

# Vascular reactivity in intrapulmonary arteries of chicken embryos during transition to ex ovo life

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The present study aimed to characterize pulmonary vascular reactivity in the chicken embryo from the last stage of prenatal development and throughout the perinatal period. Isolated intrapulmonary arteries from noninternally pipped embryos at 19 days of incubation and from internally and externally pipped embryos at 21 days of incubation were studied. Arterial diameter and contractile responses to KCl, endothelin-1, and U-46619 increased with incubation but were unaffected by external pipping. In contrast, the contractions induced by norepinephrine, phenylephrine, and electric field stimulation decreased with development. No developmental changes were observed in endothelium-dependent [acetylcholine (ACh) and cyclopiazonic acid] or endothelium-independent [sodium nitroprusside (SNP)] relaxation. These relaxations were abolished by the soluble guanylate cyclase inhibitor 1H-[1,2,4]oxadiazolo[4,3-a]quinoxalin-1-one. Endothelium-dependent relaxation was unaffected by blockade of cyclooxy