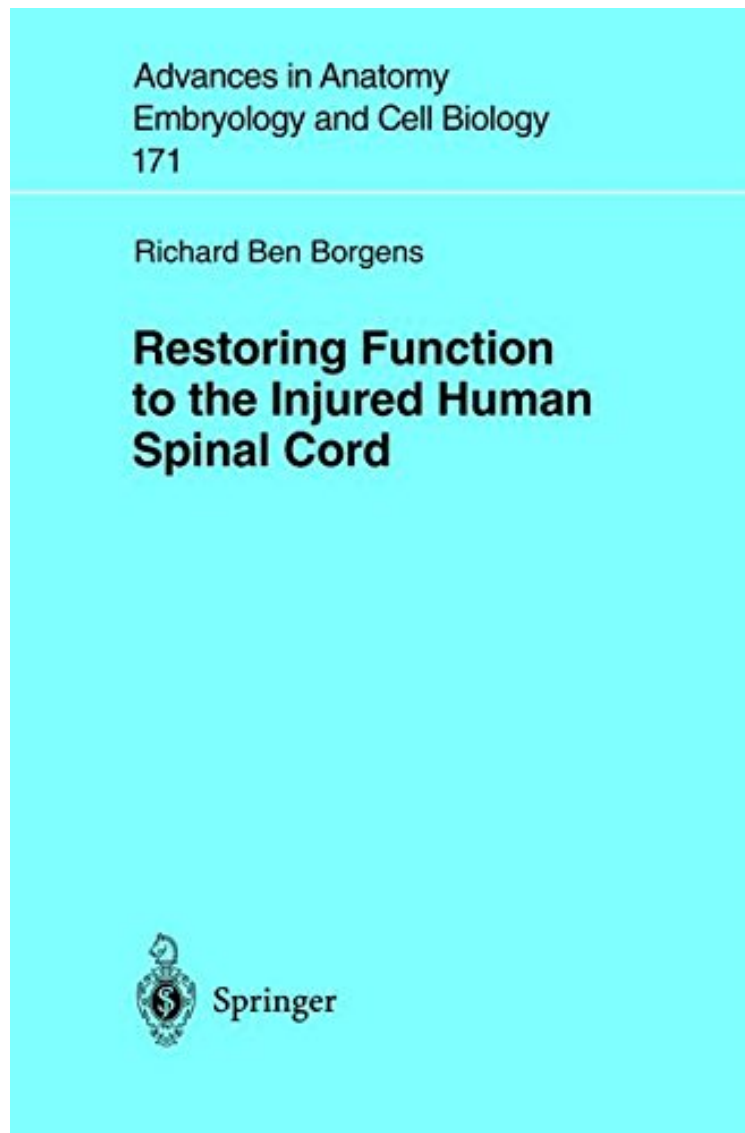


[E-BOOK] Restoring Function to the Injured Human Spinal Cord (Advances in Anatomy, Embryology and Cell Biology)

## Restoring Function to the Injured Human Spinal Cord (Advances in Anatomy, Embryology and Cell Biology)

*Richard B. Borgens*

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**Richard B. Borgens : Restoring Function to the Injured Human Spinal Cord (Advances in Anatomy, Embryology and Cell Biology)** before purchasing it in order to gage whether or not it would be worth my time, and all praised Restoring Function to the Injured Human Spinal Cord (Advances in Anatomy, Embryology and Cell

Biology):

This book has two major themes: one, to provide a general understanding of the biology of spinal cord injury (SCI) in animal models and their relationship to naturally occurring injury in man, and secondly, to review novel means to induce functional recovery from spinal cord injury based on developmental biophysics and physiology. These are new innovations in the treatment of SCI, born of disciplines that have not received much attention from investigators interested in the repair and regeneration of the Central Nervous System (CNS). They include development of 4-Aminopyridine for chronic SCI; oscillating electrical fields and polymer infusion for acute SCI. Biochemistry, neurotransplantation techniques, and pharmacological approaches have long dominated this literature. Curiously though, it is these former techniques that are more practical and are rapidly moving into human clinical studies, or have already begun then. All of these clinical therapies have been developed at the Center for Paralysis Research at Purdue University, mirroring the backgrounds and interests of the electrophysiologists and biophysicists of our Research Center's faculty. Two of the three experimental therapies for SCI developed at Purdue University are now in human clinical trials, and a third will soon begin. They frame the emphasis of this text.

From the Back Cover Of catastrophic traumas to the human body, spinal cord injury (SCI) has least benefited from innovations arising from the new biology. Since after WW II, the "standard of care" for SCI has changed little. The controversial use of high dosages of steroids has provided only modest benefit to patients but not without the enhanced risk of mortality. Novel therapies arising from biochemistry and genetics have not materialized in over 15 years, and are unlikely to in the authors opinion. Instead, appreciation of biophysics and cell physiology in controlling nerve injury, growth, regeneration, and function has produced innovative clinical approaches now in testing in human spinal cord injury.