INTRODUCTION
Contracture management has been one of the more difficult challenges we face as orthotists. Ensuring optimum results for our patients in order to prevent surgery or regain the biomechanics for standing and ambulating are what we strive for and quite frankly, are what is expected of us. But how do we get such results? What are the key factors necessary in order to provide the best possible outcome for our patients? This case study will focus on using dynamic splinting for contracture management, its results, and discuss the essential factors needed for success.

METHOD
In this case study, a custom dynamic knee extension assist orthosis was used with having lateral dynamic concentric extension knee joints and medial free motion knee joints, polypropylene thigh and calf cuffs to distribute the force, and an anterior knee cap to create a three point force (see figure 1 below). This custom knee orthosis was used during night-time hours to provide a low stretch over a long period of time in order to gain the optimum results while measuring ROM weekly to ensure ROM increase is attained. Once ROM has plateaued then the tension is increased. In this case study, patient suffered incomplete spinal cord injury due to MVA in 2013. The goal of the patient was to ambulate once again but since the accident had developed a -25 degree knee extension contracture in his right lower extremity. With the assistance of the physical therapist, we were able to provide patient with the dynamic knee extension orthosis and monitor his progress on a weekly basis recording the results.

Figure 1. Sample of Custom KO

RESULTS
Results were recorded on a weekly basis during the patient’s therapy session by the physical therapist. It was observed that the best results came the week preceding a tension increase, with the greatest overall increase occurring during the initial first week of treatment (see figure

Figure 2. Knee Extension ROM

DISCUSSION
After conducting this case study it is evident that dynamic splinting for contracture management is a viable treatment. However, we face several challenges in order to achieve desired results such as compliance and proper follow up, even knowing when to provide such orthosis. The intention of this abstract is to instill confidence and knowledge to other orthotists to ensure they have the best chance to achieve results as the patient in the case study received. This abstract will discuss the design and fit of the dynamic stretch orthosis, the tension settings and follow up, and lastly the appropriate diagnosis and contra-indications.