

Los Angeles City Fire Department

TRAINING BULLETIN

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KENDRICK EXTRICATION DEVICE (KED)

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I. INTRODUCTION

The Kendrick Extrication Device (KED) is a spinal immobilization device similar to a short backboard but with an important difference-it folds around the patient and is held in place by Velcro® secured straps across the forehead and chin and built-in straps across the chest and around the thighs. The effect of this device, when applied, is to securely immobilize the patient's head and spine. The KED is intended to be used as an intermediate spinal immobilization device when the patient, due to position or location, cannot be initially secured to a long full (backboard). Once the patient is moved to a position or location where a long backboard can be applied, the patient should be secured to a long backboard to assure immobilization of the patient's entire body.

II. FEATURES

The KED is constructed of heavy-duty, vinyl-coated canvas, enclosing rigid vertical slats. Included are two padded head straps secured by Velcro® strips, three color-coded torso straps, two black thigh straps and a vinyl-coated occipital pad. Replacement head straps are available from Supply and Maintenance Division (Strap, Head/Chin, #9375741, Pk.). Built-in handles on the top and sides of the KED may be used to pull or maneuver the patient but are not designed to support the patient's weight and should not be used to hoist or lift the patient. It is recommended that, for convenience of storage, the KED be carried inside the Nylon® carrying case issued with it.

III. INDICATIONS FOR USE

The KED should be used to immobilize the spine of any patient suspected of having a spinal injury when, due to the position or location of the patient, it is not possible to secure the patient to a long backboard prior to moving them. If the patient is in *extremis* or in danger, consideration should be given to moving the patient to a long backboard while providing manual, in-line stabilization of the spine instead of taking time to apply the KED. The decision to use the KED or to move the patient while providing manual stabilization of the spine is one that must be based on the condition of the patient and the circumstances at the scene. In making this decision, the EMT-I or Paramedic must exercise their best clinical judgment as to what will be best for the patient, bearing in mind that in trauma, often the best treatment for the patient is rapid transportation.

IV. APPLICATION

As with any spinal immobilization device, the first step in applying the KED is to immediately and continuously, apply manual stabilization of the head and neck (circumstances and conditions may dictate the approach to this step front, rear, side, above). Next, if the patient is conscious, assess the patient's distal neurological status, by asking the patient to move their fingers and toes and asking if they can feel a light touch to the back of their hands and the tops of their feet. Proceed by applying an appropriately sized cervical collar (see package insert for proper sizing and application). Open the KED and slide it behind the patient (it is strongly recommended that the chest straps **not** be released until the device is **in place** behind the patient).

Position the KED so that the widest part is behind the patient's torso and the narrowest part is behind the patient's neck. The part with the Velcro® strips should now be behind the patient's head. The device should be slid-up snugly under the patient's arms. Release the chest straps one at a time, snap each into the buckle of the corresponding (color-coded) strap on the opposite side and tighten to secure the patient's torso. Next, release the two thigh straps from the top of the KED and place each strap under the patient's groin, across the top of the opposite thigh and snap it into the buckle on the opposite side. Tighten each strap to secure the patient's lower back.* Use the vinyl-coated pad supplied with the KED to pad behind the patient's head and neck to prevent extension of the cervical spine when the head is secured. Finally secure the head straps across the forehead and upper part of the cervical collar to the Velcro® strips on the KED. Reassess the patient's sensation and movement in their hands and feet. Once the patient has been extricated or removed, they must be secured to a long back board like any other patient with a suspected spinal injury. When securing the patient to a long backboard it is necessary to release the thigh straps to allow the patient to straighten their lower extremities.

*if a groin injury is suspected **do not** cross the straps, instead snap the strap into the buckle on the same side. **Do not** use the thigh strap if a fractured femur is suspected.

V. CLEANING

The KED can be washed with a mild detergent and water. Avoid immersing it, while this will not damage the device, it will lengthen the drying time and is usually not necessary. The KED should be washed to decontaminate it after **every** use, and if contaminated with blood or other body fluids, it should be disinfected by washing it with a disinfectant detergent solution and allowing it to air-dry prior to reuse. Refer to Training Bulletin No. 82, Infectious Disease Protocols.

VI. CONCLUSION

The Kendrick Extrication Device is intended to be applied by trained and skilled rescuers. In addition to reading and becoming familiar with the User's Manual issued with the KED and to receive training and supervised practice from a qualified member PRIOR to attempting to apply the KED to a patient.

