



ARC SAC Instructor Information Cervical Spine Motion Restriction

Instructor or Educational Program Issues/Question/Topic

The current standard of care with regard to cervical spine injury routinely consists of maintaining axial alignment and applying a rigid cervical immobilization device coupled with a long spine board. EMS protocols are now moving towards selective immobilization depending on predefined assessment criteria and less use of a rigid cervical immobilization device coupled with a long spine board. Accordingly, it is appropriate to review the utility and advisability of cervical collar use by first responders and what practices should be recommended and taught by ARC Instructors. .

Related Scientific Advisory Council Documents

List the ARC SAC documents which are the basis for this instructor informational document

- X **Scientific Review** _____
X **Advisory** _____
☐ **Answer** _____
☐ **Product Review** _____

Introduction and Summary of SAC Documents and Recommendations

Use of cervical collars for potential cervical spine injuries has been a part of prehospital care for decades despite the lack of scientific evidence demonstrating if they can be applied correctly by lay first aid providers, whether they help and if they may actually harm the patient.

The most recent literature search by the ARC Scientific Advisory Council builds upon the 2015 Scientific Review of the same question and screened 341 articles to fully review 10 deemed of sufficient quality upon which to base a review. While the evidence is not of high quality it suggests that adverse effects such as pressure ulcers and pain are relatively common with cervical collar use. At the same time there continues to be a lack of evidence that shows benefit from cervical collar use.

This review supports the SAC Advisory Council's recommendation that lay first aid providers avoid the use of cervical collars and instead use common sense practices of instructing the patient not to move until advanced medical care arrives (self-immobilization), and/or gently supporting the head on either side to keep it from moving until advanced care arrives.

Standards: None

Guidelines:

- We recommend against use of a cervical collar by first aid providers.

Options:

- We recommend against any manipulation of the neck.
- We recommend against first aid providers strapping the head or neck

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Implications for Program Design, Modification and/or Delivery

No changes are envisioned as this recommendation is a reaffirmation of the 2015 recommendation.

Attachments

FAQ

Q. If I suspect a spinal injury in an injured person, what should I do to prevent the neck from moving?

A. Although there is no evidence to support a recommendation, many EMS systems around the world are moving to a 'self-immobilization' approach, where an awake, cooperative injured person is instructed to hold their own head still during extrication. It has also been observed that when a person has an injured neck, they will often restrict their own motion.

Q. What if the person is unconscious or unresponsive? Should I hold their head to keep it from moving?

A. Again, there is no scientific evidence to support a recommendation. If the person is not moving and unconscious, it would be reasonable to wait for advance medical care to arrive. Alternatively, a first aid provider may consider gently supporting the head with both hands to restrict further movement. Anecdotally, it has been noted that attempts to forcibly restrict head movement in a person who is confused or with altered mental status may lead to that person becoming agitated and attempting to move their head to avoid being touched.

Q. Is there ever a role for use of a cervical collar by first aid providers?

A. Some teams of first aid providers, such as mountain or wilderness rescue groups, are trained and repeatedly refreshed in the proper application of cervical collars under the direction of a medical advisor. In such cases, these first aid providers may operate under their local protocols and apply a cervical collar to persons with possible spine injury and when extrication and transfer to advanced medical care will take longer than usual and require movement over challenging terrain.