# Dec. 10, 2009 Presentation & Workshop
# OC Goodwill Fitness Center
# Drumming after Spinal Cord Injury

This is a presentation and workshop for an Orange County spinal cord injury group in December 2009. Spinal cord injury, or SCI, poses some very specific mobility challenges to affected persons. Outside of their day to day physical mobility challenges, there is a vast amount of new research underway that is producing new treatments and impressive new outcomes for many following SCI today. Our goal in introducing drumming here is to explore ways in which it can be used to further the everyday needs of persons with SCI, perhaps even in ways not previously considered, and to explore how it might be used to support new research initiatives in the sub-clinical setting.

Up to this point, we have not had any specific experience with spinal cord injury or treatment. We are familiar with SCI albeit as a neurological and physical condition, and we interviewed some persons having SCI, as well as spoke with scientists at the UCI Reeve Center as to their current research interests.

For this SCI workshop, we presented our hallmark "rhythm & movement" drumming to help everyday mobility, and bolstered our communicative drumming with more assertive rhythms with the belief this might help SCI individuals better navigate and communicate while at crowded places and venues.

Next, we featured some "fun and lively" rhythms to simulate dancing, running, and jumping, movements that are widely not very available to persons with SCI, and we ask participants to try and feel the playing of the beats right down into their feet.

Lastly, we provided a drumming session on "visualization of walking and gait," in support of a new joint Harvard University and University of California Irvine Reeve Center research study. In this study, participants are placed under an fMRI scanner and asked to visualize walking. The hope is that these researchers can come to a new understanding of the role between optimized brain activity and spinal cord repair. We felt that if the participants were to play their visualized walking movements on a drum or shaker, and try and sense this down to their feet, that the additional "biofeedback" might trigger a better response than merely visualization alone (though no brain imaging is done).

We carried out this workshop by way of instrument stations, whereby, instruction was given on how to play and experience each of the instrument groups (bass, hand drums, shaker, and bells/block). The following is descriptive information on each exercise.



**1. Rhythm & Movement Drumming:** Designed to help everyday mobility, tasks, and coordination thereof. SCI persons, notwithstanding the limitations from upper thoracic and cervical cord involvement, should already have increased dexterity in the use of their hands and fingers. The goal of this exercise is to get the participants to use existing finger and hand movements for more than merely tasks and control of their chair, rather, to play patterns that can be parlayed over to better coordination and syncopation of tasks and chair control. These should be quick and varying rhythms to simulate everyday movements. Participants are instructed to play patterns not only on the instruments, but also on their legs and parts of their chair.

**2. Communicative Drumming:** Designed around the concept that learning assertive and provocative rhythms will further an individual's body language, presence, and telepathic energy. The basis to this exercise is supported by an earlier published study that reported men under the height of 5'8" did not command the same attention when speaking as did taller men. Further, it has been observed in SCI that because the individual sits down relatively low in their chair in public, much less than 5'8", and that they require a wider space to pass thru crowds, they face additional difficulty in having people acknowledge them sufficiently to make room for passage. Here, strong and assertive rhythms are played to boost one's command and presence. Mind-body exercises may also be of help.

**3. Psyche & Wellness Rhythm Drumming:** The concept in this exercise is that body movements and rhythms like running, jumping, skipping, and dancing are important to our overall wellness and psyche. In SCI, when one is limited to mobility via a chair, he/she is limited in the movements and rhythms they can carry out. By playing these movement patterns on hand percussion, one can "simulate" many of the patterns that are executed in running, jumping, skipping, and dancing. The main difference in the true movements versus this exercise would lie in the motion of the feet as "pivot points." Here, the "pivot point" of movement will be as low down on the spine and into the pelvis as is possible for each person. The focus of this exercise is fun and lively rhythms that simulate the above movements.

**4. Drumming and Visualization of Walking/Gate:** This exercise is being offered in support of a joint Harvard University and University of California Irvine Reeve Center study on walking and gait in SCI. Though no fMRI scanner is available in today's drumming, the concept is the same, that playing a rhythm and feeling movement down into the legs might enhance brain activity for spinal cord repair. Participants are asked to play their visualized walking movements on a drum or shaker, and try and sense the pulse into their feet. This exercise requires more individualized concentration to engage visualization of walking. It is unclear whether other distractions and rhythms in the room might detract from the merits of this exercise. Typical rhythms would be 1-2 1-2 or 1-2-3-4 to simulate walking and marching.

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