

Clinical pharmacology and therapeutic use of antioxidant vitamins

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The clinical use of antioxidants has gained considerable interest during the last decade. It was suggested from epidemiological studies that diets high in fruits and vegetables might help decrease the risk of cardiovascular disease. Therefore, supplements of vitamins C and E were applied through protocols aimed to prevent diseases such as atherosclerosis, preeclampsia or hypertension, thought to be mediated by oxidative stress. Despite the biological properties of these vitamins could account for an effective protection, as shown by several clinical and experimental studies, their efficacy remains controversial in the light of some recent clinical trials and meta-analyses. However, the methodology of these studies, criteria for selection of patients, the uncertain extent of progression of the disease when initiating supplementation, the lack of mechanistic studies containing basic scientific aspects, such as the bioavailability, pharmacokinetic properties, and the nature of the antioxi