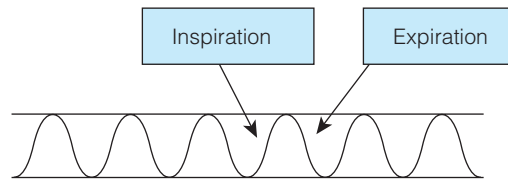
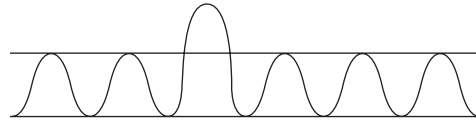
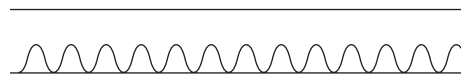


Normal Findings**Eupnea**

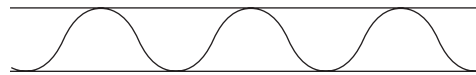
Even depth
Regular pattern
Inspiration = Expiration
Occasional sigh

**Eupnea with sigh****Abnormal Findings****Tachypnea**

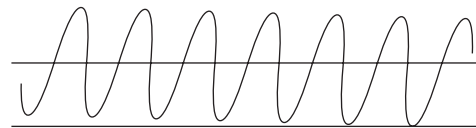
Rapid, shallow respirations
Rate > 24
Precipitating factors: fever, fear, exercise, respiratory insufficiency, pleuritic pain, alkalosis, pneumonia

**Bradypnea**

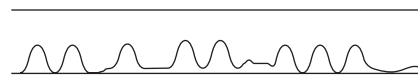
Slow, regular respirations
Rate < 10
Precipitating factors: diabetic coma, drug-induced respiratory depression, increased intracranial pressure

**Hyperventilation**

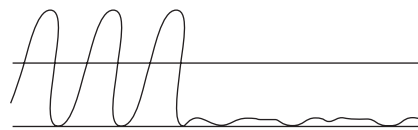
Rapid, deep respirations
Rate > 24
Precipitating factors: extreme exertion, fear, diabetic ketoacidosis (Kussmaul's), hypoxia, salicylate overdose, hypoglycemia

**Hypoventilation**

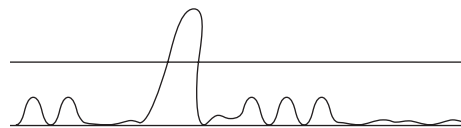
Irregular, shallow respirations
Rate < 10
Precipitating factors: narcotic overdose, anesthetics, prolonged bed rest, chest splinting

**Cheyne-Stokes**

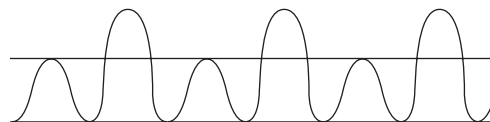
Periods of deep breathing alternating with periods of apnea
Regular pattern
Precipitating factors: normal children and aging, heart failure, uremia, brain damage, drug-induced respiratory depression

**Biot's (Ataxic) Respirations**

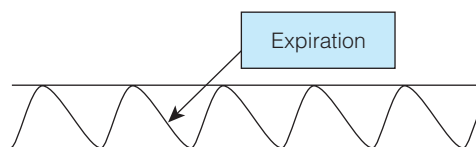
Shallow, deep respirations with periods of apnea
Irregular pattern
Precipitating factors: respiratory depression, brain damage

**Sighing**

Frequent sighs
Precipitating factors: hyperventilation syndrome, nervousness
Causes: dyspnea, dizziness

**Obstructive Breathing**

Prolonged expiration
Precipitating factors: COPD, asthma, chronic bronchitis



Prolonged expiration