

## Introduction

The Biofeedback and Advanced Therapy Institute originally published this book under the name *ELECTROMYOMETRIC BIOFEEDBACK THERAYPY*. It was poorly produced in almost very sense of the word. There were many clerical errors (very poor editing), some of the content strayed from the basic theme of the book, the font used was ill chosen, and even the quality of the paper was exceptionally poor. Ironically, the cover was pretty good. That being said, the content centering on the main subject of the book is, in my view, *very good* and (to my knowledge) has not been duplicated or matched in all the intervening years between the original publication date (1981) and today (2009). The material within this book was developed through the trial and error of clinical practice working with, and helping to correct, neuromuscular dysfunctions. The models describing our view of how the central nervous system responds to damage and how it can be aided through the reeducation process with the help of electromyometry still appears to be valid and may aid the reader in understanding our approach. The figures and illustrations are the same as those used in the previous book, though they have been relabeled it improve quality and clarity. The photographs used to illustrate electrode placements are the originals used in the first book (as one can see from their quality). All in all, this book is an upgrade of the previous production and is an attempt to once again present the material within, in hope that what we discovered will not be lost.

The following was taken from the original introduction.

...Being a relatively new field, biofeedback has been subjected to enthusiastic applause and deriding criticism. Such extreme reactions have developed as natural consequences of early successes in the treatment of dysfunctions previously considered incurable or highly resistant to therapeutic management, coupled with its failure to be a nonspecific panacea for the treatment of all human ills....Its appeal has come out of its non-invasive nature, and its ability to allow the patient an opportunity to play an active major role in his or her own therapy, while poorly understood psychoneurophysiological mechanisms at work in treatment techniques was the source of much of the scientific derision.

The goal of this book is to explore the psychoneurophysiological mechanisms involved in the use of electromyometric feedback in the treatment of neuromuscular disorders. An attempt will be made to explore the relationships between the various separate elements in the central nervous system and between those elements and the muscles as an intricate cybernetic system. These relationships will be explored in terms of damaged and undamaged systems and how electromyometry may be utilized in the treatment of various specific neuromuscular dysfunctions.

...This text will basically limit itself to the discussion of the neuromuscular system and the use of electromyometry to affect it. There will not be a general exploration ...of all biofeedback instrumentation nor of the many treatment techniques that developed out of its use.

This text is divided into four major sections (chapters) of interest. The first...is devoted to the muscle spindle and its relationships to the various components of the central nervous system. The second...is devoted to a discussion of how the neuromuscular system can be described as a cybernetic system of positive and negative feedback loops and how electromyometry may be utilized as a treatment modality for dysfunctions of that system. The third...is a discussion of the etiology of various pathogenic neuromuscular and of the specific electromyometric treatment protocols utilized in their amelioration. The fourth...is devoted to the etiologies of various nonpathogenic neuromuscular dysfunctions and the electromyometric protocols appropriate for their treatment.

It is hoped that this text will further the scientific development of biofeedback by advancing the view that far from being a general palliative treatment of human ills, it provides a set of specific tool for the treatment of specific human dysfunctions.