What Doctors, Scientists and Nutritionists Say About Alkaline, Ionized Kangen Water™

Dr. Hiromi Shinya



"I have examined more than 300,000 people's stomachs and intestines for 35 years and realize that our health depends largely on our dietary life. And from my experiences I would like to teach you healthy, dietary habits to help you enjoy your life!"

"It is widely recognized in the medical profession that a healthy and clean colon is one of the most important precursors to good health and that the great majority of body ailments and diseases originate in an acidic and dirty colon. Water is essential for your health. Drinking "good water;" especially hard water which has much calcium and magnesium keeps your body at an optimal alkaline PH."

"Kangen Water™ is alkaline rich water (ph 8-9), and is considered the very best drinking water because of its incomparable powers of hydration, detoxification, and anti-oxidation."

~Dr. Hiromi Shinya, Leading Endocrinologist (2)

Dr. Horst Filtzer



"When I first drank Kangen WaterTM I experienced something I had never have before, I liked it, I liked it very much. ... As I investigated the product, as I investigated the concept of ionized water, as I investigated the concept of alkalization of the body cells, I became more and more convinced that this is a product that is of absolute value to all mankind. That it is a product that should be used in all households if at all possible, because it clearly is superior to any form of water than I ever encountered."

"Personally, I can testify that there is no question that my own life has been markedly enriched by the ingestion of Kangen WaterTM... I endorse Kangen WaterTM as a physician, as a surgeon, as a human being, 100%. I feel that it is of great benefit to all mankind.... I can only recommend it in the highest way." ~Dr. Horst Filtzer, Vascular Surgeon (3)

Dr. Corinne Allen



"Brain inflammation can occur from many causes including: head injuries, premature birth, lack of oxygen and various infections. The resulting inflammation can provide dysfunction in the body's ability to detoxify harmful substances. They can also exhibit mitochondria that have low energy output and high free-radical generation. Often those with brain challenges like Autism and Aspergers, drink almost no water each day, only accentuating the problems in brain functioning. In Autistics and others where brain inflammation is high, toxins can more easily cross the blood brain flooding the brain with free radicals. Kangen WaterTM has been providing my clients with a strong source of antioxidants and improved hydration. In our brain programs we observed that our therapeutic expectations have been significantly exceeded by adding Kangen WaterTM to the treatment plan.

~Dr. Corinne Allen, Nutritionist (4)





"This [alkalizing] program contains a whole new way of looking at diet and nutrition. When followed, it leads to a healthy, lean, trim body and an enhanced level of wellness, energy and mental clarity most people have not experienced previously."

"Based on years of research and observation, we have concluded that over acidification of the body is the underlying cause of all disease. Because many people consume a diet primarily comprised of acid forming foods, (i.e. sugars, meat, dairy, yeast breads, coffee, alcohol, starches, etc.) rather than whole plant foods, they are frequently sick and tired"

"In my experience, Kangen WaterTM supercharges your nutritional program better than anything. Water is the key and this [Enagic® KangenTM Water] is the best water I know of. Anyone who gives it an honest try will experience it in their own health, without question!" ~Dr. Dave Carpenter, Naturopathic Physician (5)

Dr Fereydoon Batmanghelidj



"I am a researcher. I have researched dehydration for the past 20 years. When I discovered that the solution to most of the disease conditions of our society is not a moneymaker, I decided to take my information to the public. My research revealed that unintentional dehydration produces stress, chronic pains and many degenerative diseases. Dry mouth is not the only sign of dehydration and waiting to get thirsty is wrong. Medicine has based its understanding that it is solid matter in the body that regulates all functions of the body. I have explained scientifically at the molecular level that it is water that regulates all functions of the body including functions of solid matter. 75 % of our bodies are composed of water. The brain is 85% water. It is water that energizes and activates the solid matter. If you don't take enough water, some functions of the body will suffer. Dehydration produces system disturbances. When I use the word water cure, I am referring to curing dehydration with water."

~Dr Fereydoon Batmanghelidj, Medical Doctor, Researcher (6)

Dr. Otto Warburg



Dr. Otto Warburg in his lab at the Max Planck Institute for Cell Physiology in Berlin-Dahlem. 1960s. "All normal cells have an absolute requirement for oxygen, but cancer cells can live without oxygen – a rule without exception."

"Cancerous tissues are acidic, whereas healthy tissues are alkaline."

~Dr. Otto Warburg, Chemist, Nobel Prize Winner (7)

Dr. William Howard Hav



"All disease is caused by auto-toxification (self-poisoning) due to acid accumulation in the body."
"Now we depart from health in just the proportion to which we have allowed our alkalies to be dissipated by introduction of acid forming food in too great amount... It may seem strange to say that all disease is the same thing, no matter what its myriad modes of expression, but it is verily so."

"It was said earlier that all we can do for disease is to stop creating this background of acid end-products of digestion and metabolism, and this is true, for if disease comes always and only from this acid collection, then it must be evident to anyone that the cure lies in the discontinuance of this accumulation.

"Pneumonia, erysipelas, typhoid fever, influenza, acute arthritis, colitis, hay fever, all subside when the body is fairly detoxicated and the diet so corrected as to stop this excessive formation of the acid end-products, simply because each was expressing the end-point of tolerance of toxins, and each was the means by which the body sought to unload this unwanted mass."

"If the blood develops a more acidic condition, then these excess acidic wastes have to be deposited somewhere in the body. If this unhealthy process continues year after year, these areas steadily increase in acidity and their cells begin to die. Other cells in the affected area may survive by becoming abnormal, these are called malignant. Malignant cells cannot respond to brain commands. They undergo a cellular division that is out of control. This is the beginning of cancer."

~Dr. William Howard Hay, Surgeon, Developer of Hay Diet (8)

Dr Keiichi Morishita



"Modern medicine... treats these malignant cells as if they were bacteria and viruses, it uses chemotherapy, radiation and surgery to treat cancer. Yet none of these treatments will help very much if the environment of the body continues to remain acidic."

"Drinking water that has a high alkaline pH, because of its de-acidifying effect, will help in preventing cancer. In Asia, alkaline water is regularly served to patients, and is considered a regular part of treatment." ~Dr Keiichi Morishita, Director of the Ochanomizu Clinic in Japan and the Head of the International Natural Medicine Association (9)

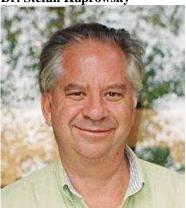
Dr. Robert C. Atkins



"Just about every condition I can think of, from arthritis to diabetes to cancer, is associated with acidity. It is no coincidence that many of our modern habits such as alcohol consumption, smoking, eating sugar, and stress, all tend to increase acidity. The only parts of our body that are supposed to be acidic are the contents of the stomach, the skin, and perspiration. Virtually everything else is supposed to be at least slightly alkaline."

~Dr. Robert C. Atkins, Physician, Cardiologist (10)

Dr. Stefan Kuprowsky



"Acid wastes build up in the body in the form of cholesterol, gallstones, kidney stones, arterial plaque, urates, phosphates and sulfates. These acidic waste products are the direct cause of premature aging and the onset of chronic disease."

"I believe that the best water is water that is alkaline (reduced) and purified using a small device known as a water ionizer."

~Dr. Stefan Kuprowsky, Naturopathic Doctor (11)

Dr. Theodore A. Baroody



"Any stressor that the mind or body interprets and internalizes as too much to deal with, leaves an acid residue. Even a mild stressor can cause a partial or total acid-forming reaction. ... The countless names attached to illness do not really mater. What does matter is that they all come from the same root cause: too much tissue acid waste in the body."

"It is my opinion that ionized water will change the way in which all health practitioners and the public approach their health in the coming years. ... I have administered over 5000 gallons of this water for about every health situation imaginable. I feel that restructured alkaline water can benefit everyone."

~Dr. Theodore A. Baroody, DC, ND, Ph.D., Dipl. Acu., Nutritional Consultant (12)

Dr. Susan Lark



"Drinking four to six glasses of alkaline water a day will help to neutralize over acidity and over time will help to restore your buffering ability. Alkaline water should be used when conditions of over acidity develop, such as cold, flu or bronchitis. Like vitamins C, E and Beta Carotene, alkaline water acts as an antioxidant because of its excess supply of free electrons. This can help the body against the development of heart disease, strokes, immune dysfunctions, and other common ailments."

"The benefits of the alkaline water created through electrolysis far exceed just its ability to gently raise the pH of the cells and tissues of the body and to neutralize acids. Because the alkaline water has gained a significant number of free electrons through the electrolysis process, it is able to donate these electrons to active oxygen free radicals in the body, thereby becoming a super antioxidant. By donating its excess free electrons, alkaline water is able to block the oxidation of normal tissue by free oxygen radicals."

~Dr. Susan Lark, Clinical Nutritionist (13)

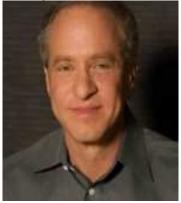
Dr. Lester Packer



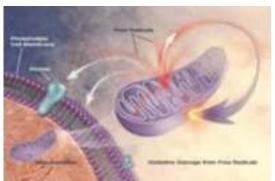
"Scientists now believe that free radicals are factors in nearly every known disease" ~Dr. Lester Packer, Senior scientist at Lawrence Berkeley Laboratory, world's foremost antioxidant research scientist

"Consuming the right type of water is vital to detoxifying the body's acidic waste products and is one of the most powerful health treatments available." ... "We recommended that you drink 8-10 glasses per day of this alkaline water. It is one of the simplest and most powerful things that you can do to combat a wide range of disease processes. It is interesting to note that in Japan, professional sports teams drink alkaline water to improve their performance" ... "It is well known that many chronic diseases result in excess acidity of the body (metabolic acidosis). We also know that the body tends to become more acidic due to modern dietary habits and lifestyles and the aging process itself. By drinking high negative ORP alkaline water, you combat metabolic acidosis and improve absorption of nutrients." (14)

Dr. Ray Kurzweil



"There are more benefits to "alkaline water" than simply the alkalinity or pH. The most important feature of alkaline water produced by a water alkalizer is its oxidation reduction potential (ORP). Water with a high negative ORP is of particular value in its ability to neutralize oxygen free radicals. ORP can also be directly tested using an ORP sensor and meter. We have conducted these experiments as well. We found that water coming directly from the tap had an ORP of +290mV, while the water coming out of the water alkalinizer had a negative ORP. The more negative the ORP of a substance (that is, the higher its negative ORP), the more likely it is to engage in chemical reactions that donate electrons. These electrons are immediately available to engage in reactions that neutralize positively charged free radicals. This is the key benefit of water produced by a water alkalinizer that is not available by simply drinking water that has had some bicarb or other compounds dissolved in it to make it alkaline."



"Free radicals are among the most damaging molecules in the body and are highly unstable molecules that are oxidizing agents and are electron deficient. They are a principal cause of damage and disease in the body. Oxygen free radicals contribute significantly to a broad variety of harmful conditions in the body ranging from life-threatening conditions such as heart disease, stroke and cancer, to less severe conditions such as sunburns, arthritis, cataracts, and many others. Free radicals MUST get electrons from somewhere and will steal them from whatever molecules are around, including normal, healthy tissues."
"Damage to tissues results when free radicals strip these electrons from healthy cells. If the damage goes on unchecked, this will lead to disease. For example, the oxidation of LDL cholesterol particles in arterial walls by free radicals triggers an immune system response that results in atherosclerosis, the principal cause of heart disease. The negative ions in alkaline water from an electrolysis machine are a rich source of electrons that can be donated to these free radicals in the body, neutralizing them and stopping them from damaging healthy tissues. Specifically, these ions have the potential to engage in the chemical reactions necessary to neutralize oxygen free radicals."

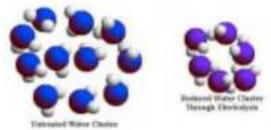
~Dr. Ray Kurzweil, Award-winning Scientist, Inventor (15)

Dr. Mu Shik Jhon



"Hexagonal water – comprised of small molecular units or ring-shaped clusters – move easily within the cellular matrix of the body, helping with nutrient absorption and waster removal. It aids metabolic processes, supports the immune system, contributes to lasting vitality and acts as a carrier of dissolved oxygen. It can provide alkaline minerals to the body and it helps in the more efficient removal of acidic wastes. Drinking hexagonal water takes us in the direction of health. It supports long life and freedom from disease. Biological organisms prefer hexagonal water."

~Dr. Mu Shik Jhon, Chemist, Founding president of the Association of Academies of Sciences in Asia



"Ionized water has a hexagonal shape and carries an abundance of hydroxyl ions (OH-). It provides extra electrons that neutralize destructive free radicals circulating throughout the body. Hexagonal ionized water carries a high negative ORP (Oxidation Reduction Potential) when it is first produced, making it a potent anti-oxidant."

"When taken internally, the reduced ionized water with it redox potential, or ORP of -250 to -350 readily donates its electrons to oddball oxygen radicals and blocks the interaction of the active oxygen with normal molecules."

"Water has the ability to attract and accumulate bio-energy. It also stores an energy memory of harmful or helpful vibrations to which it was exposed in the past. Chlorinated tap water is polluted with non-biological chemicals and negative energy imprints. It is also devoid of bio-energy and so may be regarded as being badly polluted as well as 'dead'. Alkaline living water is regarded by a growing number of health care professionals as the best water to drink and is listed as a medical device in Japan for the treatment of degenerative diseases."

"My hypothesis was born from the clinical observation study in our clinic. Since May '85 we have confirmed thousands of clinical improvements, obtained solely by exchanging drinking (as well as cooking water) from tap water to reduced water." (16)

Dr. Hidemitsu Havashi



"Devices to produce reduced water were introduced into our clinic in May 1985. Based on the clinical experiences obtained in the past 15 years, it can be said that introduction of naturally reduced water (using H-01 Active Hydrogen Generator) or electrolyzed-reduced water for drinking and cooking purpose for inpatients should be the very prerequisite in our daily medical practices. It is because any dietary recipe cannot be a scientific one if property of water taken by the patients is not taken into consideration." "The Ministry of Health and Welfare in Japan announced in 1965 that the intake of reduced water is effective for restoration of intestinal flora metabolism."

~Dr Hidemitsu Hayashi, Cardiovascular Surgeon, Director of the Water Institute of Japan **CLINICAL IMPROVEMENTS OBTAINED FROM THE INTAKE OF REDUCED WATER** HAYASHI, Hidemitsu, M.D., Water Institute, & KAWAMURA, Munenori, M.D., Kyowa Medical Clinic, (1985-2000) (17)

- 1. Improvement of blood glucose and HbAIC levels in diabetes mellitus.
- 2. Improvement of peripheral circulation in diabetic gangrene.
- 3. Improvement of uric acid levels in gout.
- 4. Improvement of liver function in hepatic disease, cirrhosis of liver, hepatitis.
- 5. Improvement of gastroduodenal ulcers and prevention of recurrences.
- 6. Improvement of cholesterol level; hypertension, angina, myocardial infarction.
- 7. Improvement of hypersensitive disorders; atopic dermatitis, asthma, urticaria.
- 8. Improvement of autoimmune disorders; rheumatism, collagen disease, SLE.
- 9. Improvement of so-called specific diseases; Behcet' syndrome, Crohn disease, ulcerative colitis, Kawasaki's disease.
- 10. Improvement of malignant tumors of liver; hepatoma, metastatic tumors.
- 11. Improvement of general malaise, chronic constipation & diarrhea as well as persistent diarrhea occurred after gastric resection.
- 12. Improvement of dehydration in infants with vomiting and diarrhea caused by viral infection.
- 13. Improvement of hyperbilirubinemia in newborns.
- 14. Experiences of pregnant women who took reduced water during their pregnancy; almost no emesis, smooth delivery, slight jaundice, enough lactation, smooth and satisfactory growth of newborns.

Dr. Yoshiaki Matsuo PhD.



"in my opinion, redox potential is more important than pH. ... For example, the average pH of blood is 7.4 and acidosis or alkalosis are defined according to deviation within the range of 7.4 + -0.05. But nothing has been discussed about ORP, or oxidation-reduction potential."

~Dr. Yoshiaki Matsuo PhD., Vice President of the Water Institute of Japan (18)

"It has long been established that reactive oxygen species (ROS) [free radicals that contain the oxygen atom] cause many types of damage to biomolecules and cellular structures, that, in turn result in the development of a variety of pathologic states such as diabetes, cancer and aging. Reduced water is defined as anti-oxidative water produced by reduction of water. Electrolyzed reduced water (ERW) has been demonstrated to be hydrogen-rich water and can scavenge ROS in vitro (Shirahata et al., 1997)."

Dr. Sanetaka Shirahata



"Several natural waters such as Hita Tenryosui water drawn from deep underground in Hita city in Japan, Nordenau water in Germany and Tlacote water in Mexico are known to alleviate various diseases. We have developed a sensitive method by which we can detect active hydrogen existing in reduced water, and have demonstrated that not only ERW [Electrolyzed Reduced Water] but also natural reduced waters described above contain active hydrogen and scavenge ROS [Reactive Oxygen Species–free radicals that contain the oxygen atom] in cultured cells."

"Reduced water suppressed the growth of cancer cells transplanted into mice, demonstrating their anticancer effects in vivo. Reduced water will be applicable to not only medicine but also food industries, agriculture, and manufacturing industries."

~Dr. Sanetaka Shirahata, Professor of Cellular Regulation Technology at the Department of Genetic Resources Technology (19)

Dr Arthur M. Echano



"If the world has accepted antioxidants to slow down the aging process, it should readily agree to the uses of ionized alkaline water as an anti-aging agent. Their roles are closely linked and intertwined such that a lasting anti-aging program is incomplete without addressing both free radicals and organic acid wastes." ~Dr Arthur M. Echano, Medical Doctor, Naturopath, Nutritional Medicine Specialist (20)

Dr. Robert Young



"The pH level (the acid-alkaline measurement) of our internal fluids affects every cell in our bodies. Extended acid imbalances of any kind are not well tolerated by the body. Indeed, the entire metabolic process depends on a balanced internal alkaline environment. A chronically over-acidic pH corrodes body tissue, slowly eating into the 60,000 miles of veins and arteries like acid eating into marble. If left unchecked, it will interrupt all cellular activities and functions, from the beating of your heart to the neural firing of your brain. In summary, over-acidification interferes with life itself leading to all sickness and disease!"

"Researchers believe that disease is caused by excess acidity in our body that weakens all body systems. Caused by our high stress lifestyles, what we eat and pollutants, it affects virtually everyone. This forces the body to rob minerals – calcium and magnesium – from vital organs and bones. Our reserves are depleted, leaving the body vulnerable to bone density loss, heartburn, indigestion, blood sugar issues, weight gain – 68 conditions in all. When healthy, your body has sufficient alkaline reserves to balance it self – and naturally resists disease. The easiest way to help your body to be more alkaline is to drink alkaline water"

~Dr. Robert O. Young, Cellular Nutritionist (21)

Dr. Ed Leshin



"As a chiropractor, I knew about the benefits of alkalizing for years. However, it wasn't until my own son became ill and wouldn't take anything else that we looked into getting a water ionizer. Since using this water, his brain tumor has decreased, he has more energy and his emotional status is so much better. It was hard to ignore these results and I am now a strong proponent of everyone using ionized, alkaline water." ~Dr. Ed Leshin, Chiropractor, Acupuncturist (22)

Dr. Sherry Rodgers



"Alkaline water rids the body of acid waste... After carefully evaluating the results of my advice to hundreds of individuals, I'm convinced that toxicity in the form of acidic waste is the primary cause of degenerative disease."

~Dr. Sherry Rogers, M.D., Immunologist, Environmental Medicine (23)

Dr. Peggy Parker



"Months of testing and research have led me to the discovery that drinking Kangen WaterTM is the most effective tool I have found to quickly, easily, and economically reduce cellular oxidation and achieve a more alkaline pH in the body."

As a Biological Medicine Physician, I have been measuring the levels of oxidation in bodily fluids for about a decade using a very sophisticated piece of lab equipment called the QFA (Quantitative Fluid Analysis). Based on the rate of oxidation in these fluids this measurement device calculates a person's biological age. For most people this biological age is generally 20-50 years older than their actual chronological age. Since it is our biological age that determines the length of our life, that number is quite significant. More than 3 years of testing and research have led me to the discovery that drinking Kangen Reduced Alkaline WaterTM is the most effective tool for quickly, easily and economically changing the rate of oxidation on cells that I have ever encountered."

"One can therefore say that drinking ionized Kangen waterTM has the potential to slow the aging process. The powerful component of the water that does this is the –ORP (Oxidation Reduction Potential) charge on the water. This negative ORP part of the water is what causes this water to be able to slow down the oxidation of our bodies. As the cell walls of our body become oxidized, they become sticky and this prevents hydration of the body as well as nutrient absorption and cell waste to be expelled. The -ORP removes oxidation from the cell wall and allows for better hydration, and cell metabolism and overall cell health."

~Dr. Peggy Parker, Naturopathic Physician, Biological Medicine (24)





"International studies show that populations with little or no history of illness, such as cancer, drink higher pH (alkaline) waters. After all potential risk factors were considered and factored out, it became evident that they had been drinking waters with a pH of 9.0 to 10.0."

~Dr. Leonard Horowitz, Behavioral Scientist, Educator (25)

Dr. Don Colbert



"Hexagonal, alkaline water is especially effective in treating those with chronic disease."

"Your body thrives in an alkaline environment since it is able to detoxify more efficiently than in an acidic environment. In an alkaline environment your tissues get rid of impurities more efficiently. When cancer patients come into my office to begin nutritional treatment, their bodies are almost always very acidic and toxic. My first task is to get their tissues alkalinized with alkaline water."

"I have recommended alkaline hexagonal water to even my youngest patients. In 2005 a ten-year old girl and her parents came to my office in South Carolina. The girl had crippling juvenile rheumatoid arthritis and weighed only fifty-two pounds. Her hands were swollen like mitts, and her knees were swollen as large as softballs. I put her on hexagonal, alkaline water, one to two quarts a day. A week and a half later she was pain free, and her swelling was significantly diminished. When she arrived she was wheelchair bound, but she was actually able to walk without pain after only a week and a half of drinking hexagonal, alkaline water. Her parents were ecstatic. We raised the pH of her tissues. After a month, her hands were almost normal size."

~Dr. Don Colbert, Medical Doctor (26)

Wade Lightheart: Canadian National Bodybuilding Team Member Three-Time Natural National Bodybuilding Champion, International Online Trainer



"I'm real excited to talk about my experience with Kangen WaterTM...what happen just a few months ago really shocked me and, I believe, it will be sending another shock wave into the athletic world...I was introduced to Kangen WaterTM when I was invited to attend a demonstration...I went over to check it out and considered myself fairly knowledgeable about water, as I write about it in my books and I recognize the importance...I went over and had my first glass of water and I can honestly say that, from my very first glass, I said "Wow! There is something very different with this water.

I know my body very well and I knew that I had never tasted any water like this before...there was something going on at a cellular level as the water went into my body...I started drinking the water and I watched the presentation...everything that was said during the presentation totally fit in with everything I had learned in the last 20 years...I wasn't aware of any technology that could produce the results that I was feeling...I had been exposed to other ionizers and, frankly, I hadn't been impressed...this time I was feeling something quite different in my body in just the first few hours.

Over the next few days I drank more water and saw the presentation a few more times...by the 3rd day I looked in the mirror and I could not believe the results...I was losing body fat at a rate that was quite shocking...my recovery at the gym was at a phenomenal rate...I felt like I could run thorough the gym walls...the water was doing something so positive that I decided to put my reputation on the line and I entered the National Bodybuilding Championships... with only 2 weeks preparation I won in two different categories and qualified to compete for Natural Mr. Olympia in Greece...because of the Kangen WaterTM my physique transformed; my life transformed; I'm thrust back into competition...I believe that Kangen WaterTM, produced by the Enagic® machine, is going to be the next great thing in athletic performance!" ~Wade Lightheart (Wade McNutt), Natural Bodybuilding Champion (27)

Shan Statton, Sports Nutritional Consultant



for the NBA, NFL, MLB, PGA, LPGA, NASCAR, NHL, NY Yankees, AZ Diamondbacks, Houston Rockets, LA Dodgers, etc.

Within the last four months I have learned that I was missing a huge important principal of health that was right before me this whole time. I had always felt that I was providing my elite athletes with all the key factors needed for health and success and energy and vitality, because I was giving then what I believed to be the most important. And even though I taught the principles and the need for hydration, I never understood until about four months ago the need for proper hydration. I taught for fifteen years in the nutrition industry that I cared more about nutrient utilization than simply nutrient consumption. That same principle holds true in the area of hydration and I didn't really realize that. It's not about how much water or liquid you drink it's about how much is actually being utilized within the body.

When I was introduced to a company called Enagic®, they provide a very simple technology that improves the hydration of the water that goes into the body. And it's very simple it hooks up to your water faucet at home. Now, when they started telling me about this, I thought to myself, no way no way, my reputation has always been impeccable in the area of, I only represent things that make a big difference and truly has proven to be beneficial to people, so I thought, water is water. That couldn't have been further from the truth. I was missing a very key component of our health, and that is proper hydration. Enagic® makes a water called Kangen WaterTM. Kangen in the Japanese word meaning "return to origin."

The water we consume today through tap, or bottled water, through purification systems, all of that water is very acidic. I had no idea. If you go back to the basics of nature, and you take water from natural springs coming out of the earth, all of that water has a very high pH or alkalinity to it, and the waters that we drink out of the tap or purification systems, or bottled water is far from alkaline, in fact it is more acidic. I didn't realize that. Acidic water is actually damaging to the body. Acidic water is something we'd want to stay away from. Anything acidic! I spent fifteen years trying to teach people to reduce the acidity within the body and we can do that through the food that we eat. But, that really takes a complete lifestyle change, when in reality I know realize that we can change very quickly, effectively in the water that we drink. ...

This Kangen Water™ technology is truly nothing short of miraculous in my opinion, because it really provides three different very important aspects to our health that I find very intriguing. Number one is this machine provides a very high antioxidant based water ... the second thing I am really impressed with is its micro-clustering abilities ... and the third component [its alkalinity], Kangen Water™ is up to a 9.5 pH." ~Shan Stratton, Sports Nutritionist (28)

Felicia Drury Kliment BA. MS



"After years of very positive continuous clinical experiment that I am conducting with hundreds of clients using electronically restructured alkaline water, it is my opinion that this technology will change the way in which all health providers and the public will approach their health in the coming years. ... My suggestion is to drink restructured alkaline water whenever possible."

~Felicia Drury Kliment (29)

Foot notes:

- 2. **Dr. Hiromi Shinya** was born in 1935 in Fukuoka. After graduating from Juntendo Univesity, School of Medicine, he was internationally active and made a phenomenal impact as a pioneer in the field of Gastrointestinal Endoscopy. Dr. Hiromi Shinya is a clinical professor of surgery at Albert Einstein College of Medicine at Yeshiva University; head of the endoscopic center at Beth Israel Medical Center in New York, New York; and Vice-chairman of the Japanese Medical Association in the United States. He is also affiliated with both the Maeda Hospital and Hanzoo-mon Gastrointestinal Clinic in Japan. Dr. Shinya pioneered modern colonoscopic techniques, and invented the electrosurgical polypectomy snare now common on colonoscopes, allowing for removal of colon polyps without invasive surgery. He also authored of The Enzyme Factor, the English translation of his book on the relationship between enzymes and health that has sold two million copies in Japan. In his book and even on the cover Dr. Shinya extols the virtues of drinking alkaline ionized water, specifically, Kangen WaterTM produced only by the Enagic® devices. Dr. Shinya puts all his patients on Knagen WaterTM as part of his recommended diet.
- 3. **Dr. Horst Filtzer, M.D.** a Harvard Medical School graduate cum laude is a Vascular Surgeon. Horst has 35 years of active surgical practice in General and Vascular Surgery at Cambridge City Hospital in capacities as Assistant Director, Department Chairman, and Program Director He is also Director of the Wound Care Center in Western Arizona Regional Medical Center, Bullhead City, AZ.
- 4. **Dr. Corinne Allen** is an international researcher and practitioner in natural health and nutrition and has been in practice for more than 30 years. After receiving her doctorate in nutrition, Dr. Allen went on to more training in neurokinesiology and brain-stimulation techniques. She is recognized for her natural and practical approach to health regarding natural and alternative methods of stimulating permanent changes in the brain in dyslexia, ADD, autism, Asperger's syndrome, learning disabilities, academic and behavioral issues and brain injuries. She runs the Advanced Learning & Development Institute.
- 5. **Dr. Dave Carpenter** is a member of the Idaho Association of Naturopathic Physicians. He is currently the President of the International Iridology Practitioners Association (IIPA), has served on the Board of Directors of IIPA since 1996 as Public Relations Director and Vice-President. Dr. Dave Carpenter is a Licensed Acupuncturist, Fellow of the International Academy of Medical Acupuncturists, and an IIPA Certified Comprehensive Iridologist (CCI). He is also a member of the American Naturopathic Medical Association, the Idaho Acupuncture Association, faculty member of the Intermountain Institute of Natural Health, and a graduate of Central States College of Health Sciences as a Naturopathic Medical Doctor, and the Royal Academy of Naturopathy in Australia as a Naturopathic Doctor, a graduate of the International Academy of Medical Acupuncturists. Dr. Carpenter also holds a BS degree in Nutrition.
- 6. **Fereydoon Batmanghelidj, M.D.**, an internationally renowned researcher, author and advocate of the natural healing power of water, was born in Iran in 1931. He attended Fettes College in Scotland and was a graduate of St. Mary's Hospital Medical School of London University, where he studied under Sir

Alexander Fleming, who shared the Nobel Prize for the discovery of penicillin. Dr. Batmanghelidj practiced medicine in the United Kingdom before returning to Iran where he played a key role in the development of hospitals and medical centers. His groundbreaking book, Your Body's Many Cries for Water (1992), has been translated into 15 languages and has sold over a million copies

7. **Otto Heinrich Warburg** was born on October 8, 1883, in Freiburg, Baden. His father, the physicist Emil Warburg, was President of the Physikalische Reichsanstalt, Wirklicher Geheimer Oberregierungsrat. Otto studied chemistry under the great Emil Fischer, and gained the degree, Doctor of Chemistry (Berlin), in 1906. He then studied under von Krehl and obtained the degree, Doctor of Medicine (Heidelberg), in 1911. He served in the Prussian Horse Guards during World War I. In 1918 he was appointed Professor at the Kaiser Wilhelm Institute for Biology, Berlin-Dahlem. Since 1931 he is Director of the Kaiser Wilhelm Institute for Cell Physiology, there, a donation of the Rockefeller Foundation to the Kaiser Wilhelm Gesellschaft, founded the previous year.

For his discovery of the nature and mode of action of the respiratory enzyme, the Nobel Prize has been awarded to him in 1931. This discovery has opened up new ways in the fields of cellular metabolism and cellular respiration. He has shown, among other things, that cancerous cells can live and develop, even in the absence of oxygen. Otto Warburg is a Foreign Member of the Royal Society, London (1934) and a member of the Academies of Berlin, Halle, Copenhagen, Rome, and India. He has gained l'Ordre pour le Mérite, the Great Cross, and the Star and Shoulder Ribbon of the Bundesrepublik. In 1965 he was made doctor honoris causa at Oxford University. Copyright © The Nobel Foundation.

- 8. **Dr. William Howard Hay** graduated from the New York University Medical College in 1891 and spent 16 years in regular medicine, specializing in surgery. He later developed Bright's Disease, and was unable to cure it using accepted medical methods of the time. This led him to find alternative methods to rid himself of disease. He came up with the concept of food combining (also known as the Dr. Hay diet), the idea that certain foods require an acid pH environment in digestion, and other foods require an alkaline pH environment, and that both cannot take place at the same time, in the same environment. After curing himself through proper diet, he wrote several books, started a sanatorium, and lectured throughout United States and Canada.
- 9. **Dr Keiichi Morishita** is Director of the Ochanomizu Clinic in Japan and the Head of the International Natural Medicine Association. He is also an Honorary Professor, Georgia Tbilisi State Medical University, Professor, Choson University & Graduate School, Korea, Visiting Professor, Shenyang Pharmaceutical University, China and Honorary Director, China Health Care Food Association & Senile-Resistant Association, Honorary Director, Non-Pharmacotherapy Treatment & Research Center, Heilongjiang Province China, and Honorary President, Guangxi Pama Institute of Longevity, China, among many others. He is the author of The Hidden Truth of Cancer 1950 Graduated from the Tokyo Medical University where he majored blood physiology, 1955 Received Ph.D. from Chiba University, the school of Medicine, 1960 Presented a basic theory of Natural Medicine for cancer treatment and longevity (Morishita Theory) 1966 Testified as a member of the academic panel at the hearing on cancer by the special Committee for Advancement of Scientific Technologies of the Japanese House of Representatives. 1970 Established the Natural Medicine Society, the Life Science Association and Ochanomizu Clinic 1977. The effectiveness of Natural Medicine was endorsed by the McGovern Report written by Senator George McGovern of the U.S.A. 1982. The validity of the theory, diet of meat produces cancer; diet of grain/vegetables prevents cancer, presented at the hearing was proven by the National Academy of Science (USA) Recommendation. 10. Dr. Robert C. Atkins, a physician and cardiologist was one of the pioneers of complementary medicine in the United States and one of the most famous, successful and enduring nutrition experts of the last 40 years. He was the founder of The Atkins Center for Complementary Medicine and Atkins Nutritionals, Inc. He also authored more than a dozen health and nutrition books, including Dr. Atkins' New Diet Revolution, one of the 50 best-selling books of all time, and Atkins for Life, which quickly joined Dr. Atkins' New Diet Revolution on The New York Times bestseller list.
- 11. **Dr. Stefan Kuprowsky** is a Canadian naturopathic doctor with impressive academic credentials and a strong vision for natural medicine. He holds a Bachelor's degree in Biological Anthropology from Trent University (1977), a Master's in Medical Anthropology (1982) and a Doctorate in Naturopathic Medicine (1985). He has been in practice over 20 years as a Naturopathic Physician as well as a consultant, writer, lecturer, radio host and teacher in the natural health industry. He has served as President of the BC Naturopathic Association and is currently serving on the BC College Board as Chairman of the Quality Assurance Committee. He is also a professor at the Boucher Institute Of Naturopathic Medicine in New Westminster. Dr. Kuprowsky has studied mind-body medicine with Deepak Chopra and a certified

instructor for Dr. Chopra's Creative Health program. He currently operates the Vancouver Naturopathic Clinic.

- 12. **Theodore A. Baroody**, DC, ND, Ph.D., Dipl. Acu. was born in Sanford, NC, in 1950. He received his B.S. in Psychology and his Masters degree in Educational Counseling from Western Carolina University in 1974 and 1978. He received his D.C. degree from Life Chiropractic College of Marietta, Ga. in 1981. He further studied in Beirut, Lebanon and at Colombo Americano, Columbia, as well as having traveled extensively in Europe and Asia to gather information on the healing arts. Dr. Baroody later completed an N.D. from Clayton School of Naturopathy in 1991 after years of clinical research in his practice and received his Ph.D. in Nutrition from American Holistic College. Dr. Baroody is a Certified Nutritional Consultant (C.N.C.) and a professional member of the American Association of Nutritional Consultants, and a diplomate in acupuncture. He is the author of the popular book, Alkalize or Die (2002)

 13. **Dr. Susan Lark** is one of the foremost authorities in the fields of clinical nutrition and preventive medicine. A graduate of Northwestern University Medical School, she has served on the clinical faculty of Stanford University Medical School, and taught in their Division of Family and Community Medicine. Dr. Lark is a distinguished clinician author lecturer and innovative product developer. Through her extensive
- medicine. A graduate of Northwestern University Medical School, she has served on the clinical faculty of Stanford University Medical School, and taught in their Division of Family and Community Medicine. Dr. Lark is a distinguished clinician, author, lecturer and innovative product developer. Through her extensive clinical experience, she has been an innovator in the use of self-care treatments such as diet, nutrition, exercise and stress management techniques in the field of women's health, and has lectured extensively throughout the United States on topics in preventive medicine. She is the author of 13 best-selling books on women's health including The Chemistry of Success.
- 14. **Dr. Lester Packer**, is the world's foremost antioxidant research scientist. He is a senior scientist at the prestigious Lawrence Berkeley Laboratory, and Head of the Packer Lab at the University of California, where he has been a professor for 35 years. Dr. Packer is the executive editor of Archives of Biochemistry and Biophysics, and serves on the editorial advisory boards of Free Radical Biology and Medicine, The Journal of Applied Nutrition, and The Journal of Optimal Nutrition. He is a member of eight professional societies and is President of the International Society for Free Radical Research, and Vice President of UNESCO's Global Network of Molecular and Cell Biology. Dr. Packer has published over 700 scientific papers and 70 books on every aspect of antioxidants and health, including the standard references Vitamin E in Health and Disease, Vitamin C in Health and Disease, The Handbook of Natural Antioxidants and Understanding the Process of Aging:The Roles of Mitochondria, Free Radicals, and Antioxidants. The International Bibliographic Information on Dietary Supplements (IBIDS) is produced by the Office of Dietary Supplements at the National Institutes of Health to assist the public, health care providers, and researchers in locating credible, scientific literature on dietary supplements. Several hundred citations of the Packer Lab's work on the antioxidant network and gene regulation are in the peer reviewed section of IBIDS database.
- 15. **Dr. Ray Kurzweil** is one of the world's leading inventors, thinkers, and futurists. He's been awarded 19 honorary doctorates, honored by 3 US Presidents and is recipient of many of the nations highest awards for excellence. He has been called "the restless genius" by the Wall Street Journal and "the ultimate thinking machine" by Forbes magazine and PBS included him as one of 16 "revolutionaries who made America," along with other inventors of the past two centuries. Time magazine writes, "Kurzweil's eclectic career and propensity of combining science with practical—often humanitarian—applications have inspired comparisons with Thomas Edison". Among Kurzweil's many honors, he is the recipient of the \$500,000 MIT-Lemelson Prize, the world's largest for innovation. In 1999, he received the National Medal of Technology, the nation's highest honor in technology, from President Clinton in a White House ceremony. And in 2002, he was inducted into the National Inventor's Hall of Fame, established by the US Patent Office. Author of several books Dr. Kurzweil second book in 1993, The 10% Solution for a Healthy Life, How to Eliminate Virtually All Risk of Heart Disease and Cancer, was published by Crown Publishers. The book stemmed from Ray's successfully curing himself of type II Diabetes through a nutritional program he had researched himself.
- 16. **Professor Mu Shik Jhon**, Honorary and Founding president of the Association of Academies of Sciences in Asia (AASA) and Former President of the Korean Academy of Science and Technology (KAST), was born in 1932 at Taegu, Korea and received BS and MS degrees from Department of Chemistry, Seoul National University in 1954 and 1958, respectively. Then he moved to U.S.A. to pursue his doctorate study at Department of Chemistry, University of Utah. He received his Ph.D. degree in 1966 and became an assistant professor at University of Virginia. Three years later, Prof. Jhon came back to his mother country, Korea, to serve as the head of Liquid State Chemistry Research Laboratory at the Korea Institute of Science and Technology (KIST) in 1969. Then, he joined the Korea Advanced Institute of

Science and Technology (KAIST) as a charter member in 1971. Prof. Jhon is a foreign fellow of National Academy of Sciences, India, and Pakistan Academy of Sciences, a foreign academician of Russian Academy of Science and a fellow of the European Academy of Arts, Sciences & Humanities. He published over 280 papers and produced many eminent scholars including about 50 Ph.D.s. He served as President of KAST, Founding President of AASA, Founding President of the Korean Association for the Advancement of Sciences and Chairman of the Board of Research Institute of Bioinformatics and Molecular Design. His main research fields were the theory of liquids and solids, structure and properties of water and aqueous solution, water and biological molecules, theoretical studies of zeolite, hydrogel and polymers. He was interested in the role of water in biological system, especially human body. To explain the role of water, he proposed a liquid structure theory, "Significant Structure Theory" and extended it to water. Hexagonal and pentagonal water structures are the water cluster models that he introduced to explain the abnormal behaviors of water. During last two decades before he passed away, he intensively worked on the illumination of the relation between hexagonal water and health, and authored The Water Puzzle and the Hexagonal Key.

- 17. **Dr. Hidemitsu Hayashi** was born in 1938. He practiced medicine and specialized in Cardiovascular Surgery after graduating in 1968 from the Medical School of Kobe University, Japan. He also studied at the University of Munich (1970-71). Specialized in the field of Cardiovascular Medicine. In 1985, after 20 years of clinical experiences as a surgeon he began advanced research on the medical benefits of water. In 1995 he simultaneously released in Japan and the U.S. his theory on the effects of hydrogen-rich water in preventing and treating illnesses. Dr. Hidemitsu Hayashi is a researcher and a "Hydrogen-rich Water" Advocate, and is the Director of the Water Institute of Japan in Tokyo.
- 18. **Dr. Yoshiaki Matsuo PhD** is Vice President of the Water Institute of Japan and was contributing inventor to the modern domestic ionizer.
- 19. **Dr. Sanetaka Shirahata** is a Professor of Cellular Regulation Technology at the Department of Genetic Resources Technology, Faculty of Agriculture, Kyushu University. His activities have included the development of functional waters and foods for anti-allergy, immunopotentiation, anti-oxidation, anti-life style-related diseases; recently following researches have been focused on antioxidative function and improvement of various diseases by electrolyzed reduced water and natural reduced water. Dr. Shirahata has published abstracts and among other research topics has made presentations on; Evaluation of oxidant and antioxidant activities of various potable waters by ESR; Apoptotic inducing effect of active hydrogen on tumor cells; Application of water to therapy current researches on reduced water and its clinical application; and Anti-diabetes effect of reduced water scavenging reactive oxygen species. His academic society affiliations include, Japanese Society for Animal Cell Technology (President, 2003- Japan), Japan Society for Bioscience, Biotechnology, and Agrochemistry (Editor Councilor of the West branch, 1999-2004, Japan), Japanese Society for Food and Nutrition (Councilor, 2000-2004, Japan), Japan Society for Food Science and Technology (Councilor of the West Branch, 1989-2004, Japan), European Society for Animal Cell Technology (Japan), Japanese Society for Immunology (Other), Japanese Society for Molecular Biology (Japan).
- 20. **Dr. Arthur M. Echano**, M.D., N.D., D.HOM.I., MACNEM is a Medical Doctor, a Naturopath, and a Nutritional Medicine specialist based in New South Wales, Australia who has been successfully practicing nutritional therapy in cancer management for the past 20 years. He has had several speaking engagements in various natural health seminars in Australia and Asia and has written several introductions for various Natural Health books in Australia. Dr. Echano is a 1978 medical graduate of the Faculty of Medicine & Surgery, University of Santo Tomas, Manila, Philippines. He also holds a doctorate degree in naturopathy from the U.S. and a diploma in homeopathic ionictherapy from Australia. He is a medical doctor and naturopathic physician Down Under and is a registered member of the Australian Traditional-Medicine Society (ATMS), the Australian Medical Association (AMA) and the Australasian College of Nutritional & Environmental Medicine (ACNEM).
- 21. **Robert O. Young**, MS, D.Sc., Ph.D., N.D. has been widely recognized over the past two and a half decades. Throughout his career, his research has been focused at the cellular level. Having a specialty in cellular nutrition, Dr. Young has devoted his life to researching the true causes of "disease," subsequently developing The New BiologyTM to help people balance their life. In 1994, Dr. Young discovered the reality of biological transformation of red blood cells into bacteria and bacteria to red blood cells. He has since documented several such transformations. Dr. Young's research findings have been published in several noted journals, including The Journal of Alternative and Complementary Medicine. (Sympathetic Resonance Technology, Scientific Foundations and Summary of Biologic and Clinical Studies, Dec. 2002,

- Vol. 8, No. 6: 835-842.) He is the author of numerous articles and author and co-author of many books including The pH Miracle (2002), The pH Miracle for Diabetes (2003), The pH Miracle for Weight Loss (2004).
- 22. **Dr. Leshin** is a holistic chiropractor and licensed acupuncturist. He has studied with the top physicians in the field of oriental medicine, nutritional therapies and kinesiological techniques. Dr. Leshin is the founder and developer of ACU-Field Therapy, a technique that has helped many people across the country with various conditions. Dr. Leshin works with chronic conditions such as cancer, MS, Parkinson's as well as allergies and other ailments. He has helped people with severe hormone imbalances which lead to a variety of problems by using specialized testing procedures.
- 23. **Dr. Sherry Rogers MD**, is a Fellow of the American College of Allergy and Immunology and a Diplomate of the American Academy of Environmental Medicine, and has been in private practice for over 26 years. Dr. Rogers lectures on her original scientific material worldwide, as well as giving advanced courses for physicians. She developed the Formaldehyde Spot Test and published her mold research in three volumes of the Annals of Allergy. She has published chemical testing methods in the National Institutes of Health Journal, Environmental Health Perspectives. In addition, she has published multiple scientific articles, authored 13 books including her most recent, The High Cholesterol Hoax, The High Blood Pressure Hoax, Detoxify or Die and Pain Free and has been environmental editor for Internal Medicine World Report. Dr. Rogers has appeared on numerous television and radio programs, in addition to Healthy, Wealthy and Wise and writes monthly articles for health magazines, plus her own newsletter, Total Wellness.
- 24. **Dr. Parker**, **N.D.** & Biological Medicine expert is a traditionally trained Naturopathic Physician who resides in Spokane, Washington. She is an internationally renowned teacher and lecturer. After receiving her Naturopathic degree, Dr. Parker continued her education with a post-doctoral degree in Biological Medicine from the PBMN in Lustmühle, Switzerland. This intensive, two year program was designed and led by the famous Swiss physician, Dr. Thomas Rau. The basic focus of this course revolved around adjusting the pH (acid/alkaline ration within body fluids), ORP (rate of oxidation in body tissues), and the conductivity of minerals across the cell wall membrane, and just how these factors affect health. As a physician Dr. Parker has been trained to both administer and evaluate tests including Darkfield Microscopy, Biological Terrain Assessment (QFA), EAV, Electro-Dermal Screening, Computer Regulation Thermography, Tongue and Pulse Diagnosis, Sclerology, Heart Rate Variablitly, Hair Tissue Mineral Analysis, Applied Kinesiology and Hyperbaric Oxygen Therapy to name a few.
- 25. **Dr. Len Horowitz** is an internationally known authority in behavioral science, public health education, and health practice management. He received his doctorate from Tufts University, was awarded a fellowship to do behavioral research at the University of Rochester, and later earned a Master of Public Health degree in behavioral science from Harvard University and a Masters degree in health education from Beacon College. One of healthcare's most captivating motivational speakers, Len has served on the faculties of Tufts University, Harvard University, and Leslie College's Institute for the Arts and Human Development, directed a multidisciplinary health center for over a decade, and currently serves as President of Tetrahedron, Inc., a nonprofit health educational corporation.
- 26. **Don Colbert, M.D.**, is board certified in family practice and anti aging medicine. He is the Medical Director of the Divine Health Wellness Center in Orlando, Florida where he has treated over 40,000 patients. Dr. Colbert is an internationally known expert and prolific speaker on integrative medicine (a combination of traditional and alternative medicine). Don Colbert, M.D. has been featured on Fox News, ABC World News, The Atlanta Journal Constitution, BBC, Readers Digest, News Week, Prevention Magazine, and many others. He's the best-selling author of over 40 books including What Would Jesus Eat, The Bible Cure Series, as well as The Seven Pillars of Health (a New York Times best-seller) that together have sold over 4 million copies. Many of Dr. Colbert's books are required reading at many medical schools around the world. Dr.Colbert is on the Medical Advisory Board for the Fellowship of Christian Atlhletes. Dr. Colbert is also the president of Divine Health Inc., which distributes and sells nutritional supplements and vitamins.
- 27. Three Time Canadian Natural Bodybuilding Champion, Wade Lightheart is one of the world's premiere training and nutrition advisors. Having majored in Sports Science at the University of New Brunswick, he has authored numerous books on health, nutrition and exercise, which have sold in over 80 countries. Wade has starred in several exercise videos and is sought out by a wide range of persons and personalities. His global client list includes: actors, singers, CEO's, professional and amateur athletes. Wade's articles have appeared in over 200 publications worldwide and he continues to presents his

dynamic lectures to sold-out audiences around the world. Wade is the President of Lightheart Lifestyle Services and founder of the Institute of Advanced Natural Health Sciences and institute dedicated to providing training and education for Natural Health Practitioners as well as the general public. He also serves as the Director of Human Performance at Yaletown Holistics and is an advisor to several national and international media Publications. During his competitive career Wade won competitions in 5 different weight categories, 4 overall championships, and 13 titles in total including 3 National Championships including appearances with Team Canada at the IFBB Mr. Universe contest in 2003 as well as 5th Place in the INBA Natural Olympia Contest in 2007.

- 28. **Shan Stratton**, Sports Nutritional Consultant for the NBA, NFL, MLB, PGA, LPGA, NASCAR, NHL, NY Yankees, AZ Diamondbacks, Houston Rockets, LA Dodgers, etc. He has worked with countless famous athletes like Kurt Warner, Maria Sharapova, Reggie Jackson, Cynthia Cooper and on and on. He states that drinking Kangen WaterTM is the missing link to overall health and performance for athletes after promoting and counseling the use of high quality supplements, enzymes, and probiotics to the athletic community for over 15 years.
- 29. **Felicia Drury Kliment BA. MS**. is the author of The Acid Alkaline Balance Diet (2002). Her acid alkaline diet plan guides and shows how you can cure acid reflux and other degenerative diseases by following a simple diet program. Starting out as a teacher in the inner city, Felicia Drury Kliment was determined to find out what caused the learning disabilities and behavioral disorders in the children she taught. She found the answer when, years later, as a faculty member at The City College of the City University of New York, she and a colleague conducted a series of statistical research studies. These studies revealed how the processed food served in school cafeteria triggered out of control behavior in the classroom and made it harder to learn.