

Conjugated Linoleic Acid (CLA) Health Benefits and Sources

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Abstract : Conjugated linoleic acid (CLA) is a mixture of positional and geometric isomers of octadecadienoic acid with two conjugated double bonds. Of more than a dozen isomers of CLA found naturally in dairy and meat products from ruminants, c-9, t-11 and t-10, c-12 are the two isomers with known physiological importance, including anticarcinogenic, antidiabetic, antilipogenic, and antiatherosclerotic effects. Conjugated linoleic acids (CLA) may influence the onset and severity of several chronic diseases, including various cancers, atherosclerosis, obesity, bone density loss, and diabetes. These findings are of special interest to the agriculture community, because dietary sources of CLA are almost exclusively beef and dairy products. Thus, a better understanding of the specific isomers and mechanisms responsible for these positive effects of CLA on human health would be both prudent and economically beneficial. To date, research related to the advantages of CLA consumption on human health has been conducted using experimental laboratory animals and cell culture systems. These data consistently show that relatively low levels of CLA can influence risk of cancer. Further, very recent investigations suggest that the predominate CLA isoform (cis-9, trans-11 CLA or rumenic acid) found in beef and milk fat possesses anticarcinogenic effects but does not alter body composition; the trans-10, cis-12 CLA has been shown to inhibit lipogenesis. Clearly, further work, especially using human subjects, will be required to characterize the potential benefits of CLA consumption on human health. Moreover, we suggest that foods naturally containing high amounts of CLA (e.g., beef and dairy products) be considered as meeting the definition of functional foods.

Keywords : conjugated linoleic acid, potential health benefits, fats, animals, humans

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