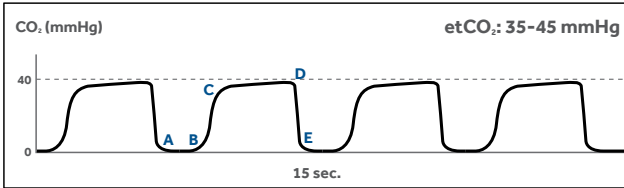


NORMAL AND ABNORMAL etCO₂/CAPNOGRAPH WAVEFORMS

Normal Capnogram



The normal capnogram is a waveform which represents the varying CO₂ level throughout the breath cycle.

Waveform Characteristics:

A-B: Baseline

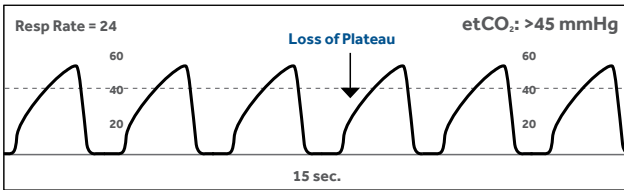
C-D: Expiratory Plateau

D-E: Inspiration

B-C: Expiratory Upstroke

D: End-Tidal Concentration

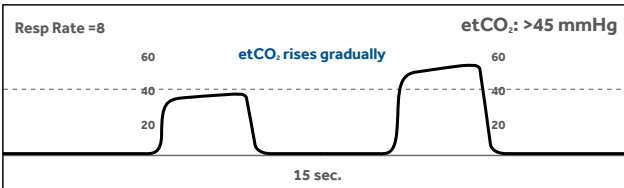
Bronchospasm/Asthma



Other Possible Causes:

- Bronchospasm/COPD
- Obstruction in the expiratory limb of the breathing circuit
- Presence of a foreign body in the upper airway
- Partially kinked or occluded artificial airway

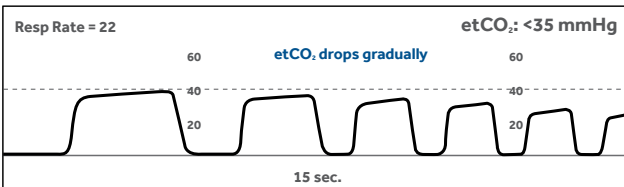
*Increasing etCO₂ (Hypoventilation)



Other Possible Causes:

- Decrease in respiratory rate
- Decrease in tidal volume
- Increase in metabolic rate
- Rapid rise in body temperature (malignant hyperthermia)

*Decreasing etCO₂ (Hyperventilation)



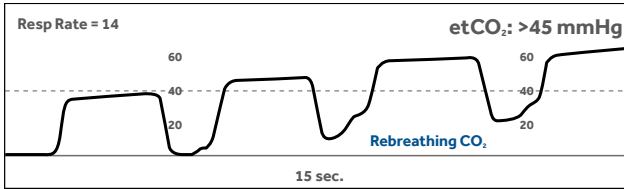
Other Possible Causes:

- Increase in respiratory rate
- Increase in tidal volume
- Metabolic acidosis
- Fall in body temperature

*Assumes adequate circulation and alveolar gas exchange

NORMAL AND ABNORMAL etCO₂/CAPNOGRAPH WAVEFORMS

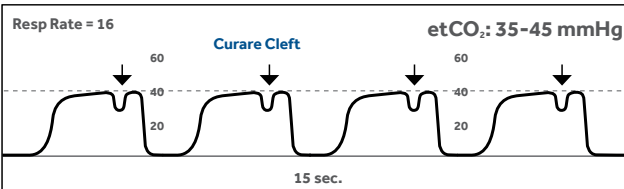
Rebreathing CO₂



Other Possible Causes:

- Faulty expiratory valve
- Inadequate inspiratory flow
- Partial rebreathing
- Insufficient expiratory time

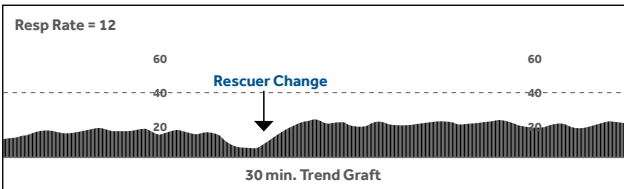
Curare Cleft



Other Possible Causes:

- Patient is mechanically ventilated
- Depth of cleft is inversely proportional to degree of muscle relaxants

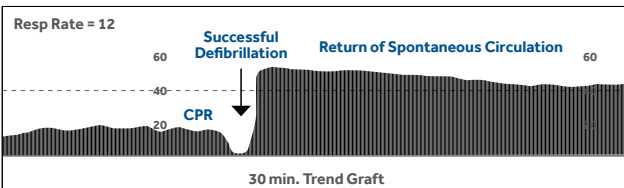
Cardiac Arrest



Other Possible Causes:

- Decreased or absent cardiac output
- Decreased or absent pulmonary blood flow
- Sudden decrease in CO₂ values

Return of Spontaneous Circulation



Other Possible Causes:

- Increase in cardiac output
- Increase in pulmonary blood flow
- Gradual increase in CO₂ production

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