

TECHNICAL REPORT

CERVICAL COLLAR MOTION RESTRICTION STUDY

Overview

A research study was conducted at Laerdal California, Inc. to compare the motion restriction capability of the Aspen® Collar and the Philadelphia Cervical Collar.

Thirteen volunteers were asked to move their head through a series of movements while wearing each collar. Their movements were videotaped and degrees of deflection from the neutral position were measured.

Results

Analysis showed there was a slight difference in the motion restriction of the two collars for flexion and extension. The Philadelphia Collar limited 0.5 degrees (7%) more motion in flexion and 0.3 degrees (2%) more in extension. The collars were virtually the same in these two motions.

The Aspen® Collar was significantly better in limiting rotation, 5.2 degrees (20%) less movement, and lateral bending, 6.3 degrees (23%) less movement.

This data suggests that in terms of motion restriction, overall, the Aspen® Collar limits more motion than the Philadelphia Collar.

MOTION ALLOWED IN DEGREES

