

# Antinociceptive Effects of Tetrahydrophthalimides and Related Compounds

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This paper describes the antinociceptive effects of tetrahydrophthalimides and related compounds in mice. Twenty compounds were obtained by the reaction of *cis*-1,2,3,6-tetrahydrophthalic anhydride with appropriate amines, dehydration, and addition to the imidic double bond. They were analyzed in the writhing test at 10 mg/kg given intraperitoneally. The most active compound 2-benzyl-5-morpholin-4-yl-hexahydroisoindole-1,3-dione (**19**) was studied on formalin, capsaicin, glutamate and hot plate models. The antinociceptive activity demonstrated by some studied compounds is promising, and some of them were more active than acetylsalicylic acid and paracetamol used as reference drugs in writhing tests in mice. Compound **19** was about 5-fold more potent than the reference drugs, being also effective by oral route and against the inflammatory response in the formalin test. The results suggest that compound **19** could be used as a model to obtain new and more potent antinociceptive agents. It exhibits an interesting antinociceptive profile, and does not interact with opioid systems.

*Key words:* Antinociceptive Effects, Tetrahydrophthalimides, Mice