### Stiffneck Sizing and Application

#### Application Steps

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Single size assembly – firmly push the black fastener/sizing post through the small hole as far as possible.</td>
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<td>2.</td>
<td>Preforming – Ensure the collar is preformed by rolling it so that it is shaped to neck.</td>
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<td>3.</td>
<td>Manual stabilization – partner applies manual stabilization to patient’s head in neutral position. Neutral is when direction of eyes is perpendicular to spine. In neutral position, (1) spinal fractures are generally more stable (2) the largest spinal canal size is available, extension and flexion tend to narrow the spinal canal.</td>
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| 4.     | Contraindications for neutral alignment –  
  - Neck spasm  
  - Increased pain  
  - Start or increase of neurological deficit  
  - Airway or breathing complications  
  If moving patient to neutral alignment produces any of symptoms listed:  
  - Immediately stop attempts to move to neutral  
  - Stabilize using a blanket roll or SAM as best as possible in position found  
  - complete backboard fixation  
  - use extra beefy blanket roll to immobilize head/neck  
  - transport rapidly to the First Aid Room. |
| 5.     | Measure the “Key Dimension” between the trapezius at the base of the neck and the chin.           |
| 6.     | Common measuring errors - (1) extension will overestimate the “Key Dimension” and flexion will underestimate the “Key Dimension” |

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7. Common measuring errors – (2) measuring laterally away from the base of the neck where the collar rests will overestimate the “Key Dimension”. Measure at the point on the trapezius where the collar will rest.

8. Reproduce the “Key Dimension” on the single size Stiffneck from the black fastener/sizing post to the bottom of the rigid plastic. The sizing post is in alignment with chin piece. The collar supports between the chin and trapezius at the base of the neck. Note: do not use the foam at the bottom as part of the “Key Dimension” as it provides no support.

9. On adjustable collars, adjust the collar so that the moving piece is set so that the key dimension is reproduced on the device. Ensure both sides are set to the same size. Note: do not use the foam at the bottom as part of the “Key Dimension” as it provides no support.

10. On adjustable collars, lock the collar so that the collar size is fixed. Ensure both sides are locked and secure. Test the lock by tugging gently against the lock.

11. Cut away or reposition clothing so that collar fits next to skin of patient.

12. To apply chin piece to seated or standing patient – slide the collar up the chest wall until the chin is firmly seated on the chin piece. Correct placement is evident because the chin will be flush with the end of the chin piece. IF THE CHIN IS NOT FLUSH WITH THE END OF THE CHIN PIECE, THE COLLAR IS NOT ON CORRECTLY.

13. To apply chin piece to supine patient – slide back portion of collar under neck until it is just visible. Then slide the collar up the chest wall until the chin is firmly seated on the chin piece. Correct placement is evident because the chin will be flush with the end of the chin piece. IF THE CHIN IS NOT FLUSH WITH THE END OF THE CHIN PIECE, THE COLLAR IS NOT ON CORRECTLY.
14. Tightening collar – grasp the corner of the tracheal opening to prevent rotation of the collar during tightening. Pull the Velcro fastener and secure it to the front of the collar.

15. Inspect and readjust/resize as necessary – (Part 1) the head and neck should be in neutral alignment with eyes perpendicular to spine. Too large a collar can lead to neck extension; too small a collar can lead to neck flexion.

To readjust, loosen, then repeat device application steps.

16. Inspect and readjust/resize as necessary – (Part 2) the chin should be flush with the end of the chin piece. This will occur with incorrect application of correctly sized collar and with incorrectly sized collar.

17. Inspect and readjust/resize as necessary – (Part 3) The collar should provide support between the trapezius, chin and chest wall. If there is excess space or play, then the collar is too small.

18. On adjustable collars, DO NOT adjust the collar while it is applied to the patient. Completely remove the collar, readjust, then reapply.

19. Done.