Dr. Moise’s Medical Update

Natural Remedies of Interest to People with Spinal Cord Injury

Alpha-lipoic Acid

This is a naturally occurring fatty acid found in some foods, specifically yeast, spinach, broccoli, potatoes and liver. It is known to be important in the function of the mitochondria (energy producing structures within each cell of the body). It has also been shown to have anti-oxidant properties. It helps control blood sugar levels in diabetics and prevents toxicity in cases of heavy metal (e.g. lead) poisoning. Research studies have shown that alpha-lipoic acid helps to lessen the nerve pain associated with diabetic neuropathy and pinched nerves in the back (radiculopathy). This supplement has not yet been studied as a possible treatment to help lessen neuropathic pain caused by spinal cord injury, but it has the potential to help, based on the results mentioned above for other types of nerve pain.

When the spinal cord is suddenly injured, chemicals are released by the damaged tissues that have a toxic effect on nerve cells, causing further damage above and beyond the damage that occurred at the moment of the injury. This delayed damage for the 24-48 hours immediately following trauma to the cord is called secondary injury. An interesting study was just published on the use of alpha-lipoic acid in rats with acute spinal cord injury showing that it completely prevented the secondary injury caused by oxidative toxic chemicals released by the spinal cord tissue. Human studies have not been started yet, but if this proves some day to be as helpful for humans as for rats, this diet supplement could some day be used in the emergency room to lessen the amount of nerve damage in newly spinal cord injured people.

Possible side effects of alpha-lipoic acid include upset stomach, dizziness (from low blood sugar) and skin rash. The usual dose is 200 mg, three times a day.

Acetyl-L-Carnitine

This is another naturally occurring substance. It is an amino acid, a protein building block, present in our bodies. When used as a supplement, it has been shown to promote regeneration of injured peripheral nerves (i.e. nerves in the arms and legs). It specifically reduces oxidative damage to nerves, increases DNA synthesis in mitochondria, and increases level of proteins in nerve cells called nerve growth factors. This results in faster electrical nerve conduction, decreased loss of sensory nerves in nerve diseases, and increased nerve healing and regeneration. It has also been shown to have a strong pain-reducing action, for those with pain from damage or illness involving the peripheral nerves, including diabetic neuropathy. A recent study showed that Acetyl-L-Carnitine also reduces pain from herniated discs causing sciatica nerve pain down the leg.

Continued on page 2
As many people age, or become disabled, most are in the dark on what their insurance coverage is for items pivotal in their independence. Some may not even attempt to go down the maze of Medicare and yet they never have mobility back in their life.

Medicare and similar insurances, typically cover 80 percent of the cost of most durable medical equipment such as; Power Wheelchairs, Manual Wheelchairs, Walkers, etc. Most individuals hold a secondary policy or a form of Medicaid that will cover the Medicare part B co-pay. Some may think it’s impossible to get such expensive items covered, but once you learn the requirements you might change your mind.

The qualifications for Medicare are anyone that has an inability to perform their mobility related activities of daily living in their home, such as, toileting, feeding, dressing, preparing meals, light housekeeping, and ambulating from room to room. These activities need to be done safely and in a timely manner. In addition Medicare will want to know what type of equipment will solve your deficit. Will a cane suffice, if not, why, then walker, manual wheelchair, finally a power wheelchair. This needs to be approved by your physician, and also needs to be documented in an official chat note from your face to face evaluation with your physician.

Mobility equipment is a wonderful tool to help complete your (or your loved ones) mobility related activities of daily living. If you are interested in finding out more about if you may qualify or have any other questions, please feel free to contact Mike at United Seating & Mobility by calling (877) 295-8950.

No one has yet studied this natural supplement as a treatment for individuals with spinal cord injury, but one has to wonder if it could have a role in helping to regenerate damaged nerves within the spinal cord, or if it might work as a treatment for neuropathic pain caused by spinal cord injury.

Possible side effects of Acetyl-L-Carnitine include upset stomach, restlessness, and a fishy smell to the breath, urine or sweat. The usual dose for nerve pain treatment is 500-1000mg three times a day.
The Journey

by Aimee Wallace, MS, PT, ATRIC

It started out as a routine mountain-bike ride for 38 year-old Mark Plemmons on a fall day in September, 2009. He combed the hills surrounding the San Francisco Bay area for the steepest terrain, as he did most afternoons after working all day as a carpenter. The steeper the trail, the better the jumps on the descent. But Mark’s routine came to an abrupt halt when, after soaring 30 to 40 feet through the air, he landed wrong and was thrown over the handlebars and into the stump of an oak tree.

Mark realized his injuries were life-threatening, and so did his dog Rover. Rover had been trained to stay by Mark’s side, but on this day he raced to get help. Mark often rode his bicycle into the hills and tended to take the same route. A woman who lived at the base of those hills was used to seeing Mark and Rover pass by as she played with her children in their yard. This time, when she saw Rover come down the trail alone and frantic, she sent her husband into the hills to look for Mark.

Meanwhile, Mark realized his cell phone was 30 feet away, in the bike’s seat pouch. He managed to pull himself to the bicycle and called 911. The woman’s husband ended up finding Mark and guiding the paramedics to his location. That’s all Mark remembers, as he spent the next month in a drug-induced coma in ICU with subsequent treatment for a pulmonary embolism, 2 major surgeries and 75 x-rays. He had fractured his lower spine (T12 and L1 vertebrae), all of the ribs on his left side, and two areas in his shoulder. His lungs also collapsed. He remembers awakening and feeling “completely helpless, hopeless, fearful and confused.” He suffered from significant nerve and injury-related pain during the next three months of his inpatient stay and couldn’t tolerate more than an hour in his wheelchair. When discharged, Mark couldn’t get around without a wheelchair. His mother had been told that he would never have the ability to move the muscles below his waist and that she should be thankful he could even blink his eyes.

In 2010, Mark heard about the outpatient program at St. Luke’s Rehabilitation Institute and decided to enroll. He moved in with his brother, who lives near Spokane. That’s when I met him, 10 months after his accident.

Mark had begun to have a flicker of contraction in his quadriceps and wanted to capitalize on the movement he had regained. He describes with joy the moment he was told he’d be able to use a walker and braces, because it was a “game changer.” Until then, he didn’t realize he actually had the potential to walk.

The next four months were a period of extreme hopefulness for Mark, as he was casted for leg braces and assigned stretching and strengthening exercises. He has learned to face his daily struggles and continues to work hard at becoming as independent as possible. Reflecting on his experience, Mark tells me, “I am super thankful and feel truly blessed to have the St. Luke’s staff and team in my life at this particular, life-changing event. My interactions at St. Luke’s, from housekeeping to therapists to doctors, has been nothing short of an amazing and positive experience.”

As for Rover’s race to find help, Mark suspects it’s a welcome payback. A few years before the accident, Rover got lost during a fishing trip and Mark took a week off work to find his loyal sidekick. Their relationship, he concludes, was “meant to be.”
Mark’s Tips on Life

• Keep positive no matter how hard it can be sometimes. I tell myself everything will be okay.
• Be thankful for what I have and appreciate the simple things in life.
• The best things in life are not things.
• Remember that accidents and poor health can affect anybody.
• Look at other people’s “good side” only; surround yourself with positive people and situations.
• Remember as humans we all have our good and not so good days.
• Take life day by day and have patience.
• Push to try to learn how to do something new daily (getting dressed, making coffee, preparing food etc.).
• Get a journal and write down goals (exercising, stretching, shopping etc.).
• Get out of the house as much as possible (library, mall, and park).
• Find a quiet, paved, bike path to get some exercise and take in nature.
• Take day trips if possible.
• Step out of your personal comfort zone as much as possible.
• Learn breathing exercises.
• Learn a new hobby (photography, fishing, reading, writing, crafts, etc.).
• Keep the TV off.
• Learn how to use a computer and research online forums to connect with other people who have the same type of injury.
• Think of other disabled people and realize that they also take part and have just as functional a role in society as able bodied people.
• No matter how hard it is to push yourself to exercise, just keep pushing.
• Challenge yourself to talk with as many people as possible in public. You never know who may have great ideas or connections for you.
• Rest and have a good diet plan.
• Do research and check out a new career if need be.
• Get a gym membership.
• Enroll in classes.
• Each and every human has his/her own journey. Do not compare yourself to others.
• No matter what the prognosis is from the surgeons and doctors, put it behind you, accept your injury/illness and fight with everything you have to try and get better. No one truly knows the future.
• Believe in miracles because they happen every day.

Mark has been inspired by his journey to write a book of stories for others who have had similar experiences to hopefully help with dealing with a life changing accident. He wants to instill hope and a community of support through these stories as it is something he feels that he did not have available to him after his injury. If you are interested in connecting with Mark on this project please contact him at: Mark Plemmons 925-413-5781 (cell).
Smoking and Spinal Cord Injury

By Sarah Krantz MOTR/L

Many people use tobacco products as a means to relax, de-stress and to temporarily feel good. There are many ways to use tobacco products with the most popular being smoking and chewing. Either way the nicotine and other chemicals enter into the bloodstream and straight to your brain. Once there the brain reacts to nicotine by making more endorphins, which are often called the body’s natural painkiller, which partly explains why nicotine is addictive.

Use of products with nicotine are linked to many health problems such as cancer, emphysema, heart disease and stroke. Organs harmed by smoking include the brain, eyes, mouth/throat, lungs, heart, stomach, kidneys, bladder, pancreas and skin.

Complications for smokers with SCI

People with spinal cord injuries (SCI) are at risk for many secondary complications related to SCI including pressure sores, bone loss, pain, and reproductive health, which are made worse from smoking. In addition there are several other ways nicotine from smoking affects your body when you have a SCI.

After an SCI your blood circulation is impaired increasing the risk for pressure sores. Nicotine further decreases blood flow which leads to poor oxygen and nutrient circulated to the skin thus increasing the risk for pressure sores and severely impairing skin healing. Also smoking produces carbon monoxide that severely impairs oxygen from entering the blood. The decreased oxygenated blood to the skin is how pressure sores can develop. If a pressure sore does develop, this same decreased concentration of oxygenated blood flow increases healing time and slows healing.

People with SCI overuse their shoulders, elbows, and wrists due to using their arms for transfers, propelling their wheelchair and for activities of daily living leading to musculoskeletal pain. In various reports it has been suggested that the inadequate blood supply to the body may increase your risk for musculoskeletal injury and neuropathic pain and may increase preexisting musculoskeletal and neuropathic pain.

Having an SCI affects the muscles responsible for coughing and expelling mucus trapped in the lungs. There are already other potential concerns after an SCI including an increase in respiratory problems such as: a general decrease in exercise leading to decreased breathing capacity; posture problems with rounding of the shoulders or slouching that can lead to smaller lung capacity; and a change in the type or severity of spasticity that affects the chest or breathing muscles. The concern that is linked with smoking is the increased number and severity of respiratory infections due to the diminished ability to cough. Smoking contributes to congestion increases the production of mucus. The build-up of these secretions may lead to pneumonia, one of the more common causes of both sickness and death with SCI.

Bottom line:

In conclusion, smoking is proven to be bad for your health, leading to many serious health problems especially for those with SCI. If you do smoke or use tobacco products there are many ways to help you quit. Talk to your doctor today to decrease your high risk of developing complications from smoking. Please visit the Spinal Cord Injury Information Network site for more information about Smoking and SCI: http://www.spinalcord.uab.edu/show.asp?durki=108408 and the Spinal Cord Injury Resource Center at http://www.spinalinjury.net/html/_smoking_and_sci.html

2012 Upcoming Events

June - outdoor recreation experience
July – camping
July – ski fest

Dates are not confirmed at this time. Please contact Candice with your questions at: BelcouCM@st-lukes.org
Team St. Luke’s Athletes Shine at the ParaPan American Games

Team St. Luke’s athletes Bob Hunt (age 21), Chelsea McClammer (age 17), Kristen Messer (age 24) and Amberlynn Weber (age 18) had stellar performances on the track bringing home eleven medals from the 2011 ParaPan American Games held in Guadalajara, Mexico.

- **Chelsea McClammer** secured her place as the “Top Performing ParaPanAm Track and Field” athlete winning six medals. She received Gold in the 100m, 200m, 400m, 1500m and 5000m races and the Bronze in the 800m race. McClammer received the most medals of any other track and field athlete.

- **Amberlynn Weber** won four medals, receiving Gold in the 200m, 400m and 800m races and the Bronze in the 100m race. “To win these medals feels so amazing, it’s more than I ever imagined”, said Weber. “I knew I would do well here, but not this well! I tried to stay out of my head and just focus on racing my race and what I needed to do, and all of the pieces came together.”

- **Kristen Messer** won the Gold medal and set a world record in the 100m race. “I didn’t expect a world record, but I’ll take it,” said a glowing Messer. “I’m just so happy to be here and thankful to all of the people who helped me train.”

- **Bob Hunt** placed 4th in the 100m, 5th in the 200m, 6th in the 400m and 5th in the 800m and set three personal records.

Team St. Luke’s had more athletes on the U.S. Paralympic Team than any other program in the country.

Congratulations athletes and coaches!

From left to right: Amberlynn Weber, Bob Hunt, Kristen Messer and Chelsea McClammer,