Response to Letter Regarding Article, “Extravirgin Olive Oil Consumption Reduces Risk of Atrial Fibrillation: The PREDIMED (Prevención con Dieta Mediterránea) Trial”

We appreciate the interest and kind comments by Gonzalez-Salvado et al regarding our published article on extravirgin olive oil (EVOO) consumption and a reduced risk of atrial fibrillation (AF).1

The answer to their questions about the quantity of EVOO that should be consumed to observe a reduction in the risk of AF and the between-subject variability in EVOO consumption can be found in our online-only Data Supplement published in Circulation. In the per protocol analyses shown in Table II in the online-only Data Supplement (including the 3 arms of the trial together), we demonstrated that the risk of AF was only 6.6 cases/1000 person-years when the attained consumption reached the 3 upper quintiles of consumption, whereas it was 15.5 when the consumption was in the 2 lower quintiles. This cutoff corresponded to a consumption of at least 25 g/d. More specifically, and taking into account the between-subject variability in total energy intake and after controlling for other potential confounding factors, we observed a significant reduction in the risk of AF when EVOO consumption represented ≥15% of total energy intake (please check Figure IB in the online-only Data Supplement).

We acknowledge that we did not specify whether EVOO was consumed raw or cooked. Specifically we included both possibilities in our educational recommendations to participants, but we also gave the advice to our participants to frequently consume EVOO for salad dressings and as a spread. Please check http://www.predimed.es, and previous articles on our interventions in the Prevención con Dieta Mediterránea (PREDIMED) trial.2,3 Furthermore, it is well known that EVOO is more resistant than other oils to the high-temperature heating process while cooking, and that the presence of phenol compounds attenuates the potential adverse effects of frying at high temperatures.4 Therefore, we do not think that this is a relevant issue or may substantially affect the properties of EVOO.

In previous articles published by our group there is ample information about the consumption of EVOO in the remaining groups (please check http://www.predimed.es/core-publications.html). Moreover, the per protocol analyses presented in our online-only Data Supplement included the 3 intervention groups.

Gonzalez-Salvado et al also argue that no specific tool, apart from the food-frequency questionnaires, was frequently used to assess the correct adherence to the low-fat diet. We have already published the objective assessment of compliance using biomarkers and the adherence was appropriate. In addition to the full-length food-frequency questionnaires, we also used a specific 9-point score to appraise the adherence to the low-fat diet in the control group.

The assessment of AF followed exactly the same procedures as those used for the primary end point of the PREDIMED trial. The key issue here is that the adjudication process was independent and completely blinded to the allocated diet and, given the randomization, there is no reason to expect any differential misclassification. In this scenario, the likelihood for away-from-the null bias is therefore negligible.5

We agree that our results should be cautiously interpreted, and that additional studies, preferably large primary prevention trials, need to be conducted.

Disclosures
None.

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