

Overuse of antibiotics in healthcare and industrial farming practices have led to widespread resistance of infectious bacteria to antibiotic treatment. This has in turn led to increasing mortality due to infection.³¹ Although this is a global crisis, highly industrialized nations have led the world in the overuse of these crucial medicines. To address this growing problem it is critical that we reserve their use in livestock for infection rather than for artificial growth, and stop using antibiotics as pesticides. In addition, in health care we can devise and implement a new integrative medicine approach to reduce reliance on antibiotics for less threatening infections. Homeopathy is an important part of this approach, as it is in Switzerland, France, and many other countries around the world. Homeopathy can be integrated into the landscape of medical options as a means of reducing susceptibility to infection, reducing severity of pain and other symptoms during infection, and recovering faster from infection.^{32, 33}

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Consequences of antibiotics overuse to individual health

While antibiotic resistant life-threatening infections are a primary driver for addressing this crisis, overuse of antibiotics also has a negative impact on long-term individual health quality. We are just starting to recognize the myriad unintended consequences of the vast amounts of antibiotics in our food supply, including recent discovery of drug-resistant E. Coli in retail chicken breasts potentially being a contributing factor to chronic urinary tract infections in humans.34 Human overuse of antibiotics leads to the destruction of the gut microbiome. leading to a host of chronic conditions.

³¹ Ventola CL. The Antibiotic Resistance Crisis: Part 1: Causes and Threats. Pharmacy and Therapeutics. 2015;40(4):277-283. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4378521

³² Bornhoft, G., & Matthiessen, P. (2012). Homeopathy in Healthcare. Dordrecht: Springer. https://doi.org/10.1007/978-3-642-20638-2

³³ Colas, Aurelie, Danno, Karine, Taber, Cynthia, Ehreth, Jenifer, & Duru, Gerard. (2015). Economic impact of homeopathic practice in general medicine in France. (BioMed Central Ltd.) BioMed Central

³⁴ Johnson JR, Porter SB, Johnston B, et al. Extraintestinal Pathogenic and Antimicrobial-Resistant Escherichia coli, Including Sequence Type 131 (ST131), from Retail Chicken Breasts in the United States in 2013. Schaffner DW, ed. Applied and Environmental Microbiology. 2017;83(6):e02956-16. doi:10.1128/AEM.02956-16. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5335



Minimum dose concept in homeopathy

The concept of "less is more" in homeopathic medicine is two-fold. Homeopathic medicines are a subset of ultra-high dilutions. Homeopathic medicines are manufactured in a specific way and chosen to stimulate the body's own healing response. The homeopathic treatment, the frequency of taking a dose of a homeopathic medicine is minimized, allowing the body's healing response to be as efficient as possible. When practitioners individually match the homeopathic medicine to the person based on the Law of Similars (as homeopathy was developed), we see the best results. "Minimum dose" is a key principle of homeopathy, and actually maximizes efficacy.

Scientific studies on homeopathy in reduction of antibiotics

There are many conditions for which homeopathy makes sense to integrate as an effective therapeutic intervention of lesser risk. With specific regard to reduction in antibiotics overuse, there is quite a bit of scientific validation that homeopathy can be as effective as or better than antibiotics in resolution of minor infections in humans and animals.

Otitis media

In addition to contributing to the crisis of antibiotic resistant microbes, antibiotics overuse has led to compromised immune systems in part because of microbiome disruption.³⁶ This can be particularly problematic for children, whose immune system and micro biomes are still developing.

A trial of 230 children showed that individually chosen homeopathic remedies resulted in rapid resolution of pain from otitis media in the majority of children within 12 hours.³⁷ The improvement from homeopathic treatment was 2.4 times faster than in children prescribed a placebo, utilizing data from an earlier meta-analysis for placebo time compared with conventional medical treatment. The cost of homeopathic medicine was 14% less than antibiotic treatment.

An earlier preliminary study of children with acute otitis media showed homeopathy compared to placebo resulted in fewer treatment failures over 5 days, 2 weeks, and 6 weeks, with differences of 11.4, 18.4, and 19.9%, respectively, but these differences were not statistically significant. Diary scores showed a significant decrease in symptoms at 24 and 64 hours after treatment in favor of homeopathy (P<0.05).³⁸

Upper respiratory infection

One of the main causes for overuse of antibiotics is upper respiratory tract infections. A multinational comparative effectiveness study for acute respiratory problems resulted in 82.6% response for homeopathy compared to 68% for conventional treatment after 14 days. A replication of this study included 1,577 patients, of whom 857 received homeopathic and 720 conventional treatment: improvement was significantly faster with homeopathy.³⁹

³⁵ Bell IR, Schwartz GE. Adaptive network nanomedicine: an integrated model for homeopathic medicine. Frontiers in Bioscience (Scholar Ed.). 2013;5(2:685-708. https://www.ncbi.nlm.nih.gov/pubmed/23277079

³⁶ Koji Watanabe, Carol A. Gilchrist, Md Jashim Uddin, Stacey L Burgess, Mayuresh M. Abhyankar, Shannon N. Moonah, Zannatun Noor, Jeffrey R. Donowitz, Brittany N. Schneider, Tuhinur Arju, Emtiaz Ahmed, Mamun Kabir, Masud Alam, Rashidul Hague, Patcharin Pramoonjago, Borne Mehrad, William A. Petri. Microbiome-mediated neutrophil recruitment via CXCR2 and protection from amebic colitis. PLOT Pathogens, 2017; 13 (8): e01006513 https://doi.org/10.1371/journal.ppat.1006513

³⁷ Frei H, Thurneysen A. Homeopathy in acute otitis media in children: treatment effect or spontaneous resolution? Br Homeopath J. 2001 Oct;90(4):180-2.
PubMedPMID: 11680801. https://doi.org/10.1054/homp.1999.0505

³⁸ Jacobs 1, Springer DA, Crothers D. Homeopathic treatment of acute otitis media in children: a preliminary randomized placebo-controlled trial. Pediatr Infect Dis J 2001: 20: 177-183.

https:/journals.lww.com/pidjI/Abstract/2001/02000/Homeopathictreatment of a cute otitismedia in. 12

³⁹ Riley D, Fischer M, Singh B, at al. (2001). Homeopathy and Conventional Medicine: An Outcomes Study Comparing Effectiveness in a Primary Care Setting. Journal of Alternative and Complementary Medicine, 7:149-159. https://www.ncbi.nlm.nih.gov/pubmed/11327521

⁴⁰ Haidvogl M Riley D, Heger M et al. Homeopathic and conventional treatment for acute respiratory and ear complaints: A comparative study on outcome in the primary care setting BMC Complement Altern Med. 2007; 7: 7.

A nationwide study in France, the EP 13 study, included 6,379 patients from 804 medical practices comparing treatment outcomes for patients attending conventional, homeopathic, and mixed practice family physicians. Chief complaints were musculoskeletal conditions, upper respiratory tract infection, sleep disorders, anxiety, and depression. Patients in the homeopathic group had longer times between recurrences of their chief complaint. Patients who consulted family physicians certified in homeopathy used significantly less antibiotics (and antipyretic/anti-inflammatory drugs) for upper respiratory tract infections than those who attended conventional physicians with similar outcomes.⁴¹

Sinusitis and rhinitis

A double-blind placebo controlled study of a homeopathic combination formula in the treatment of acute rhinosinusitis. In the homeopathy patients, a reduction in sinusitis symptoms after 7 days (0 — 20 scale)from 12.1 +/- 1.6 to 5.9 +/-2.0 points after 7 days. In the placebo group it decreased from 11.7+/-1.6 to 11.0+/-2.9 points (p<0.0001) Over the 21 day study, the homeopathic group had freedom from sinus symptoms in 90.3% of the patients, and reduction in another 8.3%. The placebo group over the same time had symptoms remaining unchanged or worse for 88.9% of patients. 42

Another study, a prospective, randomized, double-blind, placebo-controlled, multicenter phase III clinical trial of the same combination formula was conducted over 22 days with an 8 week post-treatment observational phase. The homeopathic formula caused a significant reduction in the Sinus Severity Score compared with placebo on day 7 (5.8 +/- 2.3 [6.0] points vs. 2.3 +/- 1.8 [2.0] points; P < .0001). On day 21, 39 (68.4%) patients on homeopathic medication had a complete remission of symptoms compared with five (8.9%) placebo patients. 43

In an uncontrolled clinical trial of 119 patients suffering from clinical signs of acute sinusitis were treated using a homeopathic combination formula. Typical sinusitis symptoms, such as headache, pressure pain, and cough, were reduced after a mean of 4.1 days of treatment. Ninety-nine received only a homeopathic medication, 20

patients were able to discontinue concomitant medication at the first visit, and only one patient needed antibiotics. Average duration of treatment was 2 weeks. At the end of treatment 81.5 % described themselves as symptom-free or significantly improved.⁴⁴

A multi-centric observational study of 628 patients suffering from chronic sinusitis (CS) was conducted in India at its Institutes and Units of the Central Council for Research in Homoeopathy using individualized homeopathic remedies (selected from a pre-selected 17). There was a statistically significant reduction in Chronic Sinusitis Assessment Score (CSAS) (P = 0.0001) after 3 and 6 months of treatment, as well as improvement in radiological scan.⁴⁵

Another comparison of homeopathic and conventional family physician's outcomes in chronic health issues including sinusitis, headache, low back pain, depression, insomnia, atopic dermatitis and rhinitis found that patients who sought homeopathic treatment had better outcomes at similar cost to conventional care. 46, 47

Other kinds of Infection

Homeopathy can be useful in most kinds of infection. There are high quality trials confirming homeopathy can be utilized complementarity to lessen recurrent tonsillitis and to reduce the need for antibiotics for acute throat infections. ⁴⁸ Integrating homeopathy with conventional care under University of Vienna hospital physician supervision was shown to greatly improve survival rates of severe sepsis compared to placebo. ^{49, 50} For most of the

https://bmccomplernentalternmed.biomedcentralcom/articles/10.1186/1472-6882-7

⁴¹ Grimaldi-Bensouda L, Begaud B, Rossignol M, Avouac B, Lert F, et al. (2014) Management of Upper Respiratory Tract Infections by Different Medical Practices, Including Homeopathy, and Consumption of Antibiotics in Primary Care: The EPI3 Cohort Study in France 2007-2008. PLoS ONE 9(3): e89990. https://doi.org/10.1371/journal.pone.0089990

⁴² Friese, KH. & Zabalotnyi, D.I. HNO (2007) 55: 271. https://doi.org/10.1007/s00106-006-1480-x

⁴³ Zabolotnyi, D.I., Kneis, K.C., Richardson, A., Rettenberger, R., Heger, M., Kaszkin-Bettag, M., & Heger, P.W. (January 01, 2007). Efficacy of a Complex Homeopathic Medication (Sinfrontal) in Patients with Acute Maxillary Sinusitis: A Perspective, Randomized, Double Blind, Placebo-Controlled, Multicenter Clinical Trial. Explore: the journal of Science and Healing, 3, 2, 98-109. https://www.explorejournal.com/article/S1550-8307(06)00563-5/fulltext

⁴⁴ Adler M. Efficacy, safety of a fixed-combination homeopathic therapy for sinusitis. Adv Ther 1999; 16: 103-111.

https://www.ncbi.nlm.nih.gov/pubmed/10539378

⁴⁵ Nayak, C., Singh, V., Singh, V. P., Oberai, P., Roja V., Shitanshu, S. S., Sinha, M. N., ... Mathew, G. (April 01, 2012). Homeopathy in chronic sinusitis: a prospective multi-centric observational study. Homeopathy, 101, 2, 84-91. https://www.thieme-connect.com/DOI/DOI?10.1016/j.homp.2012.02.002

⁴⁶ Witt C, Keil T, Selim D, et al.(2005). Outcome and costs of homeopathic and conventional treatment strategies: a comparative cohort study in patients with chronic disorders. Complementary Therapies in Medicine, 13:79-86. https://www.sciencedirect.comiscience/article/pii/S0965229905000221?via%3Dih ub

⁴⁷ Bhattacharyya SS, Mandal SK, Biswas R, Paul S, Pathak S, Boujedaini N, Belon P, Khuda-Bukhsh AR: In vitro studies demonstrate anticancer activity of an alkaloid of the plant Gelsemium sempervirens.

⁴⁸ Palm, J., Kishchuk, V. V., Ulied, A., Fernandez, J. P., De, J. S., Jong, M. C., Keller, T., ... TocTo Research Group. (January 01, 2017). Effectiveness of an add-on treatment with the homeopathic medication SilAtro-5-90 in recurrent tonsillitis: An international, pragmatic, randomized, controlled clinical trial. Complementary Therapies in Clinical Practice, 28, 181-191. https://www.sciencedirect.com/science/article/pii/S1744388117301597?via%3Dih

⁴⁹ Frass M, Linkesch, M, Banjya, S, et al. Adjunctive homeopathic treatment in patients with severe sepsis: a randomized, double-blind, placebo-controlled trial in an intensive care unit. Homeopathy 2005:94;75-80. http://www.ncbi.nlm.nih.gov/pubmed/15892486

⁵⁰ Stevens, M., Piepers, S., & De, V. S. (January 01, 2016). Mastitis prevention and control practices and mastitis treatment strategies associated with the consumption of (critically important) antimicrobials on dairy herds in Flanders, Belgium. Journal of Dairy Science, 99, 4, 2896-2903. https://www.journalofdairyscience.org/article/S0022-0302(16)00148-X/fulltext

clinical trials conducted, homeopathic medicines show promise in reducing the need for antimicrobial treatment of cow herds.⁵¹

Conclusion

Homeopathy is a safe and effective medicine that Americans want. We should look to the countries that have already successfully integrated CAM including homeopathy for inspiration on how we can bring effective homeopathic treatment to all Americans who can benefit. Homeopathy has demonstrated great potential to greatly reduce the need for antibiotics. It's our responsibility to pursue such a promising option for the health of our country, and for the integrity of antibiotics as a treatment option.

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⁵¹ Hektoen, L., Larsen, S., Odegaard, S.A., & Loken, T. (December 01, 2004). Comparison of Homeopathy, Placebo and Antibiotic Treatment of Clinical Mastitis in Dairy Cows - Methodological Issues and Results from a Randomized-clinical Trial. Journal of Veterinary Medicine Series A, 51, 439-446. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1439-0442.2004.00661.x