

C3-C4

1 cm above [thyroid cartilage](#) ($\approx$ [hyoid bone](#)).

[Cervical EMG](#): is most helpful for [nerve roots](#) C5-1. There are no good muscles to reliably test C3-4, and compression here may cause findings in lower nerve roots.

[Cervical spondylosis](#) (CS) at the [C3-C4](#) level (segment) usually presents with [degenerative cervical myelopathy](#) in older than younger patients ^{1) 2) 3) 4)}.

Greater segmental angulation and hypermobility at the C3-C4 segment were identified as potential contributors to the high incidence of pathology at the C3-C4 segment in elderly patients, and not only static factors but also dynamic factors may contribute to the development of [degenerative cervical myelopathy](#).

Sleep-induced apnea: rare but serious complications of [C3-4](#) level operations. Maybe associated with bradycardia & cardiorespiratory instability. Possibly due to disruption of the afferent component of the central respiratory control mechanism

Ossification of the posterior longitudinal ligament (OPLL) Typically begins at C3-4 and proceeds distally, often involving C4-5 and C5-6 but usually sparing C6-7

The direct effects of [rheumatoid arthritis](#) (RA) on the subaxial spine involves the facet joints posteriorly. Degenerative disc disease, which is generally a late manifestation in RA, is not the result of synovitis. Involvement is most common at C2-3 and C3-4.

C3/C4 cervical functional spinal units of porcine specimens were selected. Following preloading, all specimens were loaded under 1200 N axial compression in either a neutral or static end range flexion posture (15°) for 2 h. Following loading, six annulus samples were dissected from each disc: four single-layer and two multi-layer samples. The multi-layer samples underwent peel tests to quantify the mechanical properties of the interlamellar matrix while the single-layer samples underwent tensile tests to quantify the mechanical properties of the intralamellar matrix. Statistical comparisons between properties were performed to determine differences between postural condition, extraction location, and extraction depth.

Results: Flexion elicited a decrease in lamellar adhesive strength ($p = 0.045$) and in single-layer failure strain ($p = 0.03$) when compared to a neutral posture. Flexion also had extraction depth-specific effects namely increased intralamellar matrix stiffness in the inner annulus when compared to neutral ($p = 0.019$). Flexion also resulted in a significant decrease in toe region strain for the inner region of the annulus ($p = 0.035$). The inner region of the annulus was shown to have a significant

increase in stress at 30% strain when compared to the outer region after flexion ($p = 0.041$).

Conclusion: The current findings suggest that the mechanical properties of the interlamellar and intralamellar matrices are sensitive to flexion, creating an environment that promotes an increased potential for damage to occur ⁵⁾

1)

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