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摘要:

摘要目的: 观察有氧运动对自发性高血压大鼠(SHR)心肌血红素氧合酶(HO)活性及HO-1 mRNA表达的影响, 探讨适宜的有氧运动对高血压性心肌肥大的防治作用及机制。方法: 雄性Wistar大鼠6只为正常对照组(C组), 雄性自发性高血压大鼠16只, 随机分为高血压组(S组)和高血压运动组(T组)。T组每日进行60min无负重游泳, 每周6次, 共9周, 用RT-PCR方法检测大鼠心脏HO-1 mRNA表达。结果: 与C组相比, S组心肌HO活性显著降低($P<0.05$); 与S组相比, T组心肌HO活性显著升高($P<0.05$)。与C组相比, 各组心肌HO-1 mRNA表达差异均有显著性意义, S组心肌HO-1 mRNA表达显著升高($P<0.01$); 与S组相比, T组心肌HO-1 mRNA表达也显著升高($P<0.01$)。结论: 说明长期有规律的运动可以升高SHR心肌HO活性和HO-1 mRNA表达。

关键词: [血红素氧合酶](#) [心肌肥大](#) [有氧运动](#)

Effects of aerobic exercise on activity of heme oxygenase and expression of heme oxygenase-1 mRNA in cardiac muscle of spontaneous hypertensive rats [Download Fulltext](#)

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Fund Project:

Abstract:

Abstract Objective: To investigate the effects of aerobic exercise on activity of heme oxygenase(HO) and expression of HO-1 mRNA in cardiac muscle of spontaneous hypertensive rats(SHR). Method: Male Wistar rats were assigned as follows: normal control group (C) with 6 normal rats, SHR group (S) with 8 SHRs, training SHR group (T) with 8 SHRs. T group carried on 60min unloaded swimming 6 times a week for 9 weeks. The rats in all groups were fed with normal feedstuff. Nine weeks later activity of HO and expression of HO-1 mRNA were determined by RT-PCR. Result: Activity of HO reduced significantly compared with normal control group ($P<0.05$); the expression of HO-1 mRNA in S group increased significantly compared with normal control group ($P<0.01$); Compared with S group, activity of HO and expression of HO-1 mRNA in T group increased obviously($P<0.05$, $P<0.01$). Conclusion: The long term regular aerobic exercise can increase activity of HO and expression of HO-1 mRNA obviously and improve the development of cardiac hypertrophy induced by hypertension.

Keywords: [heme oxygenase](#) [cardiac hypertrophy](#) [aerobic exercise](#)

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