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## **An unscientific disease treatment method: Homeopathy**

Recently we have been worried to see certain universities, and even faculties of medicine, promote and host meetings on homeopathy in their campuses.

Although devoid of any active medical substance, homeopathic treatment is seen to replace medical methods in certain cases, putting the lives of patients at serious risk.

Practiced since the early 19<sup>th</sup> century, homeopathy is based on the claim that patients can be treated by administering them very low doses of substances which would normally cause symptoms of the disease in healthy people. The preparations are manufactured by repeatedly diluting the chosen substance. At the end of the dilution process, the so-called “medicine” may not even include a molecule of the active substance.

Today, the development of a new medication requires a long process of collecting and analyzing data, complete with trials carried out at certain stages. New drugs are made available to patients only at the end of a development process of 10 to 12 years, after their efficiency is proven with reliable evidence. Medical practices based on evidence help reach a decision on the effectiveness of a treatment through comparisons with existing treatments or placebo administration (trials involving patients who are unaware that they are given “drugs” lacking any active substance). If the new treatment or drug is indeed proven to be effective as a result of meticulously designed, unbiased and randomized clinical trials, then it is accepted that the treatment will help patients regain their health. The effectiveness of the drug increases with its dose. This is the basis of modern scientific medicine. Products certified as drugs by public authorities undergo meticulous controls after their discovery and at every stage of their manufacturing, and are made available in the market with a firm guarantee of their quality.

The homeopathic method, on the other hand, stands in a sharp contrast with the basic principles and scientific methods of modern medicine as summarized above. Scientific and clinical studies have found homeopathy to be no more effective than a placebo treatment (Mathie, 2014). Homeopathic products are deemed to be innocuous as they generally include no active substance; however, they could include other known or unknown effective substances since they do not go through any standardized process of certification. Furthermore, although innocuous in a sense, homeopathy could become dangerous since the patient thinks that she is being treated via homeopathy and thus refrains from seeking effective methods of treatment. As such, the use of such methods instead of modern scientific methods is ill-advised, and could jeopardize the lives of patients.

Unfortunately, patients who are disappointed with the effect of existing medical treatments continue to view homeopathic “treatments” as an alternative. Even in a country such as the USA, where state-of-the-art medical technologies are available, a significant portion of patients are reported to opt for homeopathy and other alternative therapies (Podolsky, 2016). This tendency makes patients vulnerable to charlatans who abuse their weakness to take their money in return for unscientific methods of dubious effectiveness.

Faced with such a situation, the Science Academy feels the obligation to issue the following warnings:

1. Citizens ought to beware of homeopathic and similar treatments offered instead of scientific methods, and consult their physicians about the possible risks associated with such unscientific practices.
2. Societies of medical specialists should conduct studies on and control the practices of alternative medicine and homeopathy in their fields of expertise.
3. Ministry of Health must establish mechanisms of control to oversee such alternative medication placed on sale, and whenever deemed necessary, seek the support of societies of medical specialists, considered to be the representatives of scientific medicine.
4. In line with its obligation of offering accurate information to the society at large, the press should beware of this pragmatism, bordering on fraud, of individuals who market such alternative practices.
5. The fact that, in recent times, certain universities and even faculties of medicine, promote and host meetings on homeopathy in their campuses, thus granting such treatments prestige, constitutes a grave irresponsibility as well as a deplorable violation of scientific integrity, the society's right to accurate information, public health principles as well as patient rights.

Science Academy, Medical Working Group

#### References

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2. Mathie, R. T., Lloyd, S. M., Legg, L. A., Clausen, J., Moss, S., Davidson, J. R., & Ford, I. (2014). Randomised placebo-controlled trials of individualised homeopathic treatment: systematic review and meta-analysis. *Syst Rev*, 3, 142.