



"WAAARRRMM" mnemonic for weaning from cardiopulmonary bypass

Warm (nasopharyngeal temperature of 37°C and core temperature of approximately 35.5°C)

Anesthesia (most patients remain intubated and sedated with controlled postoperative mechanical ventilation)

Adjuvant drugs (adequate supply of muscle relaxants, antiarrhythmic agents, inotropic agents, etc should be ready)

Air (removed by ventilation and by massaging the heart, assisted by transesophageal echocardiography [TEE] visualization)

Rhythm (normal sinus rhythm is ideal, but temporary epicardial pacing is employed if sinus rhythm cannot be achieved)

Rate (heart rate between 80 to 90 beats/minute)

Resistance (hypotension with normal or elevated bypass flow rate or cardiac output indicates low systemic vascular resistance and a need for vasopressors)

Respiration (adequate ventilation and oxygenation)

Metabolism (calcium [1.09 to 1.3 mmol/L], potassium [4 to 5.5 mmol/L], hemoglobin [≥ 7 mg/dL], acid-base status normalized)

Monitoring (all monitors functioning and volume on pulse oximeter audible)

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