**Definition:**

**Cervical Spine Immobilizations:** Use of devices to stabilize the neck in a neutral position until adequate evaluation can be undertaken to determine the presence or absence of a cervical spine injury. Cervical spine immobilization must limit flexion and extension and side-to-side movement of the neck.

**Guidelines:**

1. All patients who have a either a mechanism for cervical spine injury or assessment physical findings must be treated with cervical spine immobilization, including:
   A.) Log roll and laying flat
   B.) Cervical immobilization collar

2. Most patients will arrive to the emergency room with a hard collar in place, if not one will be applied after arrival in the emergency room
   A.) Make sure that the collar has been applied correctly and is the correct size
   B.) Check under the collar (with manual immobilization, which is where the neck is supported along the sides of the patient's head with the holder's thumbs placed behind the ears and the hands along the mandible and upper neck)

   ![Image](image)

   for the presence of any skin break down, lacerations, swelling, penetrating injuries, tracheal deviation, subcutaneous emphysema, distended neck veins or jewelry. Remove all jewelry.

   C.) Make sure the collar is appropriately padded around lacerations or other open wounds.

   D.) If a patient is admitted to the hospital with a cervical collar orders should state that the patient is in C-spine precautions. It should be noted in the patient's chart about a plan for clearance.

   E.) If cervical spine immobilization will be in place for a while (in patient) then a long-term collar such as a Miami J should be placed. A note in the patient's chart should document the type of collar and when changes are made.

   F.) After application or changes to the collar or with log rolling the patient should be examined for changes; neurological assessment along with a CMS assessment should be completed.
Protection of the Cervical Spine

What types of patients should be in C-spine precautions, wearing a C-collar?
If any of these conditions are present, use cervical spine injury precautions:

History:

1. Mechanism of Injury
   - Motor vehicle crash (vs. vehicle, pedestrian or bicycle)
   - Falls > 4 feet and/or > 5 steps or even a fall from standing height
   - Diving or tackling incident
   - Severe blunt trauma to the head, neck, or upper body

2. Pre-existing conditions
   - Previous neck surgery
   - Elderly or arthritic neck

Physical Assessment:

- Neck pain, tenderness or stiffness in awake and alert patients
- Altered level of consciousness (unconscious, altered mental status, GCS < 14)
- Abnormal peripheral motor sensory exam
- Altered vital signs
- Presence of other injuries (Skull fx, facial and/or upper body injury)
How to Log Roll a patient

1. Explain to the patient what you are going to do and instruct the patient not to help that the staff will be doing all the work.
2. Takes a minimum of 3 people to roll the patient and a 4th person to perform whatever activity was going to be done, such as assessing the patients back.
3. Notice in the picture how one person takes control of the head. This person is the one who controls the rolling of the patient. When it is time to roll the patient the person in control of the head should count to 3 and everyone rolls the patient at the same time. This person holds the head and maintains C-Spine stabilization.
4. The other 2 people will be on the same side of the patient. One person puts their hands on the shoulder and hip. The second person puts their hands on the hip (cross hands with the first person) and on the knee. Then on the count of 3 everyone turns the patient at the same time. See the pictures below!

Notice how the Spine is kept aligned the entire time. Remind the patient not to help. The staff should have the body and head supported. This is difficult for patients who are awake and alert, they tend to want to help. Note the pillow between the knees is optional this is not necessary.

5. When your procedure is done, the person at the head of the bed will count to 3 and everyone will roll the patient back onto their back.
6. Patients need to be kept in this position and in C-Collars until they are cleared by the physician.