

# Spinal Cord Injury SIG

Fall 2015 / Winter 2016



## Letter from the Chair

Welcome to our Fall-Winter 2015 Newsletter!

One of our SCI SIG goals last year was to compile a roster of SCI SIG members who were “experienced” SCI clinicians in the US. Spinal Cord Injury SIG members, with the equivalent of 3 years (or more) full time experience specific to SCI, responded to our survey. In addition to asking about years of experience in SCI, we also asked clinicians to identify if they might be interested in learning about/participating in clinical research opportunities in SCI. Early last Summer we were able to post our list online. Our intention was to make the information available to those around the country that may be searching for referrals in specific geographic locations. You can find out about practice settings and contact information for our experienced clinicians on our SCI SIG webpage under, “News and Noteworthy”. Our goal for the next time we collect this information (anticipated in Spring 2017), is to have representation of SCI Experienced clinicians in all 50 states and US territories! Thanks to all who responded to our survey.

Our SCI SIG is also currently recruiting clinicians to serve as Vice Chair or Nominating Committee Member, as these positions will become available next June 2016. If you are interested in either of these positions, please turn to page 2 for more information or contact **Twala Maresh, PT, DPT, NCS, ATP**, our Nominating Committee Chair. In addition to the positions noted, we will be voting on a new “Chair-Elect” position, as well this Spring 2016. The person who is voted into this Chair-Elect position will spend a year learning the roles/responsibilities of the Chair position, then following that year they will assume the role of Chair for the SIG for a three year term. This is a great way for someone who is interested but concerned about being prepared to fulfill the role of chair. If anyone is interested in running for the Chair-Elect position, please don’t hesitate to contact me if you have any questions.

The APTA Combined Sections Meeting (CSM) is fast approaching and will be held at the Anaheim Convention Center, Anaheim, CA on February 17-20<sup>th</sup>, 2016. The SCI programming for CSM is especially inviting this year! Check out the full day preconference course on locomotor training. And you won’t want to miss the SCI-

SIG Sponsored program featuring **Jeff Kleim, PhD** and **Candy Terfertiller PT, DPT, ATP, NCS** as they present their session on the principles of neuroplasticity applied to SCI. Their talk is officially entitled, “Walking Recovery After SCI: Translating Lessons from the Lab Into Clinical Practice”. A summary of all CSM SCI-Related programming can be found on page 2 of this newsletter or for more details go to <http://www.apta.org/CSM/Programming/>.

Also, the next “STEP” conference is almost here! Registration is now open for IV STEP which will be held in Columbus, OH, July 14-19, 2016. The STEP Conferences were designed to bring together physical therapy researchers, educators, clinicians, as well as, basic scientists, to figure out how to best integrate the current science to advance PT practice. The first “STEP” conference was held in 1966 (NUSTEP), II STEP was held in 1991 and III STEP in 2005. Seats for IV STEP are still available but filling up fast! My first STEP conference was II STEP. It was an unforgettable experience for me as a young therapist and I am sure this one will live up to its billing, as well. The IV Step conference on motor control will focus on four “Ps”: *Prevention, Prediction, Plasticity, and Participation* as they relate to contemporary practice in neurorehabilitation. For more info and to register, please see <https://u.osu.edu/ivstep/>.

And finally, in this newsletter, we continue the theme of “Aging and SCI”, focusing specifically on cardiovascular adaptations and aging following SCI. Our profound thanks go out to **SueAnn Sisto, PT, MA, PhD, FACRM** and **Kazuhiro Sabat, BS** for shaping the conversation on this critical topic. Turn to pages 3-5 for an in depth assessment of the cardiopulmonary challenges following SCI and the added considerations of aging. You can read about how to focus your strategies to maximize health promotion/disease prevention efforts in this very important area of SCI clinical practice. We hope you find this informative and useful. Until Next Time.....enjoy the Holidays!  
Karen J. Hutchinson



**KJ Hutchinson**  
SCI SIG Chair

### SCI SIG Officers:

- Karen J. Hutchinson, Chair
- Meghan Joyce, Vice Chair
- TBA, Secretary
- Twala Maresh, Chair, Nominating Com.
- Rachel Tappan, Nominating Com.
- Tim Faw, Nominating Com.

### Inside this issue:

Letter from the Chair	1
SCI SIG news and CSM Programming and upcoming conferences for 2016	2
CVD Adaptations and aging following SCI	3-5
Clinician’s Corner: Martha Smith, PT, DPT, NCS,	6-7
Recap of Conferences in 2015 And SCI SIG Business	8

**Next Issue: Psychosocial Considerations Following SCI**

# SCI SIG NEWS!



## Preconference Course-

Wednesday Feb 17th

8:00 am **Walking the Walk: Translating Research Evidence to Clinical Practice** *P Hennessy, C Holleran, TG Hornby, J Moore, J Woodard*

## Educational Sessions

Thursday, Feb. 18<sup>th</sup>

8:00am **Advanced Roles of Physical Therapy in Spinal Cord Injury: A Model for Lifelong Care** *M Kilbane*

11:00am **SCI SIG Sponsored Session : Walking Recovery After SCI: Translating Lessons From the Lab into Clinical Practice** *C Tefertiller, J Kleim*

Friday, Feb 19<sup>th</sup>

8:00am **Bone Health Post SCI: Current state of the Knowledge and Evidence for Change Following Physical Therapy Interventions**

*T Johnston, R Shields, A Gorgey, G Forrest*

Saturday, 20<sup>th</sup>

7:00am **SCI SIG Business meeting**

8:00am **Fitting the Wheelchair Like a Prosthetic: How to Do it and Why it Matters** *P Garven, A Morgan*

11:00am **Linking Remote Lesion Effects to Recovery After SCI** *T Faw, DM Basso*

**Come join us in Sunny California for Great Spinal Cord Injury programming at CSM!**

## ***Hello from the SCI SIG nominating committee!***

We are looking for three dynamic individuals to run for one of three available positions in the Spinal Cord Injury Special Interest Group. The current openings include Chair-Elect, Vice Chair and Nominating Committee member. Positions will be voted upon in the 2016 elections.

You may nominate a colleague or you may self-nominate. Follow the link below to find the nominating form as well as the duties of each open position and as Karen stated in her letter on page 1, the person who is voted into the Chair-Elect position will spend a year learning the roles/responsibilities of the Chair position, then following that year they will assume the role of Chair for the SIG for a three year term. This is a great way for someone who is interested in a leadership role in the SCI SIG but concerned about being prepared to fulfill the role of chair.

<http://www.neuropt.org/forms/nomination-forms-2016>

A new form must be filled out for each nomination.

Becoming involved with our SIG is a wonderful way to keep current with what is happening in the area of spinal cord management. It is also a great opportunity to network with therapists providing spinal cord injury treatment and research around the country. As an officer in the SCI SIG, you will have the opportunity to participate in organizing SCI SIG programming at CSM and/or writing the SCI SIG newsletter to disseminate SCI education. If you have questions about any of the available positions please contact me or another member of the SCI SIG nominating committee. We are happy to answer your questions!

Twala Maresch, Chair [twalam@uca.edu](mailto:twalam@uca.edu), Rachel Tappan, [rstappan@yahoo.com](mailto:rstappan@yahoo.com), Timothy Faw, [timothy.faw@osumc.edu](mailto:timothy.faw@osumc.edu)

*We look forward to hearing from you soon!*



The SCI SIG is looking for clinicians who are interested in writing a position statement on the use of outside health and fitness facilities post discharge from Physical Therapy. Specific recommendations, helpful hints, questions you didn't know you needed to know.

Anyone interested in participating on this Committee, please contact Karen Hutchinson at [kahutch@bu.edu](mailto:kahutch@bu.edu). This volunteer group will work via conference calls over the course of an academic year.

## SCI or Related CONFERENCES Spring 2016

**32nd International Seating Symposium**

**Location:** Vancouver BC, Canada

**Meeting:** March 1-4, 2016

**For more info:** <http://www.iss.pitt.edu/>

**American Spinal Cord Injury 2016 Annual Scientific Meeting**

**Location:** Philadelphia, PA

**Meeting:** April 13-16, 2016

**For more info:** [www.asia-spinalinjury.org](http://www.asia-spinalinjury.org)

**PRAXIS 2016 — Bridging the Gaps: SCI research to Outcomes**

**Location:** Vancouver, BC, Canada

**Meeting:** April 25 - 27, 2016

**For more info:** [www.rickhanseninstitute.org](http://www.rickhanseninstitute.org)

## Cardiovascular Adaptions and Aging following Spinal Cord Injury

By Sue Ann Sisto, PT, PhD, FACRM and Kazuhiro Sabat, BS



*Sue Ann Sisto is a professor at Stony Brook University in NY. She is the Chair of the Ph.D. Program in Health and Rehabilitation Sciences and Concentration Director for Rehabilitation and Movement Sciences and serves as the Director of Rehabilitation Research and Movement Performance (RRAMP) Laboratory.*



*Kazuhiro Sabat is a second year medical student at Stony Brook University of Medicine interested in Sports Medicine. Currently working at Rehabilitation Research and Movement Performance (RRAMP) laboratory with Dr. Sisto.*

Acute and chronic medical management over the past few decades have contributed to increased longevity in patients with Spinal Cord Injury (SCI). However, the average life expectancy of individuals with SCI is still significantly lower than that of the able-bodied population. Careful consideration of the causes of (premature) death is important to understanding life expectancy data. Cardiovascular disease (CVD) is the leading cause of death in the United States, particularly in the aging population.

Multiple risk factors are related to CVD and aging in people with SCI compared to the able-bodied population. (1) One factor leading to an increased prevalence of CVD after a SCI is that able-bodied Americans are living longer and may sustain falls and other trauma at an older age and may already have advanced CVD prior to injury. Studies show a higher prevalence of CVD and stroke among SCI populations compared with that of the able-bodied populations (2, 3). In one study, individuals with SCI, had 2.72 fold increased odds of CVD and a 3.72 fold increased odds of stroke, after adjusting for age and sex (2). Furthermore, several biomarkers are highly associated with cardiovascular disease, and are more elevated in people with SCI compared to the able-bodied population (4, 5).

### **Biomarkers of CVD in SCI**

Specific markers, such as C-reactive protein (CRP) and homocysteine, are known to contribute to CVD and to a greater extent to CVD in individuals with SCI. These markers can be captured by a simple blood test. C-Reactive Protein, a nonspecific acute phase protein produced in inflammatory states, has a strong predictive value for cardiovascular events due to its role in atherogenesis (6). Low density lipoprotein (LDL) levels of homocysteine (an amino acid) are also higher in individuals with SCI, with larger discrepancies in older adults (>50 years) with SCI, compared to an able bodied population. Abnormal increase in homocysteine is thought to mediate cardiovascular disease by mechanisms such as increased vascular smooth muscle cell proliferation, increased synthesis of collagen and deterioration of elastic material of arterial wall, endothelial dysfunction, and oxidative damage (8). Taken together, these changes in CRP and homocysteine levels may be one explanation of increased atherosclerotic and cardiovascular risk in people with SCI.

There are other negative consequences leading to CVD in SCI such as altered hormone levels and lipid profiles, increased inflammation, and decreased physical activity all contributing to the development of CVD.

Adults with diabetes have a two to four fold increased risk of developing CVD (16) and CVD is the leading cause of morbidity and mortality in diabetic patients. Patients with SCI are at greater risk for developing Diabetes.

Several studies have demonstrated that people with SCI have abnormal lipid profiles which is highly associated with CVD. In the able-bodied population it appears that diet is strongly correlated with LDL levels and physical activity/exercise is correlated with HDL levels. After spinal cord injury, there is a large shift in body composition and metabolism including: lean tissue atrophy below the level of injury, increases in adipose tissue, insulin resistance, and disorders of carbohydrate metabolism such as impaired glucose tolerance and diabetes mellitus (9-11). In particular, low levels of high-density lipoprotein (HDL) can be observed during the chronic phase of SCI, suggesting that the metabolic changes coupled with physical inactivity associated with SCI, could be responsible for the development of this dyslipidemia (1, 12-14).

Cardiovascular disease is a particular concern in people with SCI who also have diabetes. Adults with diabetes have a two to four fold increased risk of developing CVD (16). Prevalence of glucose intolerance and diabetes is significantly higher in individuals with SCI compared to the able-bodied population (9, 10). Glucose can be assessed by a fasting blood test or a 3-hour oral glucose tolerance test where the person ingests a known quantity of glucose and blood is drawn off in half hour increments for 3 hours to track how glucose is metabolized over time. Glucose intolerance is due to changes in body composition and a post injury decline in physical activity levels (17). People with SCI who were insulin resistant were noted to be more obese than both non-insulin resistant SCI and able-bodied individuals (18). Increased intramuscular fat and skeletal muscle atrophy are highly associated with glucose intolerance after SCI (19). Fat deposition could be assessed most accurately using CT scans but where this is not feasible, a Dual Energy Absorptiometry Assessment (DEXA) or waist/girth circumferential measures, although less accurate, could be used. Increased accumulation of fat can increase the amount of non-esterified fatty acids due to increased lipolysis. This increased level of non-esterified fatty acids in the blood are deposited into muscle and liver cells. In turn, triglyceride levels in the liver increase and contribute to insulin resistance (17). Additionally, diabetes in individuals with SCI tends to occur at a younger age compared to the able-bodied population, indicating signs of premature aging in the SCI population (3).

### **Premature Aging in SCI**

Individuals with SCI also show additional signs of premature aging. These include age related hormonal changes such as decreased testosterone, growth hormone, and IGF-1(5). These factors appear to be implicated in age related decline in lean muscle tissue, rapid bone loss in the hip and lower limbs, and higher levels of adipose tissue are reported in people with SCI (5, 20). These biochemical changes along with the hormonal changes captured by a simple blood test, seen in premature aging, could be another factor precipitating the risk of CVD development in people with SCI. *Cont. on pg 4*



## CVD and Aging Cont.



*Individual 40 years post tetraplegia returning to tennis after heart attack in 2014*

Blood pressure is another indirect measure of the CVD status of the individual with SCI. The baseline or resting value for blood pressure recommended to start pharmacological treatment for able-bodied patients over 60 years is systolic blood pressure (SBP) >150mmHg and diastolic blood pressure (DBP)

>90mmHg. Patients less than 60 years old should start pharmacological treatment if

SBP >140mmHg and DBP >90mmHg. There are no specific guidelines for people with SCI but special caution should be taken with people with tetraplegia since they demonstrate lower and less stable BP than people with low thoracic injuries, where regular monitoring of BP is necessary (21). Therefore, regular monitoring for these cardiovascular risk factors is recommended at an earlier age in individuals with SCI than would be expected in the non-SCI population, so appropriate preventative measures can be taken before disease develops. Changes in physical activity, diet, and use of statins have been shown to normalize lipid profiles in people with SCI. Therefore, diet and lifestyle modification (non-medical treatments) are preferable for health management in at risk-populations with SCI.

When managing CVD, the spectrum of interventions available include lifestyle changes, medications, angioplasty, and coronary artery bypass graft (CABG). Regarding pharmacological treatments suggested to manage CVD after SCI, treatment with a statin is almost always the initial pharmacological approach against dyslipidemia. This is because of the proven efficacy of statin to lower LDL levels, CVD events and mortality in patients with increased CVD risk. There is no reason to change the dosage and target LDL level (<100mg/dL) for persons with SCI. Statins causes statin-induced myalgia in 5-10% of individuals, and rarely it may cause rhabdomyolysis. It is not known if individuals with SCI are at increased risk for these side effects (15).

Diet and lifestyle modification (non-medical treatments) are preferable in at risk-populations with SCI, but changes in physical activity, diet, and use of statins has been shown to normalize lipid profiles in patients with SCI.

Recent studies have demonstrated that metabolic and musculoskeletal abnormalities in individuals with SCI can be partially reversed by endurance training with upper-body arm ergometry, functional electrical stimulation (FES) training of lower limbs, or a combination of the two. VO<sub>2</sub> maximum has been shown to increase after varying periods of training, and regular exercise has been shown to improve abnormal lipid profiles in people with SCI (22, 23).

Moderate intensity upper extremity exercise 30-45 minutes three times a week for 8-12 weeks have shown to effectively improve fasting lipid profiles in individuals with SCI (22, 24). Activity/rest interval type exercise may also be effective in improving lipid and glycemic profile (25).

This "interval" consists of three minutes of moderate intensity arm exercise followed by 2 minutes of rest, repeated for 1 hour, with the goal of maintaining intensity at 70-80% of heart rate reserve three times a week for 8 weeks (24). Remember that those individuals with injuries above T5 will not have a normal heart rate (HR) response to aerobic exercise. In this case, exercising with a 20-30 BPM above their resting HR is a safe starting guideline ([www.apta.org/PESP/](http://www.apta.org/PESP/)). Using the Borg Rating of Perceived Exertion (RPE) Scale may also provide greater insight into the perception of effort rather than relying only on HR recordings. However, it is important to recognize that due to the constraints in autonomic control noted above, an increase in RPE values may not correlate with an increase in HR/BP with exercise following SCI. (26)

Finally, Functional Electrical Stimulation (FES) training of the lower limbs demonstrates reversed muscle atrophy, increased muscle mass, and increased endurance (27, 28). Some FES studies have also shown improvement in isometric strength, lower limb circulation, and vasodilatory capacity (27, 28). However, this sort of equipment and training is not readily available to the general SCI population. There exists a strong need to establish community-based resources to facilitate this type of training for the promotion of health and wellness post-SCI. Furthermore, there is a need for larger randomized controlled trials to confirm that these training regimens are helpful in preventing not only CVD but other age-related chronic illnesses such as diabetes, arthritis and respiratory disease in the SCI population.



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- Cont. on pg 5

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## **INFORMATION NEEDED!**

The Practice Committee aims to understand how to best serve clinicians and what resources would be most useful to improve evidence-based care. Please feel free to share this survey with other clinicians and colleagues who are also working in neurologic physical therapy and may not be involved in the APTA and/or Neuro Section.

Copy the link to begin the survey:  
<https://www.surveymonkey.com/r/BFRT38R>

### **MODULES FOR THERAPISTS, DOCTORS, NURSES, AND OTHER PROFESSIONALS**

Topics include assessment, acute management, respiratory, nutrition, bowel, bladder, sexual function, assistive technology, community inclusion, psychosocial, outcomes, vocational rehab, issues specific to women, cell transplant therapy and more!

Each sub-module includes a presentation of the topic, activity based learning exercises, references, and self-assessment questions.

**Sign-up is Free! [www.elearnsoci.org](http://www.elearnsoci.org)**

## **Online Education Resources for People with SCI Related to Aging:**

### **National Spinal Cord Injury Association Resource Center:**

Aging with SCI:

<http://www.spinalcord.org/resource-center/askus/index.php?pg=kb.page&id=266>

### **Northwestern Regional Spinal Cord Injury System Education Videos:**

Everybody's Doing It! Aging with a Spinal Cord Injury:

<http://sci.washington.edu/info/forums/reports/aging-2012.asp>

Aging with a Spinal Cord Injury:

[http://sci.washington.edu/info/forums/reports/aging\\_6.09.asp](http://sci.washington.edu/info/forums/reports/aging_6.09.asp)



## Clinician's Corner: Martha M. Smith, PT, DPT, NCS, CLT



Martha Smith, PT, DPT, NCS, CLT graduated from the University of WI-LaCrosse with her MSPT in 2002, and completed her transitional DPT from Northeastern University in 2015. She achieved her NCS in 2010 and has worked primarily with neurological diagnoses across the spectrum of care, including acute, inpatient rehab, and outpatient PT services, in addition to extensive clinical education with PT students. She has worked at the Rehabilitation Institute of Chicago as a full-time PT on the spinal cord injury & float teams since April 2011.

The positive impact of physical therapists through our therapeutic assessments, interventions, and patient education is undeniable; however, we can also support wellness in our patients beyond the hospital and clinic. Physical activity and cardiovascular fitness is often a challenge for patients once they discharge from our services to the community. Becoming involved with adaptive sports is one option for individuals with spinal cord injury to achieve this healthy lifestyle, as well as facilitating community support, friendship and travel. Participation in sport promotes improved functional capacity including strength and cardiopulmonary endurance, increased optimism, and increased “inclusion in meaningful life activities and roles.”<sup>1</sup> The positive influence of adaptive sports on self-efficacy, self-esteem, quality of life measures, and mental health has also been discussed in the literature.<sup>2</sup>

Quad or Wheelchair Rugby (formerly “Murderball”) was developed in 1977 in Canada as an adaptive sport played by athletes with quadriplegia, with the goal of creating an intense, full-contact competitive game for individuals with impairments in all four limbs. The majority of athletes have cervical-level spinal cord injuries, but others participate with diagnoses including cerebral palsy, amputations, muscular dystrophy, polio or other neurological diagnoses. Quad rugby is recognized as a Paralympic level sport with representation in the Summer Games since 2000, as well as tournaments on regional, national, and international platforms. All players are classified by a point system from 0 to 3.5, according to their functional capabilities and to “ensure fair and equitable competition”<sup>3</sup>; there are 4 players on the court at any given time, with a total of 8 points or less per team. Generally, a team will play two higher-point players in offensive/ball-handling roles, with two lower-point players in defensive/picking roles. However, a point can be scored by any player on the court and all players contribute to the success of the team. Strapping systems promote player safety and the use of the specialized quad rugby chair as an extension of the athlete, allowing protection during hits, maneuverability during court progression, and leverage for holding opponents.

Physical therapists are frequently involved in the quad rugby sport as classifiers, referees, and team staff. Classifiers work as a panel of trained experts, taking into consideration the individual’s muscle strength, range of motion, functional performance, and sport-related skills (such as dribbling, passing & catching, and push strokes/mechanics). Referees work in pairs to officiate tournament games for the US Quad Rugby Association (USQRA)<sup>4</sup>.

I became involved with the Chicago Bears quad rugby team in the fall of 2012 after one of my former SCI patients suggested we check out a practice together. (continued on page 7)



Dr. Martha Smith providing team support

## Clinicians Corner Cont.:

He quickly became hooked on the game; the team invited me back as well, explaining that the sport is largely supported by a group approach including inclusion of able-bodied support staff. My training as a physical therapist is beneficial to the team in many ways. Knowledge of anatomy and neurorehabilitation facilitate not only assisting the athletes with developing more efficient, productive movement strategies during transfers, donning equipment, and during game play, but also with preventing overuse injuries or malaligned positions.

As I watch warm-ups in progress, I can observe which athletes are moving well and which need more attention on a weekly basis. My background in customized wheelchair prescription and posture allows me to assist with modifying an athlete's equipment or positioning in their quad rugby chair to optimize their agility, strength, balance and comfort. As a PT working with individuals with SCI, I am quick to recognize and assist athletes who demonstrate symptoms of autonomic dysreflexia, overheating, dehydration, or general medical distress. All coaching staff with affiliated USQRA teams are required to take concussion awareness & training courses, and we provide basic medical attention during the course of the season. My manual therapy skills are also regularly utilized, especially during tournament weekends, where I help with mobilization and release of trigger points, overworked muscle groups, as well as the "feel-good" massage that the athletes also appreciate at the end of a game. "Able-bodied" (or AB's, as we are often referred to) also help with transportation, team logistics, equipment management, coaching, and overall team management.



Involvement with adaptive sports has also expanded my perspective on how individuals with SCI function in the community, and how I can help to better prepare my inpatients for a larger range of challenges. The athletes and staff that I work with are my friends and my teachers; the supportive, collaborative nature of the sport drives us all to improve and to work together towards a common goal.

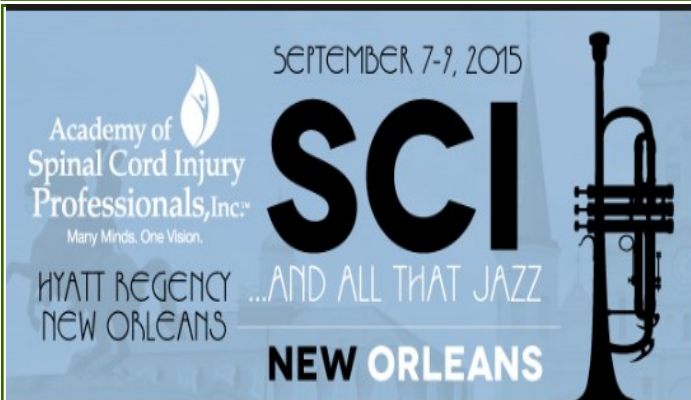
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4. United States Quad Rugby Association: <http://www.usqra.org>





## 2015 Conference Recaps



The Academy of Spinal Cord Injury Professionals (ASCIP) hosted the 2015 Educational Conference "SCI...and All That Jazz!" on September 7-9<sup>th</sup> in New Orleans, LA. The conference was held at the Hyatt Regency in downtown New Orleans. The programming offered exceptional educational curriculum spanning the continuum of spinal cord injury and disease and was of interest to all SCI professionals; physicians, psychologists, nurses, therapists, social workers, case management, and chaplains.

The conference provided a wide array of presentations including keynote and plenary sessions, in-depth workshops, over 100 posters, vendor hall, and opportunities for specific clinical education on key areas of SCI practice and research. This year there were also opportunities to obtain CEU's in ethics, with lectures specifically geared toward ethical scenarios relating to spinal cord injury.

Key lectures from some of the most respected professionals in the field included topics such as: *40 years of SCI Research*, *Point Counterpoint discussions surrounding controversial issues in SCI management*, *Rehab Technology Friend or*

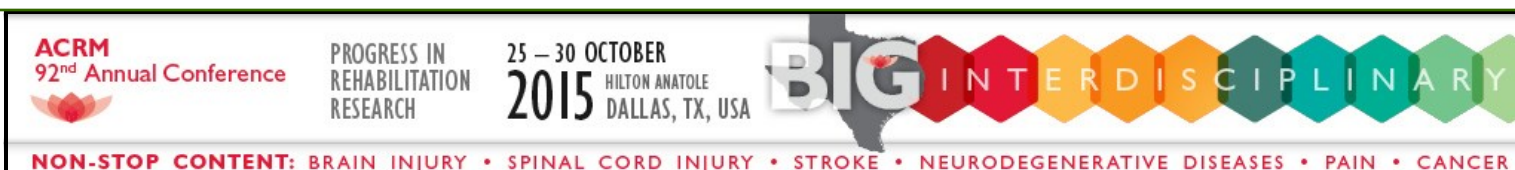
*Foe*, and *Independent Living and Empowerment*. The conference kicked off its opening ceremonies with a reception at Mardi Gras World, where registrants could take a tour and see where the historic Mardi Gras floats are made. This gathering allowed ASCIP attendees opportunities for networking and reuniting with old friends and colleagues. The ASCIP team is looking forward to another successful educational conference and expo next year in Nashville, Tennessee at the Omni Nashville and Music City Center Hotel September 4-7<sup>th</sup>. For more information, resources, and membership opportunities for the Academy of Spinal Cord Injury Professionals please visit [www.academyscipro.org](http://www.academyscipro.org).

Submitted by Meghan Joyce, PT, DPT



The International Spinal Cord Society (ISCOS) and American Spinal Injury Association (ASIA) Joint Scientific meeting was held in Montreal, CA on May 14-16<sup>th</sup>, 2015. This highly attended conference included 3 full days of programming and hundreds of SCI-related poster presentations. Dr. Michael Boninger's gave an awe-inspiring keynote address on the, "Future of Neural Prosthetics in SCI", and Dr. Alberto Aguayo gave a memorable perspective on the advances of neural regeneration and repair after spinal cord injury.

Finally, Edelle Field-Fote, PT, PhD, FAPTA, Director of Research at Shepherd Center in Atlanta, GA, presented her timely Special Lecture on the critical role of neurorehabilitation in driving neuroplastic change after SCI. The next ASIA Scientific Meeting will be held on April 13-16, 2016 in Philadelphia, PA. And next year's ISCOS Scientific Meeting will be held in Vienna, Austria September 14<sup>th</sup>-16<sup>th</sup>, 2016. Submitted by Karen Hutchinson, PT, DPT, PhD



The American Congress of Rehabilitation Medicine (ACRM) held its 92<sup>nd</sup> annual conference, *Progress in Rehabilitation Research*, in Dallas, TX from October 25<sup>th</sup>-30<sup>th</sup>. The conference was held at the Hilton Anatole. This is the largest interdisciplinary conference in the world for rehabilitation research. Programming at ACRM covered a wide range of topics of interest to interdisciplinary rehabilitation professionals, including 6 diagnoses and 12 additional focus areas (including spinal cord injury, brain injury, stroke, cancer, pediatric rehabilitation, pain, neurodegenerative diseases, neuroplasticity, and technology).

There were four plenary sessions covering topics ranging from *Neuroprosthetics to wheelchairs: The good, the bad, and the ugly of assistive technology* to *The healthcare quality landscape: Role of rehabilitation medicine*. Additional activities included two themed poster grand rounds, sessions with directors of the National Center for Medical Rehabilitation Research (NCMR) and the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), the themed Henry B. Betts Awards Dinner and gala "Diamonds and Denim", and an expo featuring scientific poster displays and the latest rehabilitation products and services.

Throughout the conference, various special interest groups, networking groups and task forces held meetings to further foster communication and brainstorming throughout the interdisciplinary rehabilitation community. ACRM will hold a mid-year meeting in Chicago, IL April 13-15 2016, and will hold the 93<sup>rd</sup> annual conference in Chicago, IL Oct 30-Nov 4, 2016. For more information, resources, and membership opportunities for the American Congress of Rehabilitation Medicine please visit [www.acrm.org](http://www.acrm.org).

Submitted by Kaitlin Hays, PT, DPT, NCS