

## Reply to H. Raeisi-Dehkordi et al.

Dear Editor:

We thank Raeisi-Dehkordi et al. (1) for their letter to the Editor concerning our systematic review of the effects of diets enriched in monounsaturated oleic acid on the management and prevention of obesity using data from randomized controlled trials (2). Raeisi-Dehkordi et al. (1) have raised some questions that must be addressed. According to their classification regarding the possible questions, we have answered those questions in the same order accordingly.

The first concern referred to the inadequate search strategy and ignoring a number of eligible studies due to methodological problems. The number of articles in the initial search was low (821) because the search was restricted to randomized controlled trials, which we mentioned in our article. It should be noted that the full text of all articles that included our main keywords (e.g., oleic acid, olive oil, MUFA, monounsaturated fatty acid, and Mediterranean diet) in the title AND obesity-related terms (e.g., overweight, obesity, obese, body mass index, waist circumference, central obesity, adiposity, adipose tissue, android fat, gynoid fat, body composition, energy expenditure, weight control, and appetite) in the title or abstract was screened. Overall, ~300 full-text articles were reviewed to extract any possible data of interest. Therefore, our study also included articles that presented anthropometric indices as secondary outcome.

As we mentioned in the Methods section, the reference lists of eligible articles were also examined to identify additional and relevant studies. However, 7 studies (3–9) were missed in the hand searching, and should be considered in the updated systematic review and meta-analysis. We should also mention that our final results did not alter after taking the findings of these studies into consideration.

It should be indicated that only the moderate- to high-quality articles based on the Cochrane Collaboration tools were included in our systematic review; unfortunately the sentence was not mentioned in the article. In fact, our study did not include low-quality articles with respect to the Cochrane Collaboration tools. Furthermore, according to our systematic review, articles with insufficient data were excluded. Thus, our study did not include studies conducted by Kris-Etherton et al. (10, 11), Karvonen et al. (12), and Choudhury et al. (13).

As mentioned in our systematic review, oleic acid is found not only in olive oil, but also in other vegetable oils (e.g., high-oleic varieties of soybean and canola), nuts, fruits, and animal products (e.g., ground beef, pork, and eggs). However, our study included articles evaluating the effects of the more common MUFAs in daily nutrition. Therefore,

studies that examined the effects of less popular vegetable oils, such as hazelnut-enriched diets, were not included in our review.

Finally, as previously mentioned, quality assessment of the included studies was performed using the Cochrane Collaboration tools, and only moderate- to high-quality articles were included in our systematic review, but unfortunately this was not mentioned in the article.

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Author disclosures: The authors report no conflicts of interest.

## References

- Raeisi-Dehkordi H, Dianatinasab M, Amiri M. Systematic review of diets enriched in oleic acid and obesity: a letter to the Editor 2021;12(2):575–6.
- Tutunchi H, Ostadrahimi A, Saghafi-Asl M. The effects of diets enriched in monounsaturated oleic acid on the management and prevention of obesity: a systematic review of human intervention studies. *Adv Nutr* 2020;11(4):864–77.
- Rozati M, Barnett J, Wu D, Handelman G, Saltzman E, Wilson T, Li L, Wang J, Marcos A, Ordovás JM, et al. Cardio-metabolic and immunological impacts of extra virgin olive oil consumption in overweight and obese older adults: a randomized controlled trial. *Nutr Metab*. 2015;12:28.
- Tholstrup T, Hjerpsted J, Raff M. Palm olein increases plasma cholesterol moderately compared with olive oil in healthy individuals. *Am J Clin Nutr* 2011;94(6):1426–32.
- Kruse M, von Loeffelholz C, Hoffmann D, Pohlmann A, Selmann AC, Osterhoff M, Hornemann S, Pivovarova O, Rohn S, Jahreis G, et al. Dietary rapeseed/canola-oil supplementation reduces serum lipids and liver enzymes and alters postprandial inflammatory responses in adipose tissue compared to olive-oil supplementation in obese men. *Mol Nutr Food Res* 2015;59(3):507–19.
- Lucci P, Borrero M, Ruiz A, Pacetti D, Frega NG, Diez O, Ojeda M, Gagliardi R, Parra L, Angel M. Palm oil and cardiovascular disease: a randomized trial of the effects of hybrid palm oil supplementation on human plasma lipid patterns. *Food Funct* 2016;7(1):347–54.
- Nelson TL, Hokanson JE, Hickey MS. Omega-3 fatty acids and lipoprotein associated phospholipase A(2) in healthy older adult males and females. *Eur J Nutr* 2011;50(3):185–93.
- Kontogianni MD, Vlassopoulos A, Gatzieva A, Farmaki AE, Katsiogiannis S, Panagiotakos DB, Kalogeropoulos N, Skopouli FN. Flaxseed oil does not affect inflammatory markers and lipid profile compared to olive oil, in young, healthy, normal weight adults. *Metabolism* 2013;62(5):686–93.
- Baxheinrich A, Stratmann B, Lee-Barkey YH, Tschoepe D, Wahrburg U. Effects of a rapeseed oil-enriched hypoenergetic diet with a high content of  $\alpha$ -linolenic acid on body weight and cardiovascular risk profile in patients with the metabolic syndrome. *Br J Nutr* 2012;108(4):682–91.
- Kris-Etherton PM, Derr J, Mitchell DC, Mustad VA, Russell ME, McDonnell ET, Salabsky D, Pearson TA. The role of fatty acid saturation

- on plasma lipids, lipoproteins, and apolipoproteins: I. Effects of whole food diets high in cocoa butter, olive oil, soybean oil, dairy butter, and milk chocolate on the plasma lipids of young men. *Metabolism* 1993;42(1):121-9.
11. Kris-Etherton PM, Pearson TA, Wan Y, Hargrove RL, Moriarty K, Fishell V, Etherton TD. High-monounsaturated fatty acid diets lower both plasma cholesterol and triacylglycerol concentrations. *Am J Clin Nutr* 1999;70(6):1009-15.
  12. Karvonen HM, Aro A, Tapola NS, Salminen I, Uusitupa MI, Sarkkinen ES. Effect of alpha-linolenic acid-rich *Camelina sativa* oil on serum fatty acid composition and serum lipids in hypercholesterolemic subjects. *Metabolism* 2002;51(10):1253-60.
  13. Choudhury N, Tan L, Truswell AS. Comparison of palmolein and olive oil: effects on plasma lipids and vitamin E in young adults. *Am J Clin Nutr* 1995;61(5):1043-51.