



Institut Hospital del Mar
d'Investigacions Mèdiques

Press release

Having higher levels of omega-3 acids in the blood increases life expectancy by almost five years

- ***A 1% increase in this substance in the blood is associated with a change in mortality risk similar to that of quitting smoking. Conversely, being a smoker cancels out the positive effect of eating oily fish, the main source of omega-3 acids***
- ***The study, published in *The American Journal of Clinical Nutrition*, analysed data from more than 2,000 people participating in a population-based follow-up programme in the United States. Their progress has been studied over an eleven-year period***
- ***The researchers will try to validate the data using a European population***

Barcelona, 21th July, 2021. - Levels of omega-3 fatty acids in the blood are **as good a predictor of mortality from any cause as smoking**, according to a study involving the Hospital del Mar Medical Research Institute (IMIM), in collaboration with *The Fatty Acid Research Institute* in the United States and several universities in the United States and Canada. The study, published in *The American Journal of Clinical Nutrition*, used data from a long-term study group, the *Framingham Offspring Cohort*, which has been monitoring residents of this Massachusetts town, in the United States, since 1971.

Researchers have found that omega-3 levels in blood erythrocytes (the so-called red blood cells) are very good mortality risk predictors. The study concludes that ***"Having higher levels of these acids in the blood, as a result of regularly including oily fish in the diet, increases life expectancy by almost five years"***, as Dr. Aleix Sala-Vila, a postdoctoral researcher in the IMIM's Cardiovascular Risk and Nutrition Research Group and author of the study, points out. In contrast, ***"Being a regular smoker takes 4.7 years off your life expectancy, the same as you gain if you have high levels of omega-3 acids in your blood"***, he adds.

2,200 people monitored over eleven years

The study analysed data on blood fatty acid levels in **2,240 people over the age of 65**, who were monitored for an average of eleven years. The aim was to validate which fatty acids function as good predictors of mortality, beyond the already known factors. The results indicate that four types of fatty acids, including omega-3, fulfil this role. It is interesting that two of them are saturated fatty acids, traditionally associated with cardiovascular risk, but which, in this case, indicate longer life expectancy. ***"This reaffirms what we have been seeing lately"***, says Dr Sala-Vila, ***"not all saturated fatty acids are necessarily bad."*** Indeed, their levels in the blood cannot be modified by diet, as happens with omega-3 fatty acids.

These results may contribute to the personalisation of dietary recommendations for food intake, based on the blood concentrations of the different types of fatty acids. ***"What we have found is not insignificant. It reinforces the idea that small changes in diet in the right direction can have a much more powerful effect than we think, and it is never too late or too early to make these changes"***, remarks Dr Sala-Vila.

The researchers will now try to analyse the same indicators in similar population groups, but of European origin, to find out if the results obtained can also be applied outside the United States. The [*American Heart Association*](#) recommends eating oily fish such as salmon, anchovies or sardines twice a week because of the health benefits of omega-3 acids.

Reference article



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Michael I McBurney, Nathan L Tintle, Ramachandran S Vasan, Aleix Sala-Vila, William S Harris, Using an erythrocyte fatty acid fingerprint to predict risk of all-cause mortality: the Framingham Offspring Cohort, *The American Journal of Clinical Nutrition*, 2021;, nqab195, <https://doi.org/10.1093/ajcn/nqab195>

Further information

IMIM/Hospital del Mar Communications Service: Marta Calsina 93 3160680 mcalsina@imim.es, David Collantes 600402785 dcollantes@hospitaldelmar.cat