

CASE SERIES

A CLINICAL GUIDE TO THE ASSESSMENT AND TREATMENT OF BREATHING PATTERN DISORDERS IN THE PHYSICALLY ACTIVE: PART 2, A CASE SERIES

Jena Hansen-Honeycutt, MS, AT^{1,2}

Erin B. Chapman, MS AT^{2,3}

Alan Nasypany, EdD, AT²

Russell T. Baker, DAT, AT²

Jim May, DAT, AT²

ABSTRACT

Introduction: Breathing pattern disorders (BPDs) are characterized by persistent, suboptimal breathing strategies that may result in additional musculoskeletal pain and/or dysfunction. The purpose of this case series was to examine the effects of Primal Reflex Release Technique (PRRT) and breathing exercise interventions in physically active individuals that presented with a primary complaint of musculoskeletal pain, a BPD, and startle reflexes.

Subjects: The assessment techniques described in Part 1 of this series were used to identify three student athletes (aged 16-22) who presented with musculoskeletal pain of the low back, mid back, and knee, BPDs, and startle reflexes. The subjects were unable to identify an apparent source of their pain.

Intervention: The clinician's classification of the subject's breathing patterns guided intervention(s). Each subject was treated once with PRRT and/or a breathing reflex triggering exercise.

Results: Each of the three subjects demonstrated clinically important improvements on the numerical pain rating scale specific to their tender areas and/or with their primary musculoskeletal complaint.

Discussion: These findings suggest that it may be useful to assess for a BPD and startle reflexes along with a standard orthopedic evaluation in the physically active athlete. Treatment of BPD's may positively impact musculoskeletal pain and/or dysfunction. Further research is needed to understand the effects of treatment of BPD's and how these effects relate to musculoskeletal dysfunction.

Summary: The prevalence of BPD with startle reflexes is unknown and implications regarding the assessment for and treatment of BPD has limited research; however, positive results were demonstrated for the three subjects after normalizing breathing patterns.

Level of Evidence: 4

Key Words: Primal Reflex Release Technique, musculoskeletal pain, startle reflex

CORRESPONDING AUTHOR

Jena Hansen-Honeycutt, MS, AT

4400 University Drive MS 3D4

Fairfax VA 22030

703 993 7591 (o)

360 303 6430 (c)

E-mail: jenahhoneycutt@gmail.com

¹ George Mason University, Fairfax, VA, USA

² The University of Idaho, Moscow, ID, USA

³ The College at Brockport, Brockport, NY, USA