# Giant miniature endplate potentials at vertebrate neuromuscular junctions

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## Abstract

An unusually large amplitude spontaneous miniature endplate potential (MEPP) occurs naturally at low frequency at the vertebrate neuromuscular junction. Unlike the normal MEPPs, these giant MEPPs have long duration and long time to peak. More strikingly, gMEPPs seem to be independent of extracellular and intracellular Ca+2. and have a greater temperature sensitivity than nMEPPs. They are potentiated by tetrodotoxin (TTX) but inhibited by acetylcholine (ACh) receptor blockers indicating ACh is the neurotransmitter responsible for gMEPPs. The frequency of gMEPPs is greatly increased in muscles weakened by various drugs, toxins or disease conditions suggesting that gMEPPs may be a part of possible neurotrophic mechanism to preserve effective neuromuscular transmission when normal function is compromised.

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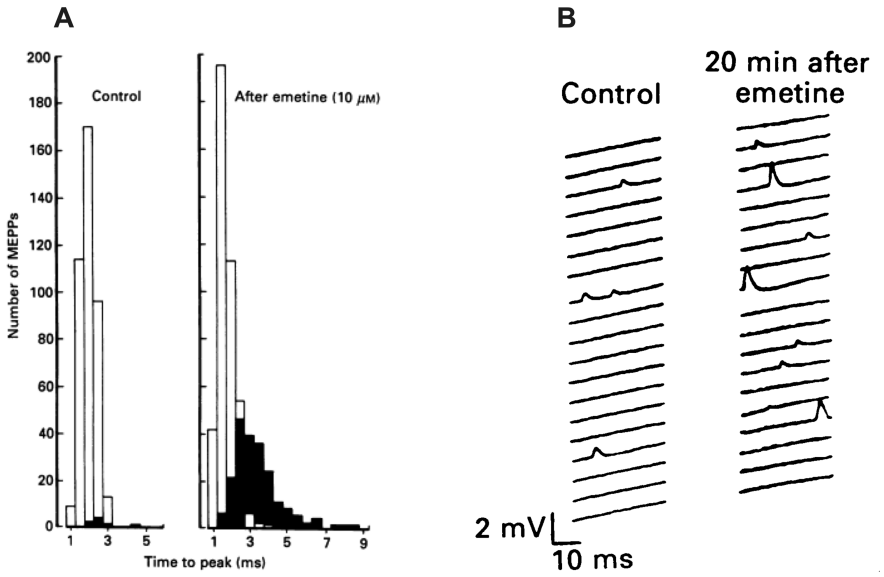
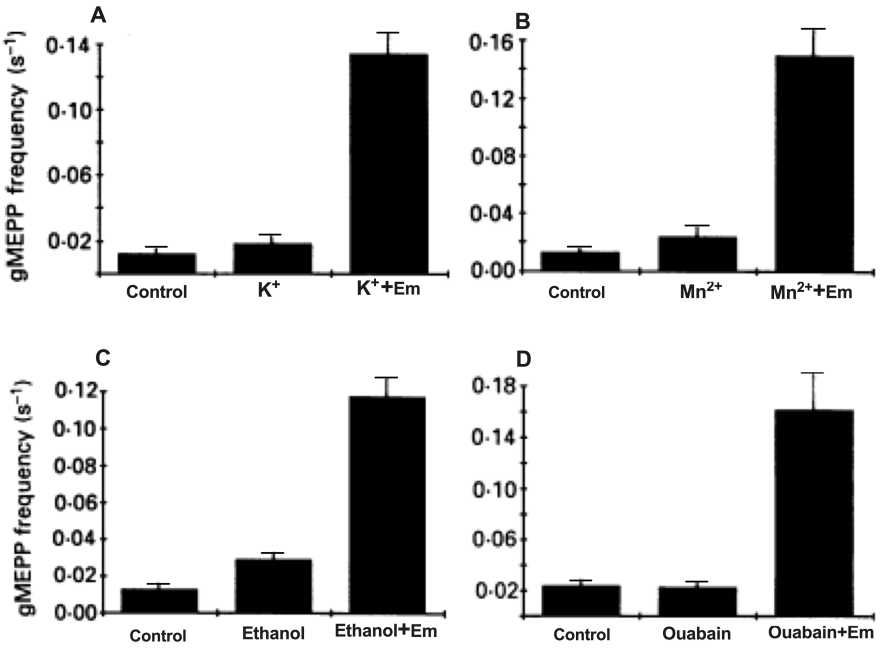
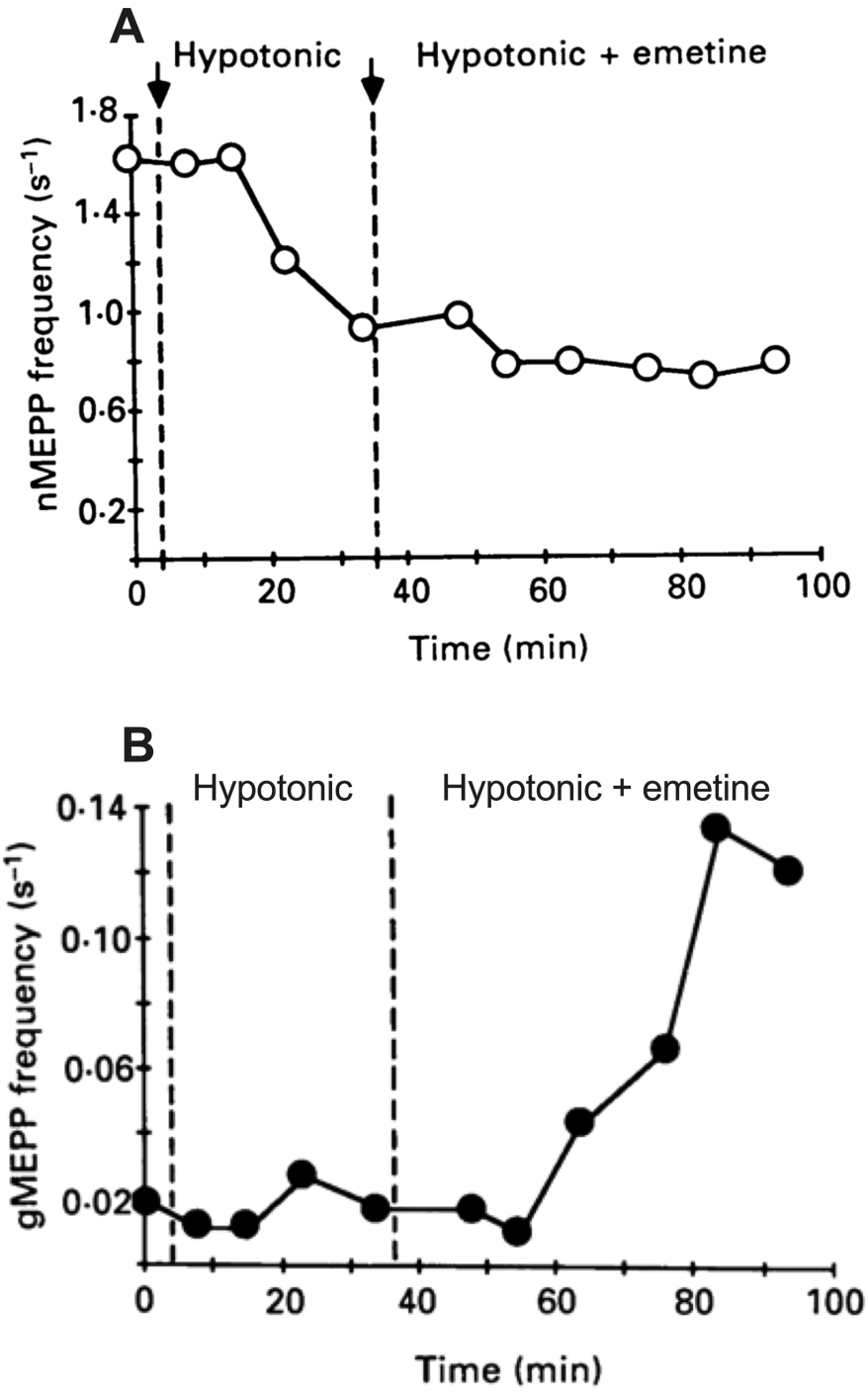
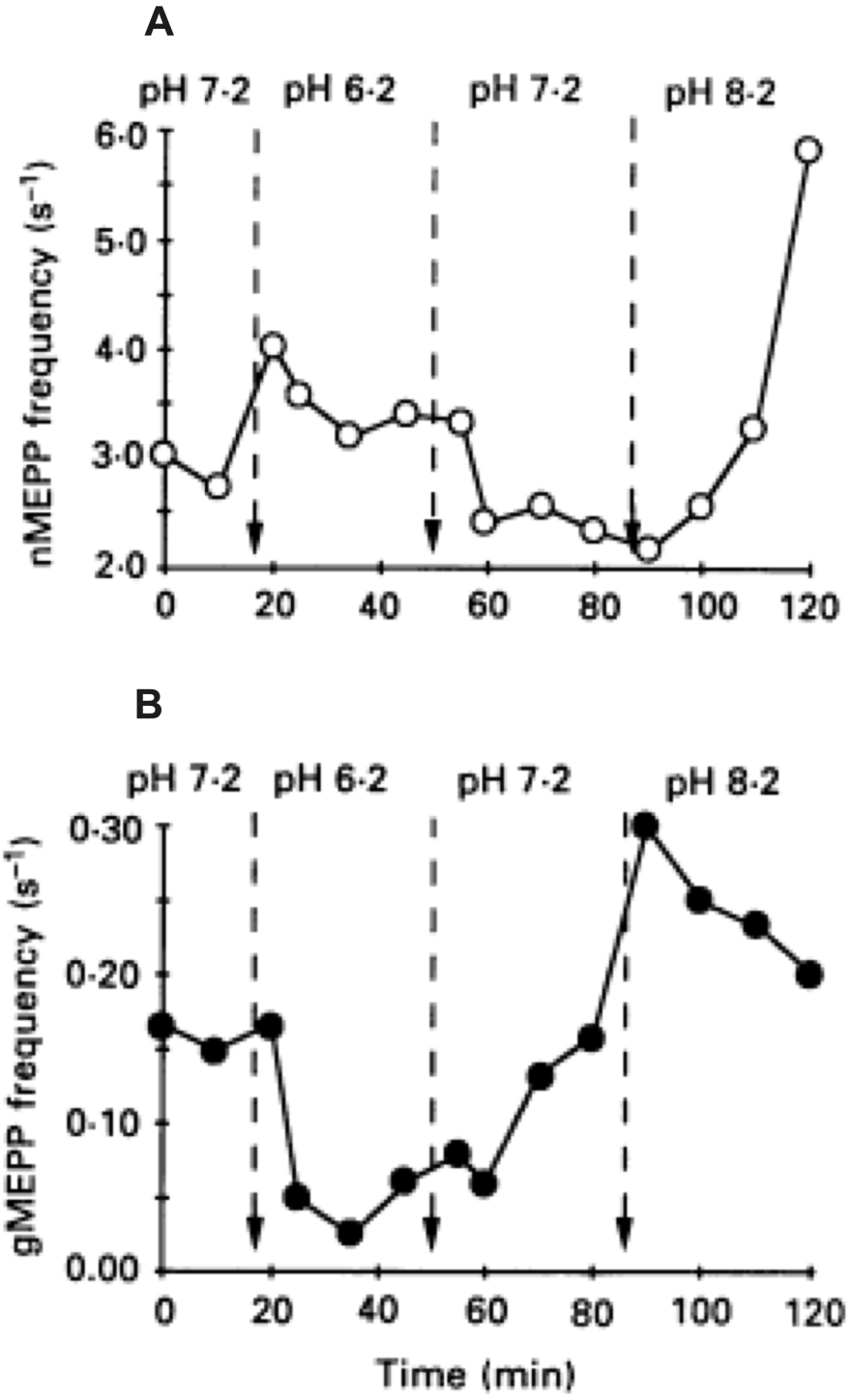
gMEPPSWord.docx available at https://authorea.com/users/617891/articles/1217712-giant-miniature-endplate-potentials-at-vertebrate-neuromuscular-junctions







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