



Alternative treatment or alternative to treatment? A systematic review of randomized trials on homeopathic preparations for diabetes and obesity

Matteo Monami¹ · Antonio Silverii¹ · Edoardo Mannucci¹

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Millions of people use homeopathy as an alternative or a complement to “traditional” drugs [1]. Although homeopathic remedies are never included among treatments in International Guidelines, both diabetes and obesity have been proposed as targets of homeopathy [2], and homeopathy is sometimes used for diabetes and its complications [3]. In fact, the use of complementary/alternative medicine (including homeopathy) seems to be common in people with diabetes [4].

This meta-analysis and systematic review (PROSPERO: CRD42018087184; <http://www.crd.york.ac.uk>) is aimed at evaluating studies on efficacy and safety of homeopathic remedies in the treatment of diabetes and/or obesity.

An extensive search of Medline, <http://www.clinicaltrials.gov>, and Google scholar databases was performed until February 1st, 2018, using the following string: “homeopath* AND (diabet* OR obes*)”, and including all randomized trials (duration ≥ 4 weeks). Primary outcomes were difference in endpoint:

- HbA1c for trials enrolling type 1 and 2 diabetes;
- Body mass index for trials enrolling type 2 diabetes or obese subjects.

Secondary outcomes were serious adverse events and mortality.

The searches failed to retrieve any trial comparing homeopathic remedies with placebo or any active drug for the treatment of either diabetes or obesity (Fig. 1).

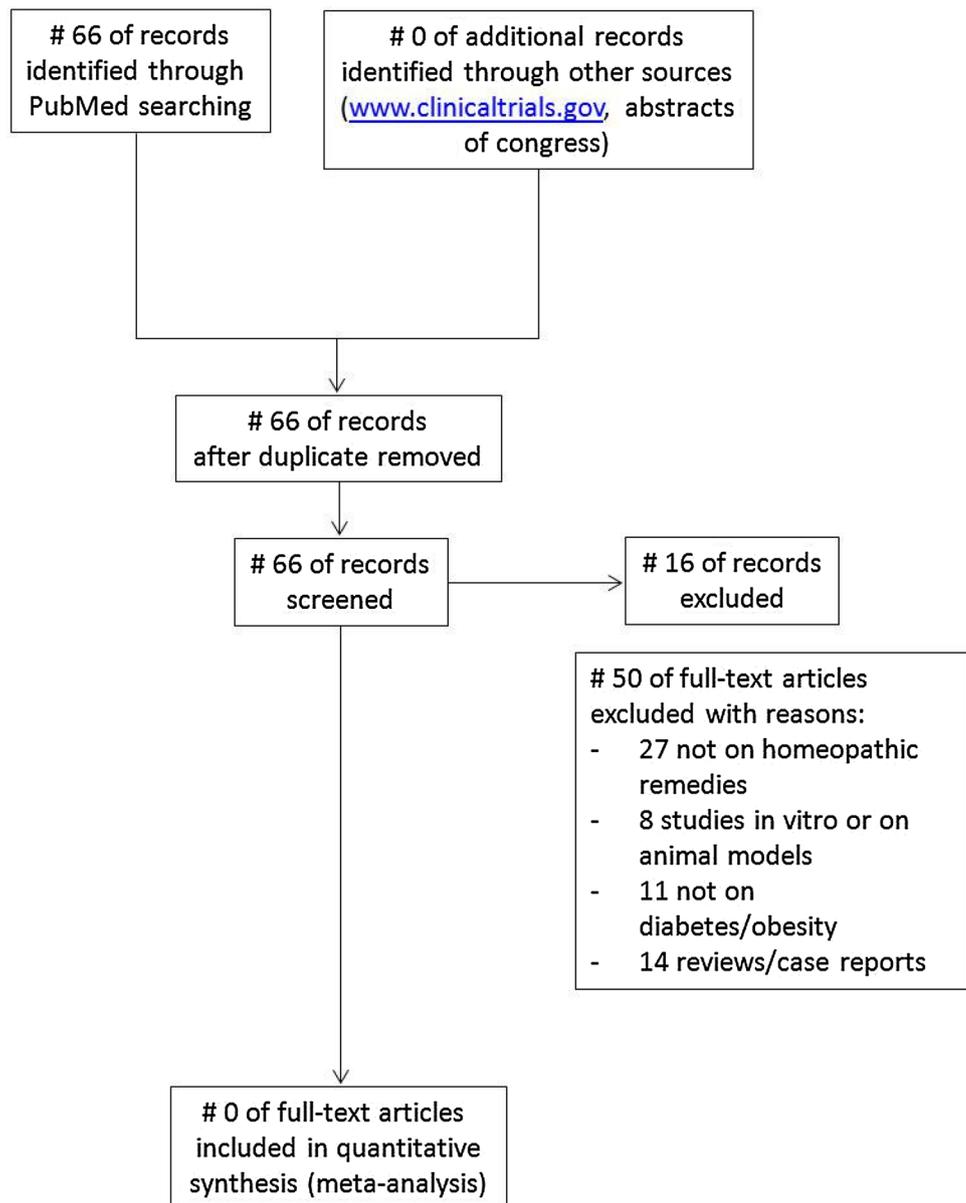
Many physicians believe that homeopathy is harmless; however, if homeopathy has biological effects, its safety needs to be tested with formal studies. Toxicity has been reported for some homeopathic remedies used for diabetes [5]. In addition, if homeopathy is used as an alternative to available and effective treatments, the consequences can be catastrophic, particularly in some conditions such as insulin-requiring diabetes. In conclusion, there is no scientific evidence on efficacy and no demonstration of safety of homeopathy in diabetes and obesity. Awaiting a final answer to the question whether homeopathic intervention differs from placebo, homeopathic remedies should never be considered as an alternative to “traditional” treatment of diabetes and obesity; in addition, no use of public healthcare resources for such remedies for diabetes is justified.

Managed By Antonio Secchi.

✉ Matteo Monami
matteo.monami@unifi.it

¹ Diabetology, Azienda Ospedaliero-Universitaria Careggi and University of Florence, Via delle Oblate 4, 50139 Florence, Italy

Fig. 1 Trial flow summary, showing reasons for exclusion of retrieved records (i.e., treatments studied other than homeopathic remedies, non-human studies, conditions studied different from obesity/diabetes, design different from that of randomized trials)



Compliance with ethical standards

Conflict of interest Matteo Monami has received speaking fees from Bristol Myers Squibb, Eli-Lilly, Merck, Novonordisk, Merck, and Takeda, and research grants from Bristol Myers Squibb. Antonio Silverii has no conflict of interests. Edoardo Mannucci has received consultancy fees from Merck and Novartis, speaking fees from Astra Zeneca, Bristol Myers Squibb, Merck, and Novartis, and research grants from Merck, Novartis, and Takeda.

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

Informed consent For this type of study formal consent is not required.

References

1. Relton C, Cooper K, Viksveen P, Fibert P, Thomas K (2017) Prevalence of homeopathy use by the general population worldwide: a systematic review. *Homeopathy* 106:69–78
2. To KLA, Fok YYY, Chong KCM, Lee YCJ, Yiu LSS (2017) Individualized homeopathic treatment in addition to conventional treatment in type II diabetic patients in Hong Kong—a retrospective cohort study. *Homeopathy* 106:79–86
3. Dannemann K, Hecker W, Haberland H, Herbst A, Galler A, Schäfer T, Brähler E, Kiess W, Kapellen TM (2008) Use of complementary and alternative medicine in children with type I diabetes mellitus—prevalence, patterns of use, and costs. *Pediatr Diabetes* 9:228–235

4. Egede LE, Ye X, Zheng D, Silverstein MD (2002) The prevalence and pattern of complementary and alternative medicine use in individuals with diabetes. *Diabetes Care* 25(2):324–329
5. Chakraborti D, Mukherjee SC, Saha KC, Chowdhury UK, Rahman MM, Sengupta MK (2003) Arsenic toxicity from homeopathic treatment. *J Toxicol Clin Toxicol* 41:963–967