Dr. Moise’s Medical Update

Positive Effects of Singing for People with Spinal Cord Injury

An interesting study was recently published in the Archives of Physical Medicine and Rehabilitation on the benefits of singing for those with tetraplegia (previously called quadriplegia). For spinal cord injury about the level of T8 (tetraplegia and high paraplegia), there is a decrease in strength of the muscles of respiration, since a large portion of the rib cage intercostals muscles are paralyzed. This increases the risk of pneumonia and collapse of the lungs (atelectasis). A minor head cold can lead to a life threatening pneumonia in this group of spinal cord injured individuals. Paralysis of the belly muscles adds to this risk by weakening one’s cough to clear out mucus from the lungs.

In this study, one group participated in group singing three times a week for 12 weeks, while the control group received group music appreciation classes with relaxation training. At the end of the 12 weeks, measurements of voice and breathing showed that the singing group could speak louder and could get more words out per breath significantly more than the control group. Both groups had improvement in mood. The conclusion of the study is that group music therapy can have a positive effect on physical functioning by improving strength in the muscles that support breathing and getting air out during speaking for improved voice quality. It can also improve mood, energy and therefore, quality of life measures, for those with tetraplegia. So if you have a neck level spinal cord injury with tetraplegia, consider joining a singing group or church choir. It’s good for your health!

Support Group

SCI support group: meets every 4th Wed from 1 - 2 p.m. Please check at front desk for the 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.
Strengthening and Optimal Movements for Painful Shoulders (STOMPS) in Chronic Spinal Cord Injury: A Randomized Controlled Trial

Manual wheelchair users with spinal cord injury are challenged by the need to use their arms for locomotion as well as typical upper body activities. They are also highly likely to report pain in their shoulders, and may face loss of independence if one or both shoulders become injured.

The STOMPS program is the first, randomized controlled trial to measure the effectiveness of a shoulder strengthening/movement optimization program for individuals with spinal cord injury. The STOMPS program combines a home exercise program of stretching and strengthening exercises with education and training in optimizing the use of arms/shoulders during common activities such as transfers, and ergonomic techniques for wheelchair propulsion.

At the start of the study, 80 individuals with paraplegia and shoulder pain were randomly sorted into two groups, a control group, and a group participating in the 12 week STOMPS program. The control group watched a 1-hour educational video, and did not complete any exercise program. Both groups were reassessed after 12 weeks, and then again at four weeks post-program. The researchers measured shoulder pain, muscle strength, activity, and quality of life.

Results were impressive! STOMPS participants reported shoulder pain decreasing to 30% of the level reported prior to starting the program. Shoulder strength increased, and participants reported improved quality of life as a result. Gains in strength and pain reduction were maintained by STOMPS participants at the four week post-study follow-up. Notably, some STOMPS participants were more than five years post-injury, yet achieved significant pain reduction and reported increased quality of life. No gains in any of the outcome measures were found for the control group. In fact, about half the participants in the control group requested STOMPS program materials at the conclusion of the study. As in any research project, there are caveats. Study limitations include a small number of participants with considerable attrition over the course of the study, and a number of subjective/self-reported outcome measures.

The STOMPS program can be easily done at home with theraband and handweights, in about 15 minutes per day, three days per week. Instructions for the complete article, as well as the exercises can be found at the links below.

Full Article: http://ptjournal.apta.org/content/91/3/305.full.pdf+html

Appendix: includes STOMPS program exercises and optimization checklist: http://ptjournal.apta.org/content/suppl/2011/02/24/91.3.305.DC1/Mulroy.pdf

Skiday Recap

It was another perfect day on Mt. Spokane for the Skiday! We had six participants for the day with one current patient present for education only. The ages ranged from 7-54 and with varied abilities. Out of the six, four signed up for three weeks of additional sessions with the Parks & Rec program. The collaboration between Spokane Parks and Rec and SLRI continues to be a success getting these individuals active in the winter!

Upcoming events: Exact dates to be determined

Mid-June – Outdoor Recreation Experience at Bear Lake

End of July – Skifest at Clear Lake

Needed: Wheelchair basketball and rugby players!

Contact Candice Belcourt, Rec Therapist at 509-879-8137 or belcoucm@st-lukes.org with questions and to register with Team St. Luke’s.
Spinal Cord Research – A Benefitting Process

St. Luke’s Rehabilitation Institute is doing its part to contribute vital research back to the medical community by partnering with Washington State University on a study funded by the Craig H. Nielsen Foundation. The study, “Comparison of Two Psychoeducational Family Group Interventions for Persons with SCI and Their Caregivers,” compares two investigational group educational programs for adults with spinal cord injuries (SCI) and their close caregivers to see if one may work better than the other.

Darlene Dickmann, a 72-year-old mother of six is a study participant after having a spinal cord injury in her home. While taking a break from fixing the hem on her daughter’s bridal gown, Darlene tripped in her living room, sending her down onto the coffee table and then to the floor. “It was very scary,” Darlene says about the experience. “I knew I had broken my neck because I had no feeling from my waist down. I was thinking I was going to die.”

Since then, Darlene has made great progress. “I have made gradual improvements over the past year and a half,” she says. “I can occasionally walk with a walker now.” Getting around in her power wheelchair, Darlene attends water aerobics and art class for occupational therapy.

Darlene could not be more thankful for previous research that has helped her in her recovery progress, which is why she was eager to volunteer for the study. “I’m so thankful for the research that has gone on before that has helped me. I want to be a part of developing more ways that are proven to work to help other people down the line.”

The benefit of helping others in the future is not the only upside of this research study for Darlene. “It’s fun, enlightening, and it’s beneficial to me and my co-participants as well,” Darlene says. “It exposes you to other people’s problems. You realize that you’re not alone.”

Enrollment in the study is currently under way. If you are interested in taking part in this study, or have questions, please contact St. Luke’s Senior Researcher, Dr. Douglas Weeks, by phone at (509) 939-1316 or email at weeksdl@inhs.org.

Kayaking Opportunity

Team River Runner has a weekly class to help you learn or improve your kayak skills. It is a free class. Call Tim at (509) 951-2871 if you’re interested.

Time: Wednesdays, 7 - 9 p.m.

Location: Eastern Washington University pool
Quadriplegia and Tetraplegia

The term Quadriplegic is derived from two different words from two different languages, Latin and Greek. The word “Quadra”, when translated from latin means “four”, this relates to the number of limbs. “Plegic”, is derived from the Greek word “Plegia”, which when translated, means “paralysis”.

When the two words are combined, you have “Quadriplegia”.

“Tetra” is derived from the Greek word for “Four”. “Para” is derived from the Greek word for “two” Hence: Tetraplegic and Paraplegic.

In Europe, the terminology for four limb paralysis has always been tetraplegia. The Europeans would never dream of combining a Latin and Greek root in one word.

Quadriplegic and Quadriplegia are the terms used mainly in America to describe paralysis of all four limbs. In 1991, when the American Spinal Cord Injury Classification system was being revised, the difference in names was discussed. The British are more aware of Greek versus Latin names. Since Plegia is a greek word and quadri is Latin, the term quadriplegia mixes language sources.

Upon review of the literature, it was recommended by the American Spinal Cord Association that the term tetraplegia be used so that there are not two different words in English referring to the same thing.”

Taken from www.apparelyzed.com