

Gut. 2011 Apr 13. [Epub ahead of print]

Omega-3 polyunsaturated fatty acids for the treatment and prevention of colorectal cancer.

Cockbain AJ, Toogood GJ, Hull MA.

Source

University of Leeds, Leeds, UK.

Abstract

Omega (ω)-3 polyunsaturated fatty acids (PUFAs) are naturally occurring substances that are well tolerated and have been used extensively for the prevention of cardiovascular disease. More recently, ω -3 PUFAs have been recognised to have anticancer activity. There is also evidence suggesting improved efficacy and/or tolerability of conventional cancer chemotherapy when administered with ω -3 PUFAs. The purpose of this review is to (i) describe the mechanisms by which ω -3 PUFAs are thought to have antineoplastic activity, (ii) review published preclinical and clinical studies that support anti-colorectal cancer activity and (iii) summarise current clinical trials investigating the potential therapeutic role(s) of ω -3 PUFAs at different stages of colorectal carcinogenesis, from adenoma (polyp) prevention to treatment of established malignant disease and prevention of cancer recurrence.