

PAEDIATRIC ANAESTHESIA

Preparation for Bypass: Pre-bypass Checklist	Checklist on Bypass	Preparation for Separation-from-Bypass Checklist
<ol style="list-style-type: none"> Anticoagulation <ol style="list-style-type: none"> <input type="checkbox"/> Heparin administered – 300 IU/kg (check cardiac calculator) <input type="checkbox"/> Desired level of anticoagulation achieved – ACT >480 sec <input type="checkbox"/> Arterial cannulation <ol style="list-style-type: none"> Absence of bubbles in arterial line Evidence of dissection or malposition? <input type="checkbox"/> Venous cannulation <input type="checkbox"/> Are all monitoring/access catheters functional? <input type="checkbox"/> Transesophageal echocardiograph (if used) <ol style="list-style-type: none"> In "freeze" mode Scope in neutral/unlocked position Supplemental medications <ol style="list-style-type: none"> <input type="checkbox"/> Neuromuscular blockers <input type="checkbox"/> Anesthetics, analgesics, amnestics <input type="checkbox"/> Inspection of head and neck <ol style="list-style-type: none"> Color Symmetry Venous drainage Pupils 	<ol style="list-style-type: none"> Assess arterial inflow <ol style="list-style-type: none"> <input type="checkbox"/> Is arterial perfusate oxygenated? <input type="checkbox"/> Is direction of arterial inflow appropriate? <input type="checkbox"/> Evidence of arterial dissection? <ol style="list-style-type: none"> Patient's arterial pressure persistently low Inflow line pressure high? Pump/oxygenator reservoir level falling? Unilateral facial swelling, discoloration? <input type="checkbox"/> Assess venous outflow <ol style="list-style-type: none"> Is blood draining to the pump/oxygenator's venous reservoir? Evidence of SVC obstruction? <input type="checkbox"/> Is bypass complete? <ol style="list-style-type: none"> Arterial and PA pressure nonpulsatile? Desired pump flow established? <input type="checkbox"/> Discontinue drug and fluid administration. <input type="checkbox"/> Discontinue ventilation and inhalation drugs to patient's lungs; confirm perfusionist started sevoflurane at >1% <input type="checkbox"/> For circulatory arrest, turn off bair hugger, warming blanket and apply ice to head. <input type="checkbox"/> Consider GTN/phentolamine for cooling/ rewarming. <input type="checkbox"/> Turn on warming devices only after temperature above 30° 	<ol style="list-style-type: none"> <input type="checkbox"/> Air clearance manoeuvres completed; can use TEE to confirm <input type="checkbox"/> ROTEM while rewarming. <input type="checkbox"/> Send for blood products while rewarming – PCT, FFP, platelets <input type="checkbox"/> Rewarming completed <ol style="list-style-type: none"> Nasopharyngeal temperature 36-37°C Rectal/bladder temperature ≥ 35°C, but ≤ 37°C <input type="checkbox"/> Address issue of adequacy of anesthesia and muscle relaxation <input type="checkbox"/> Obtain stable cardiac rate and rhythm (use pacing if necessary) <input type="checkbox"/> Pump flow and systemic arterial pressure <ol style="list-style-type: none"> Pump flow to maintain mixed venous saturation ≥ 70% Systemic pressure restored to normothermic levels <input type="checkbox"/> Metabolic parameters – check ABG from perfusionist <ol style="list-style-type: none"> Arterial pH, PO₂, PCO₂ within normal limits Hct: >25% K⁺: 4.0-5.0 meq/L <input type="checkbox"/> Are all monitoring/access catheters functional / zeroed? <ol style="list-style-type: none"> Transducers re-zeroed TEE (if used) out of freeze mode <input type="checkbox"/> Respiratory management <ol style="list-style-type: none"> Atelectasis cleared/lungs reexpanded Residual fluid in thoracic cavities drained Ventilation reinstituted & start sevoflurane <input type="checkbox"/> Inotropes/vasopressors/vasodilators started. <input type="checkbox"/> Blood products in OT before coming off bypass. <input type="checkbox"/> Protamine - 3mg/kg (check cardiac calculator).