

**Cardiac energy metabolism and lipid peroxidation in stressed male and female rats**

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Immobilization for 10 min induced a significant increase in cardiac mitochondrial ATPase activity in both male and female rats. Prolonged emotional stress for 7, 14 and 28 days was accompanied by progressive elevation in ATPase activity that was more pronounced in males vs. females. Also, emotional stress induced progressive depression in ATPase response to immobilization. These types of stress were not accompanied by a significant activation of lipid peroxidation in cardiac mitochondria reflecting a high antioxidant reserve in the heart. So, during moderate emotional prolonged stress males demonstrated a much more pronounced elevation in cardiac energy metabolism than females which may result in a more rapid depletion of energy metabolic reserves in the male heart in comparison with the female one.