Chloroquine is extensively used in the management of malaria in Kenya. It is widely available for self medication. Often it is used concurrently with other drugs. In the present paper, possible drug interactions with Chloroquine have been investigated. Isolated rat phrenic nerve diaphragm preparation was used to study the effect of Chloroquine alone and in combination with several drugs on neuromuscular impulse transmission. Chloroquine in the dose range 0.025 - 0.3 vg/ml organ bath concentrations induced a dose-dependent neuromuscular junction (NMJ) transmission blockade. The drug significantly potentiated the NMJ transmission blockade induced by commonly used agents gallamine, succinylcholine and lignocaine. It antagonised the NMJ facilitatory action of physostigmine, calcium chloride and barium chloride. Chloroquine could be interfering with ion conductance processes. It is suggested that Chloroquine should be used with caution in conditions characterised by muscle contractile disorders or during treatment with drugs that cause decreased skeletal muscle activity. Key Words: Chloroquine, interactions, neuromuscular junction.