

Influence of 5-HT₂ Receptor Agonist on Cardiac Pumping Function of Trained Offspring of Trained Rats

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Abstract

We studied cardiac pumping function in the offspring of rats subjected to swimming exercise and the offspring of untrained rats. The rat pups were adapted for swimming with stepwise increasing load from day 21 to 70 life. At the age of 21 and 70 days, offspring of trained rats showed lower HR and significantly higher stroke volume and cardiac output than offspring of untrained rats. Agonist of 5-HT₂-receptors α -methyl-5-hydroxytryptamine maleate (30 μ g/kg) reduced enhanced stroke volume in trained offspring born by trained mothers. In trained offspring of untrained rats, the agonist had more pronounced effect on HR. © 2012 Springer Science+Business Media, Inc.

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Keywords

5-HT₂ receptor agonist, cardiac pumping function, heart rate, muscle exercise, stroke volume