



&



STUDY GUIDE

What is the XCOLLAR?

The XCollar is a **complete cervical spine splinting system** designed especially for EMS. It ensures the highest standard of patient care by significantly reducing movement of the Cervical Spine by securing the head to the torso above and below the injury at four points; two posterior and two anterior, thus eliminating unwanted traction of the Cervical Spine to better help avoid distraction injuries.

Who uses the XCOLLAR?

THE XCOLLAR is currently used in more than 36 countries around the world, by dozens of EMS agencies in the US, the US ARMY and NAVY Special Operation Forces.

What is the XCOLLAR Plus?

XCollar Plus integrates the XCollar and an Adjustable Head Restraint System (HRS). Each HRS consists of a set of Velcro straps to secure the patient to the backboard preventing lateral and vertical movement while allowing inline movement of the head with the thoracic cavity. An Adjustable Occipital Support Pad ensures that proper patient alignment is maintained. The Adjustable Support Pad is capable of allowing rescuers to adjust the height of the support for the Occipital as needed from 1/2" to 2" in 4 X 1/2" increments.

This new technology allows EMS responders to provide:

1. **Better patient care and safety:** *Provides a greater degree of immobilization for patients regardless of patient's body type, age, or size and is capable of immobilizing in Position of Comfort. Additionally, the HRS with the XCollar Plus allows rescuers to provide support for the Occipital region when needed to maintain the patient's proper alignment and ensures that dynamic forces during transport do not exacerbate existing injuries of the Cervical Spine.*
2. **Faster treatment: 30 SECOND APPLICATION;** *Care for multiple patients by a single rescuer, reducing patient's waiting time for initial treatment, and acting as a **FORCE MULTIPLIER** during **MASS CASUALTY INCIDENTS**.*
3. **The best treatment requiring less equipment:** *Care for small pediatric to large adult size patients (from approx. 25 pounds to approx. 360 pounds and more) with the same device.*





&



3-Step Easy Application in 30 seconds: “S-A-X”

(SETUP –ADJUST – XSTRAPS APPLICATION)

#1: SETUP

- Extend the XCollar to its longest setting. Unfold the Back Support and lock it in place.

#2: ADJUST

- Encircle the patient and capture the chin before connecting the buckle.
- Note: for a supine patient, pull on clothing while sliding the Back Support in position.
- While holding the device in place, using a “push & pull” method, adjust Side Straps evenly.
- Extend Chest Support Piece until firm contact with the upper sternum is obtained.
- Pinch the locking tabs to secure the Chest Support.

#3: XSTRAPS APPLICATION

- Apply X-Straps using a “push & pull” method to the corresponding color-coded Velcro.

-USE OPPOSING FORCES IN EVERY STEP OF APPLICATION-

After XCollar application, you may proceed to securing the patient to the backboard/vacuum mattress/rescue basket by applying the HEAD RESTRAINT SYSTEM (HRS).

2-STEP HRS APPLICATION:

1 – SLIDE, STACK and STICK – Once patient is on the backboard, SLIDE the Occipital Support Pad under the head. STACK the Occipital Support pieces as needed to maintain proper alignment. Pull the clear film strip to STICK the Occipital Support Pad to the backboard.

2 – SECURING STRAPS APPLICATION – Remove one X-Strap while maintaining tension to place the black-colored side of the square end to XCollar Velcro. Reattach X-Strap. Wrap the securing strap to the backboard taking off the slack. **DO NOT OVER TIGHTEN.** Repeat on the other side.

Airway Management

1. Loosen the **Chin Strap**, remove the **XSTRAPS** and loosen the **Side Straps if necessary**.
2. Obtain airway.
3. Re-tighten X-Straps to secure **XCOLLAR**.





&



Application Checkpoints

These hands-on steps are recommended by Emegear, LLC to apply the XCollar Devices. You must demonstrate these applications to an “Evaluator” prior to applying the device on an injured patient. Please assure that you feel comfortable applying the device in all situations:

General XCollar Application
S – A – X Neutral Position Application
1. SET-UP
Extend the Side Pieces; Unfold and Lock the Back Piece
2. Adjust
Encircle the patient and connect the Buckle
Capture the chin between the Chin Strap and Padding
Adjusts Side Straps to patient circumference using a “push & pull” method
Extend the anterior Chest Piece to upper chest without distracting the c-spine and lock it in place
3. X-Straps
Deploy the X-Straps, placing them between guides while maintaining tension, using a “push & pull” method
Attach the X-Straps to the matching color coded Velcro
Ensure the XCollar is securely and properly applied without causing “distraction” to the patient’s spine
In Position of Comfort & Prone Application
Properly complete the S-A-X points of General XCollar Application
Tighten Lateral Side Strap on the side the patient is facing first, then complete other Side Strap
Extend and lock Adjustable Chest Support asymmetrically ensuring padding has good contact on sternum
Secure X-Strap on the side the patient is facing first, followed by the second X-Strap
Supine Position Application
Properly complete the S-A-X points of General XCollar Application
Slide Back Piece at a 45 degree angle to midline between shoulder blades
Push on the XCollar while pulling on clothing to position Back Support
Ensure proper placement of the occipital pad without patient manipulation
Airway Management
Loosen the Chin Strap to allow proper sealing of a BVM mask using “EC clamp” hand-hold technique
Demonstrate the steps of removal in reverse application order to allow advanced airway insertion
Head Restraint System Application
Use the correct amount of padding for occipital region to keep patient in an in-line position
Detach XStrap and attach Securing Strap on the Velcro, then reattach the XStrap (repeat on opposite side)
Attach Securing Strap to the carrying device without pulling tension





&



Skills Verifications Sheet

Name:	Agency:	Date:
General XCollar Application		
S – A – X Neutral Position Application		
1. SET-UP		√
Extends the Side Pieces; Unfolds and Locks the Back Piece		
2. Adjust		√
Encircles the patient and connects the Buckle		
Captures the chin between the Chin Strap and Padding		
Adjusts Side Straps to patient circumference using a “push & pull” method		
Extends the anterior Chest Piece to upper chest without distracting the c-spine and locks it in place		
3. X-Straps		√
Deploys the X-Straps, places them between guides maintaining tension, using a “push & pull” method		
Attaches the X-Straps to the matching color coded Velcro		
Ensures the XCollar is securely and properly applied without causing “distraction” to the patient’s spine		
In Position of Comfort & Prone Application		
Properly completes the S-A-X points of General XCollar Application		
Tightens Lateral Side Strap on the side the patient is facing first and the other Side Strap second		
Extends and locks Adjustable Chest Support asymmetrically ensuring padding has good contact on sternum		
Secures X-Strap on the side the patient is facing first and then the other X-Strap second		
Supine Position Application		
Properly completes the S-A-X points of General XCollar Application		
Slides Back Piece at a 45 degree angle to midline between shoulder blades		
Pushes on the XCollar & Pulls on clothing to position Back Support		
Ensures proper placement of the occipital pad without patient manipulation		
Airway Management		
Loosens the Chin Strap to allow proper sealing of a BVM mask using “EC clamp” hand hold technique		
Demonstrates the steps of removal in reverse application order to allow advanced airway insertion		
Head Restraint System Application		
Uses the correct amount of padding for occipital region to keep patient in proper in-line position		
Detaches X-Strap and attaches Securing Strap on the Velcro and reattaches the X-Strap (repeat on opposite side)		
Attach Securing Strap to the carrying device without pulling tension		
Evaluator’s Name:		Signature:
<i>By signing this form, the “Evaluator” is verifying that the Provider named at the top of this page has successfully demonstrated all manipulative skills required by this training course and this Skills Verification Sheet in accordance with the manufacturer recommendations. Emegear, LLC may not be held liable for any hands-on skills verification since they are not being verified by manufacturer approved instructors.</i>		

