

Hemodynamic Instability^{**}: In severe cases, the increased strain on the right ventricle can lead to a^{**}. 1 drop in cardiac output and systemic hypotension, potentially leading to shock and death. **Clot Formation (Thrombogenesis)**^{**}: Clots form in the deep veins due to factors described by Virchow's triad: endothelial injury, hypercoagulability, and venous stasis. **Ventilation–Perfusion Mismatch**^{**}: The obstruction impairs gas exchange by causing areas of the lung to be ventilated but not perfused (dead space), leading to hypoxemia (low blood oxygen levels). **Vascular Obstruction**^{**}: This blockage leads to increased pulmonary vascular resistance and a subsequent rise in right ventricular afterload. 2.3.4.5.6.7