Salt (NaCl) for Humans Version 2.9 08 May 2016

Salt is important, but seldom understood. There are good and bad salts.

Good fine salt with its 80 minerals is beneficial for healthy life and helps prevent bodies from bad bacteria and from some parasites, which are reasons why salt is such a good preservative, and is good because it doesn't affect the healthy items. Some salt comes from the sea, but today's sea is more polluted than the 250 million years old pink salt in the Himalayan mines now being sold in some human food shops. Most people don't know about the enormous differences which have a major effect on our health, good and bad. Google for 'Himalayan salt mineral analyses'.

In New Zealand some veterinarians in their ignorance and jealousy, accused Solminix with its 80% salt of being 'expensive salt' and convinced companies like DeLaval to remove the salt from soluble mineral mixes which makes them highly toxic poisonous products, needing protective instructions and ridiculous precautions. Most vets know that salt is the most important mineral for animal health which almost eliminates vet visits, so don't add it to the minerals they sell, some of which contain oxides and other toxins that increases vet visits. Owning two farms from 1955 to 1987 we didn't require a vet visit while some farmers had them weekly (See Testimonials), but did work with them to measure selenium levels that I was the first to discover were low in NZ in 1958. Read Selenium.

If you have a sore throat and gargle with warm salt water, bacteria in your throat are killed.

Sodium is the main element in saliva, which is the first digestive juice, so is essential for good digestion as well as optimum health.

Salt and magnesium help bodies control their temperature. Solmin has stopped calves in the high altitude areas of NZ from shivering dreadfully in winter, and improved animal health so much that many vets from all round New Zealand phoned me and asked what was in it, to achieve this. My answer was, salt and deficient minerals.

Our bodies contain up to 450 grams of salt and need to consume it regularly to be healthy.

In ancient times the value of salt was seen in the way Roman soldiers were paid in salt, leading to the phrase "worth his salt" and our word "salary".

An excess can raise blood pressure and is associated with increased risk of heart disease, but drink too much water and you'll drown!

About two and a half percent by weight of seawater is salt. The early European settlers in New Zealand tried to extract salt from the sea as early as the 1880's, but the first effective salt works were not opened until 1949 at Lake Grassmere, Marlborough. Their average annual output has risen from the 51 tonnes produced in 1949 to 116,500 tonnes in 1973, but New Zealand needs about 140,000 tonnes so imports salt. There are two refining plants, one at Grassmere and one at Mt. Maunganui, which processes imported crude salt. The Mt. Maunganui site was chosen because it has a good port and rail facilities, and is close to paper mills and other major users.

For years, some NZ medical people told us that salt is bad for our health, especially if we have heart problems. They didn't tell us, but they were talking about NZ table salt made from sea water from today's polluted sea, and that it had some minerals removed and sold.

In 2011, Belgian researchers found that low salt diets increased the risk of death from heart attacks and strokes and that reducing salt intake did NOT prevent high blood pressure. They found that the less salt people ate, the more likely they were to die from heart disease.

Low sodium (Na) levels can be fatal. Elephants known for intelligence walk up to 100 km to eat salt from a cave, and birds undertake similar efforts to get salt. Ancient tribal Zulus in South Africa, when feeling unwell, would walk to the coast and drink seawater. Even now, some tribes from inland areas will give bottles to people going to the beach to bring some sea water for them, because in their remote areas, many km from a town or store, they have no other source of salt.

People with low Na levels will often feel restless and irritable and may experience appetite loss, headaches, high blood pressure, confusion and memory loss. It is important to monitor and correct these problems because they can lead to more significant complications. Deficiencies in some elements can accentuate the negative effects of low Na. Always aim to get all your mineral levels correct.

Short term sodium deficiency can cause fainting and biliousness which salt can cure in minutes, as

it did for a daughter during an overseas holiday in tropical temperatures.

The fact that salt has many positive effects has been almost totally ignored by the medical and veterinary professions. Some vets sell mineral mixes containing no salt! Many genuine and considerate consultants are finding that today's strong greed and unscrupulousness cause companies & their sales people to do things to feather their own nests, with little consideration for the end users.

If, as a farmer, I was allowed to feed only one mineral to animals (instead of the ten that I recommend), then it would be salt, because it is the mineral least taken up by plants and is the first and most essential for digestion, not that all elements are not necessary.

A lot of people make the mistake of taking many minerals, but don't have enough salt in their diet.

There are people against the consumption of any salt, but they base this on the bad table salts which have had minerals removed and sold. Some table salts made from the North Seas which is polluted with mercury and oils and leaked toxins from the many oil wells.

The heart muscle has to work harder when on a low salt or mineral deficient salt. A salt free vegetarian diet can cause kidney, respiratory and blood sugar problems. The excessive intake of greens (high in potassium) and no salt can cause an imbalance of low sodium and high potassium, which in animals causes ill health. Add Himalayan salt to your greenies.

A problem that New Zealand has is that the bulk of information received about salt comes from USA, which possibly does more research and promotes it more than all the other countries combined. This is fine, but USA has areas with excess salt, magnesium and selenium and their vegetables and meat come from farms over vast areas. Whereas in the Waikato, New Zealand, most foods come from within 80 km, most of which is low in essential elements and very high in manganese (Mn). Mn is very low in most of north America and most of the UK, which results in animal mineral mixes from USA and UK and fed in NZ can contain manganese, which has caused severe stress on New Zealand animals and then the farmers handling stressed animals. I've often solved this serious problem. Read Elements > Manganese.

What complicates the salt story is that most table salts which have had minerals removed and sometimes things like aluminium added, to make them flow, are poison. The adding of iodine in New Zealand is beneficial, but doesn't make it as good as mined real dryland salts from the dry areas of Himalaya, USA or South Africa. Before reading more, Google for 'table salt poison' and you'll be amazed at how much evidence there is on this, in a million sites.

Blood pressure

Googling for "salt deficiency + blood pressure" found 188,000,000 sites showing how much of a problem the lack of salt is, including information regarding it causing high blood pressure and accelerated ageing.

New Zealand's geologically new pumice, volcanic and peat soils combined with high rainfall result in many mineral deficiencies; however, all countries suffer some deficiencies. People in large countries like the USA get a variety of nutrients that the human body needs because some food comes from areas containing high magnesium such as around Wisconsin and others from high selenium areas, like their upper Midwest.

High rainfall areas like New Zealand have the lowest mineral levels because of leaching. An example is the West Coast of New Zealand's South Island, which gets up to five metres (200 inches) of rain a year, with salt from the sea, but animals have died from boron deficiency. Read Elements > Boron. Irrigated areas can be as leached as high rainfall areas.

Immigrants from South Africa find our table salt tasteless compared with their Saltcor ancient mined salt from the Upington desert area in the North-West Cape which gets less than 150 mm of rain a year and the heat evaporates most. Our refined cooking salt is made from current (highly polluted) sea water near Blenheim, and then has minerals removed and iodine added, so fewer people now eat it. More buy mined salt. See page 4.

The further from the sea, the less sodium is contained in the soils, pastures and crops. In Switzerland, in the middle of Europe and in New Zealand's North Island inland high country, the sodium levels are one-tenth of those on the coast that get sea spray. Close to the sea in Taranaki, New Zealand, the prevailing westerly winds increase the sodium levels in pastures so high that cows don't get bloat on the paddocks close to the sea, but do on the paddocks in the same farm one km inland. Salt

stops froth forming so frothy bloat doesn't occur. Read Animal Health > Bloat.

The key to solving mineral deficiencies is knowing the deficiency symptoms. Some are mentioned in this chapter. Low sodium levels can result in distress, tiredness, lethargy, cramps, brain sluggishness and more. If your perspiration doesn't taste salty, you are low in sodium. Animals licking each other **vigorously** indicate sodium deficiency.

Dr Jacques de Langre, who has a Ph D in biochemistry from the University of Brussels, studied salt for 30 years and wrote: "The health bureaucrats think that all salts are the same, which is far from correct." Most refined salts have the good minerals removed and things added so, in reality, they can be a mild poison! However, natural salts are a nutritious and essential food.

In Australasia and the USA, the majority of doctors condemn salt and take their heart patients off it, whereas in France they prescribe natural, complete salt for heart patients.

From an early age, people are told that salt causes high blood pressure and the prevailing viewpoint of modern medicine reinforces that salt is bad and must be eliminated from the diet, like tobacco and alcohol. The truth is that natural, hand harvested sea salt from desert areas contains an abundance of essential macro-nutrients. In 100% natural salt there are over 80 trace elements that act as buffers that can actually lower blood pressure and remove excess sodium from the tissue, once it has completed its role within the cells. This current belief, that avoiding salt will help you live longer, has been sadly misunderstood and consequently, the health food establishment has inadvertently promoted this premise, solemnly declaring that avoiding all salt will lead you to better health and well being.

Overwhelming scientific research now shows that, for most of us, avoiding natural salt definitely WILL NOT lead to better health, it can cause the opposite! What is not always known is that a low-salt diet for the treatment of high blood pressure has been based on research using commercially refined table salt, the detrimental effects of which have now been well documented, so much so that it is called "Poison".

A salt deficient diet can raise or lower your blood pressure. A lack of correct salt can cause accelerated ageing, cellular degeneration and biochemical starvation, weakened kidneys, stressed livers and massive adrenal exhaustion.

On a salt free diet, the valves of your heart muscle can tire, due to a lack of essential minerals and trace elements which are found in top quality salt.

The healing powers of good salt are equal to those of Vitamin C, Vitamin E and many other nutrients you can get from food stores. Unfortunately this knowledge is not in many doctors' vocabularies.

Refined salt (pure sodium chloride) is detrimental to the body and can cause high blood pressure, but unrefined, naturally harvested sea salt from old desert mines is the best for all people, especially those with high blood pressure and heart problems.

One of my food and health specialists, Robyn Jackson (See Health Specialists) sent some of my blood to her Australian counterparts, who reported that I was low in sodium and needed to consume more natural salt. They also recommended that I eat fruit before each meal and ample protein and fat with each meal, which I have done with excellent results allowing me to work up to 12 hours a day for years, serving farmers through writing the GrazingInfo eBook and advising and answering questions. I also follow the suggestions of five other natural and alternative health specialists, as mentioned in appropriate chapters and listed in Human Health > Introduction.

Some people in hot conditions, or exercising excessively and lacking sodium, can feel faint. Some athletes lacking sodium have collapsed. There is a documented case of a marathon runner that died through lack of salt. Both a magnesium deficiency and low potassium levels can cause the same problems. Natural salt contains all of these essential elements. Being low in more than one element can be fatal.

Many of the first, white New Zealand settlers died of iodine deficiency, so about a hundred years ago the New Zealand government legislated that iodine had to be added to all table salt.

The craze a few decades ago to reduce salt in the human diet was partly caused by some people consuming too much of the plain, refined, dangerous salt. The reduced consumption of salt then caused quite a number of New Zealanders to become low in iodine, which was not supplemented when the table salt intake stopped.

People need more salt in summer and when exerting themselves. Muscle cramp can sometimes be cured in minutes by taking a pinch of salt, but this doesn't work for everyone. Magnesium usually does.

Do not eat too much salt, because it suppresses magnesium, which can then result in cramps. Excess salt can also cause swollen ankles. See Human Health Elements > Magnesium.

In food

Salt in food helps to prevent it from spoiling, by drawing moisture out of it so that bacteria won't grow as fast. Salt can also be used to disinfect & kill bacteria.

Ages ago, salting was the only way to preserve food and it remains a common ingredient in many foods such as some nuts, fish, etc. Salt makes soups more savoury, reduces dryness in crackers and pretzels, and increases sweetness in cakes and cookies. Salt also helps disguise the metallic or chemical after taste in products such as soft drinks.

For otherwise healthy adults, the American Heart Association recommends limiting sodium intake to less than 2,300 milligrams (mg) a day. That's about 1 level teaspoon plus what some may eat in processed foods every day. If you have high blood pressure or certain other chronic conditions, are dark skinned or older than 50, then your doctor may recommend limiting sodium intake to less than 1,500 mg a day.

Most people CANNOT stay healthy on a low-salt diet and many researchers have shown that salt restriction lowers high blood pressure only a little, while a diet high in vegetables and fruit lowers high blood pressure dramatically. Exercise is the main thing to reduce high blood pressure. When I farmed and gardened a lot, and donated blood until too old, to their surprise my pressure was always 120/80. After damaging both shoulder and upper back muscles from digging to grow and harvest potatoes, etc, not recommended at 82, I had to stop all gardening. Sitting at the computer for up to 12 hours on most days answering farmer questions and writing farming and health articles, my blood pressure increased to 150/120, so I started lifting my knees and squeezing and stretching my toes as exercise and it dropped to 120/80. So the high blood pressure was not from suffering for stressed farmers and battling to get them to farm naturally, and being frustrated by the backwardness of the establishment.

I lifted my knees as high as possible twice a second which is the best exercise I know of because it exercises the toes, tummy and body muscles, reducing tummy fat.

Getting back to salt. On 1 November 2011 two endurance cyclists near Christchurch suffered heart attacks and one died. This has happened many times and, in the past, when checked, some were low in sodium and/or magnesium.

From the Animals' farming section > Elements > Salt

Low sodium levels in soils cause potassium (K) to leach which, at $900 per tonne, is costly.

High K in NZ soils are common because of the inaccuracy of soil testing and cause unpalatable, hard pasture, increasing pulling out of ryegrass, lowering animal appetite and causing poor digestion.

Low sodium levels cause dry, shaggy coats, shivering in cold weather and suffering in heat, lower milk production (MAF trial confirmed it) and poor reproduction. Low sodium can also lead to downer cows, which are sick, affected by milk fever and can't stand up after calving, even after receiving treatment for milk fever. Low zinc and/or boron can accentuate it or cause more severe symptoms.

Sources

Dr Bruce West in Carmel, California, USA, wrote that real salt that comes from ancient, unpolluted deserts can help people reduce high blood pressure and ailing joints.

New Zealand solar sea salt from Blenheim is dried in tidal beds, but 650 mm of rain per annum falls there, leaching some of the elements, and some elements are removed from it to sell as table salt. They claim that it is to make it free-flowing, but real dry salts flow freely out of larger holes! Coarse agricultural salt from Blenheim is used by some farmers as fertiliser at 30 to 100 kg per hectare with success and no problems, if analysing ryegrass staggers shows show it is needed. It makes pastures softer (especially when potassium is too high, which is the case in most New Zealand pastures because fertiliser companies encourage excessive use because its $800 a tonne is highly profitable to them) and more palatable to animals that then graze it ahead of areas not salted. See Elements > Salt.

Some Blenheim, NZ solar salt is ground finely for animal soluble mineral mix supplements. The salt used in Solmin for animals has had nothing removed or added.

There are several brands of salt. On the Chris Rhodes compatible to humans scale of 1 (poison) to 100 (perfect), NZ table salt is 1. Himalayan salt 85 and Utah USA salt 65.