

Definition and research on complex homeopathy

From the FAKOM website <https://www.fakom.de/was-ist-komplexhomoeopathie/>

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What is complex homeopathy?

Despite its name, complex homeopathy is not complicated, but a simple and effective method of curing diseases. Homeopathic complex remedies are sensibly coordinated mixtures of natural remedies. These are combined in such a way that they complement and reinforce each other in the healing of a disease. Therapy with these substances is effective, safe and based on over 200 years of experience. Millions of people all over the world trust this form of treatment to solve their health problems in a gentle and sustainable way, because the successes convince them time and again.[1][2] The effectiveness of homeopathy has also been proven by numerous scientific studies.[3][4]

Supplement or alternative?

Depending on the illness, homeopathic complex remedies are used either as an alternative to the chemical medicines of conventional medicine or as a supplement to them. This is because the future of medicine is integrative: it makes use of all available treatment options from conventional and natural medicine, each of which offers the individual patient the best chance of healing.[5][6]

Conventional medical methods celebrate their great successes above all in life-threatening conditions, for example in intensive care medicine. Here they are indispensable. The same applies to many diseases in which organs are irretrievably destroyed, as is the case, for example, with type I diabetes.[7] Such health problems should not be treated with homeopathy alone. Its role in this field is limited to supporting vital measures. For example, intensive care physician Professor Michael Frass of the Medical University of Vienna was able to show in a study that ventilated COPD patients could be weaned from ventilation and discharged from intensive care much more quickly with homeopathic adjunctive therapy.[8]

For acute illnesses that do not require immediate hospital treatment and for many chronic conditions, the disadvantages of chemical preparations often outweigh the benefits. They have side effects that can cancel out their positive effects, especially if they are taken over a long period of time. The renowned medical researcher Professor Peter Gøtzsche identifies side effects of medicines as the third most frequent cause of death in Europe and the USA - directly behind heart disease and cancer - on the basis of broad data.[9] Moreover, conventional medicine often just puts the problem on the back burner because it can alleviate symptoms for a short time, but does not tackle their cause at the root.

In many cases, therefore, complex homeopathy is the better choice. It has almost no side effects, and it does not suppress the symptoms of the disease, but stimulates the body to activate its self-healing powers. This makes it one of the stimulus-response therapies, which are all based on the same principle: In the case of illness, the organism is in an imbalance. The therapist now sets impulses that stimulate it to find its balance again on its own. This class of treatment methods also includes, for example, acupuncture[10] and some classical naturopathic treatments, such as Kneipp's water showers.[11]

Complex remedies, homeopathy and medicinal plant therapy

Medicinal plants can serve as the basis for homeopathic complex remedies, as they are also used in medicinal plant or phytotherapy, for example camomile. However, animal products, such as squid ink, or chemical elements and their compounds, such as sulphur or sodium chloride, are also used. In some cases, the basic substances of complex remedies are diluted and shaken over several stages according to the rules of homeopathic remedy production. This process is called potentisation. However, some substances are also used in very low potency levels, or even completely undiluted. In complex remedies, homeopathy is thus partly reinforced by the power of phytotherapy and vice versa.

This is a difference to so-called "classical homeopathy", in which relatively high dilutions of the remedies are usually administered. In addition, classical homeopaths prescribe only one remedy at a time, whereas complex remedies contain several active ingredients that have been proven to cure a disease in different ways and therefore reinforce and complement each other. Common to both approaches is that the selection of the potentised substances is based on the so-called similarity or simile principle.

Simile principle

The word "homeopathy" comes from the Greek and is composed of the words "similar" (homoion) and "suffering" (pathos). Accordingly, a substance can cure symptoms in the case of illness which it

can produce in a similar form in a healthy person. This connection is the basis of the so-called simile or similarity principle.

Its use can be explained, for example, using the kitchen onion (*Allium cepa*): In healthy people, it causes clear flowing sniffles and burning eye tears for a short time. Homeopathically, it is thus used, for example, for colds that are accompanied by complaints similar to those that occur when cutting onions.

Potentiation

Another characteristic of homeopathy is the pharmaceutical process of potentisation. In this process, the starting substance is gradually diluted and shaken. The resulting remedies are designated with certain combinations of letters and numbers. For example, the potency level D6 stands for a preparation that has been diluted six times in a ratio of 1:10 (D = decimal or decimal power) and thoroughly shaken after each dilution step.

This special form of remedy preparation is bindingly regulated in the regulations of the official homeopathic pharmacopoeia (HAB).[12] The use of relatively small amounts of the starting substances ensures that homeopathic remedies are free from pharmacological side effects. Complex remedies differ from the high potencies of classical homeopathy in that many starting substances are contained in harmless but still analytically detectable quantities.

History of complex homeopathy

At the end of the 18th century, the German physician Samuel Hahnemann (1755 - 1843) encountered a form of medicine that often did more harm than good: bloodletting, bloody cupping and the administration of strong, sometimes toxic substances were part of the repertoire of the physicians of that time. Hahnemann broke with these practices and developed the simile principle and the effect of potentised remedies on the basis of self-experimentation. Homeopathy was born. In the period that followed, the researcher continued to develop his theory and practice. Hahnemann's therapeutic successes soon provided him with countless students, imitators, and he soon enjoyed an international reputation. In 1810, Hahnemann's fundamental work on homeopathy was published under the title "Organon der rationellen Heilkunde", from the second edition onwards "Organon der Heilkunst".[13]

As early as Hahnemann's time, some homeopaths attempted to use several potentised medicines at the same time. Their healing successes were just as impressive as those that could be achieved with single remedies. Therefore, both approaches continued to develop fruitfully. Emanuel Felke (1856-1926) is regarded as an important pioneer of modern complex homeopathy. In addition to his theological studies, he was concerned with medical topics, especially with various naturopathic forms of treatment. His special homeopathic approach was to combine remedies that acted on different organs or tissues affected by a disease.[14] His complex remedies were therefore not mere mixtures of remedies all indicated for the same disease. Rather, they had a holistic effect on health disorders from several starting points. Complex homeopathy, which has been continuously developed since Felke's time, stands in this tradition.

Conclusion

Complex homeopathy is an independent form of therapy that combines the best of classical homeopathy and phytotherapy.[15] It combines harmonised remedies into formulations that stimulate the organism to heal itself on several levels and positively influence disease processes from different sides. Complex homeopathy is very suitable for self-administration, especially for simple diseases. However, it is even more effective in the hands of qualified therapists.

Many complex remedies are approved by the Federal Institute for Drugs and Medical Devices (BfArM) for the treatment of certain diseases. In order to receive this indication-related approval and to be allowed to name it on the medicine's packaging, scientific proof of efficacy must be provided.[16] In this respect, such complex remedies differ from merely registered homeopathic Medicines for which no specific therapeutic area of application may be named by law.

Research on homeopathy

In the following sections, scientific findings on homeopathy are presented. It is about the areas of health care research, controlled studies and basic research. Data on the safety of homeopathy will also be looked at. Those who do not like technical details on clinical trials and laboratory experiments can simply read the respective conclusion.

Health services research

Randomized, (placebo) controlled trials (RCTs) are considered the "gold standard" of clinical research. They allow a relatively reliable causal conclusion from the medical intervention used to the therapeutic effect. However, research results from RCTs can only be transferred to everyday clinical practice to a limited extent. Therefore, studies that examine the effectiveness of therapies under the real conditions of health care are also significant.[17] In health care research, homeopathy is usually examined as a complete therapy procedure (admission consultation, administration of medication, follow-up consultations, etc.). It therefore does not allow direct causal conclusions to be drawn about the specific effect of potentised medicines.

Example Witt et al. (2005)

This outcome study [18] on homeopathy conducted at the Charité Hospital in Berlin is the largest observational study on outpatient homeopathic care in the German-speaking world to date. Witt et al (2005) studied 3,981 patients who were treated by 103 homeopathic physicians in health insurance and private practices according to the rules of classical homeopathy, initially for two and finally for eight years[19]. The most common diseases were headaches and migraines in women, allergic rhinitis and hypertension in men, and neurodermatitis and susceptibility to infections in children, 97% of which were chronic conditions across all patient groups. The patients had been suffering from their disease for an average of 8.8 years, and 95% of the patients had already received conventional treatment before the start of the study.

The homeopathic treatment led to an average reduction of clinical symptoms by about 50% as well as a significant improvement in quality of life. The greatest reduction in symptoms occurred within the first three months of treatment. After 24 months, according to the patients, 23% of the initially present symptoms were completely lifted, and 13% of the study participants reported that they no longer had any health complaints at all. The observed improvement in symptoms and quality of life

were stable over eight years. Lower age and more severe disease correlated with greater improvement.

Example EPI3 cohort (2012-2016)

The EPI3 cohort study examined a total of 8,559 patients in France who were receiving treatment from 825 doctors with and without additional homeopathic qualifications. The researchers analysed the data with regard to the therapeutic effects for various diseases and also took into account how many conventional medicines were prescribed in the respective practices.

With regard to upper respiratory tract diseases in adults and children in 518 cases, the researchers found that about 50% fewer antibiotics, anti-inflammatory drugs and antipyretics were prescribed in homeopathic compared to purely conventional medical practices. The therapeutic success in the homeopathy group was equal to that in the comparison group.[20]

Similar data were collected for the field of musculoskeletal diseases, such as rheumatoid arthritis, using 1,153 cases: After 12 months of therapy, no significant difference in treatment results could be found between homeopathic and conventional doctors. However, the former prescribed only about half of the otherwise standard non-steroidal anti-inflammatory drugs (NSAIDs) and painkillers.[21]

In the subgroup of mental disorders, the data of 710 people suffering from depression and anxiety disorders were evaluated. A greater reduction in clinical symptoms was observed for the subjects who received treatment from homeopathic doctors compared to purely conventional practices. At the same time, the probability of being prescribed psychotropic drugs was less than one third for these patients compared to the comparison group.[22]

Conclusion of health services research

Observational and outcome studies based on clinical practice show relatively uniform results in a wide range of disease areas: patients who receive homeopathic treatment experience clinically relevant improvements in their symptoms as well as an increase in quality of life. The effects are regularly of similar magnitude compared to conventional therapy, but there are significantly fewer side effects.[23] Patients who have not experienced sufficient improvement with conventional treatments also frequently benefit from homeopathy.[24] Doctors with additional homeopathic training prescribe about 50% fewer synthetic medicines for various diseases. 50% fewer synthetic medicines for various conditions, for example antibiotics[25], non-steroidal anti-inflammatory drugs[26] and psychotropic drugs.[27] The majority of available health economic studies on homeopathy found health improvements equivalent to those of the conventionally treated control group, if any - with cost savings at the same time.[28] The results of these studies are very positive.

Safety

Representative surveys [29] of homeopathy users regularly reveal that it is a form of therapy considered to be particularly safe and to have few side effects. The perceived harmlessness of the potentised medicines is even given by many patients as a decisive reason for their therapy decision, as a qualitative study of the University of Bremen found. [30]

These subjective impressions are confirmed by studies: A meta-analysis by Ernst and Grabia (2003)[31], which evaluated 24 RCTs, presented 63 cases of adverse drug reactions in the verum

group (1.54% of the subjects). This contrasted with 50 cases (1.45% of subjects) from the placebo group.

Stub et al. (2020)[32] calculated in a review of 18 observational studies that the number of adverse effects was significantly higher for conventional medicine compared to homeopathy. And no serious side effects of homeopathic medicines were reported.

It is also true for complex remedies, which contain partially weighable doses of the starting substances, that they can be used safely: Potentially toxic substances are subject to prescription up to the third decimal potency (D3) according to federal regulations (Scribas Table), which prevents careless use.[33] Furthermore, quality assurance is legally binding through the Homeopathic Pharmacopoeia. With qualified prescription or proper use of potentised medicines, toxic effects and other undesirable effects are almost impossible.

Meta-analyses of randomized, placebo-controlled double-blind studies

According to the ideas of evidence-based medicine (EBM), the most reliable findings on the efficacy of a therapeutic procedure can be obtained from meta-analyses of high-quality randomized controlled trials. Both proponents and critics of homeopathy therefore often refer to such reviews to support their respective positions. In the following, an overview of meta-analyses of clinical homeopathy studies is therefore given by means of examples.

Example Linde et al. (1997)

Under the question of whether the clinical efficacy of homeopathy could be explained exclusively by placebo effects, Linde and colleagues conducted a meta-analysis[34] of all randomized, placebo-controlled double-blind studies on homeopathy. Of 119 studies found, 89 contained sufficient data to be included in the meta-analysis. For this pool, significant superiority of homeopathy over placebo was found. For the 26 studies classified as of high methodological quality, Linde et al. calculated a smaller but still significant effect over placebo. Also for the subgroup of studies on non-individualised prescribing, which includes complex homeopathy, a significant superiority over placebo was found.

Example Shang et al. (2005)

This work [35] has probably triggered the most media coverage of all scientific works on homeopathy. Shang et al. (2005) used almost the same data pool as Linde et al. (1997), but only 8 of the 110 studies initially examined were included in the final analysis. These 8 studies were selected as the largest from an initial pool of 21 that showed high methodological quality. The combined odds ratio [36] of these 8 studies did not indicate any significant effects of homeopathy over placebo.

This meta-analysis was met with critical comments from several authors who pointed out several significant weaknesses in the work. The most important seems to be the fact that the analysis of the 21 high-quality studies demonstrates a significant superiority of homeopathy over placebo.[37] Moreover, the negative result finally presented by the authors depends significantly on a single study investigating the efficacy of a homeopathic remedy for the prevention of muscle soreness.

Example Mathie et al. (2014)

This meta-analysis [38] included only studies whose therapeutic mode could be classified as "individualized homeopathy". The quality assessment by risk of bias according to the high standards of the Cochrane Collaboration[39] was also a novelty. Of the 32 included papers, 22 provided sufficient data to be included in the final analysis. These studies provided a significant positive result for homeopathy. The evaluation of the methodological quality, however, led to only three studies being classified as reliable. Their combined evaluation also provided significant effects over placebo, but the authors could not draw any final conclusions from only three studies, especially as they all investigated different indications.

Mathie and colleagues provided three more meta-analyses on homeopathy by 2019, each examining different study designs, e.g. those with non-individualized (clinical) prescribing or those in which the control group did not receive placebo but another treatment. The results of these papers are broadly similar to those presented here from Mathie (2014).[40]

Conclusion Meta-Analyses RCTs

Overall, with regard to the indication-independent meta-analyses on homeopathy published to date (n = 8), it emerges that, as a rule, a specific efficacy of potentised medicines beyond placebo is recognizable, even in the methodologically high-quality studies. The overall result is only negative in each case (homeopathy=placebo) if the majority (90-95%) of the available data are excluded from the evaluation and/or questionable statistical methods are applied.[41] However, the authors more or less agree that the evidence situation does not allow definite conclusions, especially with regard to individual diseases. This is because there is a lack of high-quality studies as well as independent replications.

Clinical homeopathy research in the overall context of EBM

88% of 1,128 of the methodologically highest quality reviews of clinical trials (Cochrane reviews) call for more research. 45% of these publications present results that do not allow conclusions to be drawn on the usefulness/harmfulness of the therapy studied. Only 2% of all medical procedures that have been studied according to Cochrane standards are considered to be safely helpful and have clear scientific evidence.[42] Based on the available research results, homeopathy should provisionally be classified in the 45% group of interventions that are presumably helpful but need to be better researched.

Compared to very many treatments of conventional medicine, which are clearly more widespread despite lower or even negative evidence, homeopathy is in a better position based on the overall evidence from clinical studies than the regular critical media reports might have suggested.

Basic research on homeopathy

Some homeopathic complex remedies contain measurable concentrations of active ingredients. Up to a certain limit, their effects can therefore be explained with recourse to common scientific ideas. The frequently used potency D6, however, already corresponds to a dilution ratio of 1 : 1000,000 - the amount of starting substance contained would have to be given in micrograms. In this concentration, however, most of the substances used no longer have an effect according to classical ideas. Therefore, even with the indisputably effective complex homeopathy with its deep potencies, other mechanisms must also be at work.

A specific effect of potentised medicines can no longer be explained with recourse to the classical pharmacological model "molecule acts on cell receptor", at the latest with dilution ratios beyond the Avogadro constant [43]. Experimental laboratory research on homeopathy therefore examines on the one hand whether empirical evidence for a difference between homeopathics and solvents is observable. Physicochemical test procedures [44], such as nuclear magnetic resonance measurements [45], plant bioassays or animal models are used for this purpose. On the other hand, homeopathic basic researchers try to make the active principle of high potencies comprehensible in scientific categories through corresponding theory building. Various approaches exist for this.

Nanoparticles

In 2010, Indian researchers claimed to have detected residual molecules of the original substance in highly potentised medicines by means of electron transmission microscopy.[46] Repeats of these experiments in Europe in 2018 produced contradictory results.[47] Reliable independent replications of the claimed observations would therefore first have to be made.[48] Even if the nanohypothesis were correct, it would still have to be clarified which receptors in the organism should react to a few particles that are presumably unable to trigger pharmacological effects in the classical sense.

Quantum effects

A completely different theory assumes that homeopathic medicines do not "contain" a chemical or physical signal in the classical sense. Rather, they are said to be the medium of non-local quantum effects.[49] According to this theory, these produce an "entanglement" between the original substance of the remedy and the patient, which optionally also includes the therapist.[50] Entanglement phenomena have meanwhile been experimentally demonstrated not only for subatomic particles, but also for large atomic assemblies.[51] However, as far as the explanation of effects of homeopathic high potencies is concerned, the entanglement theory has so far been purely speculative.[52] The theory of entanglement has not yet been applied to homeopathic remedies.

Field effects

The third and last group of models assumes that homeopathic medicines do transmit local signals in the classical physical sense. However, the information is not supposed to be directly bound to residual particles of the original substance, but to be mediated by a differently "stored" electromagnetic or similar field. One group of these field hypotheses has been discussed under the heading "memory of water".[53] The idea here is that water forms substance-specific liquid-crystalline structures (clusters) that persist even when no atom of the original substance is present due to serial dilution. In fact, such clusters do exist - but they are only stable in the range of picoseconds and thus are not able to be information carriers.[54] Nevertheless, there are indications of a possible field effect of homeopathic high potencies.[55] Nuclear magnetic resonance measurements also indicate a change in the water molecule dynamics in these substances.[56] In addition, there are indications that the water molecule dynamics in these substances have changed.

Example Doesburg et al. (2019)

At present, the most interesting candidate for a stable experimental set-up to demonstrate specific effects of potentised preparations might be a recent experiment [57]: Doesburg et al. were able to show, with the aid of computer-assisted optical analysis, that the crystallization images of powdered

cross seedlings growing under the influence of highly potentised tin (Stannum D30) exhibited specific characteristics that did not show up under treatment with placebo. The observed differences were stable and of a relevant magnitude. The experiments were carried out several times in different laboratories and took place under randomized double-blind conditions. Systematic negative controls documented the reliability of the test system. A further replication of this experimental set-up by an independent research team could have far-reaching significance for the empirical proof of specific effects of potentised substances.

Conclusion Basic research

In the more than 1,000 scientific publications on homeopathic basic research, there are a considerable number of high-quality studies that observed specific effects of highly potentised remedies. There are also a few successfully independently replicated experimental models.[58][59] However, the measured effects are often so small or scatter so strongly that they are close to the "noise limit" of the test systems used.[60] Overall, it remains to be said that there are also too many "positive" findings in preclinical research on homeopathy, even from methodologically high-quality studies, to be explained without further ado by the placebo hypothesis. However, a generally accepted scientific proof is still lacking. This is because there is a lack of multiple independent replications of experiments with always the same result. Homeopathy must therefore be classified as a scientific anomaly, i.e. as a phenomenon that can only be inadequately explained with recourse to common theories. This applies above all to the high potencies. The principle of action of low potencies can be partially explained by classical pharmacological models. Here, among other things, the principle of hormesis[61] comes into consideration: Low amounts of toxic substances can have positive effects on organisms. In the case of complex remedies containing different potency levels, there is probably an interlocking of different mechanisms of action.

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