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Athletes, sports medicine and stem cells: Regenerative applications

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Athletic endeavor has always intertwined with pursuing optimal physical performance. The inherent risk of traumatic injury has placed sports medicine at the forefront of progressive treatment. The emergence of Regenerative Medicine has led to the clinical translation of sports medicine related problems. The use of Biologics, Platelet Rich Plasma (PRP) and Stem Therapy are foundations for this approach. The scientific literature will be explored to provide a foundation for the pathophysiology of injury and trauma as it relates to sports medicine, and the regulation of catabolic responses through cellular signaling and cytokines. The rationale for Regenerative Medicine applications such as stem cell treatments in sports medicine is presented. Various clinical cases are presented to illustrate the utilization of stem cell therapy and PRP as a therapeutic strategy to assist athletes in their return to sport. Select situations in which standard medical treatment is a surgical intervention, may be unsuitable for return to sport. A Regenerative Medicine treatment model incorporating Stem Cell Therapy, may provide suitable alternative strategies that facilitate healing and repair, without precluding return to sport. In the sports medicine world success is measured by return to sport. The clinical translation of Stem Cell Therapy into sports medicine may foster a transformation of treatment strategy.

Biography

Dennis M Lox, MD is the Director of the Sports and Regenerative Medicine Centers A Stem Cell Center of Excellence in the Washington D.C. Metro Area and the Tampa Bay Metro Area. He attended the University of Arizona, where he was Phi Beta Kappa studying Liberal Arts. He then completed his medical training at Texas Tech University, followed by his residency program in PM&R at The University of Texas Health Science Centers at San Antonio. He has always pursued Sports Medicine, and this led to a path into Regenerative Medicine. He has edited 2 medical texts, 9 book chapters, and lectures National and Internationally on sports, regenerative medicine and stem cells.

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