

Similia principle

The similia principle (syn. principle of similars) may be adjudged a practical maxim in the theory of medicine ^[1]. The pathological condition of an organism can improve following a stimulating impulse that causes similar pathological conditions in healthy organisms. This impulse may be caused by potentised or non-potentised remedies, but can also be of physical or informational nature. Duration, quantity and frequency of the impulse should not have the power to damage or weaken the organism.

Theory of how this works

Based on observations of the reaction of an unhealthy organism to an impulse based on the similia principle, the following is assumed:

Since the impulse can induce similar symptoms in healthy organisms, its action on an unhealthy organism causes an initial increase in the pathological condition. This leads to stimulation of regulatory mechanisms as a secondary effect and thus promotes recovery.

Complex autoregulatory systems have the ability to respond to external stimuli in order to maintain stability ^[2].

Samuel Hahnemann (1755-1843) was the first to systematically investigate the similia principle ^[3]. He developed his theoretical reflections throughout his active career. *Inter alia*, he spoke of primary and secondary effects ^[4]: primary effects being symptoms triggered directly by the remedy and secondary effects being the healing reactions of the organism.

Examples for application of similia principle

Capsaicin is the substance which is responsible for the spiciness of cayenne pepper. When applied to the skin, it induces a burning pain by stimulating TRPV1 channels, the primary effect. According to guidelines, it is useful in the treatment of neuropathic pain ^[4], its secondary effect being pain relief.

In cases of acidic symptoms such as heartburn or stomach pain, folk medicine recommends drinking a spoonful of vinegar in a glass of water after a meal. Acid stimulates the neuroendocrine negative regulatory loop for acid secretion: gastric delta-cells produce somatostatin. Somatostatin lowers gastrin production: therefore, parietal cells produce less gastric acid ^[5].

Skin burns should not be cooled ^{[6] [7]}. The first-aid application of warm water delays burn progression and increases skin survival ^[8]. This use of warmth, e.g. a warm shower for sunburn, is traditional knowledge. It intensifies the burning pain, the primary effect; this is followed by pain relief, the secondary effect.

Paradoxical interventions in the context of psychotherapy aim to reinforce pathological behaviour. In this way, the patient becomes more aware of his inefficient behaviour patterns and is able to alter them ^[9].

Science and Research

Boucsein examined herbal medicines in terms of phytopharmacological aspects. He concluded that almost half of the applications are based on the principle of similars^[10]. *Nicotiana tabacum*, for example, stimulates intestinal peristalsis and can provoke diarrhoea. It is used in accordance with the similia principle in cholera treatment^[11]. Another example is henbane: the alkaloids contained in this have a parasympatholytic effect and thus cause restlessness; henbane has been used according to the similia principle to treat overexcitement^[12].

Eskinazi and Teixeira have demonstrated in numerous publications that chemical-pharmacological substances can cause primary and secondary effects^[13]^[14]. The intended effects are usually the primary effects, while the secondary effects occur as unintended side effects, known as *rebound effects* and *paradoxical reactions*. For example, stopping the use of proton pump inhibitors can result in excessive stomach acid production^[14] and agitation may occur as a paradoxical response to benzodiazepines^[15].

Many toxic and pharmacological substances, such as opium, digitalis and colchicine, are known to have a dose-dependent reverse effect. Small doses have the opposite effect to higher doses: the lower the dose, the stronger this paradoxical effect, which is termed *hormesis*^[16]. According to the similia principle, attenuation of the sensorium by opium in high doses is interpreted as a predominance of the primary effect, while stimulation of the sensorium after a low dose is interpreted as a predominance of the secondary effect.

To research the similia principle, van Wijk and Weigant performed experiments on cell biological systems^[17]. Cells developed different reaction patterns in their repair proteins after being damaged by toxic substances such as cadmium, arsenic or lead. These different patterns were investigated: cell cultures damaged with toxin A showed accelerated regeneration processes and a higher survival rate when treated with low doses of toxin B, provided the response pattern of the repair proteins of toxin B was similar to that of toxin A^[18].

A large number of studies are available regarding the clinical application of the similia principle according to the rules of homeopathy^[19]. An example of accumulated evidence from daily practice is a cohort study by C. Witt (3981 patients) which shows benefit with comparatively low side effects, generally low costs and both high patient satisfaction and improved clinical parameters^[20].

Research into, and perception of, the similia principle in scientific dialogue is blocked due to its association with potentised medicines and homeopathy. Further development is hindered by, on the one hand, the hostile attitude of those who are convinced exclusively of the homeopathic approach and, on the other, those who are dogmatically against homeopathy^[21].

Medical history

The similia principle was recognised in classical antiquity. Hippocratic writing (460-370 BCE) differentiates between three different modes of treatment and discusses their generalisability: the principle of similars, the principle of contraria, and *sometimes this, sometimes that*^[22]. The conclusion is that all have their justification and the selection of the appropriate treatment depends on the framework conditions in each case^[23].

In his treatise on *Poetics*, Aristotle (384-322 BCE) describes this phenomenon: *The spectator of a drama experiencing similar feelings to his own mood like compassion, terror and shudder undergoes a purification of the soul from these emotions*. He called this *catharsis*^[24].

In medical writings from successive centuries, the similia principle is mentioned repeatedly as a possible treatment method. Isidore of Sevilla (c 560 – 636) claims every treatment is either similar or opposite^[25].

In the late Middle Ages, Paracelsus (1493-1541) demonstrated various examples. He set the principle of similars against the principle of opposites: *Contraria contrariis curantur, that means hot drives out cold, which is wrong...*^[26]. He also adopted the *doctrine of signatures*, which focuses on external analogies between medicines and diseases, e.g. yellow plant sap from celandine indicates its relationship to the liver and gallbladder system. This represents a modification of the similia principle^[27].

Later, alchemists such as Oswald Croll, Petrus Severinus, Robert Fludd and Basilius Valentinus adopted the similia principle^[28] and Johann Pharamundus Rummel (c 1600-1660) was the first to formulate *similia similibus curentur* – let like be cured by like^[29].

During the Age of Reason and the Enlightenment, De Haen (1704-1775) and Albrecht von Haller (1708-1777) developed treatment according to the similia principle^[30] and Anton von Stoerck (1731-1803), Viennese court physician and later personal physician to Empress Maria Theresa, examined in detail the effects of remedies such as *Aconitum napellus*, *Pulsatilla pratensis*, *Hyoscyamus niger* and *Datura stramonium* on healthy people in order to facilitate their use according to the similia principle^[31].

As a student In 1777, Samuel Hahnemann attended lectures on pharmacology given by Joseph Quarin (1733-1814), Stoerck's successor, Rector of the Vienna Medical School and head physician at the Krankenhaus der Barmherzigen Brüder (Hospital of the Brothers of Charity). He also benefitted from bedside teaching, becoming familiar with the practical implementation of Quarin's treatment method. From this point onwards, Hahnemann continued to explore and apply the similia principle and developed a treatment concept which he named *homeopathy*. In 1796 he published his theories for the first time in *Essay on a new principle for ascertaining the curative powers of remedies, with a few glances at those hitherto employed*, in Hufeland's *Journal of Practical Medicine and Wundarzneykunst* (wonderful art of medicine)^[32]. Hahnemann later published all his conclusions in the *Organon of the Art of Healing*, which he continued to revise^[33]. Notable in this context is that until c 1827 – for at least 30 years – he prescribed according to the similia principle without using highly diluted and succussed (shaken) medicines. Later he propagated the use of very small doses in the form of potentised remedies in order to prevent serious primary effects^[34].

Hahnemann was totally opposed to other treatment methods such as *contraria contrariis* and allopathy (where the remedy action bears no similarity to the disease) and to colleagues using other methods in addition to homeopathy (*semi-homeopaths*). For example, a dispute arose between Hahnemann and the director of a surgical clinic about whether cold water or warm alcohol should be used for skin burns^[35]. He termed the principle of similars *the law of similars* and judged it as being equally as important as natural laws^{[1] [36]}.

Separately from homeopathy, Robert Koch (1843-1910) adopted the similia principle and developed a medicine for use in tuberculosis. In 1882 he discovered the tuberculosis bacteria. After self-injecting an extract from bacterial cultures, he noted symptoms similar to those of tuberculosis. Following the successful use of this remedy, which he called *Tuberculinum*, in early-stage tuberculosis, he published his observations, which led to its use internationally^[37]. Due to a lack of knowledge and experience in applying the similia principle, the dosage of *Tuberculinum* was often too high, causing significant side effects^[38].

The following quotation from Emil von Behring (1854-1917) illustrates the historical meaning of the similia principle for the development of vaccines. It also shows the stigmatisation of the similia principle provoked by Hahnemann: *It is Jenner's immortal achievement that he replaced the isotherapeutic principle by the homeotherapeutic principle in smallpox. As is well-known, the homeotherapeutic immunisation principle was popularised and scientifically discredited by Hahnemann in developing the homeotherapeutic healing principle. Only thanks to Pasteur's brilliant intervention ... isotherapeutic and homeotherapeutic ideas were once again honoured in medical science. When treating tuberculosis, Robert Koch tried to make use of a subtype of the homeotherapeutic principle, which is characterized by the fact that a living pathogenic substance is not selected for protective vaccination and curative vaccination, but rather an inanimate poison which is derived from it. ... You may certainly get positive immunisation results using such homeotherapeutic treatment of poisons in diphtheria, tetanus and some other infections (isotoxic therapy) ... My own work in the field of tuberculosis therapy relies on the homeobacterial and antibacterial protective and healing principle.*^[39].

Relevance for homeopathy

Homeopathic therapy involves applying the similia principle according to the following guidelines:

- Firstly, the patient's symptoms are recorded in detail through case-taking, observation and examination.
- This information is then compared to the symptom patterns of the remedies. These patterns were created based on remedy testing on healthy people, and toxicological and clinical observations and are documented in the homeopathic Materia Medica.
- The remedy which is the best match to the patient's symptoms is selected.
- The remedy is administered as a single very small dose.
- After an appropriate observation period, the reaction of the organism is evaluated: primary effect, secondary effect, excretory reaction, parasympathetic regeneration phase or compensation of previously disturbed control loops, such as sleep-wake rhythm or temperature regulation.

Somatic and psychological aspects are considered. Non-pathological characteristics are also observed^[33]. Selecting a remedy according to the similia principle is complex and requires detailed knowledge, careful action and experience. The assessment of similarity between remedy pictures and patient symptoms is always individual and is influenced by the therapist's subjective perception^[40]. An effect will only be expected if the selected remedy is sufficiently similar.

Criticism

One point of criticism is that the similia principle is too vague and overly generalising^[41]. Even homeopaths interpret it differently^[42] and the criteria used to determine similarity are so diverse and complex that objectivity cannot be achieved in the assessment^[40].

Hahnemann took cinchona and reported symptoms similar to those caused by malaria. This frequently cited trial is erroneous as cinchona does not in fact cause the symptoms described^[43]^[44]. After Hahnemann had gained more experience, he performed a proper proving and described in detail the symptoms that are actually triggered by cinchona^[45].

The paramount importance of the similia principle as the only causal treatment method is resolutely rejected by critics and integrative working practitioners. Great efforts are made to eliminate this conviction and there are stringent guidelines for medical homeopathic education^[46].

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History of the text

First Draft: **Nana Giannopoulou and Natalia Tzima**

Revision: Anna Gerstenhöfer, Curt Kösters, Sigrid Kruse, Antonella Ronchi, Susan Buchheim-Schmidt, **Klaus von Ammon**, Christa Raak, Sandra Würtemberger

Experts to consult: **Prof. Stefan Baumgartner, Physics**, Prof. Keusgen, Pharmacy; Prof. Schmidt, History; Prof. Braun Physiology; Prof. Gündling, Naturheilkunde; Prof. Jütte,

Edited by **Margaret Wyllie**