

# END-TIDAL CARBON DIOXIDE (ETCO<sub>2</sub>) MONITORING - COLORIMETRIC DETECTOR

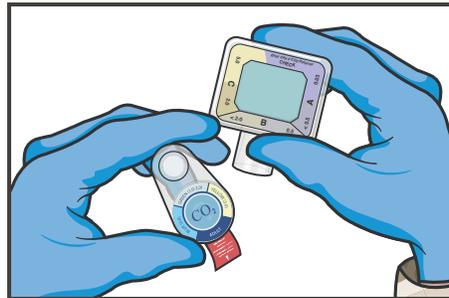


**CONSIDER** body substance isolation.

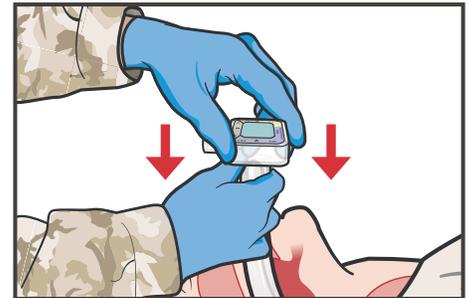
**NOTE:** If a Combat Lifesaver is available, direct them to assist.



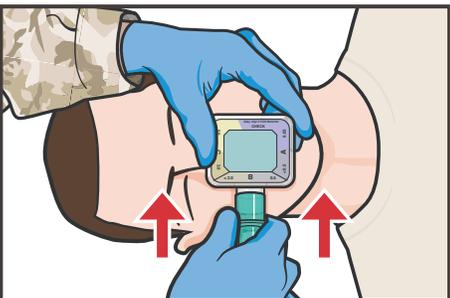
**01 REMOVE** the ETCO<sub>2</sub> detection device from its package.



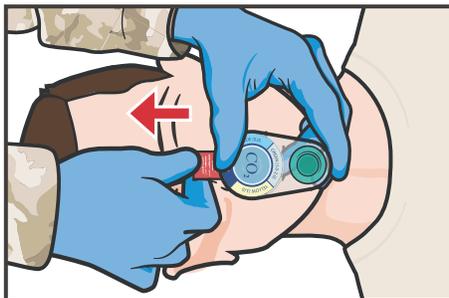
**02 CHECK** color of the indicator; if it is not similar to the “check” color on the reference scale (usually purple, with the exception of devices with a pull tab, which is usually a specific shade of blue), discard the unit and use a new one.



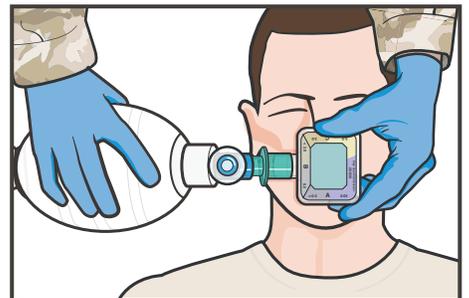
**03** Following the establishment of an advanced airway, **ATTACH** the ETCO<sub>2</sub> detector to the advanced airway by sliding the tapered end (15mm **internal** diameter connector) of the monitoring device onto the airway device.



**04 CONNECT** the distal end of the device (15mm **outer** diameter connector), which is identical to an advanced airway connector, to the standard oxygen delivery equipment.



**05** If the device has a **PULL TAB**, pull the red tab from the device to activate the ETCO<sub>2</sub> detection function.



**06** To assess proper airway placement, **ATTACH** a bag valve mask (BVM) to the ETCO<sub>2</sub> detector, deliver six breaths, and compare the color change in the center indicator of the detector to the color ranges on the detector cover.

**STEP 6 NOTE:** Carbon dioxide detectors contain a chemical indicator that is sensitive to CO<sub>2</sub>. When the detector is attached to a correctly positioned airway, the color of the indicator changes from the baseline “check” color (usually purple or a specific shade of blue) to a numbered or lettered color range (usually yellow) in response to elevated carbon dioxide concentrations.

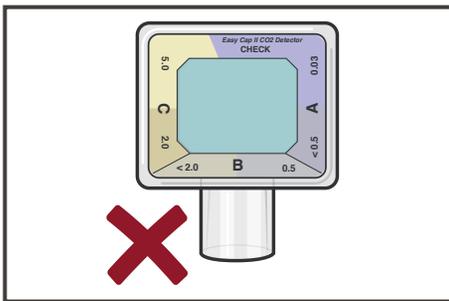
**STEP 6 NOTE:** When the detector is attached to an incorrectly positioned airway (in the esophagus, for example), the color of the indicator will not change or there will be an inadequate color change. In devices with a pull tab, a green or yellow/green color change indicates low levels of exhaled CO<sub>2</sub>.

**STEP 6 CAUTION:** ETCO<sub>2</sub> detectors can be difficult to read in low-light or night vision conditions.

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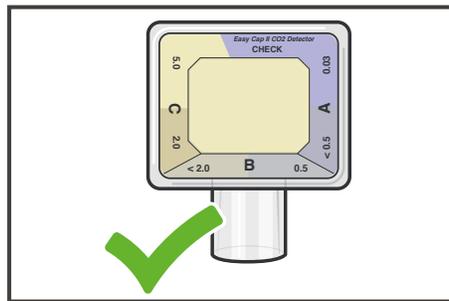
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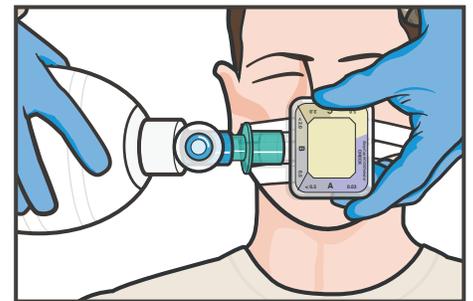


**07** If there is no color change or an inadequate color change in the ETCO<sub>2</sub> detector, the advanced airway should be repositioned and placement should be reassessed with the ETCO<sub>2</sub> detector and a BVM.

**CAUTION:** With very low cardiac output during cardiopulmonary resuscitation, there may be no color change in the ETCO<sub>2</sub> detector, even though the airway is properly positioned.

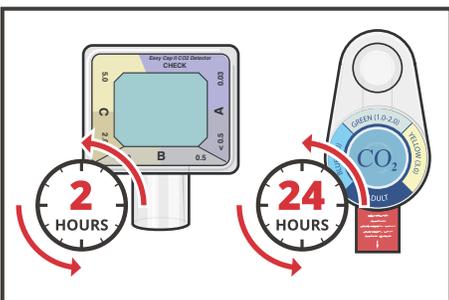


**08** Once the color change is seen, signifying proper airway placement, **SECURE** the airway.

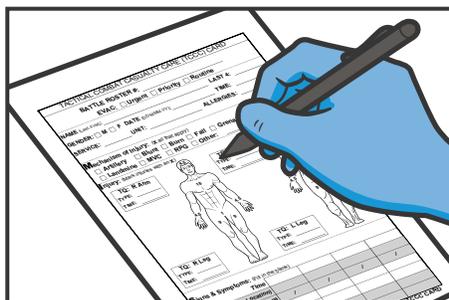


**09** Continue to **MONITOR THE CASUALTY** and the ETCO<sub>2</sub> detector for the proper color change, reassessing the casualty and repositioning the airway device if the detector reverts to its baseline "check" color or stops changing color with respirations.

**NOTE:** While in use, the detector will continuously change colors with inspiration and expiration. If the detector becomes permanently yellow, discard and replace as needed.



**10** **REPLACE** the ETCO<sub>2</sub> detector after 2 hours or if exposed to fluids, unless using a device with a pull tab, in which case it can be used for up to 24 hours.



**11** **DOCUMENT** all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.