

DC Coupling

- Direct current
- Electric voltage that is either positive or negative
- Current flows in only one direction
- Batteries are DC
- Detects slower changes in blood content
- Used for venous studies

AC Coupling

- Alternating current
- Electric voltage that reverses polarity (positive or negative) 60 times a second
- Current flows in both directions
- Wall plugs deliver 120 volts of AC
- Detects fast changes in blood content
- Used for arterial studies

g. Calibration

- Cannot be calibrated volumetrically as with venous air plethysmography (APG)
- Important to maintain the same 'size' or 'gain' setting throughout study
- Significant difference in tracing should mean a significant difference in blood volume

h. Display: tiny arterial pulsations usually evident; superimposed on tracing of venous flow



5. TECHNIQUE

- a. Sensor applied to lower leg, approximately 5 - 10 cms above medial malleolus (must not be over a varicosity)
- b. Strip chart recorder:
 - Running at slow speed (usually 5 mm/sec)
 - Stylus records on heat sensitive paper
- c. Patient instructed to complete series of exaggerated dorsiflexions to empty calf veins
- d. Manual compressions of calf can be performed; must be done bilaterally to ensure consistency