



Saving Mothers' Lives:

Reviewing maternal deaths to make motherhood safer - 2003-2005



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The Seventh Report of the Confidential Enquiries
into Maternal Deaths in the United Kingdom

Pregnancy-induced physiological changes of importance for OB-anesthesia

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Airway

- Difficult intubation and airway problems. Ten times more common than in non pregnant women
- Why?

Breathing

- Decreased PaCO₂, important?
- VO₂, 200 ml/min – 300 – 400 – 600?
- FRC decreased, 20-25%
- Consequences?

Circulation

- Cardiac output increases 50%
- SV increases by 25% and HR 25%
- Uteroplacental blood flow 750 ml/min
- Uteroplacental blood flow-no autoregulation
- Dependant on perfusion-pressure
- Aorta-caval compression overt 10-15%
- Aorto-caval compression disclosed 85-90%
- Anesthetic implications?

Blood **D**ilution

- BV increases 45%
- Plasma volume increases 55%
- Red cell volume increases 30%
- Hemoglobin conc. decreases to 11.0 g/dl
- Physiological change! Not anemia

Efficacy of anesthetics

- MAC decreases by 30%
- MLAC decreases by 25%
- Probably induced by Progesteron
- Importance?

F full stomach

- See below

Gastrointestinal reflux

- >50% of pregnant women have heartburn
- Due to lowered barrier pressure of lower gastro-oesophageal sphincter
- Gastric emptying time normal unless in labor
- Anesthesiological consequences?

