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论文

# 环氧合酶-2介导促炎因子脂多糖诱导的脊髓长时程增强的变化

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**摘要:**

目的 探讨环氧合酶 2(COX 2)和促炎因子脂多糖(LPS)对脊髓长时程增强(LTP)的作用。方法 采用细胞外记录技术,在脊髓腰膨大部记录背角浅层神经元C-纤维诱发电位,蛋白质印迹检测LPS处理后不同时间点COX-2蛋白的表达。结果 腹腔注射 LPS后4h脊髓LTP显著增强,COX-2蛋白的表达显著增高;LPS注射后12、24h对脊髓LTP无明显作用,COX-2的表达无明显增强;COX-2的选择性抑制剂NS398可翻转LPS注射4h后对脊髓背角LTP的增强效应,NS398可显著抑制LPS 4h后对脊髓COX-2表达的增强。结论 COX-2的激活参与LPS诱导的脊髓LTP的变化。

**关键词:** 环氧合酶-2;脂多糖类;长时程增强;脊髓

## COX-2 mediates changes of LPS-induced spinal long-term potentiation

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Abstract:

Objective To explore the roles of cyclooxygenase-2 (COX-2) and proinflammatory cytokine lipopolysaccharide (LPS) in spinal long-term potentiation (LTP). Methods The C-fiber-evoked field potentials were recorded at superficial layers of the spinal dorsal horn at the lumbar enlargement, and the COX-2 expression in LPS-treated rats at different time points was measured by immunoblotting technique. Results Spinal LTP and COX-2 expression were significantly augmented 4h, but not 12h and 24h after intraperitoneal injection of LPS. NS398, a selective inhibitor of COX-2, reversed the elevated LTP induced by LPS 4h after injection. Elevated COX-2 expression in LPS-treated rats 4h after injection was significantly suppressed by NS398. Conclusion Activation of COX-2 is involved in changes of LPS-induced spinal LTP.

Keywords: Cyclooxygenase-2; Lipopolysaccharides; Long-term potentiation; Spinal cord

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