Introduction: Several studies have shown the beneficial effects of n-3 long-chain polyunsaturated fatty acids (n-3 LCPUFA) on autoimmune, allergic and inflammatory diseases. This study was aimed to determine the effects of low dose n-3 LCPUFA from fish oil supplement on some hematologic indexes which at the same time are nonspecific markers of immunity and inflammation in a group of Iranian elderly subjects.

Materials and Methods: 114 elderly residents of Kahrizak Charity Foundation aged ≥ 65 were investigated in this randomized, double-blind placebo-controlled clinical trial. During 6 months of this study, the placebo group received a 1 g capsule /day containing medium chain triglycerides, while the intervention group consumed 1 g fish oil capsule /day containing 300 mg n-3 LCPUFA. Blood samples were collected before and after the intervention to determine hematologic indexes, including white blood cell, platelet and red blood cell counts, including hemoglobin and hematocrit values.

Results: After 6 months, there were no significant alterations in the studied variables in placebo group. In intervention group, only there was a significant elevation in hemoglobin levels compared with baseline (P=0.004). By univariate analysis after some adjustment, fish oil containing low dose n-3 LCPUFA did not show any significant overall effects on the concentration of red blood cells, white blood cells, platelets; also hemoglobin and hematocrit.

Conclusion: 6 months low dose supplementation with n-3 LCPUFA from fish oil had no effects on the hematologic markers such as leukocyte, granulocyte, lymphocyte and platelet count in this group of Iranian elderly people.

fish oil, n-3 fatty acids, leukocytes, granulocytes, lymphocytes, platelet count

Presentation: Poster