RESEARCH ARTICLE:

The Use of Homoeopathic Nosodes: Consideration for Human Health

Nokwanda Zulu[1], Sindile Majola[2] and Suresh Krishna Naidu[3]

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Abstract

Homoeopathy is a system of medicine based on the law of similars 'let likes be cured by likes'. This means that any substance with the capacity for producing disease in its crude state has the capacity to treat a similar disease if taken in a very small dose. Homeopathic nosodes are homoeopathic remedies sourced from diseased materials and organisms. Homoeopathic nosodes may be used to treat and prevent infectious and non-infectious diseases. The incidence of infectious disease epidemics is now occurring more often around the world. This common public threat includes the emergence of antibiotic resistance which is an increasingly global issue. Contributing factors of this emergence are linked to underlying biological and environmental issues, lifestyle changes, and the misuse and overprescribing of antibiotics. Despite strengthening health infrastructure, every epidemic and multi-drug resistance bacterium poses a challenge to the government, policymakers, health professionals, and the whole population. This article will review data available on homoeopathic nosodes as well as present evidence that is available to support the use of homoeopathic nosodes in disease prevention and treatment. It also highlights several clinical trials and in vitro studies on the use of homoeopathy to target health issues that have the potential to harm public health and those that could possibly assist in reducing healthcare costs.

Keywords*: homoeopathy; nosode; antibiotic resistance; human health*

Introduction

Homoeopathy is an alternative holistic form of complementary medicine that was developed and implemented by German physician, Dr. Samuel Hahnemann (Bala, 2020: 215). This medical system treats a disease through the administration of small doses of a remedy (highly diluted between succussions) that would in its crude form produce similar symptoms to those of the disease in a healthy individual. This principle of homoeopathy is called the Law of similars, "likes cures likes" (Khuda-Bukhsh, 2018: 2; Elavarasan *et al*., 2023: 5120). Succussion is the process of vigorous shaking and is used to increase the effectiveness of a remedy (Ullman, 2021: 2). Homeopathic medicines are prepared from natural sources (plants, minerals, animals, diseased products, healthy tissues) (Kumari, 2022: 355). The word 'nosode' is derived from the Greek term '*nosos'* referring to the disease. Nosodes are homoeopathic remedies that consist of dilutions of pathogenic organisms' causative agents, such as fungi, parasites, viruses or bacteria, and disease products (Varanasi and Nayak, 2020: 130). Homoeopathic nosodes may be used to treat and prevent non-infectious as well as infectious diseases. More than 60 homoeopathic nodoses have been used by homoeopathic practitioners, playing a significant role in clinical practice. Nosodes can be prepared from bacteria (*Diphtherinum, Streptococcinum*), viruses (*Variolinum* for smallpox and *Morbillnum* for measles), parasites (*Psorinum* for scabies), and diseased tissues (*Carcinosin* from infected breast cancer). As a result of their diverseity, the individual evaluation of new nosodes for safety assessment is always recommended and required (Munshi *et al.,* 2022: 43).

[1]Durban University of Technology, 21703712@dut4life.ac.za | https://orcid.org/0000-0002-4969-5996
[2]Durban University of Technology, drsindilemajola@gmail.com | https://orcid.org/0009-0003-2358-3106
[3]Durban University of Technology, sureshk@dut.ac.za | https://orcid.org/0000-0003-3155-8878

Antibiotics are conventional treatment drugs that are used for the prevention and treatment of bacterial infections. Thus the use of antibiotics has saved millions of lives worldwide (Ribeiro da Cunha *et al*., 2019: 1; Uddin *et al*., 2021: 1750). In addition, antibiotics have provided a platform for the implementation of surgical interventions, organ transplants, and cancer chemotherapy (Gajdács and Albericio, 2019: 1). Albeit, antibiotics have existed for decades and due to exposure to many antibiotics and their adaptation, some disease strains become multi-resistant to treatments employed (Nogueira, 2019: 86). Overtime, the overuse, and overprescribing of antibiotic due to delays in accurate diagnoses has caused a reduction in effective antibiotics available to treat infections (Morris, 2020: 3). The total number of infections occurring because of multi-drug resistance is increasing worldwide and the threat of untreatable infections is increasing (Gajdács and Albericio, 2019: 1; Uddin *et al*., 2021: 1752). Antimicrobial resistance presents a significant issue to healthcare systems around the globe. Microorganisms constantly evolves to avoid being killed by antibiotics, hence, antimicrobial resistance cannot be avoided (Verstraete *et al*., 2022: 466). Infectious pathogens can develop resistances over time if they are exposed to newly developed drugs (Chokshi *et al*., 2019: 36). The main contributing factors behind the development of antimicrobial resistance is the overuse and the misuse of antimicrobial agents both in humans and veterinary medicine (mismanagement of antibiotics in the form of interruption of therapy, self-medication, and being unrestriced in access to high rates of antimicrobial prescriptions), as well as in agricultural settings (Ribeiro da Cunha *et al*., 2019: 2). This antimicrobial resistance challenge has become worse as nosocomial infections have become a leading cause of morbidity and mortality, resulting in longer hospital stays. This has resulted in a significant increase in healthcare costs (McFee, 2009: 422; Geta and Kibret, 2021: 1).

In addition, more than 15 percent of nosocomial infections are already occurring due to multidrug-resistant pathogens (Theuretzbacher, 2012: 296 and Ribeiro da Cunha *et al*., 2019: 2). This includes some ineffective antimicrobials, for some of which there are no effective antimicrobials (Frieri *et al*., 2017: 370; Ribeiro da Cunha *et al.,* 2019: 2). Future perspectives are not looking promising as a government-commissioned study, undertaken in the United Kingdom, estimated that antimicrobial-resistant infections will lead to nearly 10 million deaths each year by 2050 and a total GDP loss of $100.2 trillion by 2050 if appropriate actions are not taken (Nieuwlaat *et al*., 2021: 1657). A systematic review done by Sekyere and Mensah in 2019 documented the increasing prevalence of antibiotic resistance in gram-positive bacteria in Africa. For instance, changing antibiotic resistances caused by *S. aureus* in the population has been recorded in bloodstream infections in Gambia, Ghana, Burkina Faso, and Niger (Bernabe *et al*., 2017: 630; Sekyere and Mensah, 2020: 29). *Staphylococcus aureus* has been recorded as the bacteria responsible for causing pneumonia and septicemia (infection of bloodstream) with resistance rates of 90 percent, 29 percent, and 20 percent to gentamycin, ampicillin, and cloxacillin, respectively, among children in Africa (Workneh *et al*., 2017: 3; Sekyere and Mensah, 2020: 30). Additionally, Founou reported 100 percent and 93.8 percent multidrug resistance (MDR) rates respectively in *S. aureus* and *Enterococcus Spp* (Williams *et al*., 2018: 2; Sekyere and Mensah, 2020: 30). The emergence of tuberculosis drug resistance in South Africa is also increasing. There are more than 322 000 new cases of tuberculosis reported annually in South Africa, 4.4 percent of cases are drug resistant (Daftary *et al*., 2021: 480). A study was conducted in KwaZulu-Natal on patients with drug-resistant tuberculosis to identify Resistance-Associated Variants (RAVs) and to evaluate the extent of the bedaquiline and clofazimine cross-reference. The results revealed that a Bedaquiline and clofazimine cross-reference is emerging repeatedly in Southern Africa. Onward transmission was greatly increased due to Rv0678 mutations in M tuberculosis. Bedequiline and clofazimine roll-out treatment in the setting of limited drug susceptibility testing has the potential to allow for the further spread of resistance (Nimmo *et al.,* 2020: 165).

Classification of Homoeopathic Nosodes

As aforementioned, homoeopathic nosodes can be prepared from biological material including diseased tissues and cultures (bacteria, viruses, parasites, and fungi) from the decomposed products of humans and animals. There are more than 60 nosodes that have been incorporated in homoeopathy treatments in clinical settings since 1830 with claimed clinical benefits. However, a small number of nosodes have been scientifically tested for their effectiveness, particularly using *in vitro* models (Daftary *et al*., 2016: 3; Khuda-Bukhsh, 2018: 2). In the Homoeopathic Pharmacopoeia of India (HPI), the preparations are categorised into four groups depending on the nature of the substance, whether the organism has the capability of producing endotoxins or exotoxins. These groups are N-Ⅰ, N-Ⅱ, N-Ⅲ, and N-Ⅳ (Sankar *et al.,* 2017*:* 158 and Nayak *et al*., 2020: 130). The four groups are demonstrated in figure 1 below.

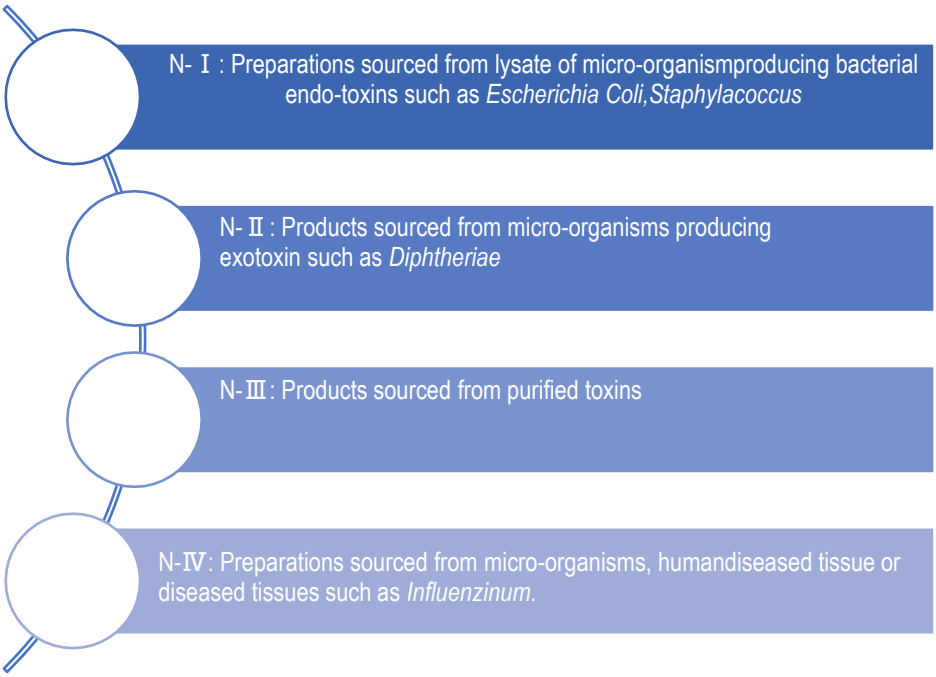

Figure 1: The classification of nosodes preparations in HPI (Munshi *et al*., 2022: 3)

Nosodes are classified into basic, exanthem, isopathic, autogenous, intestinal, and commonly used (well-proven). Basic nosodes include *Psorinum, Carcinosinum, Medorrhinum, Syphilinum*, and *Bacilinum*. All these major nosodes were prepared before 1901. *Psorinum* (sourced from sero-purulent discharge from scabies vesicle) was made and proven by Hering in 1828. *Medorrhinum* was developed by Swan before 1890 from a urethral discharge of a Gonorrhea infected patient. *Syphilinum* was developed by Swan during the 1880s and was sourced from Syphilis. *Bacillinum* was developed by Burnet and prepared from tuberculosis sputum during 1885s (Shah, 2017: 203). James Compton Burnett was the first to develop the nosode from infected cancer breast tissue known as *Carcinosinum* (Shah and Talele, 2019: 27).

Bowel nosodes are remedies made from cultures of the non-lactose fermenting bacterial flora of the intestinal tract. They were developed by Dr. Bach, Dr. Wheeler, Dr. Dishngton, and Dr. Patterson with his wife Elizabeth Patterson. Dr. Bach and Patterson discovered many specific species of bacteria in the fecal matter of hospitalised patients. These bacteria were isolated and studied, followed by specific homoeopathic remedies being sourced from them known as nosodes (Nanda, 2020: 73). This includes *Morganella,* sourced from gram-negative bacteria causing acute infections such as pericarditis, central nervous system infection, urethritis, and sepsis. It is indicated to treat respiratory conditions such as asthma and pneumonia. *Proteus* is sourced from a group of negative gram bacteria responsible for inflammation (gastroenteritis, sepsis, meningitis). It is indicated to treat urological infections. *Bacillus No. 7* is another commonly used bowel nosode indicated to treat respiratory conditions (such as asthma) and low blood pressure (Nanda, 2020: 73). The classification of nosodes is demonstrated in table 1 below:

Table 1: Classifications of homeopathic nosode

Nosodes category	Nosodes
Basic	*Bacillinum, Carcinosinum, Medorrhinum, Psorinum, and Syphilinum*
Exanthem	*Anthracinum, Diphtherinum, Malandrinum, Influenzinum, Morbillinum, Parotidinum, Pertussinum, Vaccininum, and Variolinum*
Isopathic	*Malaria officinalis, Pyroginum. Staphylococcinum, and Streptococcinum*
dabbljazIntestinal (Dr. Bach and Dr. Wheeler)	*Bach nosodes or Bowel nosodes: Bacillus dysenteria coli, Bacillus faecalis, Bacillus Gaertner, Bacillus morgan, Bacillus mutabile, Bacillus No 7 and Bacillus proteus*
Commonly used (Well proven)	*Medorrhinum, Psorinum, Pyroginum Syphillinum, and Tuberculinum*
Other	*Ambra griesea, Anthracinum, Carcinosin, Cholestrinum, Eel serum, Eosinum, Influenzinum, Leuticum, Lyssin, Maladrinum, Malaria Officinalis, Morbillinum, Osteo arthritic, Parotidinum, Pertussin, Pneumococcinum, Scarlatina Scirrhinum, Staphylococcinum, Streptococcinum, Typhinum, Typhoidinum, Vaccinium, Variolinum*

Source: Galande, 2020: 101

Indications

Nosodes are considered to contribute to the regulation of the body's organs allowing them to function in a normal and healthy way, as well as to treat and cure patients holistically (Ijaz, 2020: 2). They are safe and effective when used in conjunction with conventional treatment. There exists the possible role of integrating homoeopathy with standard care to treat all types of infectious diseases, including those with high mortality and morbidity. This may result in reduced lengths of hospital stays and a lower cost of care, thus, reducing the health-care burden on hospitals. Nosodes may be incorporated when the use of antimicrobials (such as antibiotics or anti-viral drugs) is not yet evaluated for the new emerging disease (Nayak and Varanasi, 2020: 130). Nosodes are mostly used in clinical practice, such as *Psorinum* for ailments from a suppressed skin condition or pruritus, *Medorrhinum* for the history of suppressed gonorrhea, and *Syphilinum* for the history of syphilitic chancre suppression. Although *Psorinum* is sourced from a discharge containing scabies parasites, it does not only treat scabies but may also be beneficial against cancer, eczema, migraines, mental disorders (anxiety), and more (Munshi *et al*., 2022: 43). Conventionally, majorly used nosodes in homoeopathy are known as deep-acting medicines due to the virulent capacity of involving multiple organs and systems by the presumed organisms that are present (M. tuberculosis and Neisseria gonorrhoeae) in their making. Nosodes are utilised as a treatment for non- infectious and infectious diseases as well as homoeoprophylaxis during illness in epidemic outbreaks (Nayak and Varanasi, 2020: 130).

A survey conducted by homoeopathic practitioners showed that 95 percent of homoeopathic practitioners consider nosodes to be crucial in their clinical practice (Nayak and Varanasi, 2020: 130; Tiwari, 2021: 193). An open-label study was designed by Herscu *et al*. to evaluate the safety and immune response of the coronavirus nosode BiosimCovex. The nosode was administered orally on three consecutive days to ten healthy volunteers (Herscu *et al*., 2022: 1). All forms of clinical examinations, immune parameters, and laboratory safety were performed. During the clinical trial, there were no fatal adverse events reported. The results showed an increase percentage of intetuken-6(IL-6) on day 17 in three participants. By day 34, ten participants showed elevated IL-6. A significant difference between IL-6 observations, calculated by repeated measures ANOVA, was found to be highly significant. The IL-6 values of nine participants were found to return to normal on day 60. An increase in CD4 number was noticed on day 60. This showed that Homoeopathic Pathogenic Trials (HPT) may extend into physiological changes in the immune response (Herscu *et al*., 2022: 1). *Oscillococcinum* is a homoeopathic remedy prepared from duck heart and liver. It is popularly used in influenza virus cases. The *Oscillococcinum* nosode has been successfully used in a double-blind study to treat patients with the influenza-like disease (Skripchenko *et al*., 2019: 93 and Munshi *et al*., 2022: 44). The leading country worldwide in developing homoeopathic nosodes and successfully implementing them in its public health is Cuba. Cuba has great experience in using nosodes as a stand-alone treatment or in combination with homoeopathic remedies that are not nosodes, such as prophylaxis. The country has used nosodes for different conditions including pneumonia, hepatitis, meningitis, dengue, chorale, leptospirosis, and other diseases (Bracho *et al*., 2010: 158 and Munshi *et al*., 2022: 44). Table 2, below, shows examples of homoeopathic nosodes that currently exist in clinical practice as well as with their biological functions in farm livestock (Munsh *et al*., 2022: 44).

Table 2: Treatment with homeopathic nosodes

Homoeopathic Nosode	Abbreviation	Source	Treatment	References
Anthracinum	Anthr.	Anthrax poison	Carbuncles, boils, septic inflammation, spleen diseases, malignant ulcers	Dabbir, 2017: 244; Shivadikar, 2020: 54
Bacillinum (Dr Burnett)	Bac.	Humans' tubercular sputum	Tuberculosis, Chronic catarrhal conditions	Jee *et al*. 1891: 14; Wadhwani and Chadha, 2022: 15
Borrelia burgdorferi (lyme nosode)		Bacterial species of the spirochete class	Lyme disease	Whitmont, 1998: 189; Greenspan, 2019: 5
Carcinosin	Carc.	Cancer-infected breast tissue	One of the greatest polychrest	Shah and Talele, 2019: 3
Diphtherinum	Diph.	*Corynebacterium diphtheria*	Immunity boosting for diphtheria	Bala, 2020: 216
Folliculinum	Foll.	Oestrogen	Crucial remedy for women with estrogen poisoning due to the use of birth control pills. Woman's infertility	Cooper, 1990: 102; Sharma and Singh, 2022: 89

			and regains ovulation cycle caused by the usage of birth control pills	
Histaminum hydrocholoricum		Histaminum hydrocloloricum	Allergies (reduces the amount of histamine released during allergic response hence reducing the effects of histamine)	Alexander, 2012: 3; Volinsky, 2020: 199
Influenzinum	Influ.	Prepared each year from the same influenza strain that is used in the flu vaccine for the year	Flu symptoms (stimulate the body's own immune system to resist the seasonal flu strains' onset. only homoeopathic remedy that is updated each year based on the flu strain reported by the World Health Organization (WHO)	Nayak and Varanasi, 2020: 131
Lathyrus Sativus		Lathyrus Sativus	Polio immune booster	Whatcott, 2022: 2
Lyssin (hydrophobinum)		Rabies	Indicated for patients who often feel teased, tormented, hypersensitive to noise, and light, react violently	Munshi *et al.* 2022: 43
Medorrhinum	Medh.	Gonorrhea	hormonal problems, mucus production, Children's behavioral problems, sleep disorders, and eating disorders.	Mercaldo, 1999: 69; Munshi *et al*. 2021: 43
Meningococcinum		prepared from a mix of cultures of different meningococcus bacteria.	Meningitis immune booster	Nayak and Varanasi, 2020: 133
Oscillococcinum	Oscillo.	Duck heart and liver	Treating and preventing influenza-like symptoms, decreasing the duration and intensity of fever, chills, body pains	Jacobs, 2018: 159
Parotidinum	Parot.	Mumps virus	Immune booster for mumps	Birch and Whatcott, 2013: 132
Pertussin	Pert.	*Bordetella pertussis*	Whooping cough	Nayak and Varanasi, 2020: 132
Psorinum	Psor.	Scabies discharge	Skin conditions (eczema, scabies), asthma	Munshi *et al*. 2022: 3
Rubella nosode		Rubella (German measles) virus	German measles immune booster	Loeb, 2018: 7423
Staphylococcinum	Staphycoc.	*Staphylococcus*	Diseases involving *staphylococci*	Sinha and Jadhav, 2020: 172
Streptococcinum	Streptoc.	*Streptococcus pyrogens*	History of *Streptococcus pyrogens* such as strep throat, Strep B infections in pregnant women	Seul, 2018: 34
Syphilinum	Syphil.	Syphilis	Chronic diseases such as chronic asthma, constipation, painful menses	Galande, 2020: 1; Munshi *et al*. 2022: 2
Varicella Zoster nosode		Varicella Zoster virus	Chickenpox immune booster	Shah and Talele, 2019: 28
Variolinum		Smallpox virus	Smallpox immune booster. Post-herpetic neuralgia after shingles	Whatcott, 2022: 1

Directions for Use

The rules for prescribing nosodes have been explained by a variety of stalwarts and experienced practitioners of homoeopathy (Nayak and Varanasi, 2020: 129). The following is the most documented ways of prescribing nosodes:

- If the mental, generals, and physicals including the particulars (PQRS), match the homoeopathic nosode indications, the nosode can be prescribed and function as a constitutional medicine. Constitutional remedies treat the patient as a whole, physically, emotionally, and mentally, including consideration of their past medical history (Sharma and Singh, 2021: 44)

- When treating a chronic disease, the simillimum (remedy corresponding to the totality of symptoms) is no longer effective, using the nosode in a healing process eliminates a blockage to the cure, enabling the simillimum to continue working (Deep, 2020: 385)
- Nosodes are used when the simillimum does not provide relief
- Nosodes can be incorporated when the case is unclear (lack symptoms)
- Nosodes can be prescribed as a miasmatic intercurrent remedy when treating a chronic disease. Miasm is an underlying predisposition to a persons inherited disease group. A miasmatic intercurrent remedy is the homeopathic remedy used to strengthen the body from a genetic weakness that causes predispositions to certain disease processes, given between doses of the remedy indicated by the patient's complaints to further the action of the indicated remedy (Murgod and Shah, 2021: 268)
- Nosodes can be used to prevent disease (homeoprophylaxis)
- Nosodes can be given as a *Genus Epidemicus*

Despite all the homoeopathic nosodes, it is crucial to prescribe them cautiously as they can be contradicted in a case (Nayak and Varanasi, 2020: 130). Nosodes must be prescribed cautiously in cases like that indicated in Figure 2:

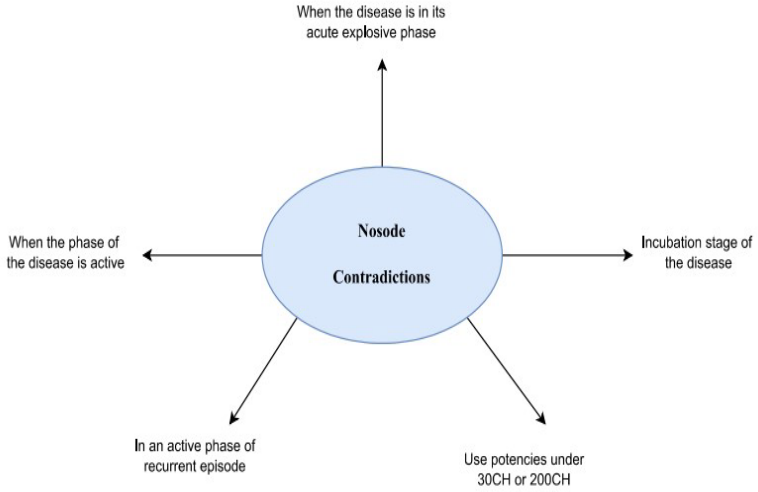

Figure 2: Nosodes must be prescribed cautiously in the following cases (Nayak and Varanasi, 2020: 131)

Preparation of Homoeopathic Nosode

Pharmacopoeia

Nosodes are prepared according to the standard prescribed in the official Pharmacopeia. Homoeopathic Pharmacopeia is an official book of standards consisting of authoritative information on homeopathic medicinal products and preparations, the main chemical properties used during identification, standards for strength, and the chemical tests used for determining purity and identity (Yapar and Ozdemirhan, 2020: 57). Most of the time, pharmacopoeias are published by an authority or government of any country. Currently, there are seven countries that have official homoeopathic pharmacopoeias. India (Homoeopathic Pharmacopeia of India, 1971-2016), Germany (German Homoeopathic Pharmacopoeia, 1825), the United Kingdom (British Homoeopathic Pharmacopoeia, 1st edition in 1870), the U.S.A. (Homoeopathic pharmacopoeia of the United States, 1897, revision 2016), France (French Homoeopathic pharmacopoeia,1897), Mexico (Mexican homoeopathic pharmacopoeia, 1998, 1st edition), and Brazil (Brazillian Homoeopathic pharmacopoeia, 2011, 3rd edition) (Valavan and Cesar, 2019: 233-235). Countries that do not have an official Pharmacopoeia are free to undertake manufacturing as per any of the recognised Pharmacopoeia from other countries (Máthé and Khan, 2022: 2). For instance, South Africa manufactures using the German Homeopathic Pharmacopoeia during the preparations of homeopathic medicines. The mentioned homeopathic pharmacopoeia differ according to the nosode preparation processes, such as number of succussions, concentration, etc. (Valavan and Cesar, 2019: 233-235) .

The only major difference is the continuous dilution of a mother tincture, according to homoeopathic laws. The centesimal method involves taking one drop of the previous potency (degree of dilution that the remedy has undergone during the preparation process) and diluting it with 99 diluent drops, then adding a drop of this into a clean vial and repeating this process many more times until the desired remedy potency is reached. At each stage, the remedy is potentised (a systematic and scientific process involving several dilutions with vigorous succussion, also known as shaking). This is vitally important and these dilutions are named potencies. Several products on public sale are 6Ch (meaning the remedy has been potentised six times, with a dilution of 1 in 100^{6}) or 30Ch (1 in 100^{30}). After the required homoeopathic nosode potency has been obtained, they are placed in the appropriate containers accompanied by the shelf-life package and recommended storage conditions (Frass *et al*., 2020: 1935; Dewanshu and Kumari, 2020: 156). Homoeopathic aggravation is the temporal or slight intensification of existing symptoms or the appearance of new symptoms after a dose of a homoeopathic remedy when the dose has been too large (Meena and Suman, 2020: 1). After the administration of a homoeopathic remedy sometimes symptoms may slightly worsen. This is known as homoeopathic aggravation. Aggravations are usually harmless, short-lived, and usually mild. A slight homoeopathic aggravation in the first hour after administration is considered a good indication that the acute disease or symptom will be cured. In cases where aggravations have persisted, this may be due to the patient proving the remedy, since the poorly matched remedy may bring out new symptoms. From these ideas, it is proven that homoeopathic aggravations are part of the treatment of homoeopathy and such a concept do not exist in another medical system (Sperl *et al*., 2020: 232).

Regarding chronic diseases, according to the application of Hahnemann's advanced methods, as described in the sixth edition of the Organon, the intensification of the original symptoms only must appear at the last stage of treatment when the cure is almost completed, given the accurately chosen remedy was taken in gradually increased potency and properly small and modified doses (Meena and Suman, 2020: 11). When a cure is almost completed, the vital force no longer needs medicine to continue its curative reaction. If further medicine is administered, the medicine symptoms are called into play. However, if the patient experiences a homoeopathic aggravation in their first dose in chronic disease cases, and in the same way every repeated, modified dose, this points to the fact that the dose was too large (Meena and Suman, 2020: 51). Homoeopathic aggravation occurrs because the smallest possible dose will be easily overcome by the vital force and does not prevent the disease from being cured. It is often not perceptible in patients unless they are oversensitive (§156, 283 Organon and Schuett, 2015: 2; Meena and Suman, 2020: 51). The duration and intensity of similar aggravations provides an idea of the accuracy of the chosen remedy, the patient's vital force, the prognosis, and the management of the case (Meena and Suman, 2020: 51).

Other stalwarts in homoeopathy have further investigated this event and observed that when a homoeopathic remedy is administrated, any one of the following responses is expected (Dipangkar, 2021: 451):

- Curative response – the improvement of symptoms
- Similar aggravation – At first the symptoms worsen, followed by improvement in symptoms.
- A dissimilar aggravation – New symptoms appear for a brief time while the old ones stay the same.
- Accessory symptoms – There is improvement in the symptoms while a new symptom appears in the process for a brief period.
- Return of old symptoms – There is improvement in the existing symptoms while the old symptoms from the past return for a brief period.
- An eruption appears for a brief time.
- Nothing happens

Use of Nosodes as Homoeoprophylaxis

Provided the difficulties in understanding how homoeopathy may work, researchers have concentrated on finding whether Homoeopathic nosodes are placebo treatments. Current evidence suggests that homoeopathy is not completely a placebo effect, however, more clinical trials and studies are required to strengthen this point of view (Raza, 2019: 1). A randomised, double-blind, placebo-controlled prophylaxis study was done in COVID-19 exposed participants in Mumbai, India. There were six groups and each group was treated with one of the following: Arsenicum album 30CH, Bryonia alba 30CH, a combination (consist of Arsenicum album 30CH, Bryonia alba 30CH, Gelsemium sempervirens 30Ch, and Influenzinum 30CH), coronavirus nosode CVN01 30CH, Camphor 1M, or placebo. The results demonstrated that good rates of recruitment and retention were achieved. Of the 4497

quarantined participants, 2233 participants completed the trial. Participants who were randomised to receive either the coronavirus nosode or Bryonia album, which showed a lower incidence of laboratory-confirmed COVID-19 and a shorter period of disease, along with fewer hospitalisation evidence than those who were administered a placebo. The three other groups (Arsenicum album 30CH, Camphora 30CH and a combination) did not show signs of efficacy (Talele *et al*., 2022: 2).

In March 2020, the COVID-19 outbreak was declared by the World Health Organization (WHO) as a pandemic. An open-label randomised study was done to assess the immune-boosting ability of a homoeopathic, therapeutic treatment including Tuberculinum 1M, Zincum metallicum, 6CH, Chininum arsenicosum 6CH, and Calcarea Phos 6XH in asymptomatic carrier of the coronavirus disease (COVID-19) in a group of high risk individuals. There were two groups. Group A (intervention group) participants were healthcare workers and their family members from the hospital at which the study was conducted (Father Muller Hospital). Group B was the control group which consisted of a high-risk participant in the age range from 14 to 60 with severe comorbidities (pregnant, end stage renal disease) (Dikshit *et al*., 2022: 85). The results showed significant effects observed in the strata of those aged 21 to 30 in the completion of treatment ($p<0.01$). The healthcare workers group showed statistically significant results in terms of other factors. In addition, the study used tests to positivity rate the methods used to monitor the testing efficacy and evaluate the disease activity status in the provided population (Centers for Disease control and Prevention (CDP)). It indicated that the treatment has potential antiviral activity (Dikshit *et al*., 2022: 85).

An observational study was undertaken between the 20th of January and the 20th of May 2021 on 1397 COVID-19 positive participants to determine the clinical-symptomatic profile of the vaccine breakthrough against COVID-19 infections and participants who were administered homoeopathic treatments.The observations were conducted against the data of participants treated with Homoeopathic medicines who confirmed the breakthrough infection standard, with a positive infection for more than or equal to 14 days after completion of both the suggested doses of an authorised COVID-19 vaccine. The study used IBM SPPSS statics 21.0 to analyse the descriptive data. Homoeopathic remedies that were found to be clinically effective in countering the adverse effects following vaccination included Acidum phosphoricum, Thuja occidentalis, Antimonium tartaricum, Pulsatilla nigricans, Aspidosperma, Sulphur, and nosodes (Typhoidinum, Influenzinum and Vaccinum) (Wadhwani and Chadha, 2022: 4). In addition, A total of 73 cases were found to be vaccine breakthrough infections out of the 1397 COVID-19 positive participants. The median recovery time observed in the data set was found to be approximately nine days. There were five participants that dropped out of the study. A total of 93.5 percent of patients responded well to the remedies. The percentage of patients that recovered completely with normal HRCT chest or serological markers was 75.34 percent. There were 29 (39.72) patients with mild clinical manifestations, 26 (35.61%) with moderate manifestations, 17 (23.28%) were severe, and one (1.36%) was critical. Ten homoeopathic medicines were prescribed to 73 participants that had adverse effects post vaccination. Many patients obtained an ORIDL score of four. A WHO clinical progression score of three was reported by the maximum number of participants (Wadhwani and Chadha , 2022: 11).

An experimental study done on nosodes prepared from the P. berghei parasite. Mice were infected with the P. berghei parasite. The study results demonstrated that the nosodes produced considerable activity. The mixture nosode exhibited an inhibition percentage of 71.42 percent (3D7) and 68.57 percent (RKL-9). The cell-free parasite nosode exhibited 62.85 percent (3D7) and 60 percent (RKL-9). The infected RBC'S nosode showed 60.61 percent inhibition (3D7) and 57.14 percent (RKL-9). On the mixture nosode-treated group, the biomarker levels of the liver and kidney were within the normal range. Cytokines showed an elevated IL-4 (interleukin 4) and IL-10, while there was a decline in IL-7 and IFN-Y in the group treated with a mixture nosode. As a result, it was concluded that the mixture nosode showed promising antimalarial activity in P. Falciparum and P. berghei (Suri *et al*., 2021: 121). An *invitro* study was performed by Munshi *et al*. in 2022 where the polyvalent nosode efficacy was tested using the minimum inhibitory concentration assay. The nosodes tested were Candida albicans (30CH, 100CH), Neisseria gonorrhoeae (35CH), Klebsiella pneumoniae (35CH,100CH), Escherichia coli (35CH, 100CH), and Salmonella typhi (30CH, 100CH) along with the positive and negative controls. Each nosode was tested against the infection it causes and cross-infections. The results revealed that the tested nosodes produced antibacterial potential against corresponding micro-organisms and against other selected organisms tested using this essay. On C. albicans species, the C. albicans polyvalent nosode (35CH. 100CH), N. gonorrhoeae nosode (35CH), and amphotericin B (positive control) exhibited growth inhibition. On K. pneumoniae species, K. pneumoniae (35CH), E, coli polyvalent nosode (100CH), and meropenem (positive control) showed inhibition of growth. However, this effect was not found on the three positive controls (ceftriaxone, ofloxacin, and amoxicillin antibiotics). The E. coli

polyvalent nosode (30CH) and positive controls (include ciprofloxacin, ofloxacin, and amoxicillin) exhibited inhibition of the growth of E. coli. The S. typhi polyvalent nosode 30CH and the positive controls (ciprofloxacin and ofloxacin) displayed inhibition of growth of S. typhi species for 24 hours. However, the effect did not last further than 48 hours. The N. gonorrhoeae polyvalent nosode could not produce inhibition on the growth of N. gonorrhoeae species. The positive controls (ceftriaxone and ofloxacin B) also could not exhibit inhibition on the growth of N. gonorrhoeae organisms. (Munshi *et al*., 2022: 42).

Worth noting is that a stringent biosafety-compliant environment is required when producing homoeopathic nosodes. Minimum handling and using sealed containers and disposable auto-tip pipettes is always recommended. The safety of nosodes in different potencies must be established according to sterility testing, as described in the Indian Pharmacopoeia or European Pharmacopoeia for aerobic and anaerobic organisms. Sterility testing results show the presence and the source organism growth in potencies such as 1C, 4C, and 6C. Any potency under 6X is not supposed to be dispensed, as well as potencies higher than 6X which must be sterile as per the Homoeopathic Pharmacopeia of India (Mashru *et al*., 2017:2585; Suri *et al*., 2021: 121). It is required to document the heat inactivation of pathogens if done. However, the Homoeopathic Pharmacopeia does not suggest inactivation (Mashru *et al*., 2017:2586). For cases where phlebotomy is performed on volunteers, they must be provided with an informed consent form stating the proposed use of the sample. According to ethical guidelines for biosafety, the viral safety of human blood plasma products, clinical research, and safety issues in the preparation of homoeopathic medicines, these process must be done accurately (World Health organization, 2009: 28). In 1964, the guidelines for biosafety in the form of the Laboratory Biosafety Manual and clinical research in the form of Declaration of Helsinki were developed by the World Health Organization (Mathur *et al*., 2019: 215).

The Right Dosage

Treating chronic illnesses (diseases that have been present for an extended period such as arthritis) with homoeopathic nosodes should be done with low potencies (such as 6x or 6C) and in acute conditions (new symptoms or diseases such as fever) treated with high potencies (such as 30CH-200CH). An exception includes cases where an accident is an etiology of the symptoms; the body might be given a kick start with a high potency dose, such as Arnica 200CH, at first followed by a lower potency remedy (Khatta and Srivastava, 2021: 36). The homoeopathic sensitivity of the patient is another factor that is required to be considered when choosing a remedy potency (hypersensitive patients take lower potencies). It is also crucial to consult with a homoeopath before taking a particular remedy, especially when in doubt. In cases where there is uncertainty in the remedy to use, a low potency, such as 6X, below 30CH or 30CH, should be used before a patient is given a high potency remedy and the patient should be observed. Then, in case the patient's symptoms improve but not fully, the remedy should be repeated but now in a higher potency (such as 200CH). In cases after using the low potency of a particular remedy where no improvement is observed or there are changes in the condition, the remedy used should be changed and a different remedy should be taken in low potency. High potencies, including 200CH and 1M, are normally taken in exceptionally low doses (typically once per week), whereas lower potencies (such as 6CH, and 30CH) can be taken every few hours for a few days (Khatta and Srivastava, 2021: 36).

Homoeopathic medicines are to be taken on a clean palate. All strong flavors including coffee, vicks, mint camphor, or toothpaste can interrupt the remedys' functions. Once relief from the symptoms is felt, use of the medication should cease. The patient can take the remedy again if the exact same set of symptoms flares up again and stop taking homoeopathic medicine once symptoms are cured. Only take it again if the same symptoms come back. If symptoms or conditions persist or worsen, consult a homoeopathic doctor (Khatta and Srivastava, 2021: 36). Homoeopathic nosodes and other non-nosode remedies are normally administrated in the form of pills, granules, globules, powders, and liquids, which are placed under the tongue. In low potencies, you can take two tablets every two hours for the first six doses, and then four times daily for up to five days. For some diseases, homoeopathic remedies are taken as an ointment, for example arnica cream which is applied directly to bruising. Avoid contact with the skin when taking the remedy in pill or granule form (including fingers to prevent contamination). A few granules or globules are dropped into the lid and poured directly into the mouth (Khatta and Srivastava, 2021: 36).

Conclusion

Towards the end of the 20th century, the use of homoeopathy lessened because of advancements in the conventional system. Despite this, in conjunction with conventional medicine, homoeopathy has been shown to

have more added advantages when it comes to the effective treatment of different diseases. Many different trial studies have revealed the effectiveness of this isopathy approach of homoeopathy, However, the absence of a standardisation of the source material and direct proof of effectiveness for human beings causes concerns and controversies around homoeopathy. The quantity of peer-reviewed homoeopathic nosode research is smaller than that of conventional medicinal research. Most significantly for global health, studies such as those presented in this article demonstrate that patients taking homoeopathic nosodes and following sensible disease avoidance measures may avoid infection or may be able to reduce reliance on conventional medication, including antibiotics, hence, reducing the prevalence of antibiotic resistances. In the meantime, the most important evidence still arises from practical clinical experience and from the successful treatment of millions of patients. A gap that needs to be filled in homoeopathic nosode research includes a high-quality study, such as multi-site research with multiple replications of the same approach for the treatment of the same medical conditions on a larger scale sample and with more practical applicability to clinical trials. This will improve publicity and reproducibility, build credibility in the healthcare system, and attract a large population of patients and professional practitioners toward this complementary treatment.

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