

# NeuroProsthetics

Clinical Training Course Description & Registration 2009

Axiobionics

Columbus OH

800 552 3539

www.Axiobionics.com

## NeuroProsthetics

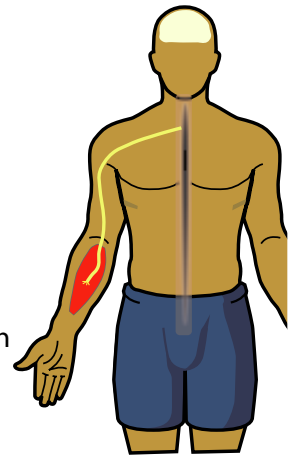
NeuroProsthetics are devices that interact with and control the nervous system. They are designed to reproduce or substitute for neurological and physiological function that has been lost to injury or disease. Wearable electrical stimulation systems deliver impulses to peripheral nerves. They induce a variety of beneficial effects, including muscle building, relaxation of spastic muscle, improvement of blood circulation, reduction of joint contractures and alleviation of pain. Neuro-

Prosthetics improve function in a way that is "physiological". Patients with central nervous system dysfunction lose function when muscles become paralyzed. However, muscles can be stimulated with enough force to induce purposeful movement.

Axiobionics integrates electrical stimulation into customized and wearable garments. These garments ensure that the muscle is properly stimulated. They accurately and precisely place the

electrode over the affected area.

Our clinicians are trained to individualize these devices specific to each case and the need of the patient.



Central Nervous System (CNS)  
Peripheral Nervous System (PNS)

## Becoming a NeuroProsthetist



Wearable Therapy Vest  
for the Management of  
Chronic Pain

To qualify for our training program you must be a practicing certified orthotist or prosthetist or other medical practitioner with an interest in working with pain, orthopedic, and neurological patients. You must attend our NeuroProsthetics training course offered throughout the year. We welcome individuals from the field of orthotics and prosthetics and hope to inspire you to grow

your clinical skills. Our technology will give you the ability to significantly improve the clinical outcomes of your patients with tools that are easy to implement. Be one of the first in your area to become a NeuroProsthetist and to implement a more physiological strategy to patient care. Sign up for the next available class.



BioVests are Custom-made  
to Exactly Fit the Patient and  
Target the Pain

## Our Nationwide Pain and Neuro Network

Join us in building a Network of skilled NeuroProsthetists for whom patients and physicians alike will rely upon for exceptional care. The number of Americans who are in pain is significant. Many of them suffer needlessly. The pain market, a multi-billion dollar market, is untapped within O&P. Show your patients a more effective means of managing pain and assist them to once again become productive members of society. As a NeuroProsthetist you will have access to the emerging markets for both pain and neuro rehab devices.

*NeuroProsthetics:  
The Next Generation of O&P Services*

Wearable Therapy  
improves quality of life as  
well as tolerance for work



## Wearable Therapy Helps Arizona Teen Walk Again After SCI

Jimmy Tucker, an adventurous 19 yo with iron-clad determination, fell as he was rock climbing 2 years ago. The fateful moment left him paralyzed and unable to stand or walk. Though a devastating injury, to Jimmy,



this was just another mountain to conquer. That sort of tenacity led him to undertake highly aggressive physical therapy at the Neuro Institute in Tempe. It was there that he was introduced to Wearable Therapy.

Initially, Jimmy had very little strength in his legs. He was able to begin walking with long-leg braces... his knees and ankles locked. It wasn't perfect, but it was a start. Muscle stimulation was initiated simultaneously with therapy, 1-2 times a week. The muscle stim

exercises resulted in increased muscle strength, which facilitated walking with unlocked knees and ankles. Jimmy was fitted with the Wearable Therapy System for effective transition to his home exercise program. Use of his system, 4-5 times per week, has greatly accelerated his progress.

Jimmy has made significant gains toward getting back on his feet. He's walking ambitiously and focusing on his target. It's obvious who's in charge!

## Pain from Scoliosis Melts Away with Wearable Therapy

Anita Jones was diagnosed with idiopathic scoliosis when she was a teenager. The curvature in her spine and the resulting pain have been profound. Anita is a determined woman, and hasn't allowed her pain to prevent her from doing the work she loves. She manages her father's Mansfield, Ohio potato chip company, which he founded in 1945. However, her work productivity and enjoyment of life were greatly affected by the 7-10/10 pain she experienced. She was so

exhausted after work; she would fall asleep before 8 pm.

Anita was fitted with a custom Wearable Therapy BioVest, resulting in dramatic improvement. Her pain is reduced to the 3-4/10 range when wearing her vest. It is significantly better than the severe pain she has had for the past 5 years. She now works with greater focus, confidence, and productivity. Her energy level has increased. Anita has become much more recreation-

ally-oriented and able to enjoy life.

Wearable Therapy has given Anita renewed quality of life and hope. We are gratified she is doing well.



## Our Mission

To provide our patients with the very best medical care in a manner that is personal and compassionate while always endeavoring to improve our technology.



*freeSTEP™ physiological walking for foot drop in CNS disorders*

### Our Founder...

*Philip Muccio, CPO, is founder and President of Axiobionics, Inc., a neuroprosthetic company devoted to innovative medical technology for the management of pain, orthopedic, and neurological disorders. He has over 15 years of NeuroProsthetic experience.*

Axiobionics  
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800-552-3539

[www.Axiobionics.com](http://www.Axiobionics.com)

# NeuroProsthetics

## Clinical Training Course

Axio|Bionics

### What you will learn...

#### **Academics**

During this 2 day session you will learn didactic and hands-on techniques to be able to implement NeuroProsthetics in your practice. The course will teach the fundamentals of electrical stimulation and how electricity interacts with human physiology. You will be taught how muscle contracts when subjected to elec-

trical impulses and how you can adjust stimulation patterns and parameters to achieve desirable effects on muscle. You will learn how to apply this knowledge to neurological conditions such as spinal cord and stroke to achieve both therapeutic and functional outcomes.

The course will teach the fundamentals of pain and pain manage-

ment techniques using electrical stimulation. Some background will be given regarding the neurophysiology of pain. You will learn about other techniques in pain management to broaden your understanding of the field.

Students will be taught proper electrode placement for both muscle stimulation and pain inhibition.

#### **Workshops**

NeuroProsthetics is as much a medical art as it is a science. You will learn how to stimulate nerves and muscles properly. Our workshop will teach you how to apply electrodes to all major muscle groups. Students will receive lab experience in the application of electrodes and a demonstration of how major muscles contract in

response to electrical Stimulation.

Each student will participate in the design and fitting of various TEST garments and will learn this process from start to finish.

There will be a demonstration of NeuroProsthetics for control of foot drop, opening of the hand, and spine function.

Students will be exposed to an actual pain patient to demonstrate the disability of the pain patient, the process of evaluation, and assesment of the outcome of this approach.

Finally, you will learn how to troubleshoot systems and be able to recognize and diagnose malfunctions using our testing equipment.

#### **Course Instructor**

Philip Muccio, CPO, is founder and CEO of AxioBionics, Inc. He has over 20 years experience with NeuroProsthetics. After completing his residency at the Cleveland Clinic, he became a member of the Cleveland Veterans Medical Center research team on Functional Electrical Stimulation. His role was research orthotist

responsible for the development of orthotics and sensors for FES devices.

Muccio obtained FDA approval for AxioBionics electrode garments in 1995. Later that year he was invited to create a NeuroProsthetic System for SCI advocate, Christopher Reeve. Mr. Reeve was able to use our product to maintain his body and to avoid complications

associated with paralysis. Muccio has created the most comprehensive array of NeuroProsthetics systems for the pain and neuro patient, and has fit thousands in his career.





# 2009 NeuroProsthetics Clinical Training Course

**Axiobionics-Center for NeuroProsthetics  
(Contact us for Exact Dates and Seminar Locations)**

**6 practitioners required for in-facility training. Please call to arrange.**

**Call or email us to be added to our email list  
for upcoming training sessions.**

**Axiobionics, Inc. 800-552-3539  
training@axiobionics.com**

**Registration Form: (Fax this form to 614-236-8083)**

**Practitioner's Name** \_\_\_\_\_

**Company Name** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_

**Telephone** \_\_\_\_\_ **Fax** \_\_\_\_\_

**Email** \_\_\_\_\_

**ABC/BOC Certification #** \_\_\_\_\_

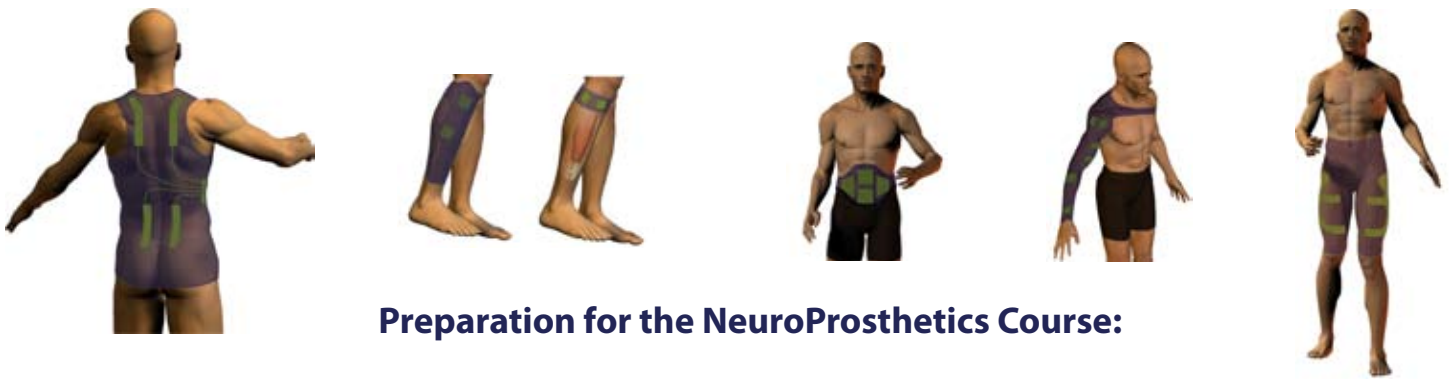
**Course Fee is \$1,000 per clinician and is due at time of registrations.**

**Course fee includes up to 17 CEU's, training manual, NMES device, electrodes, fitting kit, marketing material, website exposure, and ongoing support.**

**Forms of payment accepted: Check (payable to Axiobionics) or Credit Card**

**MC**     **Visa**     **Am Ex**     **Discover**

**Card #:** \_\_\_\_\_ **Exp** \_\_\_\_\_



### **Preparation for the NeuroProsthetics Course:**

**NeuroProsthetics entails an understanding of both anatomy and physiology. To make the most of the course, please review these subjects (with particular emphasis on muscles and the nervous system) prior to attending.**

**Participants should bring shorts to the course on the second day.**

### **Seminar Location and Hotel Details:**

**Please call for Seminar Location and Details.**

### **Arrival and Departure:**

**Please make arrangements to arrive the evening prior to the start date of the course. Departure should be made after the conclusion of the course, which is 5 pm on the second day.**

### **Contact Info:**

**Philip Muccio, CPO  
email: [philipmuccio@axiobionics.com](mailto:philipmuccio@axiobionics.com)  
cell: 614-989-1376**

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Office: 800-552-3539  
fax: 614-236-8083**

