

# The Effects of Sarcoidosis on Mechanical Neck Pain

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## MISSION STATEMENT

*“To our patients, we commit to provide the most effective, clinically superior physical therapy humanly possible.*

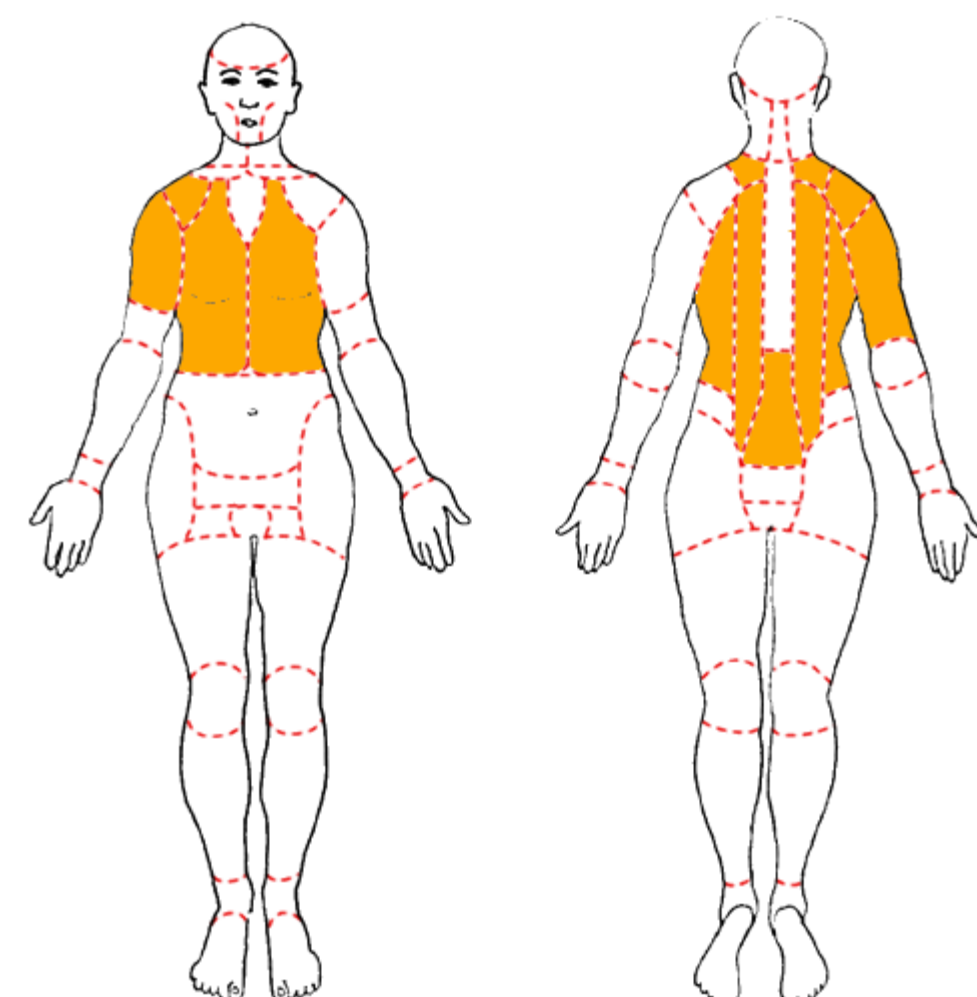
*The measure of our success will be found in the trust we build and in the hearts of those we heal.”*

## Background

Sarcoidosis is a restrictive lung disease characterized by the formation of immune granulomas in involved organs and affects 150,000 to 200,000 individuals in the United States. The most common manifestations of this disorder are dyspnea and fatigue with relevant proximal muscle weakness. The traditional treatment of sarcoidosis is the usage of corticosteroids, yet 81% of sarcoidosis specialists considered physical training as a valuable adjunctive treatment. The purpose of this case study is to demonstrate the systemic influence of Sarcoidosis on mechanical neck symptoms.

## Examination/Evaluation

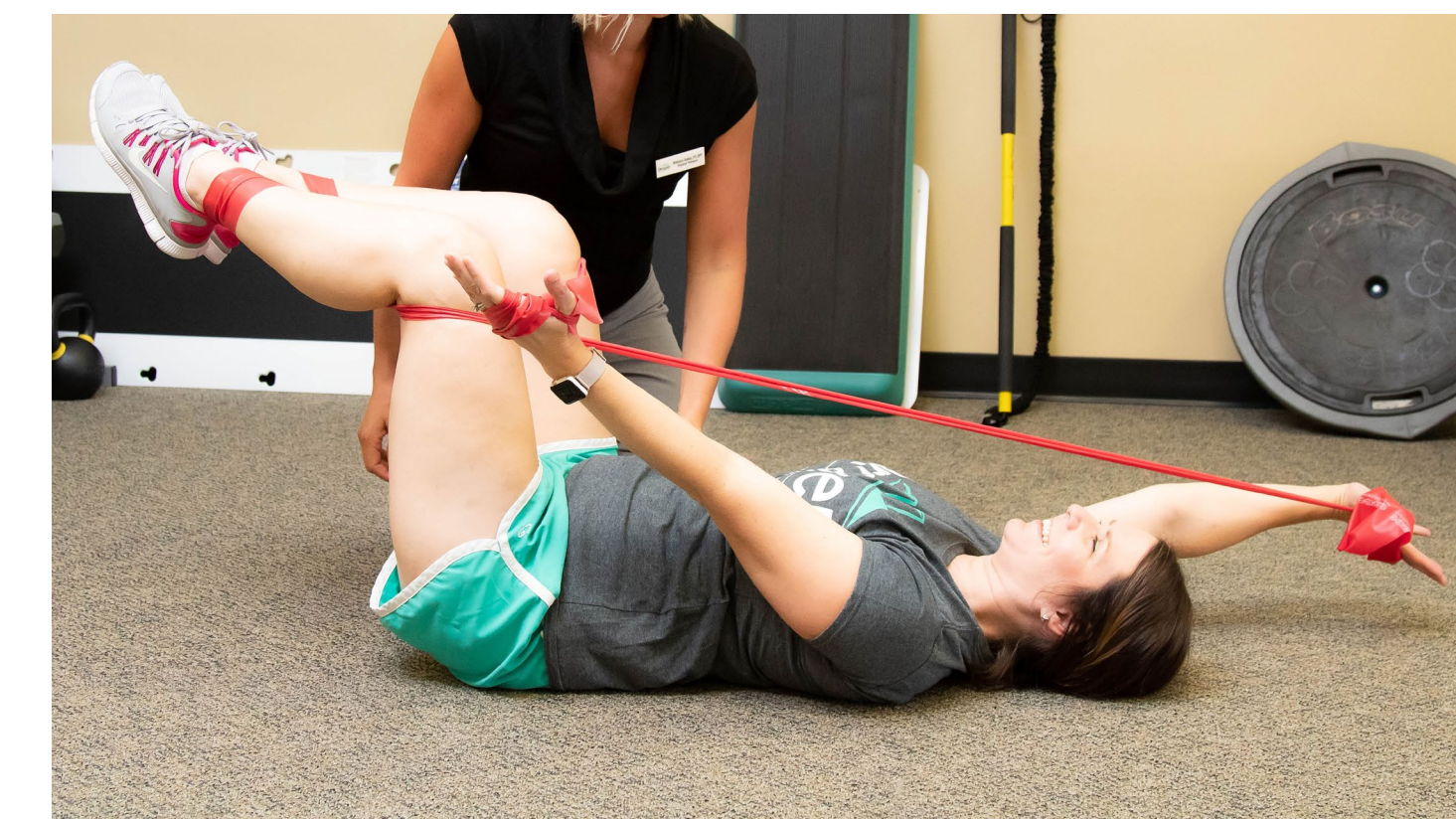
A 52-year-old female presented to physical therapy with complaints of symptoms as noted in the body chart. She reported that her symptoms were aggravated with coughing/sneezing, driving, prolonged sitting, and lifting >10 pounds. Pain was rated at a 5/10 on the numeric-pain rating scale. Past medical history (PMH) included a history of treated sarcoidosis. Objective measures can be seen in the table. Repeated cervical retractions were performed day one with reports of decreased symptoms into her shoulder and the patient was given a PT diagnosis of mechanical neck pain with directional preference and radiating symptoms. Intervention directed at treating the directional preference was commenced with minimal changes in symptoms. At the next visit, clearing of the body chart revealed a history of cramping in the diaphragm as well as bilateral feet and NT that radiated into the right middle three toes as well. Additional questioning found that she experienced frequent coughing fits and fatigue, difficulty singing, and speaking in public. Objective testing revealed a rib flare and inspiratory breathing position as well as increased tone of the right upper trapezius, levator scapula, and pectoralis minor. Abdominal motor control was rated as poor in a supported 90-90 breathing position. The diagnosis was changed to mechanical neck pain with Motor control impairments primarily related to impaired respiratory control and her sarcoidosis diagnosis.



## Intervention

Intervention was aimed at intra-abdominal pressure training, soft tissue mobilizations to the patient UT/LS/scalene, thoracic region joint mobilization, scapular retraining, DNF re-training, and taping to improve proximal motor control with a progression to functional reaching and stabilization exercises.

Measure	Initial Evaluation		Discharge
NPRS	5/10		1/10
FOTO	54		62
Cervical ROM:			
R Rotation	65*		80
L Rotation	65*		80
Shoulder AROM:	Right	Left	
Flexion	172*	180	180
Abduction	163*	180	180
FIR	T10	T7	T7
Shoulder MMT:	Right	Left	
Flexion	4-	4+	5
IR	4-	5	5
ER	4-	5	5
Abduction	4	4+	4-*



## Outcomes

After 6 weeks, the patient reported abolished pain aside from right neck and deltoid pain rated as a 1/10. She was able to sleep through the night, and reported improvements with don/doffing clothing and reaching, as well as improve breathing and speaking. Objectively, the patient achieved full, pain free right shoulder AROM and strength except for a 4-/5 MMT of abduction. She achieved a status change of 8 points of FOTO with a determined MCII of 5, and MDC of 4 in 6 visits.

## Discussion/Conclusion

This case study demonstrates the importance of a detailed subjective history to identify relevant contributing factors of a primary mechanical diagnosis. It is important to view the patient's body as a system, not just a specific site of pain or impairment. Every muscle that attaches to the trunk is both a muscle of respiration and a muscle of postural control. Internal and external forces of respiratory muscles will affect postural responses and therefore, respiration and postural control should not be evaluated in isolation. Physical therapists need to be able to determine not only the source of symptoms, but also the cause and relevant impairments to treat efficiently and effectively.

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