



A Science of Medicine
The Art of Care

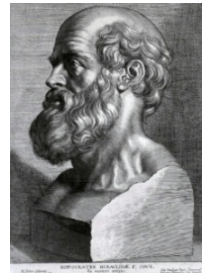
The interrelationship between Tissue Salts and the Qualities of Tibb

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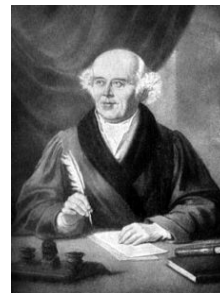
Dr W. H. Schuessler²³



Hippocrates²⁴



Rudolf L.K. Virchow²⁶



Samuel Hahnemann³³

1. Introduction

Tissue salts are the vital building blocks in manufacturing and maintaining the dynamic equilibrium of the cells in the body. It forms the basis of blood, which contains all the material for all the tissues; from the capillary vessels, arteries and veins, to every tissue and organ, which supplies nutrients and oxygen to every part of the body.

Each nerve, muscle, bone, cartilage, connective tissue, skin and mucous membrane is dependent on the correct balance of the molecular motion and structure of the mineral salts and water content in the body. Any disturbance in this equilibrium results in abnormal conditions, which are known as disease.

The common denominator which links the philosophy of the biochemistry of tissue salts and Tibb is the fact that any disturbance in the molecular motion of tissue salts

in living tissues can be rectified by restoring the equilibrium, with the process of correcting any imbalances. Biochemistry corrects imbalances with minute quantities of the same tissue salt which is either deficient or in excess; while Tibb acknowledges that the tissue salt which is given will counteract the qualities of heat, moisture, coldness or dryness, whichever one has an excess or deficiency i.e. an imbalance of the quantity or quality of the respective humors.

Both principles of the biochemistry of tissue salts and the philosophy of Tibb agree that it is more important to understand the person as a whole, integrating the body, mind and the soul, in order for true health to be realised. The innate/inborn intelligence, or 'nature', known as Physis in Tibb, is able to assist the body in maintaining the equilibrium, or restoring the balance when ill health prevails. Hippocrates summarised this in his famous quote: **“It is more important to know what sort of person has a disease than to know what sort of disease a person has.”**

As long as there is a balanced interaction between man and the environment, consuming what is necessary to sustain life and eliminating what is no longer needed, true health will prevail. As long as a person makes the right lifestyle choices for his/her ideal Temperament, the minerals and Humours in the body will be in the correct quantity and in the right proportion, and there will be harmony with the chemistry of the blood and tissues of the body.

2. The history of tissue salts

The founder of the biochemical tissue salts is Dr Wilhelm Heinrich Schuessler, while the founder of the philosophical principles of Tibb is Hippocrates.

Hippocrates (469-377 BC) was a Greek philosopher and physician who is known as the Father of Medicine. He conceptualised the theory of humours, on which much of Tibb is based. These four humours circulate in the body, and they determine the unique physical, mental and emotional characteristics of an individual, which became known as Temperament, namely: Sanguinous, Phlegmatic, Melancholic and Bilious. Each Temperament has its own combination of the qualities of heat and moisture, coldness and moisture, coldness and dryness and heat and dryness, respectively.

The unique Temperament of an individual enables one to predict who is more predisposed to certain illnesses conditions. This enables one to balance the qualities of heat, moistness, coldness and dryness by making the right lifestyle choices, especially concerning nutrition and the intake of tissue salts. **“Let food be thy medicine and medicine be thy food”** (Hippocrates).

Hippocrates also developed the theory of Physis, meaning “the organism in its unity”. He postulated that life entails a reciprocal relationship between the organism and its environment, and imbalances in these humours, he believed, caused disease

(Chishti, 1991). He carefully studied and compared different symptoms of the body and he laid down the foundation for clinical medicine based on diet, movement and rest.

Samuel Hahnemann was a German physician who was born in 1755, and is known as the Father of homeopathy, as he founded the principles of the science and art of homeopathy. He was the first person to investigate the pathological effects and therapeutic uses of tissue salts. His studies of lime, salt, potash and silica paved the way for the rest of the tissue salt remedies.³²

In 1839 Matthias Jakob Schleiden and Theodor Schwann developed the tissue salt theory, which states that all organisms are composed of one or more cells; that all cells come from pre-existing cells; that vital functions of an organism occur within cells, and that all cells contain the hereditary information necessary for regulating cell functions and transmitting information to the next generation of cells.⁷

Dr Wilhelm Heinrich Schuessler (1821-1898) continued the work of Schleiden and Schwann, and he identified and produced the biochemical tissue salts. He was born in the town of Zwischenahn, Oldenburg, in Germany. After he studied medicine, he practised homeopathy, under the guidance of the well-renowned homoeopathist, Dr Samuel Hahnemann. His research in the field of homeopathy enabled him to write various journals and books, amongst which were: the 'General Homeopathic Journal' and 'An Abridged Therapy Based on Physiology and Cellular Pathology.'

Rudolph Ludwig Karl Virchow (1821-1902) was a German physician, anthropologist, politician and social reformer, but he is best known as the founder of the field of cellular pathology. He stressed that most of the diseases of mankind could be understood in terms of the dysfunction of cells.²⁷ His theory of cellular pathology became a basis for the understanding and fight against pathological processes in living organisms.

The development of pathological anatomy in the second half of the 19th century was attributed to Virchow.²⁸ He inferred that each cell must arise from a pre-existing cell²⁹ and pathological cells were also derived from other pathological cells. He was the first to recommend a systemic microscopic study of tissues.³⁰

3. The bio-chemistry of Tissue Salts

Biochemistry does not deal with names and effects; it deals with causes, the chemistry of life, and the law of supplying deficiencies. Tibb shares this philosophy as it also searches for the underlying causes for any humoral changes and imbalances.¹

The word biochemistry is formed from 'bios', the Greek word for 'the course of life'; and chemistry, which means 'the knowledge of the elements and the laws which govern their combination and behaviour.'²

Biochemistry integrates the course of life with that of the elements, while Tibb incorporates the course of life and elements together with the humoral theory of maintaining the correct proportion, strength and quantity of body fluids. These body fluids are represented in Tibb as Blood, Phlegm, Black Bile and Yellow Bile. Each one of these fluids has a predominance of heat and moisture, coldness and moisture, coldness and dryness and heat and dryness, respectively.

Each tissue salt also has a corresponding quantity and quality of heat, moisture, coldness and dryness. Any alteration to this ideal composition will result in disease.

The combination of the biochemistry of life and medicine incorporates the very essence of the 'elixir of health' (medicine and mineral salts), together with Physis. Both principles of biochemistry and Tibb emphasise that disease is a natural process, and that its symptoms are the predictable reactions of the body.³

These diseases are labelled according to how they manifest themselves in different ways and in different parts of the body, but these labels fail to express the true problem. Disease is a condition due to a lack of some inorganic constituent of the blood – the cure is to supply the blood with the tissue salt which is lacking.⁵

A true cure is only possible when one knows what, why, how, when and where a change to the ideal humoral composition has taken place, so that one can restore the body to its ideal composition of minerals, heat, moisture, coldness or dryness for each individual person.

Digestion and assimilation of macro nutrients, found in food, drinks, herbs and medication, is dependent upon its counterpart, micro-nutrients, which are found in tissue salts; the latter which has become deficient in the body due to poor farming interventions, electromagnetic radiation, and poor lifestyle practices amongst other factors.

Tissue salts build up the constitutional health of a person over long period of time, by rebuilding the tissues and organs. They are used to balance any excess or deficiency in the body, by either removing the excess or replacing the deficiency.

The aim of integrating tissue salts into the Tibb protocol is to preserve health and endeavour to restore it when it is lost.

“Nature heals, and the physician is only nature’s assistant” (Hippocrates).

There are six lifestyle factors in health maintenance and the cause of illnesses and conditions, which include: environmental air and breathing; sleep and wakefulness;

elimination and retention; movement and rest; emotions and feelings, as well as food and drink. The emphasis is on prevention rather than cure.

Schuessler analysed the ash residue of human cells and found 12 inorganic mineral salts. He theorized that these 12 elements are critical to balancing cellular activity and health. He made 12 homeopathic remedies in low potency in order to be assimilated rapidly and easily.⁸ Tissue salts cannot be given in an undiluted or subdivided form as they would be unable to enter the cells, in addition to placing an additional strain on the body.¹³

There is also an additional 15 tissue salts, from no's 13 – 27, which are responsible for the more complex ailments and conditions. These salts are not available in tablets, and they are only able to be prescribed and mixed in powder form by a trained tissue salt practitioner for a specific individual's needs.

Schuessler did not classify the tissue salts in the form of numbers, but rather by their respective names. For ease of reference and use of the tissue salts, each one has allocated a number by the more modern contemporary biochemists.⁸

Schuessler maintained that disease does not occur if cell metabolism is normal, and cell metabolism is normal if cell nutrition is adequate. The ability of the body to assimilate and to excrete and further utilise nutritional material is impaired if there is a deficiency in the inorganic tissue salts. Adequate cell nutrition can be restored and cellular metabolism can be normalised by supplying the required tissue salts to the organism in finely divided assimilable forms.³¹

Tissue salts, also known as "cell salts" or "biochemistry salts", are the same minerals that are found in rocks and in soil, and which occur naturally in the human body.⁹

These minerals are vital for the health and well-being of every individual. They are responsible for building cells, bones, tissues, muscles, nerves etc. and every other part of the body; a lack of which will result in disease. Tissue Salts function by repairing, maintaining and nourishing living tissue and they are considered to be the building blocks of cells.

Tissue salts works well with other remedies, such as herbs, vitamins and mineral supplements. The absorption of other remedies is enhanced by the salts, due to its micro-nutrients, which assist the macro nutrient's assimilation.⁸

The aim of the Schuessler's salts is not to supply the body with the deficient mineral, but to stimulate the human body to improve the absorption of the lacking minerals from ingested food and reorganise them in the tissues.¹⁰

“When a twig is broken from a tree a new one will grow provided it is give the correct amount of water, sunlight and nutrients from the soil. The human body, however, can only utilise its constituent parts”⁵

The cells of the body will function to its optimal capacity when the internal and external environment is in harmony with one another. Physis will assist in the elimination of any excess of material in the body, and it will assimilate the necessary nutrients.

The body is made up of cells. There are specific cells for specific organs and tissues of the body. The difference in the cells is largely determined by the type and composition of the inorganic salts which make up a cell. If the body or any tissues of the body is burned, it leaves behind ashes, which are the inorganic constituents of the body.⁵

Mineral salts are the material basis of the organs and tissues of the body, and are absolutely essential to their integrity of structure and functional activity. They are the physical basis of all healing, and if the mineral salts are absent from the blood and tissues, no permanent cure is possible.¹¹

4. The constituents of tissue salts in the body

- The inorganic materials of nerve cells are Mag phos, Kali phos, Natrium and Ferrum.
- Muscle cells contain Mag phos, Kali phos, Natrium, Ferrum, as well as the addition of Kali Mur.
- Connective tissue cells contain Silica, while the elastic tissue of cells contains Calcfluor.
- The bones contain Calcfluor and Mag phos, as well as a large portion of Calcphos.
- Calcphos is found in small quantities in the cells of muscles, nerves, brain and connective tissue.
- Cartilage and mucous cells contain Nat mur, which also occurs in all solid and fluid parts of the body.
- Hair and crystalline lens contain, among other inorganic substances, also Ferrum.¹²

5. The different philosophies in treatment

The **Tibb** philosophy believes that each person carries within himself/herself an inherent wisdom, a mechanism that allows the body to heal itself. This remarkable ability of the body is known as **Physis**; it maintains health, preserves life and cures disease.

The Tibb philosophy also maintains that each individual person has his own ideal combination of heat, moisture, coldness and dryness in the body, with predominance

in one of these qualities, and a sub-dominance of another, and less of the other two qualities. Tibb refers to this as Temperament.

Depending on whether the body has a predominance of heat, moisture, coldness or dryness, any excess or deficiency of the predominant quality will result in changes to the balance of the person's ideal qualitative state.

There can either be changes in the **quantity** of heat, moistness, coldness or dryness, resulting in conditions such as: tight skin, dull movements, feeling of weight in the limbs, or poor appetite; or changes in the **quality**, resulting in conditions such as sluggishness, loss of appetite, or sensations of itching or burning.⁴

The ideal Temperament can be restored by promoting **healthy lifestyles** and appropriate treatment and interventions.⁶

The Conventional Allopathic philosophy artificially and forcefully suppresses the symptoms of disease with medication, which can become toxic to the body, with little attention given to its causes.

The Homeopathic philosophy

Works with potencies at a very high level, and tissue salts are not administered according to the 'Law of Similarity', which states: 'like cures like,' or that a medicine can cure a sick person if it can cause similar sickness in a healthy person.

The Tissue Salt philosophy

Tissue salts are not classified as homeopathic because there are not selected according to the principle of similarity. They are chemically pure salts, homogeneous to the cell minerals in the human body and physiologically and chemically in close relation to them. However, the law of minimum dose does apply, whereby the same principle applies to the dilution of tissue salt remedies, where minute doses of the respective salt will achieve the desired result.

According to how disease manifests itself in various ways and in different parts of the body, this will require re-establishing the correct balance of the minerals in the body which are deficient. This is achieved by removing any excess or deficiency in the body, by either removing the excess or replacing the deficiency by administering the same mineral salt that is deficient in the body in small quantities.

6. The causes of tissue salt deficiencies

Modern lifestyles drain minerals through stress, worry, bad nutrition, industrially tainted foodstuffs, electro-pollution (from cell phones, microwaves, computers), through environmental toxins (insecticides, pesticides, preservatives etc.), as well as

exposure to heavy metals such as amalgam dental fillings, lead, aluminium and contaminated drinking water.⁹

Research has shown that the soil of the southern hemisphere is depleted of Zinc, Magnesium and Selenium – the latter being one of the most crucial immune boosters; whereas in the northern hemisphere, where the country of Senegal is rich in Selenium, immune diseases are very rare.¹³

According to Schoenfeld, most people believe that minerals, on the cellular level, can be replaced by vitamins and nutritional supplements:

"Vitamins and supplements can only get cellular acceptance provided the cells are adequately mineral-enriched and balanced in the first place. If these minerals (tissue salts) are absent, the body will battle to absorb even a tiny fraction of these 'intruders'. In this case, the supplements will rather become a stress factor for the cells, which are missing the minerals for their intra- and extra-cellular balance to pave a smooth entry for vitamins and other substances."

Schoenfeld uses the example of anaemia: "If the iron level in the cells is depleted, the body won't be able to absorb the iron. But once one has had sufficient tissue salts and refilled its deposits, the body will be able to absorb the iron, and that is the same case with every vitamin or food supplement. The body has to be enabled to receive any benefit from them."¹³The following main points are highlighted:

Emotional disturbances

Negative attitudes, unresolved emotional issues, the consequences of words and negative childhood experiences, leave imprints in the cellular memory. This influences the personality and the way a person reacts to any given circumstance.

There may be a sudden release of anger or other destructive behaviours onto an unsuspecting person, who is not the object of the emotional reaction. Self-mutilation, addictions and abusive behaviour, are only some examples of unresolved, subconscious emotional traumas.

The consequences of psychosomatic phenomena influence the metabolic rate of the body, by slowing it down, thereby depleting the energy levels and vitality. This uses up a lot of tissue salts, hence its depletion. This is transferred in utero to the child, who will carry this negative emotional and physiological blueprint throughout his/her life. This pattern can be broken by addressing the psychosocial issues and by replenishing the mineral deficiencies.

The human energy field

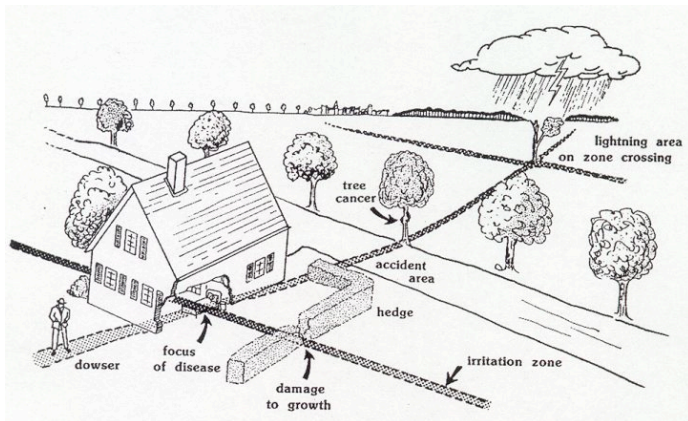
This is part of the life force energy field and it is like a template or network of energy points with which the physical molecules of the body are aligned. The field, within and outside of our bodies stores information including our thoughts, past and present. This field surrounds and runs through the body, holding within it information which reflects the current physical mental and emotional condition of the individual. It also contains the original "blueprint" of health. Negative emotions can build up within

the field, and if left uncleared, may lead to physical illness and emotional and mental imbalance.¹⁴

Geopathic stress

The word 'geopathic' is derived from the Greek words, 'Geo', meaning 'the earth,' and 'pathos' meaning 'disease' or 'suffering,' thus literally meaning 'suffering on earth'. Geopathic stress is negative energies, or harmful earth rays, which emanate from the earth and cause discomfort and ill health. The earth's surface is woven with etheric threads, identical in energy and importance as acupuncture meridians are to the human body.¹⁵

Some examples are water veins, earth grids, geological faults and radioactive radiation. Its influence on the body includes insomnia, feeling cold at night, nightmares, night sweats, nervousness, and depression.¹³



Kopp, J. (2012)²⁵

Schoenfeld adds that when a person is exposed to radiation, the body needs to fight against the disturbance, which uses up a lot of tissue salt no. 5 (Kalium Muriatricum), which is responsible for the glands. This results in the inability of the body to detoxify and get rid of the offending radiation, resulting in the person becoming increasingly more toxic. The body will only recover if it is refilling the body with the correct tissue salt.¹³

Amalgam fillings

Amalgam fillings contain mercury which has neurotoxic effects on the nervous system and it is associated with adverse effects in the brain and the kidneys.¹⁶

Mirror radiation

Mirrors and any shiny surfaces can reflect back any existing radiation or negative energy fields in the room, thus multiplying its negative effects. In the bedroom, it can cause insomnia, together with other negative emotional reactions.

Electromagnetic radiation

EMR is produced by electrical appliances, power lines, cellular phones, televisions, computers, and electrical cabling etc. If these are in the bedroom, the electromagnetic strain on the body is amplified, especially if cables, cell phones etc. are positioned at the level of the head of where the person is sleeping. This results in disruptive sleep patterns, nightmares and insomnia, as the body has to fight against this constant strain. All electrical plugs should be removed from their sockets at night.

Consequently, cell membranes harden, keeping nutrients out and waste products in. Waste accumulating inside the cells creates a higher concentration of free radicals, leading to both disruption of DNA repair and cellular dysfunction. Damage occurs to proteins on the cell membrane, resulting in disruption of intercellular communication, causing impaired tissue, organ and organism function.

Cats are known to seek out spots in the house where there is a stronger radiation; while dogs are sensitive to radiation and they will avoid these spots.

In Tibb, Physis has to work even harder to try to restore the imbalances of the tissue salt deficiencies, while trying to regenerate the body in such trying conditions.¹⁷

Microwave ovens

The nutritional molecules are destroyed by the heating process of microwave ovens, which heats the food from the inside. This also distorts the molecular structure of the foods, and over a period of time it can cause problems with the immune system.¹⁸

Craving and refusal of food/other substances

Minerals are depleted when a person craves for, or refuses any substance, because this indicates that there is a deficiency of the particular mineral in the body. The more a person craves for a substance, the bigger the deficiency, for example: The craving of chocolate indicates a deficiency of magnesium on a micro (cellular) level. This puts additional strain on the digestive system to digest and assimilate the chocolate, and hence more magnesium is required to aid in this process. The craving disappears once the magnesium levels are restored with the respective tissue salts, namely: tissue salt no. 6 (Kali phos), which is a craving for milk chocolate; and no. 8 (Mag phos), which is a craving for dark chocolate.¹³

Deficiencies of nutrition and hydration

Soft drinks contain caffeine, which increases stomach acid levels, as well as many chemicals. Drinking sodas especially on an empty stomach alters the acid-alkaline balance, causing inflammation of the lining of the stomach and duodenum, which can lead to the formation of ulcers. The most commonly associated health risks of soft drink consumption are: obesity, diabetes and other blood sugar disorders; tooth decay, osteoporosis and bone fractures; nutritional deficiencies, heart disease, food addictions and eating disorders; neurotransmitter dysfunction from chemical sweeteners, and neurological and adrenal disorders from excessive caffeine.³⁴

Soft drinks and meat contain high amounts of phosphorus and phosphoric acid, which reduce calcium from the bone, affecting bones, teeth and nails. Fizzy drinks are known to cause dehydration and increase acidity in the body. It also contains pure carbon dioxide, which can cause death, if consumed in very high quantities. It takes 32 glasses of high pH alkaline water to neutralise one glass of soda.¹³

Alcohol, black tea and coffee need at least double the quantity of water to enable process of digestion of these substances.¹³ All products which contain sugar will increase the levels of acidity in the body, which are responsible for most rheumatic complaints. Tissue salt no. 9 is responsible for neutralising acid in the body.

Deficiencies at the Macro and Micro levels

Any vitamins or drugs work at the macro level i.e. they work outside of the cells (extracellular); whereas tissue salts work on the micro level i.e. they work inside the cells (intracellular). If there is a deficiency at the macro level, the absorption of tissue salts will be unable to be effective. Deficiencies at the micro level are only able to be detected by analysing the face, together with signs and symptoms of the body, associated with the respective deficiencies.

The deficiencies at the macro level can be restored by supplying the body with small quantities of the tissue salts which are deficient. This will improve the absorption of vitamins and other drugs.

7. Advice and precautions

The active ingredients of tissue salts are absorbed through the laryngeal mucous membranes of the mouth. The greater the deficiency, the quicker the salts dissolve and the sweeter they taste. However, because of the lactose base of the tissue salt tablets, this requires a longer time to be absorbed, therefore taking more than one tablet at a time will reduce the efficacy of the ingredients.

How to take the tablets

Only take one tablet at a time. The individual tablet can be placed under the tongue or within the buccal cavity of the cheeks, allowing it to completely dissolve; it can be crushed and the pulp can be taken; it can be dissolved in a bottle of still water, and sips of water must ideally be kept in the mouth for about 30 seconds before swallowing. This will enable better absorption through the mucous membranes of the mouth.

Tissue salts are also available in powder form through trained consultants. Specific mixtures of tissue salts may be prepared for each person's individual needs and deficiencies. There are special mixtures for numerous conditions, which are also

made up by the stockists. This powder can either be dissolved in a bottle of still water, or a little powder can be put on a teaspoon and placed under the tongue until completely dissolved.

These mixtures can be given to babies in pulp form on a teaspoon, as well as to animals, which will lick off the pulp off from your hand.

The strength of the mixtures of the various salts will depend on the findings of the analysis of the face, together with the signs and symptoms of the body; the combinations may be light, medium, strong or super strong.

Every person reacts differently after taking the salts, which is dependent, not only on the severity of the deficiency, but also on the sensitivity of the person, together with other premorbid medical conditions, and other concomitant medicines and therapies.

Initially only put a knife's tip of powder under the tongue for a day or two, and increase it slowly as desired when it is well tolerated. Some people may experience light headaches or aches and pains. This is the reaction of the body in response to getting rid of toxins.

Drink lots of water! Eat a well-balanced diet, cutting out excess sugar, sweets, refined foods, soda, alcohol and smoking. Get a good night's sleep; get plenty of fresh air; moderate exercise; relaxation and reducing stress levels, and ensuring adequate bowel movements.

Tibb refers to the above as healthy lifestyle choices. Each person has a unique Temperament, which requires an individualised lifestyle program, to ensure optimal health and performance. Contact a Tibb doctor for advice at the Tibb clinics. The website for the Ibn Sina Institute of Tibb is <http://www.tibb.co.za>

Medical advice

NB! Tissue salts are not to replace any medical treatment. Other medication which has been prescribed by a medical practitioner or any other professional person must not be stopped. Please consult your medical specialist if there are any concerns, especially if you are taking blood pressure tablets or if you are on warfarin.

Tissue salts will not conflict with other treatments, but rather it will promote its absorption by enhancing the micronutrients, thereby supporting the macronutrients.

Regular follow up by the practitioner/consultant is advised so that the deficiencies can be analysed and the tissue salts can be titrated to slowly reduce its potency.

Diabetics and lactose-intolerant

Diabetics and lactose-intolerant people must dissolve the salts in a wide container of water, without stirring. (48 tablets are equal to one bread unit). After about a half an

hour, once all the salts have been dissolved, the water must be strained through a filter in order to get rid of the lactose. If the water is not filtered, the contents can be taken in the mouth, and held for 30 seconds, before spitting it out. This will enable the absorption to be effective through the mucous membranes of the mouth.¹³

Blood pressure problems

People who have either high or low blood pressure must be careful with taking tissue salt no 9 (Nat mur). This tissue salt is responsible for controlling excessive moisture or dryness in the body. A deficiency of Nat mur can influence the blood and lymphatic systems, as well as the mucous lining of the digestive tract, liver and the spleen. Any alteration in the balance of hydration, either excessive or deficient, will cause high or low blood pressure.

Warfarin

People who take warfarin should be careful with taking tissue salt no. 5 (Kali mur). This salt is responsible for detoxification of the body, and it operates the glands, and it regulates the blood flow by binding fibrous substances. It has the propensity to be a chemical eliminator, which would reduce the efficacy of warfarin. The above precautions do not mean that these salts have to be avoided altogether; smaller and lighter doses will be well tolerated.

Biochemical remedies are inert in their natural state and for them to work they have to be energised or potentised.

Re-establishing the molecular motion of the cell salts by giving minute quantities of the deficient cell salts improves health. All biochemical salts must be diluted to a level whereby its molecules may penetrate the epithelium of the mouth, oesophagus and reach the blood through the capillary walls.¹⁹

8. Principles of the Twelve Tissue Salts

The relationship between the qualities of tissue salts with those of Tibb is dependent on many factors, including:

- The effect of the qualities of heat, moistness, coldness and dryness in the body is dependent on the dominant qualities which present in each individual, for example:
 - If a person has a dominant quality of coldness and dryness, any excess of these qualities will result in conditions which are associated with these qualities, such as dry, cracked, hard skin, as well as conditions of the spine and bones.
- The opposite effects of the reactions to deficiencies of the tissue salts, for example:

- There may be either a craving for a substance or an element, or an absolute refusal of the same substance or element which is deficient in the body.
- There may be opposing conditions from the same tissue salt deficiency, for example: stiffness, hardening and contractions from an excess of cold and dry qualities; or there may be opposite reactions of flaccidity, softening and dilatations from an excess of moisture and heat.
- There may be other opposing conditions from either an excess of dryness from a loss of moisture, as in excessive thirst, decreased sweating, dehydration, a lack of mucous production, or constipation; or there may be the opposite reaction of an excess of moisture, as in no thirst, increased sweating, oedema, an increase in mucous production, or diarrhoea.

Therefore it would seem likely that presentation of the deficiency of the respective tissue salts is dependent on many factors, including:

- The unique Temperament of the individual;
- The ability of Physis to overcome any excesses or deficiencies of the body;
- The causes of tissue salt deficiencies, such as EMR, amalgam fillings, emotional disturbances etc.
- The individual lifestyle choices which a person makes with respect to environmental air and breathing; food and drink; movement and rest; sleep and wakefulness; emotions, and elimination and retention.
- Co-morbidities of other presenting diseases and conditions of the individual;
- The effect of co-existing medication on the body;
- The signs and symptoms which present on the face and in the body, and
- The effect of the tissue salt on the body;
- The effect of the aggravating and relieving factors that the tissue salts have on the body.

The treatment protocol would therefore need to consider both the active and the passive qualities of each respective tissue salt, to ascertain whether the tissue salt only affects the active or passive quality, or both qualities jointly. It is more than likely that each tissue salt has more than one quality

Active qualities are heat and coldness, and passive qualities are dryness and moistness. The quality of heat will have an opposite effect to that of cold, and likewise with that of dry and moist.

Everything in nature has opposites: Spring and Autumn, winter and summer, youth and middle age, hot and cold, dry and moist etc.

Opposing qualities cannot exist together, as nothing can be positive and negative, hot and cold, moist and dry, etc. at the same time.

All the qualities interact with each other so that one active quality combines with one passive quality to form a compound quality, which is a mixture of qualities, that are not in opposition to one another, for example: hot and moist, cold and moist, cold and dry, and hot and dry.

The difficulties in assigning a particular quality to a disease or condition are establishing its cause, as a condition may be as the result of different causes, for example: vertigo may be caused by anaemia, hypotension, ear problems, head injury etc., each of which have different qualities.

Regardless of whether or not one assigns one or more qualities to a particular tissue salt, it is prudent to consider that opposite qualities will counteract the excess of the qualities of the conditions concerned.

In order to produce a workable document, with no ambiguities, which is easy to comprehend and utilise, it has been decided to allocate the predominant qualities of the respective diseases or conditions as the primary focus, and where applicable, subdominant qualities.

9. The Twelve Tissue Salts

Tissue salt no. 1 – Calcium Fluoratum – a tissue elasticity restorer

Calc fluor is also known as Calcium Fluoride, or Fluoride of Lime. It is responsible for the maintenance and restoration of elasticity in the tissues, toning, flexibility and strengthening, as well as for protection of the exterior of the body. Calcfluor needs no. 10 (Nat phos).

Lime salt unites with albumin to form elastic fibres.²⁰ This is found in tooth enamel and the superficial layers of bone, the elastic fibres in the skin, connective tissue and the walls of the vessels.¹²

Extreme variations in temperature cause the muscles to contract in cold conditions, resulting in stiffness and pain, such as lumbago; as well as dry, hard, skin and brittle nails; and to expand in the warmth, causing the skin to stretch, resulting in stretch marks.¹³ Loss of the ability to unite with organic matter causes a continued dilation or relaxed condition of the fibres, resulting in conditions such as: varicose veins, prolapses and haemorrhoidal tumours and haemorrhages.²⁰

When the elastic fibres relax in the blood vessels the lymphatic system and connective tissue is unable to absorb the discharges. This results in hardened glands, lumpy discharges on bone surfaces and other hard swellings.²¹

The face has a brownish-blackish discolouration around the eyes, with furrows if severe. The more intense the colour, the greater the deficiency. There is increased tension in the body in the effort to overcome feelings of not being good enough and trying to make a good impression. This strain in having to keep up a good appearance causes tiredness; hence the dark rings under the eyes, which greatly depletes Calc flour. There may be bluish lips, because the strength of the muscles and the arteries has been compromised, and the heart is forced to work harder to supply blood; cracked lips, especially in cold weather; criss-cross wrinkles, flabby skin; transparent teeth tips, lack of enamel, and dental caries. There may be a reflective shine on the face from a fine layer of keratin on the skin which reflects light.²¹

This salt is **ideal for conditions** where symptoms are associated with qualities of **cold** either with an excess of **dryness** and to a lesser extent an excess of **moistness**.

Conditions linked to **coldness** with dryness includes: stiffness, dry, flaking, cracked and hard skin, warts, calluses and brittle nails, as well as back pain and disc complaints, hard tendons, hard swellings, and dental caries.

Conditions linked to **coldness** with moistness includes: flaccid joints and muscles, flabby skin, stretch marks, flat or fallen arches, prolapse of organs, swollen legs; as well as dilated blood vessels as in varicose veins and haemorrhoids (which may also bleed), loose teeth and gum recession. There may also be a loss of libido.

The possible underlying **emotions** of **fear** of not being good enough can trigger an increased production of **coldness and moistness**. Fear is linked to the kidneys and bladder and excessive fear will result in diseases to these organs, as well as weakening the adrenal and posterior pituitary glands. Fear causes the blood circulation to suddenly move inwards, causing the skin to become pale and cold, which is also evident in the appearance of a bluish tinge to the lips, with cracks. Long-lasting fear results in **excessive coldness** in the body, and this uses up a lot of Calcium Fluoratum. Fear also causes shallow breathing, and diaphragmatic insufficiency may occur as a result of an excess of coldness and moistness, amongst other conditions.

Signs and symptoms of this deficiency are **aggravated** by qualities of **cold** as in cold weather, and a lack of movement.

Relieving factors are associated with qualities of **heat** as in warm weather and physical exercise.

As this tissue salt targets conditions with **cold** qualities either linked to dryness and to a lesser extent moistness, **the temperament of this Calc fluor is towards heat.**

Tissue salt no. 2 – Calcium Phosphoricum – a cell restorer and cell builder

Calc phos is also known as Phosphate of Lime or Calcium Phosphate. It is responsible for restoring and building cells and it **regulates voluntary muscles.**

It is an important constituent of the skeletal system and bones, the skin and the gall bladder. It is especially beneficial for elderly people as it not only provides calcium, it also improves gastric digestive functioning, which enhances the assimilation of all minerals and vitamins.³⁶

Albumen is the base of all organic matter, but especially with lime salt; it chemically unites with protein, giving it the cement-like consistency to build bone tissue. It is one of the most abundant tissue salts in the body, making up 57% of the bones, the remainder consisting of gelatine, an albuminous, gluey substance, and carbonate of soda, magnesium phosphate and sodium chloride. Without lime phosphate, no bone would be made.¹²

Calc phos is found in gastric juice, and a deficiency will cause indigestion. A proper balance is needed to prevent acid conditions, such as rheumatism. Calc phos is an auxiliary to the therapeutic effects of Mag phos, as it more nearly resembles that salt than any other. When Mag phos does not restore the normal condition, Calc phos can be given.²⁰

Cravings include mustard, bacon, ham, smoked meat, tomato sauce and milk. A **chalky, sandy taste** in the mouth indicates a deficiency of Calc phos.¹³

The Face: There is a creamy-whitish appearance (yogurt look), a waxy-like skin on the on areas with cartilage, such as the nose and ears. The more surface area of waxy-like colour, the greater the deficiency. There is an appearance of a so-called 'hard life' with hard-bitten look and small lips. There may be transparent teeth tips and white spots on the teeth and nails.²¹ The white spots are evident of a protein like substance and may indicate protein allergies. In Tibb, **protein** has an overall quality of **dryness**, with degrees of coldness and heat.

Conditions/symptoms linked to **coldness and dryness** such as muscle tension, cold hands and feet, feeling cold, calf cramps, neck and shoulder tension, sciatica and insomnia, numbness or tingling of the hands and feet, osteoporosis, and tension headaches which are aggravated by **cold weather.**

The underlying **emotions** may be fears of being ignored; causing the person to become frightened, worried, introverted and shy.³⁵ There may be tension and pain, perpetual muscle strain and overtaxing of the spinal column in the body, which is linked with the qualities of **coldness and dryness**. This results in the inhibition of bone growth and albumin development, causing osteoporosis.

These signs and symptoms are **relieved** with relaxation and warmth which increases moistness and heat in the body, such as massages or a steam bath.

As this tissue salt targets conditions associated with **coldness and dryness**, the **temperament of the Calc phos is towards heat and moisture**.

Tissue salt no. 3 – Calcium Sulphuricum – a purulent and blood purifying agent

Calc sulph is also known as Sulphate of Lime or Calcium Sulphate. It is responsible for clearing pus, purifying blood and breaking down protein. It is needed for conditions which include mucous congestion, such as bronchitis and other lung conditions.

It is an important constituent of connective tissue, being the main builder of epithelial tissue. It is responsible for the formation of a protective coating of the colon, large intestine, sex organs and the prostate gland. If the protective coating of the sex organs is lost, the eggs and the sperm will be unable to fulfil their functions, resulting in impotence. It also provides a protective coating to all the eliminative channels and outlets.³⁶

Calc sulph sustains no. 5 (Kali mur) due to the building of fibrin. Lime sulphate, together with albuminoids, assists Kalium Muriaticum to form epithelial cells, which holds it intact by its cohesive quality.¹ Calc sulph needs no's 7 (Kali sulph) and 11 (Nat sulph) to achieve efficient elimination. Calcium Sulphuricum corresponds to silica, tissue salt no. 12: silica ripens abscesses, while Calcium sulfuricum heals the suppurative wounds.¹² A deficiency of this salt causes the epithelial tissue to break down and disintegrate; the fluids from the blood (serum) take up the waste and discharge it out of the body.²⁰

It is the main builder of epithelial tissue as well as clearing out any foreign tissue as a result of suppurative exudations, by facilitating the discharge of pus from the body. It helps the liver to remove waste products from the blood stream.

A deficiency is as a result of excessive **dryness** in the body, which causes the disintegration and fermentation of the epithelial cells, causing suppuration in any part of the body, such as: purulent conditions, as in acne, boils, ulcers and abscesses.

Cravings include fruit, tea and Bordeaux wine.³⁵

The Face: There is a white appearance, with possible pimples, boils or abscesses; age spots, large pores, and a dirty appearance, due to a yellow discharge, as in acne.²¹ An alabaster, marble-white discoloration appears on the face.¹³

This salt is **ideal for conditions** where symptoms are associated with qualities of **dryness** either with an excess of **heat** and to a lesser extent an excess of **coldness**.

Conditions linked to qualities of **dryness with heat** such as hyperacidity, causing gastric discomfort, rashes, boils, abscesses, acne, carbuncles with pus, and bronchitis.

The underlying **emotions** may be shock, such as a break-up in a relationship, or a fear of not being seen. During a shock reaction Physis diverts the blood circulation inwards, in an effort to enhance the blood supply to the important organs of the heart, the brain and the liver. As a result, the extremities of the skin have less blood, causing **coldness** in the extremities. Over time, the internalisation of many incidences of shocks, break-ups, etc., causes the person to withdraw from society, and becoming lonely and dependent on others for acceptance. Social isolation and loneliness are common features of the melancholic temperament with qualities associated with **coldness and dryness**.

Aggravating factors contributing towards the deficiency of this tissue salt include shock, which increases coldness & dryness, and may worsen symptoms due to an increase in the gastric acid from an excess of **dryness** in the body. This is relieved by alkaline nutrition which has a **moistening** effect, thereby counteracting the dryness.

As this tissue salt targets conditions associated with **dryness**, either linked to an excess of heat or to a lesser extent an excess of coldness **the temperament of the Calc sulph is towards moistness**.

Tissue salt no. 4 – Ferrum Phosphoricum – an anti-inflammatory agent

Ferrum phos is also known as phosphate of iron, which is an essential constituent of haemoglobin; its main function being the transportation of oxygen to the tissues and cellular oxidation.²² It is the only metal common to all 12 salts, and as such, it is essential for the effective functioning of all the other tissue salts.³⁶

It is responsible for reducing inflammation and for improving the immune system. When oxygen is deficient, the circulation is increased in an effort to increase the blood and oxygen supply to the extremities, with low iron content;¹ while blood is also drawn inward from the surface of the body, in order to preserve the vital organs

of the body, namely the heart, liver, brain and lungs. However, a lack of blood in the minute blood vessels of the skin causes the pores of the skin to close, which results in the discharge of waste matter to the inner organs, causing exudations, mucous congestion and inflammation of the lungs.²¹

The increase in the rate of motion of the blood is changed to **heat**, caused by friction – also known as the ‘conservation of energy.’ This heat, or increase in temperature of the blood, resulting in fever – a Latin word, meaning, ‘to boil out’¹

It is the principal biochemical first aid remedy. It should be used at the onset (first stage) of inflammatory conditions.¹²

When the molecules of iron are disturbed, the fibres relax, causing dilatation of the blood vessels, with an accumulation of blood in the veins, with high blood pressure, and a possibility of rupture of the blood vessel. This disturbance can also cause irritability of the muscular fibres in the intestinal villi, resulting in either diarrhoea, or weakness of the villi, causing constipation.¹² The **discharge** may be visible as haemorrhages of blood from inflammatory conditions anywhere in the body.²¹ Any discharge of blood should be considered a serious condition, which must get attention from a doctor.

Cravings include liver and liver spread.³⁵

The Face: Redness in general is a sign of Ferrum phos deficiency. - red ears and a warm, reddish flushed face, with a fever, as well as inflamed skin spots, and inflamed eyes, which may be red and burning. This is the result of an excess of **heat and dryness** in the body. If the back of the hand is hot, it is a sign of Ferrum phos deficiency. There may be a bluish-blackish shadow, or a colourless furrow at the bridge of the nose, and dark (bluish-blackish for No4 deficiency; brownish-blackish for No1 deficiency) circles under the eyes; a ‘hung-over’ appearance. A red, hot face after the consumption of alcohol may be a sign of this deficiency.¹³

Conditions/symptoms linked to **heat and dryness** such as sun intolerance, headache behind the eyes, bleeding haemorrhoids, conjunctivitis, menorrhagia, and bronchitis which exacerbate in warm nights and movement which increases heat. The aggravating factors which worsen this deficiency include coffee, black tea and cocoa.

These signs and symptoms are **relieved** by keeping cool and resting.

The associated **emotions** are: friction, conflict and temper. These are features of the Bilious temperament with associated qualities of **heat and dryness**. The result of these emotions is exhaustion and a lack of vitality, weak concentration, shortness of

breath and a low resistance to colds and flu, because of a lack of oxygen in the blood.

As this tissue salt targets conditions associated with **heat and dryness, the temperament of Ferrum phos is towards coldness and moistness.**

Tissue salt no. 5 – Kalium Muriaticum – a detoxification agent.

Kali mur is also known as Potassium chloride, or Chloride of potash. It is responsible for detoxification and functioning of the glands. It is important for the formation of most cells of the body, except bone cells, and it helps cells retain their shape.³⁶

Caution must be taken with a person who is on **warfarin**, due to thinning of the blood, as Kali mur is responsible for making fibrin in the body, and fibrin cannot be held in proper solution in the blood without the proper balance of Kali mur. Thinning of the blood from warfarin will affect the consistency of fibrinogen.

Fibrin is produced by the action of Kali mur and oxygen on certain albuminoids. This is very effective for burns as fibrin in the tissue first succumbs to the effects of heat of the burn, and the chloride of potash, by its union with albuminous substances, produces new fibrin and supplies the deficiency. A deficiency of this salt nearly always is as a result of an iron deficiency.²⁰

A disturbance in the molecular motion of this salt can cause a fibrinous exudation – any cutaneous eruptions, such as inflammations of the skin. A fibrinous exudation in the interstitial connective tissue will result in mastitis, for example.¹² In any inflammatory exudations there is fibrin in the serous cavities, which thickens, such as the pleura, causing pleurisy or pneumonia, and on the mucous membrane, as in croup, catarrh etc. In all inflammatory conditions, Ferrumphos should be given in alteration with Kalimur, as iron molecules carry oxygen, which becomes deficient due to the fibrinous exudations.²⁰

When the lumps of fibrin blocks up the auricles and ventricles of the heart, as in an embolus, there is heart failure. However, the cause of an embolus and fibrinous exudations are not the result of an excess of fibrin, but rather from a deficiency in the potash molecules that work with fibrin, diffuse it throughout the body and build it into the tissue.¹

Kalimur is the **remedy of the glands**, and an essential building block of the mucous membranes, situated in the sense organs. It is the biochemical remedy for **catarrhal conditions** accompanied by discharge of thick, white mucous or phlegm from the skin or mucous membranes. This deficiency may present as allergies, hay fever, sinusitis, snoring or nausea.

Cravings include marzipan. A **perfumed taste** in the mouth indicates a deficiency of Kali mur.³⁵

The Face: There may be spider veins or red blood vessels on the eyes; bluish eyeballs, and a milky-bluish-pinkish-purple discoloration around the eyes, mouth or entire face. Grutum (miliium), or hard white spots, may also appear on the face. There may be a white or grey coating on the tongue, mucous lining or the tonsils, because the fibrin has become non-functional because of the deficiency in Kali mur and oxygen. This is also evident as a thick white slime, or phlegm from the mucous membranes.²¹ In Tibb this is the result of an excess of the Phlegmatic Humour.

Conditions/symptoms linked to **coldness** such as mucous congestion are aggravated by dairy products like milk. Symptoms are relieved by increasing **heat** which will dry up the mucous.

The associated **emotions** are: overemotional responses which are linked to the qualities of **coldness**. This salt is linked to feelings and quality of engagement. Repressed feelings can lead to heart attacks or strokes (more in men). Suppressed feelings in women lead to coldness, frigidity and osteoporosis. The spine (backbone) is the 'mirror' of the personality, where courage for emotional involvement is lacking. Therefore the body 'supports the weak spine' with chronically tensed muscles and stressed vertebral discs, causing sciatica, amongst other chronic conditions.³⁷

As this tissue salt targets conditions with **coldness** either linked to an excess of moistness or linked to an excess of dryness, **the temperament of Kali mur is towards heat.**

Tissue salt no. 6 – Kalium Phosphoricum – a nerve and brain cell agent.

Kali phos is also known as Potassium Phosphate, or Phosphate of potash. It is responsible for the treatment of all nerve and brain disorders.

Kali phos unites with albumin, and by the addition of oxygen, creates nerve fluid, and the grey matter of the brain.²⁰ This is a constituent of the brain, nerves, muscles and blood-corpuscles. This salt is the restorative remedy after acute conditions.¹²

Cravings include nuts and milk chocolate. A **musty or mouldy taste** indicates a deficiency of Kali phos.³⁵

The Face: There may be an ash grey appearance, often seen on the chin, or temples, lower eyelids and outer corner of the eyes. The temples may be sunken; there may be loss of lustre in the eyes, and bad breath.²¹

This salt is **ideal for conditions** where symptoms are associated with qualities of **dryness** either with an excess of **heat** and to a lesser extent an excess of **coldness**.

Conditions/symptoms linked to **dryness with heat** include anxiety, irritability, gastritis, enteritis and stomach ulcers

These signs and symptoms are **relieved** with gentle motion, and eating.

The associated **emotions** are excessive demands, by expecting too much of oneself and other people. These features are typically associated with Melancholic or Bilious temperaments which both have qualities of dryness associated with them. The intensity of inner conflict and perfectionism depletes energy resources, resulting in depression, self-doubt, despondency and demotivation. There may be grinding of the teeth in an effort to control expectations.³⁷

As this tissue salt targets conditions with **dryness**, either linked to heat or to a lesser extent coldness, **the temperament of Kali phos is towards moistness** which is necessary to restore nerves and brain cells.

Tissue salt no. 7 – Kalium Sulphuricum – a metabolic and pancreas conditioner

Kali sulph is also known as Potassium sulphate. It is responsible for metabolism and it is a conditioner of the pancreas. It is the remedy of the epidermis and of the epithelium.¹² It maintains healthy **skin, hair and mucous membranes**, and is an **oxygen carrier**. Kali sulph is given for chronic diseases, such as psoriasis and chronic asthma. It is also suitable for conditions which require the purification of the blood, such as conjunctivitis and exudative tonsillitis. This is due to its oxygen carrying capacity which assists in the elimination of wastes and toxins, as well as its support for cell renewal.

It improves the ability of the body to take up nutrition effectively, especially to make and distribute oils. Ageing causes the natural lubrication to dry up, resulting in dry skin and hair, eczema, dandruff, psoriasis, and any diseases arising from rashes or scaling of the skin.³⁶

Kali sulph needs no's 3 (Calc sulph) and 11 (Nat sulph); the latter must be given in higher quantities than Kali sulph.

The oxygen in the lungs is taken up by the iron in the blood and carried to the cells by the reciprocal action of Kali sulph and Ferrumphos.²¹

When there is a deficiency of Kali sulph there is a 'suffocating feeling' and a 'desire for cool air,' most notably in the afternoon, when there is a rise in temperature, which only subsides around midnight. This is because there is an increase in the supply of oxygen during sleep, but a deficiency in this salt causes a reduced oxygen supply, causing exhaustion; the person falls asleep around midnight, breaths deeply and

restores oxygen to the blood and tissues, and opens up the pores; the circulation is immediately diminished allowing the heat to escape from the body, reducing the temperature. It takes some time again after the person awakes to resume poor breathing from the deficiency, increasing the circulation again, which produces heat, and the same scenario occurs.²⁰

Kali sulph is the maker and distributor of oil, which is formed by the union of Kali sulph with albuminoids. A deficiency causes the oil to become non-functional, which becomes too thick and blocks up the pores. This results in a discharge of a yellowish, thin, oily, slimy matter falling off the hair. This yellow exudation can arise from any orifice of the body, such as in glandular swellings, abscesses and cancers.¹ The lack of oxygen in the skin and epithelial cells causes symptoms of chilliness, heaviness, weariness, and palpitations of the heart, anxiety, sadness, headaches and limb pains.²¹

The **discharge** is a yellow-green colour with a slimy consistency. A yellow or green discharge indicates signs of infection.²¹

Cravings/refusals include fresh air, oxygen, and bitter foods and drinks. A bitter taste in the mouth indicates a deficiency of Nat sulph.

The Face: There may be a brownish-yellow discoloration, pigmentation, freckles and ageing spots.

This salt is **ideal for conditions** where symptoms are associated with qualities of **heat** either with an excess of **dryness** and to a lesser extent an excess of **moistness**.

Conditions/symptoms linked to **heat with dryness** such as gonorrhoea, bronchitis and conjunctivitis, palpitations, anxiety, headaches and limb pains.²¹ which are aggravated in a warm room and in the late afternoon.

The associated **emotions** are self-denial and fulfilling the expectations of other people, thereby creating a protective wall to block out the loneliness. This inner contradiction creates stress on the pancreas, resulting in diabetes. Breathing may be inhibited, resulting in gasping for breath, and the need for fresh air.³⁷ Diabetes is associated with the qualities of **heat and moistness**.

These signs and symptoms are **relieved** with cool, fresh air, which is aimed at reducing the heat.

As this tissue salt targets conditions with **heat**, either linked to dryness and to a lesser extent moistness, **the temperament of Kali sulph is towards coldness**.

Tissue salt no. 8 – Magnesium Phosphoricum - a pain and cramp killer

Mag Phos is also known as Magnesium phosphate. It is responsible for regulating the autonomic nervous system, by **regulating involuntary muscles**. It is a pain and cramp killer. If it is unable to resolve the condition, no. 2 (Calc phos), can be given. Severe pain is often associated with a disturbance of the nerves, thus no. 6 (Kali phos) may be a good accompaniment.

Mag phos unites with albumin, together with oxygen. It is found in the white fibres of the nerves and muscles. Calc phos is an auxiliary to the therapeutic effects of Mag phos, as it more nearly resembles this salt than any other. When Mag phos does not restore the normal condition, Calc phos can be given.²⁰

A deficiency causes these fibres to contract, resulting in pain, spasms and cramps; and depending on where the fibres contract, produce pain in the respective areas of the body. For example, when the deficiency occurs in the muscular tissue of the walls of the stomach, the white fibres draw up, contract and reduce the cavity of the stomach. The body compensates by producing gas, in an effort to expand the stomach cavity, producing a counter-force, thereby preventing a collapse.²⁰ Tibb refers to this innate ability to restore health as Physis.

Mag phos is a **muscle and nervous system** relaxant.

Iron and magnesium are antagonistic with respect to their actions: iron disturbance causes relaxation of muscles; while magnesium disturbance causes muscle contraction.¹² Cravings/refusals include dark chocolate.³⁵

The **discharge** is a white and thin mucous of the nose, and dark and stringy discharge of the vagina.²¹

The Face: There may be pinkish to crimson spots beside the nasal wings, neck, cheeks or upper chest in times of stress. The face may appear flushed and hot, especially after a meal which can signify colon weakness.²¹

This salt is ideal for conditions where symptoms are associated with qualities of **dryness** either with an excess of **cold** and to a lesser extent an excess of heat.

Conditions/symptoms linked to **cold and dry** qualities such as flatulence, nervous tension, hunger pains and muscle cramps, spasmodic pains, hiccups, spasmodic palpitations, cramping menstrual pain and headaches, especially if accompanied by shooting or stabbing pains, sciatica, tensed muscles, neck pain, and constipation. Stress may further aggravate a deficiency of Magphos.

The associated **emotions** are high tension, which is associated with qualities of **heat and dryness**, due to fear of disgrace or inferiority, from trying to cope with expectations and demands from others and the world in general. This person is

intense, and hides deficiencies due to a fear that someone would discover the shortcomings. There is a fear of failure, and, in an attempt to hide embarrassment/inferiority, the person blushes, with hot flushes.³⁷

Signs and symptoms are **relieved** by warmth and relaxation as well as the anti-spasmodic action of Magphos which reduces pain.

As this tissue salt targets conditions with **dryness**, either linked to coldness and to a lesser extent heat, **the temperament of Mag phos is towards moistness.**

Tissue salt no. 9 – Natrium Muriaticum - water balancing

Nat mur is also known as common salt, or sodium chloride, and it is the constituent of all fluids and solids of the body. It is responsible for balancing the water content in the body. No's 10 (Nat phos) and 11 (Nat sulph) can be given together with this salt. Caution must be taken for people who have either high or low blood pressure.

Nat Mur and Calc phos are the two most abundant tissue salts in the body; Calcphos makes up 57 % of bone, and as water makes up 70 % in the body, Nat mur has a major role in regulating the balance of water in the body. It is one of the most important salts as it controls the moisture in tissues; it regulates body temperature by the action of sweat, and it aids in the process of detoxification.

A disturbance in the molecules of this salt results in the change in the degree of aqueousness of the fluid or solid part of the body.¹² There may be either an excess in moisture or an excess in dryness. An excess in moisture causes puffiness, swelling of any area of the body and oedema. An excess of dryness results in a decrease of secretions of the mucous membrane, causing dehydration.

In sun stroke, a deficiency of Nat mur results in moisture to be drawn from other parts of the body, especially the nape of the neck. This causes pressure against the base of the brain (cerebellum), preventing the magnetic vibrations from the upper brain (cerebrum) from passing to the central/abdominal brain (solar plexus). In delirium tremens (alcohol withdrawal), there is a deficiency of Nat mur molecules, resulting in a disturbance of the water content in the body, which gives rise to its signs and symptoms.²⁰

Cravings/refusals include salt and spicy food.³⁵ A **metallic or salty taste in the mouth** indicates a deficiency of Nat mur, as well as tissue salts no's 20 (Kalium Aluminium sulphuricum) and 21 (Zincum muriaticum).

The Face: There may be a gelatine shine on the upper and lower eye lids (like a snail track), with a possible inflamed eyelid border; the eyes are dull; the pores are large and the skin has a spongy appearance or bloated appearance. The pores try to hold the moisture in the skin, resulting in swelling of the face.

The **discharge** is a clear, thin and watery mucous.²¹ which is indicative of an excess of coldness and moisture. The **body** may show also dandruff, dry skin and cold hands and feet, from an excess of coldness and dryness, as well as symptoms of allergic rhinitis, sinusitis, and mucous membrane complaints. There may be a burning pharynx, excessive or no thirst, and a craving for salty food. The blood pressure may be high or low.¹³

This salt is **ideal for conditions** where symptoms are associated with qualities of Cold either with an excess of **dryness** or an excess of **moistness**.

Conditions/symptoms linked to qualities of **dryness** with coldness includes: constipation, dehydration, decreased sweating, excessive thirst or no thirst, dry, cracked skin, dandruff, cold hands, feet and back, disc and joint problems, cracking joints, as well as allergic rhinitis.

The associated **emotions** are inflexibility, rigidity and stubbornness. Everything is the fault of others. If a child is constantly rebuked, he adapts to please others, forgetting his own needs. He tries to please others and distances himself.³⁷ This results in physical inflexibility, which translates into conditions such as cracking joints, immobility, in rheumatism and gout and arthritis, which is associated with the qualities of **coldness and dryness**.

Conditions/symptoms linked to qualities of **moistness** with coldness includes: watery colds (watery eyes or nose), sneezing, oedema (any swellings), shingles and anaemia with exhaustion, as well as mucous congestion, increase in sweating, and sinusitis.

The **aggravating factors** contributing towards the deficiency of this tissue salt include high consumption of salt, drinking too much water and fluids that have a dehydrating effect on the body such as coffee, soft drinks, beer and wine.

As this tissue salt targets conditions associated with qualities of **dryness** with coldness and **moistness** with coldness, **the temperament of Nat mur is towards Heat**.

Tissue salt no. 10- Natrium Phosphoricum - an acid neutralising agent

Nat phos is also known as Sodium phosphate, or Phosphate of soda. It is responsible for neutralising the acidity of the body, as well as lipid metabolism. No. 1 (Calcfluor) needs this salt, and Nat phos can be given with tissue salts no's 9 (Nat mur), and 10 (Nat phos).

As Nat phos regulates the acid content in the body, it must be balanced with alkaline so that Nat phos can work with albumin to distribute it and incorporate it into bone and tissues.

Organic matter has no creative power, and because acid is organic, like albumin (protein), there are always sufficient amounts of it in the body, provided that nutrition is properly balanced. Inorganic mineral salts have the power to create, when furnished with the proper material. An 'excess of acid is really a deficiency in Nat phos.'

A deficiency causes a fermentation of the gastric juice, retarding digestion, and altering the pH balance of the lining of the stomach. If acid causes pain, the pain is a 'cry for help' from the body in an effort to call for sufficient amounts of alkaline salts to counteract the acidity (Carey, 2012).

This salt enables lactic acid to be decomposed into carbonic acid and water. The use of this salt is the remedy for any disorders which have an excess of lactic acid such as heartburn and acid indigestion, gout, cholesterol problems, smelly feet, or body odour, constipation and any yellow coloured body discharge.¹²

Life is considered to be serious, not playful. When a child is not allowed to argue or defend himself, or to behave in an adult way, he feels threatened. These compulsions and constraints cause frustration pressure and tension, all of which increase acidity. The body is unable to manage fat metabolism, therefore fat is stored, resulting in obesity, which is a 'protective armour'

Cravings/refusals include sugar, sweets, cakes, white bread and pasta.³⁵

The Face: There is a yellowish discoloration, with a sunken and swollen face. Yellow points in the corners of the eyes signify high cholesterol, and an inability to metabolise fat; yellow points in the corners of the mouth signify liver involvement. There may be blackheads and pimples, greasy skin and weak hair, as well as acid wrinkles and acid spots. The chin may be reddish and a double chin may be present. There may be a red nose, with red spots, and a red face after eating, because of poor digestion.²¹ An **acid, fishy or oily taste** in the mouth indicates a deficiency of Nat phos.

The **discharge** is a sour, creamy or honey-coloured, thin consistency (Card, 2004), which is **purulent** and **acidic**, with excess qualities of dryness and heat. The **body** may show heartburn, swollen lymph's, craving for sweets, and tiredness.¹³

Conditions/symptoms linked to **dryness and heat** includes hyperacidity, gastritis, indigestion, and heartburn.

The associated **emotions** are anxiety and tension, which is associated with qualities of **dryness and heat**. This person is known as ‘the acid one’, with an acerbic character. The acid tries to escape via the skin, which results in pimples, blackheads and acne.³⁷

The **aggravating factors** contributing towards the deficiency of this tissue salt include inadequate nutrition like sugary foods, cakes and soft drinks

These signs and symptoms are **relieved** with alkaline nutrition, which has a cooling and moistening effect.

As this tissue salt targets conditions associated with **dryness and heat, the temperament of Nat phos is towards moistness and cooling.**

Tissue salt no. 11 – Natrium Sulphuricum - Liver cleanser and detoxification agent

Nat sulph is also known as Sodium sulphate or sulphate of soda. It is responsible for cleansing the liver, detoxification, building bile, and it is an antioxidant. No. 7 (Kali sulph) needs Nat sulph. It can be given with no’s 9 (Nat mur) and 10 (Nat phos). Nat sulph must be given in higher quantities than no. 7 (Kali sulph).

It is found in the intercellular fluids and it transforms waste products into excretory products. It is responsible for the elimination of toxins from the intercellular fluids and is needed for the healthy functioning of the liver, kidneys and pancreas. It is indicated for all illness conditions affecting the liver.³⁵ When chills and fever, or cholera and malaria occur, there is an excess of toxins in the blood and intercellular fluids. There is an inability of the process of digestion and assimilation to supply the body with sufficient amounts of Nat sulph to excrete this excess of waste matter, which is breathed in by the lungs via the blood. The body reacts by causing a spasm of the vascular, nervous and muscular systems, in an effort to get rid of the excess toxins. The Physis response results in profuse perspiration. However if the body is not replenished with Nat sulph, the chill will recur within forty eight hours, as it will take this length of time to again overcharge the blood with water.²⁰

Cravings include bitter foods and drinks.³⁵ A **bitter taste** in the mouth indicates a deficiency of Nat sulph.

The Face: This may show an **olive-green** discoloration, with greenish eyeballs, reddish-purple nose (from alcohol) and swollen lachrymal sacs, with puffy eyes.²¹

The **discharge** is a watery, yellow-green mucous, which is indicative of an infection.²¹ and which is associated with dryness and heat. The **body** may show swollen hands and feet, because of water retention, itchy skin, warts, herpes, solar eczema, as well as liver problems and smelly gas.¹³

Conditions/symptoms linked to **heat and dryness** such as biliousness, diarrhoea, itching, foul smelling flatulence, red burning tongue with blisters on the tip, inflammation of the eyes, liver and gallbladder complaints, and profuse menstruation.¹³

A deficiency may result in feelings of irritability, disgruntlement and discontentment which are features of the Bilious temperament according to the Tibb philosophy. The associated **emotions** are anger and rage, which are controlled by the liver and gall bladder. These emotions are associated with qualities of heat and dryness as heat is directed outwardly to the skin in order to protect the vital organs. If the liver is overloaded with waste and unable to break it down, the body will retain the waste in a watery solution. The body becomes bloated, with swollen hands and feet. The person feels as if life is being dictated by others, and he refuses to take responsibility for his own life. He feels like the victim, and **suppresses emotions**. This inner anger and tension causes blockages, with difficulty in breathing and muscle tension.³⁷ Liver disease may manifest as a result of unlive hate.

The **aggravating factors** contributing towards the deficiency of this tissue salt include abuse of alcohol, nicotine and coffee.

As this tissue salt targets conditions with **heat and dryness**, the temperament of the medication is towards coldness and moistness.

Tissue salt no. 12 – Silicea or Silica - a connective tissue cleanser and conditioner

Silica is a constituent of the connective tissue, skin, hair, nails, and the periosteum. It is responsible for cleansing, conditioning and strengthening the connective tissue. Silicea is considered the biochemical beauty remedy as it has nourishing, organizing, protecting and healing properties for all cells, especially the skin, eyes, hair, teeth and nails (Schoenfeld, 2013).

Silica corresponds to the suppurative process like Calcium Sulfuricum (no 3), the differences being that silica ripens abscesses, while Calcium sulfuricum heals the suppurative wounds, as it restrains the process of the formation of pus.¹² It does this by removing degenerative matter from the body, expelling abscesses, sties, boils and pimples.

Microscopically the particles of silica have sharp corners, like quartz, which is nature's way (Physis) of assisting the body to expel any suppurative discharges.¹

Cravings include movement, millet and sweets.³⁵

The Face: This may show laughter lines and compacted wrinkles, due to a loss of connective tissue; a shiny gloss on the tip of the nose (like a mirror), and with no visible pores. When this deficiency is extreme, the eyes appear deeply sunken into the sockets.

The **discharge** is thick and yellow and offensive smelling, from boils and infections and sweating. This is indicative of an infection.²¹ It has a **purulent secretion**, which is associated with the qualities of dryness and heat, as well as smelly and sweaty hand and feet. The **body** shows vertical lines on the nails, bruises easily, sweaty hands and feet, sciatic pain, which have qualities of coldness and dryness. The person is hypersensitive to noise and light.¹³

This tissue salt is ideal for conditions where symptoms are associated with qualities of **dryness** either with heat or to a lesser extent with coldness.

Conditions/symptoms linked to **dryness with heat** includes: hyperacidity and stress boils, carbuncles, abscesses, migraine, heat rashes, profuse menstruation, itching which is worse in the daytime, inflammation of the eyes, ears, throat, photophobia and profuse sweating.

Conditions linked to **dryness with coldness** includes: gout, weak joints, shoulder pain, and scoliosis.

The associated **emotions** are oversensitivity and a poor self-worth. This person is friendly with everyone, and lives for others, making other people happy, at the expense of his own happiness. There are feelings of guilt and a sense of having to be responsible for everything, and oversensitivity. As a child, the parents displayed high expectations upon him, with punishment, should he not fulfil these expectations. As a coping mechanism, the child tries to satisfy everyone, and avoiding conflict, resulting in self-doubt and poor self-worth.³⁷

This is **relieved** with alkaline nutrition (**C&M**), and sunglasses will help for the sensitivity to light.

As this tissue salt targets conditions associated with **dryness**, either linked with an excess of heat, and to a lesser extent an excess of cold, **the temperament of silicea is towards moistness**, due to the process which is necessary for the expulsion of potentially harmful and toxic substances in the body.

10. Conclusion

The biochemistry of tissue salts plays a fundamental role in the physiological and psychological framework of the human being; without which would result in changes to the ideal humoral composition of the ideal Temperament of a particular individual.

These changes would result in an alteration to the quality and quantity of heat, moisture, coldness and dryness in the body, which will consequently cause deficiencies in the essential tissue salts in the respective parts of the body.

A disturbance in the molecular structure and motion of the tissue salts causes changes in the mineral composition, resulting in disease. This can be rectified by re-establishing the correct balance of tissue salts in the body. This can be achieved by administering the same mineral salt that is deficient in the body in small quantities.

Health is dependent on the correct balance of tissue salts, together with healthy lifestyle choices; these include: environmental air and breathing; food and drink; movement and rest; sleep and wakefulness; emotions, and elimination and retention.

There is a symbiosis between the relationship of the biochemistry of tissue salts and the law of supplying deficiencies, with that of Tibb. Tibb recognises that each tissue salt has an affinity to heat, moisture, coldness and dryness, as do tissue salts; and deficiencies are corrected by supplying the tissue salt to the body which reflects its humoral composition.

Both philosophies search for the underlying causes for any humoral changes and imbalances, and restore this by correcting the quality and quantity of **heat, moisture, coldness** and **dryness** in the body, associated with the respective tissue salts.

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