

## Cardiovascular

- Heart → up & to left → lateral apical beat & may have LAD on ECG
- Heart size ↑ by 10%
- CO ↑ by 40%
- HR ↑ by 15-20bpm by term
- BP ↓ by 10-15mmHg in 2<sup>nd</sup> trimester
- SVR ↓ by 20%
- May have systolic flow murmur, 1<sup>st</sup> heart sound may be split
- Blood volume ↑50% by 28/40 then plateaus
- Supine hypotensive syndrome in late pregnancy when uterus compresses IVC.
- SVT more common.

Physiological Changes during Pregnancy	
<b>CARDIOVASCULAR</b>	CO increases 1-1.5L/min BP decreases 5-15mmHg (normalises in 3 <sup>rd</sup> trimester) HR increases 15-20 bpm Uterus compresses IVC when supine
<b>AIRWAY</b>	Oedema to upper airway Enlarged breasts
<b>RESPIRATORY</b>	Diaphragmatic elevation → reduced FRC Increased MV with respiratory alkalosis Reduced respiratory reserve
<b>HAEMATOLOGICAL</b>	Blood Volume increases 40-50% Dilutional anaemia (Hb decreases 1-2g/dL)
<b>GASTROINTESTINAL</b>	Slowed gastric emptying Intestines displaced to upper abdomen
<b>GENITOURINARY</b>	Ureteric dilation Bladder displaced intra-abdominally Increased uterine size & blood flow

## Haematology

- RBC mass ↑33%
- Dilutional anaemia
- WCC & ESR may ↑ up to 16 in 3<sup>rd</sup> trimester
- Pro-Coagulation: many factors ↑, ↑D-Dimer

## Respiratory

- O<sub>2</sub> consumption ↑20-40%
- Elevation of diaphragm
- Dead space ↑
- Tidal vol ↑40% but VC & RR remains same.
- Minute vol ↑25% → compensated met alkalosis
- TLC ↓5%
- FRC, RV & ERV ↓20%

## GIT

- ↓Motility (due to progesterone/oestrogen)
- GO sphincter relaxed
- Abdominal organs displaced superiorly
- ALP may double as produced by placenta
- Alb may fall by 5g/L
- More water reabs from bowel → constipation

## Metabolic

↑Metabolic rate

Small ↓ in Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>2+</sup>

↑TG & cholesterol.

Insulin resistance

## Renal

GFR ↑ by 50%

Glycosuria

Bladder lifted out of pelvis & flattened in AP diameter - ↑capacity to 1500ml

Kidneys enlarge