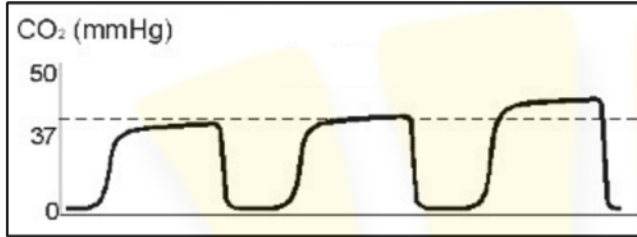


Interpreting an Abnormal Capnograph Display



Increasing ETCO₂ (hypoventilation)

Possible causes:

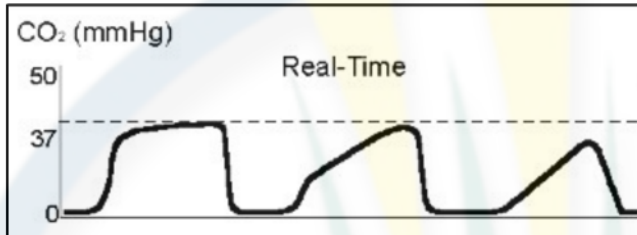
Decreased respiratory rate or depth from:

- Deep anesthesia
- Interference with chest expansion

Early malignant hyperthermia (rare)

Equipment malfunction Equipment dead space

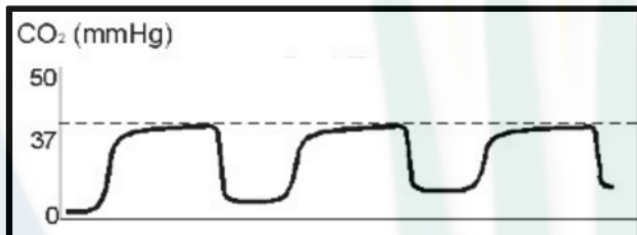
Early stage of expanding pneumothorax



Abnormal upstroke (shark fins)

= Airway obstruction:

- Kinked ETT
- ETT plug
- Obstruction on expiratory side of anesthesia machine
- Bronchospasm



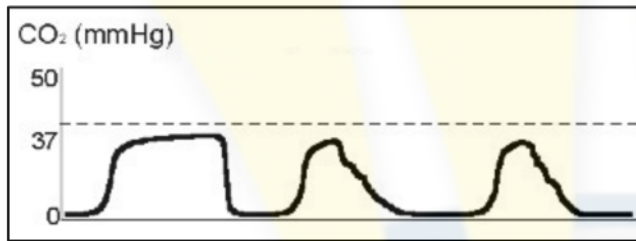
Baseline does not return to zero

Possible causes:

- Incompetent or absent unidirectional dome valves
- Too low oxygen flow with non re-breathing circuit
- Depleted absorber granules
- Absorber canister bypassed
- Leak in Bain circuit inner hose
- Crack in mainstream sensor of capnograph

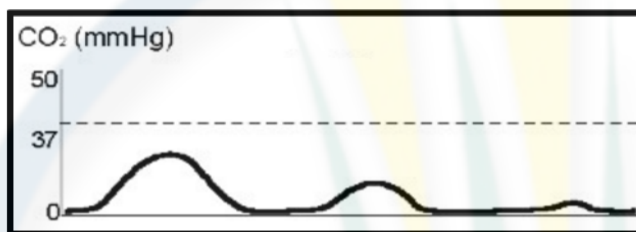


Interpreting an Abnormal Capnograph Display (Cont'd)



Abnormal down stroke:

- Leak around endotracheal tube cuff



No carbon dioxide values recorded:

- Apnea
- Accidental patient disconnect
- Esophageal intubation
- Airway obstruction
- Cardiac arrest
- Tension pneumothorax

Causes of artificially high ETCOR2R values:

- Crack in the mainstream sensor

Causes of artificially low ETCO₂ values:

- High rate of sidestream sampling from a non-rebreathing circuit
- Leak around ETT
- Crack in side stream sampling catheter
- Loose sampling catheter connection
- Water vapor in mainstream sampler
- Improper calibration
- Thoracotomy

Suspect such errors when you cannot identify an expiratory plateau on the capnograph wave form display.

