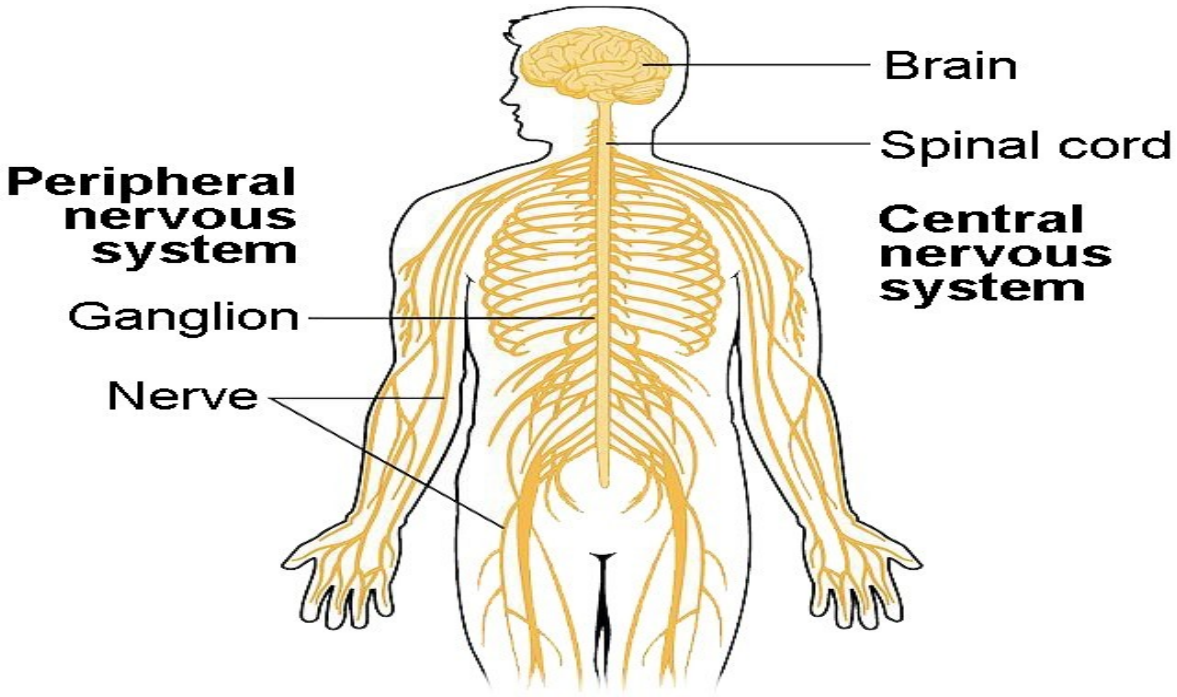
Medical PEMF Studies

NERVOUS SYSTEM

Evaluation of treatment with a pulsed electromagnetic field on wound healing,clinicopathologic variables, and central nervous system activity of dogs.



1. Am J Vet Res. 1998 Sep;59(9):1177-81.

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OBJECTIVE: To evaluate effects of treatment with a pulsed electromagnetic field (PEMF) on healing of open and sutured wounds, clinicopathologic variables, and CNS activity of dogs.

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ANIMALS: 12 adult female Beagles.
PROCEDURE: Open and sutured wounds were created in the skin of the trunk of the dogs. Dogs were divided into 2 groups. One group received PEMF treatment and 1 group served as untreated (control) dogs. The PEMF-treated dogs received treatment twice a day starting the day before surgery and lasting through day 21 after surgery. Wounds were evaluated by use of tensiometry, planimetry, laser Doppler perfusion imaging, and histologic examination. Clinicopathologic variables and electroencephalographic tracings were also evaluated.

RESULTS: Use of PEMF treatment resulted in significantly enhanced epithelialization of open wounds 10 and 15 days after surgery. Five days after surgery, wounds of control dogs had a negative value for wound contraction, whereas PEMF-treated wounds had a positive value. The PEMF treatment did not cause significant changes in short-term planimetric, perfusion, tensiometric, histologic, clinicopathologic, or electroencephalographic results.

CONCLUSIONS: The PEMF treatment enhanced wound epithelialization in open cutaneous wounds and provided indications of early contraction without significant short-term changes in other variables.

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