

# High altitude hypoxia and blood pressure dysregulation in adult chickens

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Although it is accepted that impaired placental perfusion in complicated pregnancy can slow fetal growth and programme an increased risk of cardiovascular dysfunction at adulthood, the relative contribution of reductions in fetal nutrition and in fetal oxygenation as the triggering stimulus remains unclear. By combining high altitude (HA) with the chick embryo model, we have previously isolated the direct effects of HA hypoxia on embryonic growth and cardiovascular development before hatching. This study isolated the effects of developmental hypoxia on cardiovascular function measured in vivo in conscious adult male and female chickens. Chick embryos were incubated, hatched and raised at sea level (SL, nine males and nine females) or incubated, hatched and raised at HA (seven males and seven females). At 6 months of age, vascular catheters were inserted under general anaesthesia. Five days later, basal blood gas status, basal cardiovascular function and cardiac baroreflex responses wer