Foreword

When Dr. Emil Pascarelli founded the Miller Health Care Institute for Performing Artists in 1985, he could hardly have appreciated the pioneering nature of his vision. Nor could he have realized the profound effect his novel and painstaking approach would have on the way physicians would come to view performance and workplace injuries. Under Pascarelli's direction, the Institute at Columbia University in New York became one of the largest clinics in the country treating repetitive strain injuries. Growing to about a thousand patients a month, with musicians, dancers, and keyboard workers of all varieties, an enormous experience was developing. Even after many previous fruitless consultations and treatments, patients benefited from the application of a meticulous medical and ergonomic approach, which was complemented by comprehensive upper body biomechanical assessment, laboratory tests, and finally routine videotaping of a patient's customary activity. An integrated program of ergonomic modification and a highly refined treatment program achieved success and rehabilitation even for the chronically afflicted.

Dr. Pascarelli recognized that the workplace had evolved from the backbreaking and lung-challenging labors of previous centuries to the unique demands of the modern office. Repetitive

strain injury (RSI) now makes up more than 60 percent of work-related illnesses. Dr. Pascarelli recorded subtle differences in the manner in which workers performed their jobs, and how some become disabled. He recognized the significant physical demands on what he termed the "sit-down athlete," and how poor biomechanical work habits or poor ergonomic design can lead to injury-causing behaviors such as the disabling keyboard habits of "leaners, loungers, and clackers."

Unfortunately, outside of the institute, the approach to patients with "overuse" syndromes had evolved in a somewhat chaotic clinical environment, with each specialty focusing on one or another familiar characteristic. Often the diagnosis was based on the most prominent symptom rather than on the recognition that tendinitis or carpal tunnel syndrome may be part of a larger constellation of symptoms, the recognition of which would lead to the real etiology of a patient's disability. The poor diagnostic results derived from the unfortunate erosion of physicians' clinical skills, a reliance on limited physical examinations, and moving too quickly to highly focused laboratory tests. In this setting, equivocal or incomplete test results are often accorded undue significance, even in the face of contradictory physical findings. These misleading clues often divert one's attention–to the detriment of the patient and the frustration of the clinician when the expected "cure" doesn't materialize.

Returning to basics, Dr. Pascarelli, through his highly diligent approach, brought order out of chaos. He emphasized the fundamental characteristic common to all these injuries: a history of repetitive use of the upper extremities in an intense and often awkward fashion.

The lessons learned redefined the terms of cumulative trauma, repetitive strain injury, and overuse syndrome. His "Sherlock Holmes" approach, considering every clinical clue rather than discounting those that do not fit a preconceived diagnosis, has rescued many patients from the distressing labyrinth of multiple diagnoses, failed therapies, and increasingly frustrating consultations. This clinical approach was based on evidence that despite initial symptoms in the fingers, hands, and arms,

work-related upper-extremity disorders constitute a diffuse neuromuscular illness characterized by significant upper-body disturbances that affect function in the arms, hands, and fingers. Once therapy is targeted at the proper neck and shoulder sites, the symptoms begin to disappear.

Now, in addition to the benefits to the many thousands of patients at the institute, Dr. Pascarelli has given us an invaluable resource, a welcome distillation of his unique experience, equally valuable to patients, their families, therapists, and physicians. This book guides the reader through an otherwise daunting maze in the company of a skilled and compassionate healer.

There is invaluable advice on managing pain, and a constructive approach to physical and occupational therapy. Careful analysis of thousands of videotapes of people working and musicians playing has led to accurate data on the ergonomics and biomechanics of upper extremity and neck and shoulder disorders. Rational decisions can now be made regarding workstation modifications as well as mitigating the rigors of daily living. This guidance is all the more valuable coming from a physician-investigator who has, perhaps more than any other specialist, "walked the walk." Physicians, therapists, and patients reading this book now have a unique opportunity to look over the shoulder of one of the foremost RSI specialists as he goes about his work.

It is always a major benefit to the health care community when an astute clinician-scientist critically evaluates an extensive and unusually successful practice, and then carefully documents the lessons learned. This readable book is a gift to us all: workers, patients, therapists, and physicians, as well as all who would ensure a safe and productive workplace.

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