Key notes on: Physiological changes in pregnancy

- All body systems are affected by pregnancy
- Physiological changes begin once conception occurs
- There is variation in what ‘normal’ changes occur in pregnant women – a lot of the studies done on physiology in pregnancy are old and had small numbers of participants – we are still learning....
- Women with multiple gestations experience further adaptations compared with singleton pregnancy (particularly to cardiovascular system)
- Labour and the early postpartum period are also associated with physiological adaptation e.g. further increases in cardiac output
- Cardiac and respiratory systems are dramatically affected
  - Cardiac output increases 30-50% - small ↑ in HR, larger ↑ in stroke volume
  - Increase in circulating volume by 40-50%
  - Minute volume increases 40-50% with resultant reduction in PaCO₂ 28-32mmHg
  - ~ 75% of pregnant women experience ‘breathlessness’ during pregnancy
- Carbohydrate metabolism alters with increasing insulin resistance as the pregnancy progresses
- Increase in some clotting factors – doubling of fibrinogen by term
- Physiology changes may affect medication levels and efficacy for example:
  - ↓ serum albumin = ? altered protein binding capacity
  - Increased glomerular filtration rate (potential for increased excretion)
  - Changes to maternal drug metabolising enzymes (difficult to predict metabolism pattern of regular drugs)
- Many laboratory tests have different ‘normal’ values in pregnancy – which may vary according to gestation e.g. urea and creatinine levels.

Key resources/recommended reading


**Bolded = highly recommended**