Dr. Moise’s Medical Update

Thiazide Diuretics Reduce Risk of Fracture with SCI

Everyone with paralysis of the legs due to spinal cord injury (SCI) has osteoporosis (brittle bones) in the pelvis and legs. Prior studies have shown that people with SCI lose about one third of the normal bone density in these bones, and this loss occurs early after injury, typically during the first 6 to 12 months. The decrease in bone density means that fractures can occur with relatively minor injuries, like falling from the wheelchair or twisting the leg in an awkward position during a transfer.

Another common problem in people with SCI is leg and foot swelling. When the legs hang down all day in a seated wheelchair position, the walking muscles are not working to pump foot and leg fluids back up the veins into the heart, so fluid collects as swelling in the legs and feet. This is called dependent edema. Mild to moderate dependent edema is harmless, as long as shoes are not overly tight as the feet get larger, which could cause pressure sores on the feet. If swelling is very severe, however, the skin can become more fragile and blisters or seeping of fluid from the skin of the legs and feet can occur. Thiazides are one type of diuretic (water pill) that might be prescribed to lessen swelling in the legs and feet, if it becomes severe.

An article just published in the Archives of Physical Medicine and Rehabilitation looks at the effects of the Thiazide medications on the risk of leg fractures in men with SCI. Thiazides have been previously shown to decrease calcium being excreted by the kidneys into the urine. Higher calcium loss through the urine is known to result in lower bone density. In people without SCI, prior studies have shown a lower rate of hip fracture in the elderly for those on Thiazide diuretics vs. those not on Thiazides. This new study is the first that looked specifically at people with SCI, to evaluate the effect of Thiazides on fracture risk. Only men were included in this particular research study. The study did, in fact, prove that men with SCI who were on Thiazide medications had a decreased likelihood for lower extremity fractures than those not on these medications. Thiazides, therefore, help not only swelling of the feet and legs, but also are likely to improve bone density and fracture risk, in those with SCI. Other categories of diuretic medications do not have this benefit on the bones and fracture risk.
Incomplete Spinal Cord Injury: Road to Walking Again

BY Jaime Hopoi, PT

Amanda Ward was an active 31 year old before a car accident early in June this year dramatically changed her life and how she would interact with her environment. Amanda was a passenger involved in a car accident caused by a drunk driver. At the time, Amanda was homeless and struggling with substance abuse. She was admitted to the hospital with a fracture of her T4 vertebrae and became weak in both her legs and was unable to walk secondary to a seroma that was causing severe compression of her spinal cord at the T4-T5 level. As a result, Amanda was diagnosed with having an incomplete spinal cord injury.

After multiple hospitalizations, Amanda was admitted to St. Luke’s Rehabilitation Institute to begin her road to recovery. Amanda arrived at St. Luke’s unable to sit up on her own and needed mechanical lifts in order to move her from her bed to the bathroom. She began to participate in intensive occupational and physical therapy for three hours per day. With occupational therapy she re-learned basic tasks such as dressing herself, bathing, using the bathroom, and getting herself ready for the day, as well as strengthening her arms in order to propel her wheelchair and move herself from her bed to her wheelchair. With physical therapy Amanda worked on using a wheelchair to explore her environment. Due to the incomplete nature of her injury physical therapists helped her work at getting her leg strength back by participating in therapeutic exercise for her core and legs, utilizing electrical stimulation, and using a specialized piece of equipment unique to St. Luke’s called the Lokomat©. The Lokomat© enabled Amanda to participate in retraining her body to be able to walk again. After six weeks of rehabilitation, free from drugs, Amanda discharged back to Yakima with her husband and a new outlook on life.

Amanda continues to participate in outpatient therapy to progress her walking skills and independence with mobility and tasks that she needs to perform in her daily life. She is able to walk with some assistance using a walker and is able to go anywhere independently in her wheelchair. Amanda approached the trials of overcoming drug addiction, fighting to walk again, and attempting to regain her independence with a fervor that encouraged both patients and staff at St. Luke’s.

Note: Incomplete spinal injury is a classification of spinal cord injury where there is some preservation of sensory and motor function below the level of injury. The level of preservation varies from one person to the next. Paralyses of the legs or gait disturbances are very common with these injuries as well as sensory loss and pain below the level of injury.

Support Group

SCI support group: meets every 4th Wednesday from 1 - 2 p.m. Please check at front desk for room as location changes on occasion. SCI support group facilitates an opportunity to interact and network with peers living with spinal cord related injuries and deficits. Family and friends are always welcome.

See Skifest 2014 page 3 for details
FES Bike

Arms not getting you enough exercise? Use your legs to exercise your heart and improve cardiovascular fitness with the Community Functional Electrical Stimulation (FES) Bike Program.

Call St. Luke’s Outpatient Therapy at (509) 473-6869 for more information.

Participants will be assessed and trained, along with their caregiver. Training is by a physical therapist. In 5-10 visits participants will be able to perform independently.

Offered 2-3 days per week

$35 dollars per month

Skifest 2014

It was a wild day at the lake on Saturday, July 19 and 20, with white caps on the water all day, massive winds and smoke! For Saturday we had 20 skiers/participants, 23 guests/family, and 14 volunteers. For Sunday, we had 12 skiers/participants, 15 guests/family and 17 volunteers. The weather on Sunday made up for the Saturday. The participants enjoyed the normal activities of skiing, tubing, swimming, jet skiing, boat rides and a BBQ lunch/social at noon. No injuries to report and mostly smiles throughout the weekend. Thank you to all who came out to volunteer, participate and watch the fun. We would like to especially thank our sponsors: Clear Lake Homeowners Association, Rocky Mountain Medical, Cure Medical and the Inland NW Personal Watercraft Club.

Upcoming Team St. Luke’s Opportunities

- DII Adult wheelchair basketball is started for the 2014-15 season. Practices will begin in the school district in Oct. (time/location to be determined).
- Swimming is ongoing at the Valley Oz Fitness
- Rugby is ongoing and will resume in the school district in Oct. (time/location to be determined).

Contact Candice Belcourt, belcoucm@st-lukes.org. 509-879-8137 for any questions on how to get involved!

St. Luke’s Rehabilitation Institute is committed to helping our patients and members of the community achieve the greatest quality of life possible. Sports and Recreation activities can be a great asset to quality of life. Team St. Luke’s is collecting information on activities that interest you. We will use this information to plan future activities. We appreciate your time in filling out this short survey.

The link to complete this survey is below.

Study Participants Needed

St. Luke’s Rehabilitation Institute, in collaboration with WSU Spokane, recently received grant funding from the Craig H. Neilsen Foundation to conduct a study called, “Comparison of Two Psycho-educational Family Group Interventions for Persons with SCI and their Caregivers.” If your spinal cord injury occurred within the last three years, you may be eligible for this study, which will begin in September. **If you are interested, please use the information at the end of this invitation to contact the research team.**

About the study

Spinal cord injury (SCI) can result in difficult, long-term, life adjustments for both patients and their family members. This study will provide and test two different group treatments for SCI, one called Multi-family Group intervention and the other called SCI Active Education, to see if adjustment to the injury can be improved. The person with SCI and a close caregiver will be assigned at random to one program and will participate together with a group of 4-6 other couples to receive education and support about the specific challenges of living with SCI. The groups will be led by experienced clinicians from St. Luke’s and WSU who are skilled at helping families and patients in the process of rehabilitation for SCI. If effective, the researchers believe one or both of these programs may become an option for providing education, skills, and coping strategies to people with SCI and their close caregivers.

Both the Multiple-Family Group for SCI program and the SCI Active Education program will meet for 16 sessions across 9 months. The groups will meet at St. Luke’s approximately once every two weeks. The sessions will vary from 1 to 2 hours. You will also fill out several questionnaires on 3 occasions; this will take about 1½ hours each time. These questionnaires will measure such things as quality of life, health status, confidence and skill to self-manage SCI, emotional wellbeing, support you get from others, and coping. Participation is voluntary and you may choose to stop participating at any time. Refusing to participate will not affect your regular care at St. Luke’s.

How the study benefits you and others

You may benefit from the program by gaining a better understanding of SCI and learning how to manage it more effectively. Your participation also may benefit others with SCI and their caregivers in the future by helping the researchers find out what helps and does not help. You and your care partner will be paid up to $150 during the study as a thank you for your participation.

To receive more information

If you are interested in seeing if you qualify for this study, please contact St. Luke’s Senior Researcher, Dr. Douglas Weeks by phone at (509) 939-1316 or email him at WeeksDL@inhs.org. Dr. Weeks will answer any questions you may have.

See Skifest 2014 page 3 for details
The SmartDrive is a revolutionary power assist that will improve the mobility of anyone pushing a manual wheelchair. It is a small lightweight motor that has enough power to cruise up the steepest hill or through the thickest carpet. It easily attaches to and removes from the wheelchair, so it can be used when it’s desired and left off when it’s not. Operating it is simple, just push to go and brake to stop. The SmartDrive recognizes when you push and it acts like a cruise control to keep you going at the speed of the push. So, that means push slow to go slow or push fast to go fast. It keeps cruising until you want it to stop. With a top speed of over 5 mph, it can cruise along at a very quick pace. The SmartDrive does not help when going downhill. You must be able to brake on down hills independently.

The SmartDrive was developed by MAX mobility with the financial support from the National Institutes of Health (NIH). With nearly 3 out of 4 wheelchair users developing shoulder pain, the problem is truly an epidemic. The old saying “Use it or lose it” has been updated to “Use it but don’t abuse it”. It is important to choose activities that do not overuse the shoulder. It is best to avoid heavily repetitive tasks like long bouts of wheelchair propulsion, especially in strenuous environments. Use of the SmartDrive helps prevent overuse while still allowing you to go everywhere you want to go. The SmartDrive is covered by Medicare and most private insurance, making it easy to get one. There are several videos on the MAX mobility web site that demonstrate how it works and how useful it can be for many different situations, like pushing a shopping cart! The web address is: www.max-mobility.com. If you are interested in coming in to try one, we have one in the clinic you can test drive.
New Faces

We would like to welcome the following new staff members to St. Luke’s:

**Lakhwinder Bains, TA**
Eastern Washington University –
Exercise Science 2015

Lakhwinder is currently applying to
doctoral physical therapy programs
for fall 2015 entry, interests include
team sports notable for basketball and
recently soccer, and bhangra dancing.

**Joy LaSalle, MOT, R/L**
University New Mexico 2010

Joy’s interests included reading, hiking
and travelling, with aspirations of making
it to the Galapagos Islands.

**Maryellen Meadows, OTR/L**
University of Puget Sound 1992

Maryellen enjoys spending time with
her children, working in her flower and
vegetable garden and is a recreational
runner.

**Lauren Brown PT, DPT**
Ohio University 2014
Miami University 2011 – Exercise
Science

Lauren enjoys cooking, hiking, travelling.
Additionally she plays team sports,
including soccer where she recently
joined a local outdoor team.

**Marisa Gadda, PTA**
Spokane Falls Community College 2014
Cornish College of Arts – Bachelor of
Fine Arts 2005

Marisa became interested in physical
therapy following her own course of
therapy as a patient. She is an avid
dancer, modern dance in particular.
Look for Marisa performing locally with
Spokane Up in Arms.

VISION STATEMENT
Be nationally recognized as the regional rehabilitation center of choice based upon reputation, quality outcomes
and innovative care.

MISSION STATEMENT
Our mission is to be a resource for health and wellness in order to optimize the potential for a full and productive
life. We serve individuals and their families requiring expertise in medical rehabilitation.

St. Luke’s Rehabilitation Institute seeks to provide value to those served by treating the whole person with regard
to physical, intellectual, emotional, cultural, and spiritual needs in order to restore to their fullest potential the
capacity for living. Excellence of care will take place in an atmosphere of compassion, reverence and integrity.

St. Luke’s is a division of Inland Northwest Health Services (INHS). INHS is a non-profit corporation in Spokane, Washington
providing collaboration in health care services on behalf of the community.