

Prenatal malnutrition-induced hypertension in young rats is prevented by neonatal capsaicin treatment

Pérez, Hernán

Ruiz, Samuel

Soto-Moyano, Rubén

Prenatal malnutrition-induced fetal growth retardation in the rat results in elevated arterial blood pressure at adulthood. To test the contribution of cardiovascular sensory C fibers in the hypertensive state, arterial blood pressure was measured in prenatally undernourished rats treated at birth with capsaicin. The effects of the neonatal capsaicin treatment on heart rate and respiratory frequency were also evaluated. Maternal malnutrition resulted in body and brain weights deficits in the offspring that were not modified by neonatal capsaicin treatment. Capsaicin treatment did not change the cardiovascular parameters in normal rats, but prevented the elevation of arterial blood pressure and heart rate in malnourished animals. These results indicate that elevation of arterial blood pressure in prenatally malnourished rats depends on the activity of some sensory unmyelinated C fibers. © 2002 Elsevier Science Ireland Ltd. All rights reserved.