

A Biomechanical Model for the Idiopathic Scoliosis Using the Antalgic-Trak Technology

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Abstract : The mathematical modelling of idiopathic scoliosis has been studied throughout the years. The models presented on those papers are based on the orthotic stabilization of the idiopathic scoliosis, which are based on a transversal force being applied to the human spine on a continuous form. When considering the ATT (Antalgic-Trak Technology) device, the existent models cannot be used, as the type of forces applied are no longer transversal nor applied in a continuous manner. In this device, vertical traction is applied. In this study we propose to model the idiopathic scoliosis, using the ATT (Antalgic-Trak Technology) device, and with the parameters obtained from the mathematical modeling, set up a case-by-case individualized therapy plan, for each patient.

Keywords : idiopathic scoliosis, mathematical modelling, human spine, Antalgic-Trak technology

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