

		dependent on fluctuating pulmonary venous pressures. Slight deadspace. During inspiration Q stops!! A>a momentarily.
Zone III	$P_a > P_v > P_A$	Almost ideal V / Q. Flow is independent of alveolar pressure. Q determined by a-v pressure difference.
Zone IV (BOTTOM OF LUNG)	$P_a > P_{isf} > P_v > P_A$	"Fluid pooling": r/t gravity; shunting pattern. Eg: pulmonary edema

Anesthesia Brain

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MALIGNANT HYPERTHERMIA PROTOCOL

*MH EMERGENCY HOTLINE: 1-800 MH HYPER (1-800 644-9737)

POSSIBLE TRIGGERS	ACUTE PHASE TREATMENT
1. Succinylcholine 2. ALL volatile anesthetics 3. Potassium salts	1. GET HELP! GET DANTROLENE! 2. Discontinue all possible triggers 3. Hyperventilate with 100% O ₂ at high flows 4. Administer dantrolene sodium (2.5 mg/kg) - mix each 20 mg vial of dantrolene with 60 cc sterile water (nonbacteriostatic)
CLINICAL MANIFESTATIONS	
1. Elevated EtCO ₂ 2. Muscle rigidity 3. Tachycardia 4. Tachypnea 5. Hypercarbia 6. Cardiac dysrhythmia 7. Respiratory and/or metabolic acidosis 8. Fever 9. Unstable/rising blood pressure 10. Cyanosis/mottling 11. Myoglobinuria (cola colored urine)	5. Administer sodium bicarbonate 1-2 meq/kg 6. Simultaneously with above, institute cooling measures: - lavage/cooling blanket - COLD IV NORMAL SALINE, NO LRI 7. Treat dysrhythmias prn - NO Ca ⁺⁺ channel blockers! 8. Administer additional dantrolene prn up to 10 mg/kg during acute phase 9. Monitor UO, K ⁺ , Ca ⁺⁺ , PT/PTT, ABG, EtCO ₂ 10. Treat hyperkalemia with 50 cc D50 + regular insulin 10 units IV 11. Consider mannitol/ furosemide for UO < 2cc/kg/hr not responsive to hydration 12. Consider monitoring of ABP/CVP/PA