

## PM<sub>2.5</sub>对高脂血症大鼠心血管系统的影响

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**中文摘要:**目的观察PM<sub>2.5</sub>对高脂血症大鼠心血管系统的影响,分析高脂血症大鼠是否存在易感性。方法高脂饲料喂养诱导高脂血症的Wistar大鼠和普通饲料喂养的Wistar大鼠各32只,采用气管滴注不同剂量的PM<sub>2.5</sub>进行染毒,通过检测染毒后大鼠血清心肌酶、C反应蛋白、血脂,测量血压、心率,观察不同浓度的PM<sub>2.5</sub>对心血管系统的影响。结果大鼠经PM<sub>2.5</sub>染毒后,高脂血症组与对照组相比,心肌激酶、C反应蛋白、血压和心率均有显著性差异(P<0.05),且随着PM<sub>2.5</sub>剂量的增加而升高。结论PM<sub>2.5</sub>对正常和病理状态的大鼠心血管系统均有损伤作用,但对高脂血症大鼠心血管系统的影响明显高于正常大鼠,提示高脂血症大鼠受PM<sub>2.5</sub>影响具有易感性。

**中文关键词:**[PM<sub>2.5</sub>](#) [高脂血症](#) [心血管系统](#) [易感性](#)

## Effect of PM<sub>2.5</sub> on Hyperlipemia Rats' Cardiovascular System

**Abstract:** Objective To observe the effects of PM<sub>2.5</sub> on cardiovascular system in high fat diet rats and to analysis whether there is susceptibility of high fat diet rats to PM<sub>2.5</sub>. Methods There were thirty two high fat diet induced hyperlipidemia Wistar rats and age-matched thirty two normal diet Wistar rats in the study. Creatine kinase, C reactive protein, blood lipids, blood pressure and heart rate were tested in order to observe effects of different concentrations of PM<sub>2.5</sub> on the cardiovascular system after rats' tracheas were exposed to different doses of PM<sub>2.5</sub> by instillation. Results Creatine kinase, C-reactive protein, blood pressure and heart rate of hyperlipidemia group were significantly different from those of the control group (P<0.05), and above indicators were increased with the increase of the concentration of PM<sub>2.5</sub>. Conclusion The cardiovascular system of rats in normal and pathological state can be injured by PM<sub>2.5</sub>, but the effect of PM<sub>2.5</sub> on cardiovascular system of hyperlipidemia rats is more serious than that of normal rats. These results prompted hyperlipidemia rats is susceptible to PM<sub>2.5</sub>.

**keywords:** [PM<sub>2.5</sub>](#) [Hyperlipemia](#) [Cardiovascular system](#) [Susceptibility](#)

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