Dr. Moise’s Medical Update

Spinal Cord Injury and Sleep

People with spinal cord injury (SCI) often have trouble sleeping well through the night. Sleep disorders have been shown in research studies to be more common for those with SCI than the able-bodied population. Research studies have shown two different reasons why this problem occurs.

First, people with SCI have more abnormal breathing during sleep, than those without SCI. This is true for those with tetraplegia from a spinal cord injury in the neck (C-spine), as well as for those with paraplegia from a mid back (T-spine) or low back (L-spine) injury; however it is the most common in those with tetraplegia. This problem is called sleep apnea and refers to the intermittent stopping of breathing or having overly shallow breathing during sleep. Sleep apnea can be obstructive, when the throat closes up during sleep and snoring occurs, or central, in which the brain is not sending signals properly to the muscles that result in inhaling a breath into the lungs. SCI increases both types of sleep apnea. A recent research publication in The Journal of Spinal Cord Medicine found that 60% of people with complete tetraplegia had sleep apnea. This is compared to 26% of the general population with this condition.

Symptoms that can occur with sleep apnea may include any of the following: sleepiness during the day, visually strong dreams at night, waking with headaches, having a broken sleep pattern with multiple wake-ups during the night, or waking with a gasp during the night. Unfortunately, with SCI, the majority of people with sleep apnea have no symptoms, so the only way to diagnose it is to get a formal sleep study which a doctor can order. Untreated sleep apnea is dangerous, as it can cause trouble with circulation, trouble with the heart, impaired memory and concentration. It has also been shown to cause more automobile driving accidents.

A second known cause of sleeping trouble in those with SCI is the abnormal production of melatonin from the pineal gland in the brain. This gland is often called the third eye, because it gets signals from the eyes that enable it to sense if the person is in light or darkness. In the dark, it releases the brain chemical melatonin. Melatonin tells the brain it is time for sleep and rest. For animals that hibernate during winter, this occurs due to the release of very high levels of melatonin by the pineal gland.

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Research on people with cervical SCI has shown a marked decrease in the normal release of melatonin by the pineal gland at night. This results in a loss of normal day and night cycles, so the person might be sleepy during the day and wide awake at night, or have difficulty falling asleep and staying asleep at night. Melatonin can be taken as a sleeping medication, but no research has been done to see if use of oral melatonin in the dose and quality available now without a prescription actually helps or not for those with cervical SCI (tetraplegia).

Another recent study found that adults with SCI that occurred during childhood have worse sleep than those who got their SCI as an adult. It is unknown why childhood onset SCI causes more sleep difficulties than adult onset SCI and more studies are planned by those researchers to try and figure that out.

Any person with SCI who has trouble sleeping well through the night should consider asking their medical provider to order a sleep study to test for sleep apnea and might also consider a trial of melatonin as an over-the-counter sleep aid.

SCI and Obesity

Obesity in America continues to be a leading cause of preventable death. Obesity increases the risk for other diseases such as diabetes, high blood pressure, high cholesterol and heart disease. Patients with spinal cord injuries are developing these diseases at a younger age than the non-disabled population. As person’s with SCI are living longer due to advances in modern medicine, heart disease becomes the primary cause of death (30 years post injury or <60 years of age). In a recent study among 408 veterans with spinal cord injuries; 66% are overweight, and of those 30% are considered obese when measured using the body mass index. In a 2015 study the total body fat was 10% greater in the group with tetraplegia and 12% greater in the group with paraplegia compared to non-disabled individuals.

According to one study, managing weight for person’s with spinal cord injury is a great challenge given the reduction in calories needed to sustain ideal body weight is reduced 10% for paraplegic patients and 15% for tetraplegic patients. Research has supported the need for multi-discipline treatment to include nutrition counseling and weight loss programs with guided exercise to be the most effective in maintaining weight loss.

Recommendations for weight loss include 30 minutes of endurance training 3-5x/week of moderate intensity; moderate intensity can be determined by being unable to talk easily while performing the exercises. Ultimately, finding a recreational activity that is enjoyable is excellent for helping to maintain your weight. Consider a community fitness programs such as Team St-Luke’s or Para sports Spokane.

For many spinal cord injured patient’s a functional electrical stimulation (FES) bike may be of benefit to burn calories, reduce disuse muscle atrophy and improve circulation to improve heart, skin, and muscle health. St. Luke’s offers a community program with our FES cycle for a fee (see ad on back page for details) 509-473-6869.

By Hilary Lott, PT, DPT
Outpatient Neuro SLR
**Resources After Spinal Cord Injury (SCI)**

Sustaining a SCI is a life changing event. Patients and families are overwhelmed with the diagnosis of the SCI and then are met with the reality of life after injury. There are resources available. All staff participating in the patients care should begin the discussion of discharge options at the time of admission. Discussions should focus around the accessibility of the home, home care assistance and what life could look like after SCI. The first step is accessing the home. Are their stairs? How many levels is the home? There are companies who specialize in installing ramps and providing home renovations. Most insurance do not cover in home care for assistance with bathing, grooming, dressing, and cooking. This is termed custodial care. If it is evident that 24/7 care is necessary, investigating the qualifications for and applying for Medicaid is very important. Medicaid is the only insurance payee which will pay for custodial care. This process can be time consuming. Medicare and commercial insurances do not pay for custodial care. In the absence of Medicaid, there are private pay options available for in home care. Care can be hired in increments of 2 hours up to 24 hours.

St Luke’s offers a SCI support group on the 4th Wednesday of each month which provides a supportive environment and the opportunity to meet other individuals with SCI. Caregivers are encouraged to attend as well. Team St Luke’s offers a recreational program which gives individuals the opportunity to participate in outdoor activities such as water skiing, snow skiing, fishing, archery, swimming, boating, and hand cycling.

Follow up with Dr. Moise, Physiatrist and Spinal Cord Specialist, is encouraged after discharge from inpatient rehabilitation. This appointment is scheduled for one year after discharge and sooner if inpatient physician recommends.

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**Donated (FREE) Computers**

We have recently had a community fundraiser to help people in the Inland Northwest with spinal cord injuries. Since research has shown that computer internet access is important in maintaining health and quality of life for those with SCI, we are going to use some of the proceeds from that fundraiser to provide free iPad tablet computers to five to 10 individuals with SCI. If YOU have a spinal cord injury, do not already have a computer, or have a computer you cannot use due to weak hands that cannot operate a standard keyboard, and if you have difficulty financially affording to purchase an iPad yourself, then please respond by email, including your name and phone number (and state you want an iPad) to: whannel@st.lukes.org
“Interview: Getting to Know the SCI Nursing Staff”

1) Why did you choose to work at St. Luke’s Rehab versus another setting?
   
   Melissa Stoddard, RN: “I decided to work at St. Luke’s because of the care my little sister got when she was a patient here. I was with her through every clinical setting; the ER, ICU, med-surg, then St. Luke’s. I was impressed with the compassionate individualized care my sister received. Everybody who worked with her was an expert and gave us so much education in regards to my sister’s care. My sister, along with my family, was also given hope that she could reach a level of independence and function again in which she would care for herself. Now I get to work at St. Luke’s and offer compassion, knowledge and care to our patients.

2) What inspired you to be part of the SCI Nursing Department?

   Jeff Dubrawski, RN: At first I was just a newer RN wanting to get out of long term care. When I learned about SCI I became excited because my mother raised two foster kids who were paraplegics. I grew up with an understanding of SCI and worked a lot with them at wheelchair camps. What inspired me is knowing what SCI patients are capable of. I wanted to show them that there is still so much that they can do with their lives even with their new disability.

3) What makes the SCI staff team focused?

   Angela Jorgenson, NAC: We all seem to have the same goal; helping our patient’s get to where they need to be. We all appear to have each other’s back. There is a real sense of unity here.

   Jeff Dubrawski, RN: What I think makes us so focused at least at night is the relationship between RN and NAC. The night SCI NACs have been there for so long that they know more than the newer RN at times. When I first started I was intimidated by Autonomic Dysreflexia but when I learned how long my NAC had worked on the SCI unit at St. Luke’s, I was at ease. I was very impressed at how well educated the NACs were with the SCI population. My NAC’s are so amazing and help the nurses with keeping close eyes on the patients. They go the extra mile and look up patients Bladder scan volumes and ensure urine dips were completed.

4) How do you relate and care for SCI patients so effectively?

   Angela Jorgenson, NAC: With the help from our amazing therapy team and my other teammates I have now become an empathetic person. I pride myself with the quality of care I offer to all patients.

   Melissa Stoddard, RN: I think we care for our SCI patient’s so effectively because they become like family to us during their long stay at St. Luke’s. We are part of their story in a sense and we see it has our sacred duty to provide the best care possible on their road to recovery.

5) What patient or qualities in the SCI patient has inspired you to be a better person at work and home?

   Melissa Stoddard, RN: SCI patients consistently remind me to live each day to the fullest and never take my good health for granted. They also inspire me with their hard work and attitudes to regain back some independence and function. I’m constantly motivated to live my life with joy, love, compassion and integrity because of them. It’s a gift to work with SCI patients.
New Life

Starting out your new life is scary. Suddenly your entire life has changed. You could walk before, maybe even run. Changing your clothes was just an everyday task that you didn’t even have to think about. Going to the bathroom? Well that was just something you did when your body told you it was time to go… Checking skin? Why? Pressure relief? What’s that?

Now you take nothing for granted. Now your legs don’t move—or at least not normally. Maybe you have spasms. Maybe you have to cath yourself and do a bowel program. Maybe someone else has to do most everything for you…

That is the new life that many of our spinal cord patients are facing when they leave St. Luke’s. A place they never wanted to be but now seems safe—or safer than home may feel. We have asked a few questions to a few spinal cord patients. One specifically interviewed right before they leave St. Luke’s and one after having been home a couple of weeks. The answers may vary but you will also notice that the drive for life is still there. They still want to go out and discover new things that they are able to do—just like you and me…

1. **What was your understanding of St. Luke’s prior to coming here?**
   a. Rehab therapy is working my butt off (told to them by NIACH)
   b. Intense boot camp.

2. **What was the hardest thing you had to overcome with your spinal cord injury?**
   a. Accepting that even the easy tasks will be difficult.
   b. Fall recovery

3. **What is one thing you would like to tell a new spinal cord injury?**
   a. Don’t give up. Stay positive even if you are frustrated. Push through to get your best results.
   b. Don’t give up on therapy because it is really needed.

4. **What activities are you looking forward to? Is there anything new that you would like to try?**
   a. Skifest, but I want to wait on anything else until I really get used to being home again and feel comfortable there.
   b. Rugby and basketball.

5. **Who inspired you the most at St. Luke’s?**
   a. My girlfriend—she won’t let me give up!
   b. My mom being there pushing me to strive. My therapists Lauren, PT and Katherine, OT—they were ecstatic and encouraging every time I accomplished something—it made me even more excited to see what yet I could do.

Did you notice the answers were similar? Family is important. Therapy is important. You may get frustrated but push through and conquer what is in front of you. Finally, go out and find the things you want to try, don’t just sit there…the world awaits. It may take effort, but you’re worth it!
Skifest 2017

Summer days… Out in the sun, out by the lake, a couple of boats, jet skis, food and friends. Sounds like Skifest 2017. A mix of friends from the past and present, volunteers from St Luke’s inpatient and outpatient gathered at Clear Lake. This year I volunteered to be a rescue swimmer. Sounds good, ride on the back of the jet ski and jump in the water when a skier releases the tow rope. For someone who loves to swim, this is a great way to volunteer! After a brief training, with life jackets cinched tight, we all jumped into the water. Let the day of fun begin. The skiers were assisted into a modified “cage” or seat on a modified ski. There was a swimmer in the water keeping the skier upright and 2 jet skis with drivers and rescue swimmers on either side of the skier. The skier would signal when they were ready to “hit it” and off we all would go, making our way around the lake. The jet skis would stay close and as a rescue swimmer, we would jump in the water when the skier fell to keep them upright until the boat came back and the process started again. The timing of the leap from the jet ski is very crucial as we needed to land right next to the downed skier. Well that took some practice. It was a very exciting and a little terrifying way to spend the day at the lake! Honestly, one of the best days of summer.

The true joy came from watching the patients take more of their life back and gain confidence. That was more than worth a jump in the lake. My fellow first-time rescue swimmers had similar responses. Katherine, OT said that the experience was “very fulfilling, so great to see patients outside the hospital”. Tracy an RT student had this response, “seeing the patient come to life when they get up on the ski, they forgot their boundaries.” All 3 of us said that we would absolutely do it again. I know the participants with a new sense of accomplishment are coming back. Skifest was a truly rewarding experience and a great summer day for all who came out.
For Sale


- 125,967 miles.
- NorCal 9” lowered floor.
- 6” eyebrow over the entry door for increased headroom on entry.
- 400lb transfer seat.
- Hand controls.
- Floor lock for wheelchair.
- 800lb Braun Under Vehicle Lift.
- Automatic doors.
- Remote and wired entry.

Lots space for passengers and storage. Van and lift have been very well maintained have all service records for both. Runs like a Champ! Buyer is responsible for shipping.

*The price on the van has been reduced to $15,999 – or best offer. Willing to make deal!*

For questions or more info contact –
ronny.coleman30203@gmail.com
Support Group

The SCI support group meets every 4th Wednesday from 1-2 p.m. Please check in at the front desk for the room, as the location changes on occasion. The 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.

FES Bike

Arms not getting 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