

## **R1 Project Update**

Cardiovascular disease is the leading cause of death in long-term Spinal Cord Injury (SCI). The primary goal of our research study is to achieve a better understanding of cardiovascular disease and to elucidate if there are certain risk factors that have greater relevance in people with SCI. Upon study completion, we hope to have made strides towards a web based cardiovascular risk tool (RISK) and a BMI adjusted table specific for the SCI population.

Seventy-six subjects have completed the study [64 males/12 females; 29 tetraplegia/47 paraplegia]. For this sample, the average age is 38 [19-68], the average duration of injury is 13.8 years [1-48], and the average BMI is 26 [16-46]. We measure actual body fat using DEXA scans. Interim results demonstrate large differences between standardized Body Mass Index (BMI) and actual % body fat. These findings indicate that there are many subjects with a normal BMI that have elevated % body fat. This data justifies the need for a BMI adjusted table specific for the SCI population.

There are several risk factors for cardiovascular disease. Some risk factors like age, gender, race and family history are non-modifiable. Other factors such as overweight/obesity, cholesterol, blood pressure, physical activity, and tobacco are modifiable. From our interim results, the most common factors are overweight/obesity, increased LDL (bad cholesterol) and low HDL (good cholesterol). The majority of the subjects have several risk factors for cardiovascular disease.

In summary, data collected for this project along with other studies can be used to develop SCI-specific cardiovascular disease guidelines. A better clinical surveillance tool will assist clinicians with earlier risk assessment and potentially reduce obesity-related cardiovascular disease.