# [Polyunsaturated omega-3 fatty acids in the treatment of experimental human gingivitis]

[Article in French]

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The anti-inflammatory effect of omega-3 polyunsaturated fatty acids (n-3 PUFA) has already been demonstrated in an animal model. The aim of this randomized, double-blind, versus placebo study is to assess this action on experimental gingivitis in humans. Over a 14-day period (day 0-day 14), 37 healthy volunteers undertook intensive oral hygiene, and then did not brush their teeth for 21 days (day 14-day 35) so that gingivitis could then develop. On day 28, the subjects were randomized in two groups: 18 in the treatment group (fish oil: 1.8 g of n-3 PUFA), 19 in the placebo group (olive oil), at a daily dose of 6 g over days (day 28-day 35). The Plaque Index (PI), the Gingival Index (GI) and the Papilla Bleeding Index (PBI), as inflammation markers, were measured on day 14, day 28 and day 35. On day 28 and day 35, five volunteers of each group underwent removal of an interdental papilla to carry out the n-3 PUFA composition of cell membranes: arachidonic acid (AA), eicosapentaenoic acid (EPA), docosapentaenoic acid (DPA), docosahexaenoic acid (DHA). The results show the integration of EPA, DHA and DPA in the membranes of the cells removed and particularly a significant increase of EPA in the treatment group ($p = 0.04$ S). GI in the treatment group decreased significantly ($p = 0.008$ S). The level of AA decrease, but no significantly. It would therefore seem that the n-3 PUFA have an effect on the reduction of gingival inflammation in this experimental gingival model in humans.