rehab.nsf/page/research](http://www.allina.com/ahs/rehab.nsf/page/research) or [www.breakthroughideas.org](http://www.breakthroughideas.org). Minnesota Cup winners will be announced on September 8.