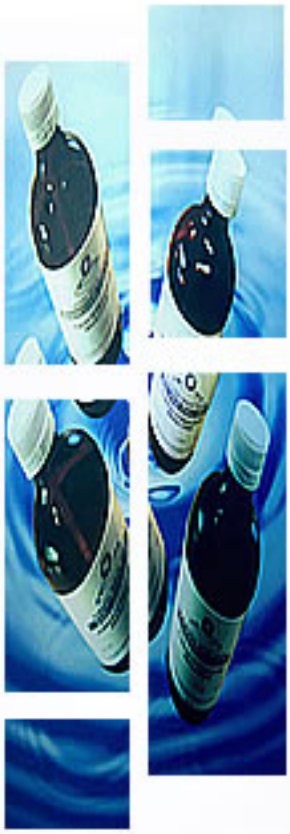

Akwa Solutions Pty Ltd

Products Information Book

Introduction

This information package has been compiled by Akwa Solutions from a variety of sources. Some of the data contained herein is considered confidential and needs to be treated by the reader as such. No data is to be used by any other party for any purpose whatsoever, without the express written permission of Akwa Solutions Pty Ltd.

It may also dispel some common myths that abound. It is not intended to offer medical advice and it certainly does not promise to do anything magical for you.

Akwa Solutions Pty Ltd (Akwa) dose hope that it will provide you with enough information that you will be able to make your own decision about finding the right path to a better future for yourself and those around you. Remember that nothing will replace a good diet and regular exercise.

Company Profile

Akwa solutions Pty Ltd is an Australian owned and based company whose major philosophy is to dedicate and provide environmentally responsible technologies and solutions which will benefit and enhance people's lives and the world we inhabit.

In January 2013 Akwa solutions acquired CC Technologies along with Australian Natural Colloids, by combining the necessary recourses this has allowed us to expand the business and continue the development of the group's propriety products.

Akwa solutions Pty Ltd (Akwa) supplies products to health food retail outlets as well as Chiropractors, Naturopaths, Herbalists and Holistic practitioners throughout Australia and the South Pacific. As mainstream western medicine has also realized the potential for Silver Colloid, Akwa solutions Pty Ltd is also supplying to a number of clinics specialising in AIDS and cancer research and treatment. Just as importantly, other areas such as animal husbandry and agriculture are enjoying the benefits of the products produced by Akwa solutions Pty Ltd. The equestrian industry, for example, is becoming highly reliant on silver due to its speedy benefits and lack of side effects.

In addition to the silver colloid that Akwa solutions Pty Ltd produces, the equipment developed by the company has allowed production of colloidal solutions with other mineral bases. Other minerals that the company is finding great success with include gold, copper, manganese, magnesium and zinc.

How does the AKWA mineral colloids process?

AKWA has developed its own method of producing the highest purity colloids. Basically Akwa Solutions utilize what is known as the electrolytic process to produce all of its colloidal dispersions. The electrolytic method has long been recognized as the best method of colloid production. This is due to the fact that no other substances are introduced into the solution to degrade the quality or performance of the product. Admittedly there are other people successfully making and marketing colloidal preparations using electrolytic technology. However, what sets Akwa Solutions apart from the others is the state of the art equipment that has been designed and built at the Akwa laboratories in Melbourne, Australia specifically for the purpose.

The core of the technology developed revolves around electronic circuitry that forces the atoms to behave as required. Obviously though, there is considerably more involved in the manufacturing process that has been developed than just this.

Firstly all water used for production is triple filtered to remove all suspended particles and contaminants. It also has all traces of chemicals such as chlorine and any organics removed. The water is then completely deionised. This procedure removes impurities virtually on the atomic level. On completion of this procedure the water is then deoxygenated. This is quite important as oxygen can produce oxides of the mineral being used during the dispersal process if it is present.

The minerals used for dispersal are provided by an approved supplier who furnishes a certificate with each batch of

mineral provided as parts of the rigorous quality control procedures that have been laid down. The details of this are then recorded along with other data including an individual batch number of completed dispersion of each.

It is common knowledge that water of purity as high as what Akwa use for the basis of the colloid is very resistant to any type of processing all. Even though the electronic equipment is virtually infallible, a registered, independent laboratory tests every batch of colloid produced. This is to ensure that the highest standard is maintained and every bottle is marked with the batch number and concentration of mineral in it.

Slight variations in concentration will always be observed between batches that are produced. This is because the colloidal dispersions are not diluted or reduced after being produced, and influences beyond human control come into play when producing colloids. There are many influences on the manufacture of colloids that do not fall into the category of mainstream science that have to be taken into consideration.

What is a colloid?

Colloid is a word use in chemistry and defined in the Funk & Wagnall's Standard Desk dictionary as "A state of matter in which finely divided particles of one substance are suspended in another in such a manner that the electrical and surface properties acquire special important." Put another way, a colloid is composed of two substances: minute particles, called the dispersed phase and a medium that holds the particles, being the dispersion medium. The dispersion medium may be solid; liquid or gaseous.

The particles in a colloid neither dissolve, nor fall to bottom but remain suspended in the dispersion medium. Colloidal minerals may be described as minute particles of pure metal floating in water. The particles are small enough to drift indefinitely, suspended by molecular motion and an electrical charge that has been placed on them during manufacture. The electrical charge on the particles repels them from each other, whilst keeping them from falling to the bottom or clumping.

As definition of "Colloid" above, a colloid is a type of chemical mixture where one substance is dispersed evenly throughout another. The particles of the dispersed substance are only suspended in the mixture, unlike a solution, where they are completely dissolved within. This occurs because the particles in a colloid are larger than in a solution. But many familiar substances are colloids, as shown below:

Particle size		
Less than 10^{-9}m (less than 1nm)	$10^{-9} - 10^{-6}$m (1nm to 1000nm)	Greater than 10^{-6}m (larger than 1000nm)
Homogenous mixture	colloids	Non-homogenous mixtures

How is a Colloid made?

There are essentially four accepted methods of commercially producing colloidal solutions. These are the chemical, protein bound, mechanical and electrolytic processes.

Chemical processing uses acids or strong alkali's to put the material into solution and can be very harmful because of the toxic and dangerous by products left in the colloid. This method would only be considered suitable for preparing a solution for industrial purposes.

The second method chemically binds microscopic particles of the element to a protein molecule. This method of production does manage to produce a consistent particle size. However it is limited in its value due to the fact that once the mineral is bound to the protein it cannot behave as it normally would. Typically, the stabilizer used is a glyco-protein, or chemical element like E.D.T.A. It is sometimes listed on the label as a "natural excipient". One of the drawbacks of using a stabilizer in the colloidal silver is that it disrupts the activity of the silver particles, causing them to bind together into bigger clumps and blocking the free-working germicidal action that would normally take place if the silver particles were small and independent.

Mechanical methods actually grind the up the materials in question into extremely fine dust, which is then added to water. Whilst being very pure, unfortunately the particles are mostly too large and inconsistent in size to be of any benefit at all.

The electrolytic method uses an electrical current to break off clusters of atoms from the material being used to create the colloid and places an electrical charge on them during manufacture; this charge keeps the atoms properly in suspension in the colloidal solution without the addition of any other material to the pure water. This process gives us the purist and truest colloid that it is possible to achieve.

Mineral Deficiency

Different minerals are needed by our bodies to carry out the daily tasks of growing, healing and rejuvenating the cells and tissue that it is composed of. The amount required varies from one mineral to another, depending on what function it has to play, as does the levels that are found in a normal healthy human body.

Mineral deficiencies in animals and humans stem from mineral depletion in the soil. Originally the soil on the surface of the earth was rich in minerals, brought up from underneath by volcanic eruption. Over countless years' plants have been continually absorbing these minerals and storing them in their cells. Unfortunately due to erosion and the onset of civilization with intensive farming practices these minerals are not replaced in the soil and now end up elsewhere on the earth, typically at the bottom of the oceans. The cycle we now have is limited minerals in the soil for the plants so limited minerals in the plants for the animals.

According to mineral analysis of 3,000 year old bones of Japanese temple monks showed that there was a greater variety and far larger amount of minerals present than in the bones of modern day Japanese people. This indicates that mineral content in our bodies has indeed declined steadily as minerals have been depleted from the usable parts of the earth's surface.

What can make it harder to pinpoint mineral problems in animals is the fact that deficiencies in some minerals can cause excess in other minerals. For similar reasons, the correct amount of essential minerals can reduce the amount of toxic minerals held in the body. When a mineral interferes with, or prevents the uptake of another it is described as *Antagonism.* On the other hand, when a mineral helps to increase the uptake or availability of another it is given the term *Stimulation.*

In June of 1992, a report was tabled at the Earth Summit held in Rio. This report contained amongst other things, data relating to the decline of minerals in farm and range soils by continent over the last one hundred years. A cross section of this information is shown below:

Continent	**% of minerals depleted over last 100 years**
Africa	74 %
Asia	76 %
Australia	55 %
Europe	72 %
North America	85 %
South America	76 %

To add to our problems two identical vegetables that look and taste exactly the same may have totally different levels of essential minerals contained in them. One grown under ideal conditions may have high levels of minerals in the cells, whilst the other, seemingly the same plant may have nothing at all that is of value to the animal consuming it.
In intensive farming situations, it is common practice to add N,P,P fertilizer. This stands for Nitrogen, Potassium and

Phosphorous. Unfortunately, these elements are the only ones required by plants to be lush and green and survive in an apparently healthy condition. The plant is in reality quite unhealthy, so much so in fact, that if this occurred in nature, disease and insects would quickly annihilate it. Obviously any animal is not going to receive any benefit from eating it.

To reinforce this point we only need to look at what occurred in May of 1980 in the States of Oregon and Washington, USA. The volcano known as Mt. Saint Helen's erupted spewing thick layers of ash onto farmland, devastating crops. The next year to the elation of the farmers, their crops bore more and bigger fruit than ever before. This due to only the fact that the fine powdery ash had re-mineralized the soil with the essential elements it had been missing.
In experiments conducted in the laboratory of Roy Walford at the UCLA in the United States, it was found that by lowering the water temperature in a fish tank by just a few degrees and maximizing the micronutrients fed to the fish their life span was extended by 300%.

Pleasingly, interest is now being taken in these topics on a Major level. Korea is now feeding pigs on a diet rich in Selenium so as consumers will benefit from the addition of this mineral to their diets when consuming pork, which they do in large quantities in that country. It is worth noting that the meat is considered superior in quality and commands a higher price in the market place. The product even has its own brand name of SELEN PORK. In other countries, because of the known link between low zinc levels and attention and behavioural problems, school age children are tested on a regular basis for zinc levels in their bodies.

Included at this point are some brief notes on known problems associated with low levels of common minerals, which are also the most required and information as to the value of silver.

Akwa Colloidal Products

How to store these mineral colloids for keeping the best result?
Important tips for best results

- Store in a cool place
- Do not freeze
- Keep out of direct sunlight
- Keep away from magnetic fields and electrical currents

Silver

A short history on Silver

The use of elemental silver as an anti bacterial agent is nearly as old as mankind itself. Its amazing properties are probably the basis for the large monetary value that has been placed on a mineral that was comparatively easy for early man to locate, mine and smelt. Throughout history, documentation points to uses of the metal to fight or retard the growth of single celled organisms. The Egyptians mention it in their writings, the Roman Empire stored wine in silver urns to prevent spoilage, and the Chinese emperor's and their courts ate with silver chopsticks. Aristotle advised Alexander the Great to boil water and store in silver vessels to prevent waterborne diseases. Vikings would line the hull their ships with strings of silver and copper for the same purpose. American settlers put silver dollars in milk to stop it spoiling and the use of silver leaf to combat infection in wounds sustained by troops during WW1 is well known and detailed.

In fact the use of silver as an antibacterial substance was becoming almost universal in America, in the earlier part of the 1900's. During the 1930's, synthetically manufactured drugs began to make an appearance and the profits, together with the simplicities of manufacturing this new source of treatment were not to be overlooked. Silver quickly lost its status. Unfortunately as drug companies become larger, the knowledge that has been amassed over the ages in regard to silver, and many other forms of traditional healing for that matter is lost.

The return of silver to conventional medicine began in the 1970's. The late Dr. Carl Moyer, chairman of Washington University's Department of Surgery, received a grant to develop better methods of treatment for burn victims. Dr. Margraf, as the chief biochemist, worked with Dr. Moyer and other surgeons to find an antiseptic strong enough, yet safe to use over large areas of the body. Dr. Margraf reviewed 22 antiseptic compounds and found drawbacks in all of them. "Mercury, for example, is an excellent antiseptic but toxic," he comments. "Popular antiseptics…can be used over small areas only." Furthermore, disease organisms can become resistant to antibiotics, triggering a dangerous super-infection. "These compounds are also ineffective against a number of harmful bacteria, including the biggest killer in burn cases – a greenish-blue bacterium called Pseudomonas aeruginosa. It almost always shows up in burns, releasing a poison."

Reviewing earlier medical literature, Dr. Margraf found continual references to the use of silver. Based on the knowledge he had amassed, Dr. Margraf decided to use the best known compound of silver; silver nitrate. Concentrated silver nitrate is both corrosive and painful. To circumvent this he diluted the silver nitrate to a .5 percent solution and found that it killed the Pseudomonas aeruginosa bacteria and permitted wounds to heal. Importantly

resistant strains did not appear. Good as it was, silver nitrate was unfortunately, far from ideal. It disturbed the balance of body salts, was thick, awkward to use and stained everything it touched.

Dr. Magraf continued his research and looked for more suitable silver preparations to utilise. As a result of these efforts, hundreds of important new medical uses for silver were found.

Silver sulphadiazine (FDA approved Silvadiene, Marion Laboratories) is used in 70 percent of burn centres in America. Discovered by Dr. Charles Fox of Columbia University, sulphadiazine has also been successful in treating cholera, malaria and syphilis. It also stops the herpes virus, which is responsible for cold sores, shingles and worse.

Medical journal reports from the early 1900's demonstrated a properly prepared colloidal dispersion of silver was the only form of silver solution that was completely suitable with no adverse side effects. For example T. H. Anderson Wells reported in the Lancet (February 16th, 1918) that a preparation of colloidal silver was "used intravenously in a case of puerperal septicemia without any irritation of the kidneys and with no pigmentation of the skin." There were still sceptics. Some of the negative reaction that colloidal silver received in the early 1900's was due to a supply of improperly prepared and unstable colloid. Shortly after however, the colloidal nature of body fluids including blood was understood. This new knowledge of body chemistry gave rise to the enormous array of applications for colloidal disinfectants and medicines.

In laboratory tests with colloidal silver, bacteria, viruses, and fungal organisms are killed within minutes of contact. Larry C. Ford, M.D. of the Department of Obstetrics and Gynecology, UCLA School of Medicine, Centre For The Health Sciences reported in a letter dated November 1, 1988, " I tested them (the silver solutions) using standard antimicrobial tests for disinfectants. The silver solutions were antibacterial for concentrations of 10^5 organisms per ml of Streptococcus Pyogenes, Staphylococcus Aureus, Neisseria Gonorrhea, Gardnerella Vaginalis, Salmonella Typhi and other enteric pathogens and fungicidal for Candida Albicans, Candida Globata and M. Furfur."

Recently, more than half the world's airlines now use silver water filters to guard against such waterborne diseases as dysentery. The Soviets use silver to sterilize recycled water aboard their space stations and NASA selected a silver system for the space shuttle after testing 23 different methods of purification.

Many of the world's airlines, led by the Swiss, use silver water filters to protect passengers against diseases such as dysentery. Silver has also been effectively used to replace chlorine in swimming pool and spa water. When used in this application it does not sting the eyes or discolour blond hair.

Japanese firms have developed at least five technologies that use silver to purify air. Many industries are now singing silver in this capacity to counteract airborne toxins and other deadly industrial poisons.

How dose Silver work?

Silver counteracts single celled organisms simply by interfering with the cell's enzyme that is responsible for its respiration. All this means is that basically the cell is suffocated. This interaction is very important because cells do not develop immunity to silver as they do to antibiotic compounds. The problem of immunity is without doubt the biggest dilemma facing modern day man and will most likely be the main natural factor in the demise of civilization as we know it, unless steps are taken to reign in the onslaught.

As clarification, single celled organisms, for the purposes of this text encompass the broad families of bacteria, virus

and fungus. Obviously because of their structures some organisms succumb to silvers onslaught more easily than others. Similarly other entities that do not fit in to this description may be successfully destroyed upon contact with silver. An example of this is eggs and larvae of creatures such as parasitic worms and other equally lower life forms.

Please refer to the testimonials of Akwa Silver Colloid as following page 19

Misinformation on silver colloid

Unfortunately a lot of advertising pertaining to silver colloids is totally untrue and misleading. Some quick research into colloidal chemistry will easily support this. One manufacturer of silver colloid even makes the incorrect claim in their advertising that electrolytically produced colloids are not stable and need to be used within 3 days of being produced!

The only colloidal solutions that should be considered for use must only contain pure H_2O and the mineral concerned. Oxides and compounds are a recipe for disaster and stabilizers should be viewed with the utmost suspicion. Think about it, if additives are in a liquid to keep the mineral in solution it will probably be that bound up it will not be able to do its intended job. Oxides and compounds can form unintentionally during and after production by natural occurrences. If any foreign material is in the solution the likelihood of this happening is inevitable.

A prime example of this is people using "gadgets" that are becoming readily available in the market place to make colloidal silver at home. Unfortunately, the raw tap water they use with these machines, as we all know contains amongst other things, chlorine. The chlorine instantly bonds to the silver to produce silver chloride, this compound at best will make most of the silver drop out of the dispersion medium and at worst, can be toxic if swallowed.

AKWA Silver colloid is electrolytic ionic silver

The most efficient method currently known to transport silver for the purposes of disabling organisms is in an aqueous colloidal solution. A colloid by technical definition is minute particles that are suspended in a medium. Having experimented with variety approaches over the past 10 years, ANC believes that the electrolytic method of production and utilize this method to produce all of its colloidal dispersions. The reasons for this are that correctly manufactured preparations that have been made by this method contain nothing but pure silver, so as there can be no interaction by foreign substances to reduce or degrade the result being sort after. Additionally the silver particles are so small that they better able to carry out their task of suffocating the organism. To this end there is also more particles per given amount metal to perform this function.

Each batch is electrolytically made without artificial stabilisers or coloring. No proteins, compounds or mineral salts are used in our colloid products. And having test by a NATA accredited laboratory before bottling to determine the concentration

In closing the most often referred to potential problem arising from the use of silver for the treatment of afflictions in live animal or humans is a condition known as Argyria. This term is given to a condition where silver compounds deposit in the fat layers under the skin. This gives the skin a greyish tone to look at. It is stressed that conventional medical practice is quick advice of the danger but like most other derogatory statements put forward by the powers above no substantiation is given. Additionally, conventional medicine will point out that silver, along with other minerals will show up in hair and nail analysis. If it is evident in these tests it is obviously being excreted from the

body and not stored as some suggest. Tests have indicated that all traces of silver can be expelled by horses in as little as six days.

Further to this, laboratory experiments have carried out involving rats and mice being dosed with concentrations of 600mg/L of silver in their drinking water for their entire life span. The result of this was officially reported as: “caused discolouration in the thyroid and adrenal glands, the choroids of the brain and eye, and the liver and kidney. Some hypo-active behavior was also reported.” Obviously, it would be almost impossible for this intake of silver to be replicated outside of laboratory conditions.

Whilst most of the discussion has revolved around inside the human body there are a number of other applications that should not be overlooked. Around the household the following is quite helpful. For pets, put colloidal silver in food or a small amount of water, making sure the animal consumes it all. You may also use a dropper and put the solution down the throat or into the eyes or ears. Colloidal silver can be added to plant water to prevent or kill mould and various other harmful organisms. It can be sprayed on fruits and vegetables (such as avocados and bananas) to keep them from turning brown.

Copper

Copper is an essential trace element for humans. It facilitates the activity of several enzymes and acts an important role in the development and maintenance of the immune and cardiovascular systems, the vascular system, and the skeletal system, the normal function of brain, and the structure and function of the nervous system.

Copper is needed for blood cell formation, protein metabolism and also needed in cellular energy production and collagen formation. Copper is a critical functional component of a number of enzymes, including cytochrome c oxidase activity, lysyl oxidase activity, dismutase activity, peptidyl glycine alpha-amindating mono-oxygenase activity and diamine oxidase activity.

Copper is found in a wide variety of foods in organ meat, seafood, nuts and seeds being major contributors. Wheat bran cereal and whole grain products are also good sources of copper. The amount of copper derived from water would normally be less than 10% of the total intake. In major Australian reticulated water supplies, total copper concentrations are typically in the range of about 0.05mg/L. The taste threshold for copper is 3mg/L.

Nutrient Interactions

Iron

Adequate copper nutritional status appears to be necessary for normal iron metabolism and red blood cell formation. Very high level of iron supplement intake can affect copper absorption in adults and infants.

Zinc

High supplement zinc intakes of 50mg/day or more for extended periods of time may result in copper deficiency. In contrast, high copper intakes have not been found to affect zinc nutritional status.

Copper deficiency

Copper deficiency in humans was identified in Florida, USA and Holland in 1931. In Australia during 1973, cerebral palsy in lambs was found to be the result of copper deficiency in ewes during the early stages of pregnancy, due to grazing on copper deficient soils.

Symptoms associated with copper deficiency include:

- White hair
- Grey hair
- Dry brittle hair
- Ptosis (sagging tissue- eye lids, skin, breast, stomach)
- Hernias
- Varicose veins
- Aneurysms
- Anemia
- Hypo and hyper thyroid
- Liver cirrhosis
- Arthritis

- Cerebral palsy
- High blood cholesterol
- Iron storage disease
- Reduced glucose tolerance

Recommendations by life stage and gender

Adequate Intake (used when an RDI cannot be determined)			
Life Stage	Age	Females (mg/day)	Males (mg/day)
Infants	0-6 months	0.20	0.20
Infants	7-12 months	0.22	0.22
Children	1-3 yrs	0.70	0.70
Children	4-8 yrs	1.00	1.00
Children	9-13 yrs	1.10	1.30
Adolescents	14-18 yrs	1.10	1.50
Adult	19-30 yrs	1.20	1.70
Adult	31-50 yrs	1.20	1.70
Adult	51-70 yrs	1.20	1.70
Adult	>70 yrs	1.20	1.70
Pregnancy	14-18 yrs	1.20	--
Pregnancy	19-30 yrs	1.30	--
Pregnancy	31-50 yrs	1.30	--
Lactation	14-18 yrs	1.40	--
Lactation	19-30 yrs	1.50	--
Lactation	31-50 yrs	1.50	--

The average healthy, well-nourished human body contains between 80-120mg of copper. Daily requirement of copper can range from 0.08mg in babies to 0.03mg in adults per kilogram of body weight.

Copper is needed for blood cell formation, protein metabolism, the production of RNA and enzyme activity. It is a critical functional component for the formation of Super-Oxide-Dismutase (SOD) – a powerful antioxidant. Copper is also needed in cellular energy production and collagen formation.

There is more information on http://lpi.oregonstate.edu/infocenter/minerals/copper/index.html and http://www.healthy.net/scr/Article.asp?Id=2059&xcntr=1

Magnesium

Magnesium is vital to all living organisms. It has electrochemical, structural and catalytic functions, activates many enzymes and is a constituent of all chlorophyll's. Over 300 essential metabolic reactions require the presence of magnesium ions for their catalytic action.

Magnesium plays a structural role in bone, cell membranes and chromosomes. In our body, it is needed for the active transport of ions like potassium and calcium across cell membranes, the phosphorylation of proteins, the formation of fatty acid, the clotting of blood and activating B group vitamins. It also acts as muscle relaxer in the body and plays an important part in the excitability of nerves.

Magnesium is widely distributed in the food, including most green vegetables, legumes, peas, beans, nuts and unrefined cereals. Meats and milk have intermediate magnesium content. Water is a variable source of intake.

Because magnesium has so many differing actions in the body, the reasons for some of its clinical effects are hard to determine. For example, magnesium has been found to improve vision in people with glaucoma. In related ways, it has the ability to reduce blood pressure. Further to this, in preliminary research it has reduced hyperactivity in children. Some studies also indicate improvement in the symptoms of chronic fatigue syndrome.

Nutrient Interactions

Fiber

High fiber intake has been found to decrease magnesium utilization, probably because of the magnesium-binding action of the phytate phosphorus associated with the fiber.

Zinc

One study reported that high intake of zinc supplements of 142mg/day in healthy adult makes significantly decreased magnesium absorption and disrupted magnesium balance.

Protein

Protein may also affect magnesium absorption. When protein intake is less than 30mg/day, magnesium is lower, when protein intake is greater than 94mg/day, magnesium absorption may increase.

Vitamin D and Calcium

Inadequate blood magnesium levels are known to result in low blood calcium levels, resistance to parathyroid hormone action, and resistance to some of the effects of vitamin D.

Magnesium deficiency

Magnesium deficiency diseases include:

- Asthma
- Anorexia
- Menstrual migraines
- Growth failure

- ECG changes (electrocardiogram)
- Neuromuscular problems
- Tetany (convulsion)
- Depression
- Muscle “ties”
- Tremors
- Vertigo
- Calcification of small arteries

Recommendations by life stage and gender

AI--Adequate Intake (used when an RDI cannot be determined) EAR—Estimated Average Requirement RDI—Recommended Dietary Intake					
Life Stage	Age	Females (mg/day)		Males (mg/day)	
		EAR	RDI	EAR	RDI
Infants	0-6 months	30 (AI)		30 (AI)	
Infants	7-12 months	75 (AI)		75 (AI)	
Children	1-3 yrs	65	80	65	80
Children	4-8 yrs	110	130	110	130
Children	9-13 yrs	200	240	200	240
Adolescents	14-18 yrs	300	360	340	410
Adult	19-30 yrs	255	310	330	400
Adult	31-50 yrs	265	320	350	420
Adult	51-70 yrs	265	320	350	420
Adult	>70 yrs	265	320	350	420
Pregnancy	14-18 yrs	335	400	--	--
Pregnancy	19-30 yrs	290	350	--	--
Pregnancy	31-50 yrs	300	360	--	--
Lactation	14-18 yrs	300	360	--	--
Lactation	19-30 yrs	255	310	--	--
Lactation	31-50 yrs	265	320	--	--

Considerable amount of magnesium can be lost in sweat and the current recommended daily intake is 5mg/kg of body weight a day. We may need extra magnesium to obtain enough quantity of recommended daily intake.

There is more information on http://lpi.oregonstate.edu/infocenter/minerals/magnesium/ and http://www.healthdimensions.com.au/a/125.html

Zinc

Zinc is an essential element for humans. It plays important roles in growth and development, the immune response, neurological function, and reproduction. Zinc is a component of various enzymes, the structure of proteins and cell membranes, and regulates gene expression. In animal studies, zinc has reported to reduce the toxic effects of nickel and cadmium.

Zinc is present in plant and animal tissues, and food is the major source of zinc intake. Drinking water usually makes a negligible contribution to total intake. In surface and ground waters, the concentration of zinc from natural leaching is usually less than 0.01mg/L. Tap water can contain much higher concentrations as a result of corrosion of zinc coated popes and fittings. In major Australian reticulated supplies, a typical concentration of 0.05mg/L is found.

There are 1.4 to 2.3 grams of zinc found in the average healthy human adult. It is found in the liver, pancreas, kidney, bone and skeletal muscle in the greatest proportion and is found in lesser amounts in the eye, prostate gland, semen, skin, hair, as well as finger and toe nails.

Nutrient Interactions

Copper

Taking large quantities of zinc (50mg/day) over a period of week can interfere with copper bioavailability. More typical intakes of zinc do not affect copper absorption and high copper intakes do not affect zinc absorption.

Iron

Dietary intake of iron at levels found in some supplements (38-65mg/day of element iron) can decrease zinc absorption, which is a particular concern in the management of pregnancy and lactation.

Calcium

High intakes of calcium have been shown to have a negative effect on zinc absorption in animal experiments, but human data are equivocal with calcium phosphate decreasing zinc absorption and calcium as citrate-malate complex having no effect.

Folic acid

There is also some evidence of potential interrelationship of zinc with folate, but studies are limited.

Vitamin A

Zinc and vitamin A interact in several ways. Zinc is a component of retinol-binding protein, a protein necessary for transporting vitamin A in the blood. Zinc is also required for the enzyme that converts retinol (vitamin A) to retinal.

Zinc deficiency

Although dietary is unlikely to cause severe zinc deficiency in individuals without a genetic disorder, zinc malabsorption or conditions of increased zinc loss, such as severe burns or prolonged diarrhea may also result in severe zinc deficiency.

Symptoms and diseases of zinc deficiency include:

- Slowing or cessation of growth and development

- Delayed sexual development
- Characteristic skin rashes
- Chronic and severe diarrhea
- Impaired immune responses
- Impaired wound healing
- Diminished appetite
- Impaired taste sensation
- Night blindness
- Swelling and clouding of the corneas
- Behavioral disturbances
- Anemia
- Alopecia (hair loss)
- Oral and perioral dermatitis
- Anorexia nervosa
- Benign prostatic hypertrophy

Recommendations by life stage and gender

AI--Adequate Intake (used when an RDI cannot be determined) EAR—Estimated Average Requirement RDI—Recommended Dietary Intake					
Life Stage	Age	Females (mg/day)		Males (mg/day)	
		EAR	RDI	EAR	RDI
Infants	0-6 months	2.0 (AI)		2.0 (AI)	
Infants	7-12 months	2.5	3	2.5	3
Children	1-3 yrs	2.5	3	2.5	3
Children	4-8 yrs	3	4	3	4
Children	9-13 yrs	5	6	5	6
Adolescents	14-18 yrs	6	7	11	13
Adult	19-30 yrs	6.5	8	12	14
Adult	31-50 yrs	6.5	8	12	14
Adult	51-70 yrs	6.5	8	12	14
Adult	>70 yrs	6.5	8	12	14
Pregnancy	14-18 yrs	8.5	10	--	--
Pregnancy	19-30 yrs	9	11	--	--
Pregnancy	31-50 yrs	9	11	--	--
Lactation	14-18 yrs	9	11	--	--
Lactation	19-30 yrs	10	12	--	--
Lactation	31-50 yrs	10	12	--	--

Deficiency produces wide-ranging diseases including birth defects and degenerative diseases in all age groups. Heavy losses of zinc also occur in sweat. The average daily recommended intake of zinc for adults is about 0.2mg/kg of body weight.

There is more information on http://lpi.oregonstate.edu/infocenter/minerals/zinc/index.html 、 http://www.healthy.net/scr/article.asp?Id=2071 and http://ods.od.nih.gov/FactSheets/Zinc.asp

BJ HC & TJ BEASLEY
WEERROOK

1620 Dalington Rd
KOLORA, 3265

To Whom IT May Concern

My name is Barry Beasley. I am a dairy farmer from Kolora in the Western District. We milk 270 cows on our property.

Over the last 6 months we have been using AUSTRALIAN NATURAL COLLOIDS "SILVER COLLOID" for the treatment of cows which have high cell counts. We have found that after only one dose of the A.N.C.SILVER COLLOID their cell counts have dropped dramatically.

As A.N.C. SILVER COLLOID has no withholding period we find it a very effective treatment for this problem.

We have also used it for the treatment of conjunctivitis in some of my trotting horses, and the results were very good

.Signed.B.J..Beasley

B.J. Beasley..

The Directors,
Australian Natural Colloids,
30-32 Boileau St.,
Keysborough.

Mr J. Chew,
7 Foukin Ave,
Balwyn, Vic., 3103
2nd July 2001

Dear Sirs,

I write on behalf of my mother, Madam Koo Yoon Yook. She has stomach cancer with the tumour bleeding badly. I am giving her regular doses of your silver colloid. Since starting the silver she is having less pain and wind. The tumour also seems to be bleeding less. Thank you for your product.

Yours truly,

J. Chew.

St. James Village
68/260 Fulham Road
Heatley. Q 4814
15th August 2001

Australian Natural Colloids
39-32 Boileau Street
Keysborough 3173.

Dear Sir,

I am writing to thank you for introducing me to your Copper Colloid Product.

As an Osteoporosis sufferer I find it particularly beneficial taken at bed time (or as required).
For me it gives great pain relief.

Yours sincerely
J M. Bleeman

TO WHOM IT MAY CONCERN

For years my husband had a persistent, harsh cough which hurt his chest, caused headaches and was even a source of irritation to me (how shameful!!)

He consulted many specialists who ordered various tests and medications none of which helped .

Finally he started to take silver colloid which K.P.Chong , a friend, generously gave him - and now, that persistent cough has gone, for which both of us are extremely grateful.

Nancy Krastev

Nancy Krastev
Mt Waverley, Vic
8th December 2010

Dear K P — Peter wrote the other enclosed, as this seemed so ~~or~~ small. He'll speak to you on Sun.
I felt I wanted to write this as it's absolutely true.

Akwa Solutions Pty Ltd

2A / 50 Princes HWY

Eumemmerring Victoria 3177

Australia