Dyspnoea in the Pregnant Woman
Objectives

1. Consider the causes of dyspnoea in the parturient

2. Develop a systematic approach to dyspnoea in the parturient

3. Implement a strategy for management of the hypoxic parturient
0.2 – 0.4% of deliveries require ICU

- Respiratory failure accounts for 40 - 50%
- i.e. about 1-2 per 1000 deliveries

- Account for about 1% of ICU admissions

- Vast majority admitted postpartum
I tried to be normal once

Most boring 2 minutes of my life
The figure shows the percentage of subjects with dyspnea at different weeks of gestation. Dyspnea is classified into four categories:

- Blue: Dyspnea present climbing hills or more than one flight of stairs
- Light gray: Dyspnea present on climbing one flight of stairs, walking at an even pace on level ground, or during routine performance of housework
- Red: Dyspnea on slightest exertion or at rest
Serial measurements of lung volume compartments during pregnancy. Functional residual capacity decreases approximately 20% during the latter half of pregnancy, due to a decrease in both expiratory reserve volume and residual volume.
Anatomic effects

- airway edema, friability
- Widened AP and transverse diam.
- Elevated diaphragm
- Widened subcostal angle
- Enlarging uterus

Functional effects

- increased respiratory drive
- minimal change in TLC, increased Vt, reduced FRC
- normal diaphragmatic function
- increased \( O_2 \) consumption and \( CO_2 \) production
ABG’s in pregnancy

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
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<tbody>
<tr>
<td>CO2</td>
<td>27-32 mmHg</td>
</tr>
<tr>
<td>O2</td>
<td>106 mmHg</td>
</tr>
<tr>
<td>Bicarbonate</td>
<td>18-21 mmol/L</td>
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<tr>
<td>pH</td>
<td>7.4-7.45</td>
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</tbody>
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Figure 3–11. Blood volume changes during pregnancy. (From Scott D: Anemia during pregnancy. Obstet Gynecol Ann 1:219, 1972.)
Causes of Dyspnoea in Pregnancy
Pulmonary Embolus
Amniotic Fluid Embolus
Infective Causes
Cardiac Disease
# Signs & Symptoms of Normal Pregnancy that may Mimic Heart Disease

## Signs
- Peripheral edema
- JVD

## Symptoms
- Reduced exercise tolerance
- Dyspnea

## Auscultation
- S3 gallop
- Systolic ejection murmur

## Chest x-ray
- Change in heart position & size
- Increased vascular markings

## EKG
- Nonspecific ST-T wave changes
- Axis deviation
- LVH
# Evaluation of Dyspnoea

<table>
<thead>
<tr>
<th>History</th>
<th>Respiratory</th>
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<tbody>
<tr>
<td>Examination</td>
<td>Cardiovascular</td>
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<tr>
<td>Investigations</td>
<td>Central</td>
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</tbody>
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Warning Signs

History

Examination
## Warning Signs

<table>
<thead>
<tr>
<th>History</th>
<th>Examination</th>
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<tbody>
<tr>
<td>Sudden onset</td>
<td>Increased respiratory rate &gt; 25</td>
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<tr>
<td>Cough</td>
<td>Low saturations on pulse oximetry &lt; 95%</td>
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<tr>
<td></td>
<td>Shallow breathing</td>
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<tr>
<td></td>
<td>Increased work of breathing</td>
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<td>Unable to speak in sentences</td>
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<td></td>
<td>Altered conscious state</td>
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<tr>
<td></td>
<td>Diaphoresis</td>
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<td>Cyanosis</td>
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Management of dyspnoea