

Shoulder Health after SCI: Overview

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Fact Sheet

Produced by



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Introduction

Shoulder pain from overuse of the arms is common after spinal cord injury (SCI). Unfortunately, pain resulting from shoulder soft tissue injury and/or disease is difficult to treat and is often not the first priority due to the presence of a wide range of other complications. The most common etiology of shoulder overuse injury involves damage to the rotator cuff or biceps tendon from mechanical impingement of the tendon between the bony anatomy of the shoulder (*Figure 1*).¹ The pain and related dysfunction tends to increase with age and is compounded by expected age-related degenerative arthritis. This fact sheet focuses on prevalence of shoulder pain and possible mechanisms of shoulder injury for individuals with spinal cord injury (SCI).

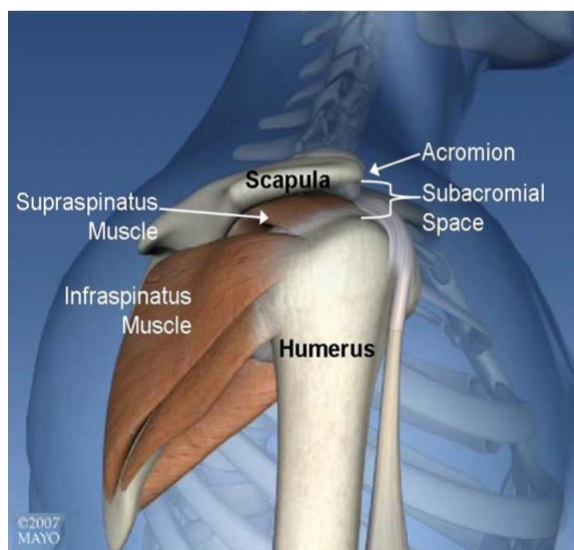


Figure 1: Anatomy of the shoulder highlighting the supraspinatus and infraspinatus muscle tendon that attach to the humerus within the sub-acromial space. Copyright Mayo Foundation; used with permission.

How common is shoulder pain following a SCI?

By injury level, the prevalence of shoulder pain is higher in people with tetraplegia (81% reporting pain) compared to people with paraplegia (58% reporting pain).² In adults who use manual wheelchairs, reports of pain range from 31-73% while 50% of adults who use motorized wheelchairs report shoulder pain.³ Among adults with SCI who ambulate with a crutch or cane, roughly 50% report shoulder pain.³ Half of adults with a SCI reporting shoulder pain will have bilateral symptoms and the majority will have chronic pain that lasts more than 1 year.⁴ The prevalence and severity of shoulder pain increases with age.

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What is known about the mechanism of shoulder pain and injury in adults with a SCI?

Shoulder pain is most intense during activities of daily living including wheelchair propulsion up an incline, transfers, reaching for objects overhead, and other tasks that require a lot of force through the hand hand.^{1-3,5,6} However, the exact biomechanical mechanism of rotator cuff injury in the SCI population is largely unknown. It is theorized that mechanical subacromial impingement is a major contributor to the reported rotator cuff disease (tendinopathies and tears) seen with imaging and concomitant pain.⁷ However, current concepts in rotator cuff disease are evolving. Subtypes of impingement have been identified including subacromial or external impingement, internal impingement, and subcoracoid impingement. Additional and detailed information is available.⁸⁻⁹

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