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Stephan Cooter, Ph.D.

Bone Spurs, Minerals, Herbs, Sunshine, Color

by Stephan Cooter, Ph.D.

When I was experiencing intense pains in a frozen shoulder, I followed my doctor's advice to alleviate the problem: I exercised, I stretched, and I used heat. But my pains were becoming much worse.

My wife, seeing me in constant pain, suggested reversing my strategies to that of using ice rather than heat, rest rather than exercise and stretching, and to stop whatever new treatment had been advised by my physician.

I had been diagnosed as an almost universal food reactor, allergic to all foods but eggs, oats, and garlic, so I had just begun taking allergy shots which involved minute doses of the food particles I was allergic to. I stopped the shots, I used ice, and I rested. Sure enough, my pains improved.

At the time, no one pointed out that frozen shoulder is frequently connected with Rheumatoid Disease (RD) and has been successfully treated with anti-amoebic [antimicroorganism] medications like copper sulfate and metronidazole [and other of the 5-nitroimidazoles]. Dr. Roger Wyburn-Mason, *The Causation of Rheumatoid Disease and Many Human Cancers*⁴⁸, 1983, believed he had found a limax amoeba which he named *Amoeba chromatosa* infesting areas of arthritic injury, resembling human macrophages in both appearance and behavior among cellular debris in injured tis-

sue. [Ed. Note: This finding has never been verified, although the treatment protocol derived from the hypothesis has been eminently successful.]

Dr. Wyburn-Mason also noted that the Rheumatoid Disease amoeba was attracted to heat. Ironically, orthodox heat-treatment for RD involves everything I was told to do for my frozen shoulder, and everything that is the exact opposite works for active arthritic problems. In active stages of RD, heat and exercise work against inflammation and pain. Cold and rest work to help.

Unknowingly, I had happened on using one essential characteristic of Wyburn-Mason's RD amoeba's behavior to my advantage. His *Amoeba chromatosa* was attracted to heat. Their thermotrophic or heat-seeking behavior has been used to make RD amoeba migrate out of inflamed human tissues. It could well be that this very simple characteristic is partly why my use of ice worked to reduce my pain. RD amoeba may have been driven into warmer territory, or may have been put to sleep.

Are these hypothetical RD amoebas attracted to already injured and hotly inflamed tissues, are they organisms responsible for causing the inflammation in the first place, or are their by-products additional causes of cartilage, joint, and other tissue injury? Whether their by-products are free radical irritants like *Candida albicans'* aldehydes, and whether these by-products bind with calcium to form excessive mineral deposits are unanswered questions. The course of RD is believed to be halted when the microbe [or some other unknown organism] is killed, but mineral deposits remain at the sites of injury. So the course of the disease is altered, but the aftermath of earlier injury remains, and EDTA chelation therapy seems unable to resolve the problem. [See "Candidiasis: Scourge of Arthritics" and "Chelation Therapy," <http://www.arthritis-trust.org>.]

One aftermath is bone spurs. Excess mineralization of bone from one cause or another is assumed to be one player in Rheumatoid Disease bone spurs, and chelation therapy has been tried to correct the problem. Ideally, chelation therapy takes heavy metal toxins, other irritants, inorganic mineral deposits, cadmium, lead, copper and calcium excesses out of the body's tissues. The good news is that it removes up to eighty percent of calcium plaques in the peripheral arteries. Many symptoms dramatically improve because of improved arterial volume and greater nourishment to all tissues. Although pain levels and flexibility improve, it has not been reported to have an effect on mineral deposits known as bone spurs or large plaques in arteries.

Unfortunately, chelation also removes essential minerals at the same time it removes deposits, and essential minerals are usually added to the end of the chelation process. I have an awful suspicion, though, that this approach may be almost the exact reverse of what should be tried by many people suffering from Rheumatoid Disease bone spurs.

John Mock, a friend of mine, had suffered from a painful shoulder for many years and had restricted his calcium intake assuming at the time together with his health counselor that excessive calcium partly precipitated the problem and was responsible for bone spurs that showed up on his X-rays.

Laurie Marzell, N.D.³¹, suggested that his bone spurs were not caused by excessive calcium but a calcium deficiency, and put him on a supplement program of 1500 mg of calcium and 750 mg of magnesium each day. Six to eight months later, new X-rays revealed that the bone spurs had dissolved along with the pain he used to feel in his shoulder³¹.

Most authorities suggest that calcium-magnesium supplementation should be 2:1, two parts calcium to one part magnesium, just as Gus J. Prosch, Jr., M.D.¹⁸, found effective in treatment of arthritis, roughly the ratio found in dolomite 1.65:1 made from living organic fossil remains. White, Handler, Smith and Stetton, in *The Principles of Biochemistry*, recommend a 5:1 calcium-magnesium ratio that these authors found to be normal for human physiology. Now many physicians are recommending equal parts calcium and magnesium. One ratio might work better for some than others.

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In one Rheumatoid Disease protocol, I noticed that mineral supplements had been combined. Although this may be workable for some combinations, combining zinc with calcium is probably a bad idea, as is combining zinc with copper, or molybdenum. Zinc taken with calcium binds with calcium and is lost in feces and urine. Similar antagonistic actions would take place with zinc and copper, and molybdenum and copper, making both sets of minerals less available.

Pfeiffer suggests taking calcium-magnesium supplements at different times of the day⁴⁴.

Dr. Richard Murray's suggestion is to take calcium supplements on an empty stomach, early in the morning, and just before retiring³⁷.

Combining Dr. Prosch's protocol¹⁸ of taking fish liver oil supplements at the same time, early in the morning, late at night on an empty stomach, might help increase calcium absorption and use, and the person taking it would get the intended benefit.

Taking zinc mid-morning on an empty stomach separates the competition of both for absorption.

Molybdenum should be insalivated probably at a different time than copper is ingested, if a person were attempting copper supplementation on the same day. One cancels the other's effects if taken at the same time.

If one is attempting candidiasis treatment, copper treatment might totally interfere with the process since copper encourages yeast activity. More than likely, copper treatment used in amoeba [or microorganism] treatment should be reserved for a different month or months altogether. [See "The Use of Ionic Copper Treatment in Treatment of Arthritis," <http://www.arthritis-trust.org>.]

Dr. Prosch has also found that the great majority of Rheumatoid Disease patients are deficient in free ionic calcium in circulation. On the surface, this presents a paradox. Excess deposits of calcium are found in arteries and joints. Serum calcium is found to be deficient. How can there be this apparent contradiction?

This calcium deficiency in circulation strongly suggests to my way of thinking that the bones which store extra minerals for the body's needs will be used to compensate for the body's other serum needs. When infectious or autoimmune processes take place from injury, food allergy, microbe, virus, or fungus, Dr. Richard Murray has pointed out that extra calcium is mobilized by the fever and inflammatory process to fuel the white blood cells to assist them in their microbe digesting purposes, to assist in the inflammatory process, to assist in repairing or digesting cellular debris from damaged or dying cells, or to assist in digesting undigested food particles that find their way into circulation.

Rises in body temperature facilitate calcium going into circulation. Children with convulsions before the turn of the century were submerged in hot water baths to assist the body's natural process in putting free calcium into the blood stream.

If blood calcium levels were high to begin with, calcium from the bones would not need to be tapped. But if deficiency states exist, extra calcium is drawn out of the bones. This draw on bone calcium is thought by Dr. Marzell³¹ to create a "streaming off" effect from the bones to supply the body's other needs. As the streaming off may become habitual, bone spurs are the visible results left behind like stalactites or stalagmites slowly forming on the ceilings and floors of cave walls, composed partly of calcium and uric acid salts in the human body near the ends of joints. Giving the body more supplemental calcium might stop the need for withdrawal from the bone's calcium banks, the streaming off effect would stop, and the body may begin to heal itself, dissolving the excess deposits.

In others, rather than bone spurs, the body's need for calcium may take the form of erosion and loss of bone density. *Prevention Magazine*¹¹ conducted a Calcium Research Project in 1977. Of 2,959 responses that were collated, 1,379 people said that bone pains had either been "relieved or abolished" after taking supplemental calcium. So that for slightly more than half of the people participating, extra calcium made a difference in relieving aching joints. Sharon

Faelten and the editors of *Prevention Magazine* suggested that arthritic bone degeneration was "simply the result of too much calcium having been withdrawn from the bones throughout the years in order to keep blood levels of this vital mineral at the required level¹¹. What's more, there is reason to suspect that the "calcium deposits" that sometimes accompany joint problems are associated *not* with too much calcium, but rather too little. What may be happening is that the calcium withdrawn from the bones for some reason has a tendency to pile up in the wrong places." A typical amount of extra calcium supplementation was reported as 1200 mg per day, together with a wide range of other vitamins and minerals. Presumably, other minerals with the exception of magnesium should be taken at different times than calcium to prevent competition for absorption.

For some, the solution may be extra copper that folklore popularized in wearing a bracelet to alleviate arthritic symptoms. Copper may absorb topically through the skin to produce both an anesthetic and anti-inflammatory effect. One of the reasons for aspirin's initial positive effect on alleviating arthritic symptoms is that it prompts the formation of copper complexes in the blood. John R. J. Sorenson, Ph.D., in a 153 person study of people with arthritic like diseases, found that copper levels rose and fell with flare-ups and remission of the disease. He found that giving copper supplements like copper acetate was an effective way to treat inflammation in animal experiments and theorized that copper was the body's natural way of assisting the inflammatory process, *Journal of Applied Nutrition*¹¹, April, 1980.

Pfeiffer has pointed out that the body under stress or infection shows a rise in serum copper and a decrease in serum zinc. In animal studies, superoxidase dismutase, a protein containing zinc and copper had been shown to reduce acute inflammation within one hour.

Dr. Wyburn-Mason's success with copper sulphate also suggests that copper complexes kill his Rheumatoid Disease organisms as well as repel them⁴⁸. Wyburn-Mason's Rheumatoid Disease amoebas would not migrate into cultures with copper present, and when copper sulphate was added to the culture, his Rheumatoid Disease amoebas died. Bile salts and copper sulphate, at 10-25 mg daily, have been successfully used to stop the course of RD in Dr. Wyburn-Mason's clinical experience, whether the cause be amoebic or something else.

Unlike metronidazole, bile salts and copper sulfate do not cause the Herxheimer reaction. One wonders if metronidazole leaves behind the dead remains of RD amoeba that pile up like dolomite limestone deposits pile up in the sea except these amoeba "skeletons" would pile up elsewhere.

I wonder further if this is what is responsible for the Herxheimer crisis reaction where all Rheumatoid Disease symptoms are made temporarily exaggerated for short periods of time. Bile salts help digest fat in the GI tract; at the joints, a fat-based amoeba might be so thoroughly dissolved by bile that all minerals and other metabolic by-products go into circulation in non-irritating forms without piling up at the joints.

Copper sulfate might kill the amoeba, then chelate with or bind to the amoeba's mineral remains, leaving less in the way of toxins to cause a Herxheimer's reaction.

It did occur to me that "amoebas" that "look like" macrophages might have been macrophages caught in the act of auto-immune attack and were acting like foreign microbes and may have been disabled as if they were vagrant invaders. [This possibility occurred to Dr. Paul K. Pybus, former Chief Medical Advisor to The Rheumatoid Disease Foundation/The Arthritis Trust of America, and seems to have been confirmed by research performed by protozoologist Kwang Jeon, Ph.D. [Also see the "The Herxheimer Effect"¹⁵ at <http://www.arthritis-trust.org>.]

Pfeiffer points out that one of aspirin's and all other NSAIDS' little known effects are chelation: that is, bivalent metals such as copper, zinc, iron, and calcium are borrowed from tissue and bone and increased in the blood supply when aspirin is taken. As Richard Murray, D.C., has pointed out, this is temporarily helpful in assisting

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. inflammatory processes by feeding white blood cells what they need, and in reducing histamine levels in the blood, but may in the long term delay the resolution of the problem³⁷.

Use of NSAIDS, though alleviating symptoms, may have been in part responsible for low iron and calcium levels noted by Dr. Robert Bingham, *Fight Back Against Arthritis*⁵. Our modern tendency to take an aspirin for every minor ache and pain may have severely drained our mineral banks.

As I understand it, aspirin-like drugs alone are putting a potential drain on the body's own storehouse of minerals when they are habitually taken over long periods of time. Non-steroidal anti-inflammatory drugs themselves may be in part responsible for creating three conditions: mineral deficiency, bone loss, and bone spurs as the calcium-mineral banks are habitually drawn on. In a sense, daily use of aspirin and its over-the-counter cousins would place the body in a constant state of chronic stress resembling the disease process itself.

It would be fascinating to find, though, if calcium-magnesium were added to aspirin that aspirin's effects would mimic calcium-EDTA or magnesium-EDTA chelation therapy. [Also see "Chelation Therapy," <http://www.arthritis-trust.org>.] Aspirin and minerals taken together might increase serum calcium without creating a drain on bone reserves and reduce the hazards of overly acidic stomachs. For pain-relieving effects aspirin aims at, plain old cod liver oil would be a healthier and safer, but not a cheaper alternative, without depleting the body of minerals. Jean Carper in the *Food Pharmacy*⁷ has pointed out that fish oils or fish block excessive prostaglandin production, in part responsible for the body over-reacting to irritants. Calcium and cod liver oil, which D₃ in cod liver oil assists, might make for a winning combination in antihistamine and immune-system boosting effects. [Also see "Essential Fatty Acids Are Essential," <http://www.arthritis-trust.org>.]

Hard work or exercise in hot weather can also result in calcium losses of 1000 mg per day, Faelton pointed out in *The Complete Book of Minerals for Health*¹¹.

Feeding the body the minerals it must otherwise mobilize to treat the inflammatory process makes good common sense: extra calcium (taken separately from zinc), extra zinc (also taken separately from copper), extra copper.

Gold salts at one time, Dr. Carl Pfeiffer pointed out, in *Zinc and Other Micronutrients*⁴⁴, 1978, had been shown to reduce inflammation, at least until gold salts themselves become excessive and reversed their effects. Fascinatingly to me, gold and copper are found in similar foods which are safer sources of the mineral. Dr. M. W. Whitehouse has pointed out that people undergoing prolonged bouts of inflammation begin to develop tastes for nuts, shellfish, and cider vinegar, all rich sources of copper and other minerals. Gold is also found in organic forms in carrots and shrimp. Since shrimp is possibly the only seafood that does not create an overly acidic reaction in the body, and overly acidic conditions are associated with arthritics, the implications for a copper-gold, fish-oil dietary change may be worth looking into. Adding carrots or carrot juice, nuts, and shrimp to the diet might be safer alternatives than supplements or injections, particularly of gold.

The *British Journal of Dermatology*, October, 1980, reported that 11 arthritic patients had been given zinc sulfate, 220 mg, 3 times a day, for six weeks, then a placebo for six weeks. For those who continued the therapy for six months, significant gains in mobility, reduction of swelling, and stiffness took place. Zinc plays a known role in immune system stimulation and reduces inflammation. It also is known to play a role as a free radical scavenger, neutralizing the effects of many irritants and normalizing the pH of the blood. Severe zinc deficiency shows up in fingernails with ridges and white spots and is associated with prostate problems. In one study, low levels of zinc and histidine were found in rheumatoid arthritis patients. Twelve weeks of 220 mg of zinc three times a day had the result of significant improvements in walking, stiffness, and swelling in the study of the University of Washington Medical School in Seattle⁴⁴. In this

study, it was believed that EXCESS copper was removed from tissues by the antagonistic effect of zinc on copper. In some cases, it may be too much copper, in others, too little.

Herbs

The herbalist point of view supports a mineral deficiency-acidosis theory of arthritis. Jethro Kloss, in *Back to Eden*²⁹, felt, with other herbalists, that devitaminized, demineralized, processed foods, especially sugar, white flour, tea, coffee, liquors, and excessive meat consumption produced an overly acidic condition of the blood where minerals were lost and metabolic waste products accumulated.

Dr. Prosch has also observed very much the same clinical profile, especially that "The great majority of [arthritic] patient's body fluids are too acid in nature." According to Dr. Prosch, "Acid-forming foods are those which are high in one or more of three elements: phosphorus, sulfur, and chlorine; alkaline diets are those high in potassium, calcium, magnesium and sodium¹⁸." Refined sugars, refined flours, grains, proteins, and fats are largely acidic in nature. The RD *Amoeba chromatosa* is described as containing "acid-fast" structures by Dr. Wyburn-Mason and may either thrive on or create acid conditions⁴⁸.

Much could be gained in healthy mineralization by simply avoiding excessive consumption of caffeinated beverages, soft drinks, and alcohol which are known as mineral wasters, especially wasters of magnesium and calcium. Other gains would come from avoiding refined sugar, white flour and rice, which require B vitamins and minerals that they must borrow from our bodies in order to be digested. The net result of eating refined foods is mineral-vitamin depletion.

Linda Rector-Page, N.D., Ph.D.⁴⁵, an herbalist, points out that acid/alkaline imbalances that result in arthritis are caused by "stress or poor environment . . . adrenal exhaustion, faulty elimination, too many prescription drugs, long-held emotional resentments, an over-acid system, and pessimism about life," *How to Be Your Own Herbal Pharmacist*, 1991⁴⁵. Dr. Rector-Page suggests that many herbs support detoxification, alkalizing, flushing out *inorganic* mineral deposits, and furnishing the body with enough *organic* silica and vitamin C for rebuilding healthy collagen and tissue. She claims that arthritis, rheumatism, bone spurs, adrenal exhaustion, and imbalances in blood pH are helped by the following kinds of herbs.

For blood and colon **cleansing**, one or more combinations of echinacea, red clover, licorice root.

For **dissolving inorganic sediment**, lemon or citrus peel, cranberry powder, slippery elm, kelp or other sea vegetables, the kitchen herb turmeric.

For **alkalizing the system**, aloe vera, rose hips, sarsaparilla, parsley.

For **digestion**, alfalfa, garlic, and cayenne.

For restoring **flexibility and reducing inflammation**, yucca, used by Southwestern Native Americans for centuries to treat arthritis, alfalfa, yarrow, aloe vera.

In different carefully controlled studies reported by Dr. Bingham, 50% to 90% of arthritic patients taking yucca alone for months to a year experienced significant improvements⁵. Yucca shares with ginseng herbal saponins which act as biological detergents cleaning out irritants in the system.

For **herbal anti-oxidants** useful in neutralizing irritants in arthritis, garlic, Pau d'Arco, ginkgo biloba, bee pollen, chlorella, and Siberian ginseng.

Dr. Rector-Page suggests combining one herb from each group to brew tea, or making up combinations of your own capsules from dried herbs in the same way. Many individual responses are possible to different herbs and herb combinations; one combination will work for one individual while another may work for another.

Cayenne does not have a burning effect unless it is heated and, because of that, probably should not be used in tea. I do know from personal experience that cayenne may not burn on its way in, or burn while it's in the digestive tract, but it can burn on its way out. It is a rich source of beta carotene, has anti-bacterial properties, and acts as

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. a stimulant on circulation and the entire system. Jean Cartper, in the *Food Pharmacy*⁷, pointed out that cayenne, with other hot peppers, stimulates the body's own pain-killers, the endorphins and enkephalins, producing not only a pain-killing effect but a kind of euphoria. It acts as a warming agent for arthritic, lower back, and rheumatic pains. [Also see Arthritis Help Centers publication, *Foods Found to Cause Pain, Swelling and Stiffness*, <http://www.arthritistrust.org>.]

Alfalfa is an Egyptian word meaning "father." It was considered the father of all restorative tonics, rich in vitamins A, D, E, and K, all minerals, and trace minerals. Paradoxically, rich in organic mineral salts, it is one of the herbalist's ways of ridding the body of inorganic mineral deposits.

Parsley, rich in chlorophyll and magnesium, B vitamins, potassium and other minerals, is also known to help dissolve bladder stones. It may work the same way on bone spurs.

Garlic is a multiple vitamin and multi-mineral in itself, especially rich in selenium and germanium. Selenium and germanium alone have been known to positively affect just about every known disease condition and restore health.

Garlic's legendary powers, as reported in Morton Walker, D.P.M., *The Healing Powers of Garlic*⁴⁷, may be in part due to moderate amounts of germanium and selenium.

Dr. Kazuhiki Asai, *Miracle Cure: Organic Germanium*³, 1981, felt that germanium was the major cause of ginseng's power to heal. It is found only in small amounts in medicinal plants, but these small amounts may be responsible for its effects. Several herbs used in herbal treatments of arthritis are rich in germanium: garlic, aloe vera, comfrey, chlorella, and ginseng. Dr. Asai reported that you can feel warmth in hands and feet within a half hour of taking organic germanium. He found that germanium alone restored mineral balance, blood pH, and normal uric acid levels. [Also see "Gouty Arthritis," <http://www.arthritistrust.org>.]

High uric acid levels have been reported in people with Gouty Arthritis and is associated with two personality traits: high drive and high intelligence.

In studies of rheumatoid arthritis, germanium was found to normalize many immune system functions, including T-cells, B lymphocytes, antibody-dependent cellular toxicity, and other functions, according to S. Levine and P. Kidd et al, Orthomolecular Medical Society Meeting, San Francisco, 1987, S. Arimori et al, *Effect of Ge-132 as an Immunomodulator in Immunomodulation by Microbial Products and Related Synthetic Compounds*, Y. Yamamura, et al, eds., Amsterdam Holland, and Dr. Asai's work at the Germanium Research Institute³. [Also see "Germanium," <http://www.arthritistrust.org>.]

Many of the healing affects of germanium and selenium might be inexpensively acquired through garlic which has both germanium and selenium, and ginseng, which has germanium, the richest source of which is said to be Korean ginseng. Dr. Asai also found that moderate doses of germanium had positive effects on his own symptoms, but large amounts tended to bring back his own chronic complaints.

Dr. Richard Passwater, in *Selenium as Food and Medicine*⁴³, 1980, reported on the May 1980 meeting of Norwegian researchers who had found depressed selenium levels in the blood of a rheumatoid arthritis group. Dramatic successes mentioned were attributed to selenium's known effects as a free radical scavenger helping to detoxify irritants, reducing pain, and eliminating symptoms. The combination of natural vitamin E and selenium intensified this effect. Herbalists recommending alfalfa and garlic may have chanced upon the vitamin E and selenium combination together with germanium. High and low levels of minerals may just be righted by the normalizing function of germanium alone.

Sunlight

When John Ott, photographer for Walt Disney's World of Nature, had gone to Florida hoping that sunshine and warmth would help his own arthritis, he was disappointed after days of basking in the sun. Then, he broke his glasses, and days later was able to throw

away his collection of canes, walk without pain, and even run up stairs. His discovery supported other observations he had made in photographing the growth of plants and cellular plant activity. Glass filters out portions of the spectrum and affects cellular activity. He had worn sunglasses in and out of doors his entire life, looked through the glass of car windshields, and looked at the outdoors through glass windows. He began then to spend as much time outdoors as possible, sometimes in the sun, sometimes in the shade, but always as much as possible without wearing eyeglasses. Six months later, X-rays helped confirm why he had experienced greater flexibility, range of motion, and absence of pain. In *Health and Light*⁴¹, John Ott saw that the X-rays revealed he had an objective 30% improvement in the hip that gave him so much trouble. Sunlight, unfiltered by glass or plastic, had somehow affected the course of his arthritis. And it was not only the sunshine on his skin that produced vitamin D, which is also known to help assimilate and use calcium, but also the effect of the sun on the pineal and pituitary glands, both of which are light sensitive, and both of which help store hormones and regulate the hormone system which is in turn responsible for the growth, maintenance, and repair of the body.

Arthritis may be partly an environmental disease, caused by living too much indoors, under artificial lighting not giving us the full spectrum, and caused by the glasses we wear and the glass windows we look out of. In part, this would make arthritis a sunshine deficiency disease, as to large extent is multiple sclerosis a disease of northern climates and weak sunlight. It wouldn't hurt to spend more time outside without glasses, not only for the sunshine and the vitamin D but the fresh air. Not only is the price right, but Dr. Robert Bingham⁵ had long observed that well tanned people and arthritis don't go together. Dr. Bingham recommended 15 to 20 minutes of direct sunlight and as much indirect sunlight as possible. Although the viewing of sunshine from indoors and through eyeglasses had not occurred to him as a problem, Robert Bingham, M.D., did notice that even vision problems improved without wearing corrective lenses while outside.

I have often wondered if it is only vitamin D which is affected by the action of sunlight on skin. Similar transformations may be involved with sunlight's effect on all other essential nutrients and cellular behavior. Linda Clark¹⁰ has pointed out that water's nutritional value and taste as well as pasta's taste and nutrient content are positively affected by sunlight. Pasta dried in the sun has a different quality than pasta dried indoors.

Louis Pasteur had originally noticed that lactic acid produced by synthetic means was different from the lactic acid in milk. Artificial lactic acid, though chemically "identical" to milk lactic acid, is a reversed mirror image³⁰. Natural substances are laevo- or left handed chemicals, but synthetics are dextro- or right handed. They differ in how they reflect polarized light either to the right or the left. Naturally produced lactic acid is known to be a chelator partly responsible for salt and other mineral losses during exercise. In sweating, lactic acid helps cleanse the body of excesses. Sudden remissions from mercury poisoning have been reported during episodes of sweating. The question I have is this: Do synthetic lactic acid food additives function in reverse, precipitating calcium deposits in arteries and joints?

Royal Lee and others^{30,34,36} in the forties felt that synthetic vitamins were really poisons or anti-vitamins. In animal studies with rats and dogs, animals lived shorter lives on synthetically enriched foods than they did on foods not enriched. In experiments with synthetic vitamin B and E, it was thought that these mirror-image-vitamins combined with real vitamins in food or in the cells of the body in order to complete themselves. Synthetic vitamin E actually resulted in depleting the stores of natural vitamin E in the body, or it had no effect. Synthetic thiamine or B₁ was unable to reverse beriberi, but modest amounts of rice polish were able to restore health. It may well be that we are not only vitamin-mineral deprived because of loss of nutrients through high temperature cooking, the leeching out of vitamins and minerals into the broth in which they are cooked and canned, but also because of the reversed nature of the synthetic

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vitamins that food companies use to replace nutrients lost in processing. Vitamins may not only be incomplete in enriched foods and synthetic vitamin supplements, but work differently because of the effect of light on their functions. Reversal of light may mean reversal of function.

Of the many reasons to use organic raw milk products and cod liver oil, Nathaniel Mead, a doctoral student in nutrition in "Eating For Flexibility," *Yoga Journal*³⁵ wrote that synthetic D₂ as found in pasteurized milk and cheeses "contributes to calcification by releasing calcium from the bones and raising cholesterol levels in the human body."

Heavy intake of vitamin D₂ is now believed to contribute to calcium deposits, the exact reverse effect of its intended addition to milk.

Mead cited a 1974, 469 page Food and Drug Administration, report on vitamin D toxicology that suggested a reclassification of vitamin D₂, ergocalciferol, as a potent "carefully controlled hormone"³⁵.

In the 1900s, Mead pointed out, not only did synthetic D₂ fail to have an effect on arthritis and rickets, but resulted in epidemics of infant and child poisonings.

Synthetics may indeed have the reverse effects of their natural counterparts. In this respect, D₂ is likely to prove one causative factor in producing bone spurs.

Calcium and vitamin D sources should be chosen carefully.

Houses with artificial lighting have positive ion charges; natural sunlight has a negative ion charge. Living in glass houses with light filtered through glass light bulbs and tubes may not only restrict a part of the spectrum, but reverse the ionization of radiant energy. As Anthony Di Fabio and Gus J. Prosch, Jr., M.D. pointed out in *Arthritis: Osteoarthritis and Rheumatoid Disease, Including Rheumatoid Arthritis*,¹⁸ positive electromagnetic fields are associated with injury; negative electromagnetic fields are associated with healing. Outdoor sunlight's negative-ion polarity may normalize the polarity of calcium ions. Indoor living may precipitate calcium deposits by reversing its charge.

When I first heard an acupuncturist's explanation of facial tics, I thought it was strange. Ancient Chinese medicine blames facial tics on the wind. Imbalances in air, earth, fire, water account for everything. Then, it hit me. The Santa Ana winds and the Chinook winds are known to cause terrible physical and emotional stress. What is not so well known is that any wind carries a strong positive-ion charge. I have a strong suspicion that the wind of any form changes the charge of calcium and thereby makes the calcium useless, which in turn causes the tics, a wind-induced calcium deficiency.

Our entire blood pH, proper ionization of tissues and blood, healthful ionization of minerals, may all be geared to outdoor living, living in real sunlight, with the negative ionization it gives to the air, and, I'll bet, the negative ionization it produces in the body. Excessive free radicals may be encouraged by the electrical fields of homes and offices; normal populations of free radicals may be re-established by spending more time outdoors. Outdoor living might work as well as the Light Beam Generator's effects of restoring the 'correct charge,' I assume the negative charge, to blocked lymph systems and damaged cellular debris¹⁷. Maybe that was what Dr. Reich meant when he said that we evolved under a blanket of solar radiation, that part of solar radiation photosynthesizes into vitamin D, which in turn ionized calcium, which in turn helped energize all cells. Vitamin deficiency and mineral abnormality may be directly related to sunlight deficiency^{2,18}. [Also see "Lymphatic Detoxification," <http://www.arthritis-trust.org>.]

Color

John Ott⁴¹ helped convince me that color should not only be thought of as a matter of personal preference but as a source of radiant energy. Plants and plant cells behave differently under differently colored filters. Tomatoes will not produce fruit in the winter in glass greenhouses that filter out portions of the spectrum.

Col. Dinshah Gladiali, in the *Spectro-ChromeMetry Encyclo-*

pedia, believed that arthritis and other conditions resulted from color deficiency. A deficiency of red and yellow, he believed, resulted in depression and chronic fear¹⁰. Depression and excitement, Pfeiffer has pointed out, result in lowered calcium levels in the blood.

The staff of *Prevention Magazine*, *Encyclopedia of Common Diseases*, 1976, reported on the findings of Dr. Moos, Solomon, and others who investigated the psychological profiles of people subject to arthritis. Depression and fear were part of the profile of those who developed arthritic symptoms. In some cases, this profile was connected with rejection by mothers and strict fathers. In others, arthritic people were described as self-sacrificing, inhibited, perfectionistic people who were characterized as moody, nervous and tense. Defeatist attitudes, depression, pessimism, or gloomy outlooks, may be players in predisposing some people to arthritic problems. Knowing feelings, acknowledging feelings, understanding resentments, and letting them go might well be worth looking into²⁰.

In Rolfing theory and acupuncture, holding onto negative feelings is believed to affect the flow of Chi or the vital force responsible for keeping us alive and well. To Ida Rolf²¹, this vital force was gravity itself, a force that after 8 Rolfing sessions, I began to sense like a kind of electromagnetic water that buoyed me up, help me stand up, and kept me from falling. If negative feelings are held onto, eventually physical blockages take place in the musculature and connective tissues. Piling up of mineral deposits and piling up of feelings may be directly related. Frozen shoulders and frozen feelings go together.

As I believe L. Ron Hubbard was saying, unbending responses to living and stiffness in the joints may be part of the unconscious scripts that our cells learn and confuse¹⁶. Once one automatic response is established, it can be equated and confused with any other feeling or posture.

As Rolfing released a physical block in my neck, I was aware of a large reserve of anger stored in that part of my body as if it were frozen in place, making my neck stiff, and forcing me to relive the stiff neck I experienced when I first got polio. As I sensed the tightness and the pain, anger erupted at my father-in-law. As I followed the anger, the feeling was digested and transformed into grief, and all the grieving I should have done at losing the use of my left leg in my childhood. I thought I was angry that my father-in-law was growing old and dying; he has been very important to me as a male model. But under that anger was a confused deposit of calcified grief that I had never processed or dissolved. As I followed the feelings and sensed them in my body, I let go of many long held resentments against God, the universe, my leg, my friends, and my family who had let me down. In letting those resentments go, I let go of a great deal of stiffness and immobility. I had rejected much about my life and much about myself and confused it all with hurt that I had never fully experienced, an angry mode that I was frozen into, and a grieving process that I never let myself go through. In becoming aware of those confusions, I felt as if I lost 50 physical pounds and another 50 emotional pounds that made my spirit and my body stiff, heavy, and painful to live in.

If we reject ourselves on emotional levels, we may be programming our immune system to attack ourselves physically. Emotional depression and immune depression go hand in hand, according to Richard Gerber, M.D., *Vibrational Medicine*²³. Rather than acting out what our bodies are telling us unconsciously, we might just be able to program the body for healthier living by telling ourselves and others positive things, by choosing and creating a positive world rather than by being victimized by a negative one, inside and out. I believe we are supposed to learn from our feelings, but at some point, we're supposed to let them go and move on. Choosing a positive color may be one way of doing just that. In the little things, big things begin.

Simply changing clothing preferences to brighter colors has worked for some people reported in Linda Clark's, *The Ancient Art of Color Therapy*¹⁰. Wearing red is said to reduce blood pressure,

Medical data is for informational purposes only. You should always consult your family physician, or one of our referral physicians prior to treatment. improve outlook, and increase confidence. Yellow, lemon tones, amber, and golden yellow, Dinshah reported to be helpful in some forms of arthritis as well. Wonderfully enough, Dinshah reported that wearing yellow helped loosen calcium deposits in arthritis. Yellow herbs like lemon and turmeric are said to do the same thing.

Does this mean that at the same time your mood lifts, your calcium deposits lift off as well? It has happened the other way around in chelation therapy. Maybe it works both ways and each goes hand in hand. The mind can chose for the body; or the body can unconsciously mirror the mind's unconcious choices. Mood, outlook, and health may be all unconsciously affected by drab surroundings, negative circumstances, the color schemes of our homes, the neutral colors of our lives. [Also see "Stress," <http://www.arthritis-trust.org>.]

Dr. Oscar Brunler, physicist and M.D., also found that beaming yellow on the stomach area helped rid the body of parasites¹⁰. Wearing yellow clothing, a yellow tie, eating yellow foods, cheese, eggs, lemons, yellow sweet potatoes, yellow corn, are all said to produce the desired effects. Orange foods and orange colors also were observed to relieve depression and negative attitudes.

Wearing red or scarlet has been observed to reduce inflammation. Dr. Brunler felt that flooding the body with red light helped rid the body of excessive uric acid deposits and dissolved uric acid crystals in joints. In school children, wearing red improves test performance¹⁰. On Wall Street, the power tie is sometimes red, sometimes yellow. In my personal experimentation with those colors, red and yellow do lift my spirits and improve energy as an adult. It only took a red or lemon yellow tie to change a gloomy day into a bright one for me and those I was in contact with. When I slept on red sheets for one week, I only needed four hours of sleep a night. Wearing a red denim shirt made me feel like dancing. It's funny, but I hadn't chosen those colors since I was a kid.

Noticing the effects of different color preferences on our moods may be an inexpensive way of transforming negative feelings into something healthy and robust. Kandinski has pointed out that red is associated with childlike vitality and assertiveness²⁷. For some of us like me who are just beginning to develop that bold childlike side of themselves, color is one way to get there. Chosing foods on that basis might not be a bad idea either. Color is a key to vitamin content, and color may be feeding much more than our spirit when we eat or surround ourselves with something bright and cheerful.

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