

## عنوان مقاله:

Evaluation of the neuroprotective, anticonvulsant, and cognition-improvement effects of apigenin in temporal lobe epilepsy: Involvement of the mitochondrial apoptotic pathway

## محل انتشار:

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#### خلاصه مقاله:

Objective(s): Cognitive deficit is a common problem in epilepsy. A major concern emergent from the use of antiepileptic drugs includes their side effects on learning and memory. Herbal medicine is considered a complementary and alternative therapy in epilepsy. Apigenin is a safe flavone with antioxidant properties. However, there is little information about the beneficial effect of apigenin on cognition in epilepsy. Materials and Methods: For evaluating the anticonvulsant effect of apigenin in the kainite temporal epilepsy model, apigenin was orally administered at 50 mg/kg for six days. Reference and working memory were examined via the Morris water maze and Y-maze task spontaneously. Results: Results showed that apigenin had significant anticonvulsant activity (P<0.01) and restored the memory-deficit induced by kainic acid (P<0.05). Furthermore, apigenin significantly increased the number of living neurons in the hilus (P<0.001). Immunohistochemical analysis showed that apigenin reduced the release of cytochrome c (P<0.01), suggesting an inhibitory role in the intrinsic apoptotic pathway. Conclusion: These .results suggest that apigenin restores memory impairment via anticonvulsant and neuroprotective activity

# كلمات كليدى:

Apigenin, Anticonvulsant, Cognition, Cytochrome c, Neuroprotection, Temporal lobe epilepsy

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