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Alpha-lipoic Acid-Palladium/Vitamin/Mineral Supplement

National Cancer Institute

Source

National Cancer Institute. *Alpha-lipoic Acid-Palladium/Vitamin/Mineral Supplement*. NCI Thesaurus. Code C106371.

A proprietary water- and lipid-soluble polymer-based nutritional supplement composed of a complex mixture of alpha-lipoic acid bound to palladium (Palladium Lipoic Acid Complex (PdLA)) and other minerals, vitamins and amino acids, including vitamins B1, B2 and B12, formylmethionine, acetyl cysteine, and trace amounts of molybdenum, rhodium, and ruthenium, with potential anti-oxidant and cytoprotective activities. Upon oral administration, the alpha-lipoic acid-palladium/vitamin/mineral supplement acts as a free radical scavenger, crosses the cell membrane and is able to transfer electrons from fatty acids to DNA via the electron transport chain in mitochondria, which protects against DNA damage. This could protect non-cancerous cells from the oxidative damage caused by radiation and chemotherapy. In addition, in the hypoxic conditions found within tumors, the excess electrons can generate free radicals within mitochondria and could induce both cytochrome c release and apoptosis.