

**3) Chemical regulation:**

a- Pulmonary arterioles are **constricted** by: catecholamines, angiotensin-II, thromboxane-A<sub>2</sub>, prostaglandin-F<sub>2α</sub>, dopamine, phenylephrine.

b- Pulmonary arterioles are **dilated** by: acetylcholine, histamine, bradykinin, prostaglandin I<sub>2</sub>, Ca<sup>++</sup> channels blocker, ↑O<sub>2</sub> and endothelium derived substance as nitric oxide.

**Pulmonary arterioles  
are constricted by:**

*phenylephrine*

*dopamine*

*prostaglandin-F2*

*thromboxane-A2*

*angiotensin-II*

*catecholamines*

**Pulmonary arterioles  
are dilated by:**

*acetylcholine*

*histamine*

*bradykinin*

*prostaglandin I2*

*Ca<sup>++</sup> channels blocker*

*↑O<sub>2</sub> and endothelium derived  
substance as nitric oxide*