

The Journal of America's Health and Fitness Company

COUNSELOR



DR. ARTHUR FURST:
Making a Difference in Neo-Life

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One man can make a difference

"The laboratory is only the first step. Taking the knowledge we gain and creating something practical, that is the essential step."



These are the words of a brilliant scientist whose discoveries are making a difference in the health of others every day. This is no absent-minded professor. This man is intensely interested in the people around him and acutely aware of what's going on in the world. These words belong to Dr. Arthur Furst, an extraordinary individual who manifests a gifted mind and a sincere desire to help his fellow man.

On the occasion of his 75th birthday, we take this opportunity to celebrate Dr. Furst - the man, his life, and his contributions to the betterment of mankind. His achievements span more than 50 years of research and pioneering discoveries in the areas of cancer and toxicology. He has received the highest honors his discipline bestows, and his prestigious career is decorated with science's most valued awards, fellowships and appointments.

At an age when most men opt for the quiet life of a Florida retirement community, Dr. Arthur Furst continues his avid pursuit of knowledge, asking ques-

tions and searching for answers. Dreams and goals of making additional contributions to science and society continue to provide the motivation that pushes him on.

He spends hours each week in his lab, investigating his current areas of interest and expanding his base of test data. He logs thousands of miles around the globe, lecturing to scientists, students and researchers, sharing his knowledge and offering his insight to the young minds that will carry on.

He works diligently to stay abreast of all current research and literature in his field. As a result, he has collected every toxicology textbook written in the English language and maintains the only library of heavy metal toxicology on the West Coast.

He is also an activist in matters of higher education in the sciences, voicing his concerns about the declining population of academic scientists and growing need for those specializing in the area of toxicology.

All of this is even more to his credit

in light of the obstacles he has surmounted to arrive at this point in his life.

Against the odds

Orphaned at the age of 4 by the Great Flu Epidemic of Chicago, Dr. Furst was among hundreds of youngsters relocated to orphanages where openings were available. He was sent to an orphanage in Los Angeles, thousands of miles from his family, where he remained until his early teens. In those years, he overcame many adversities that would have certainly discouraged a less directed young man.

Working to put himself through college, Dr. Furst began at the University of California at Los Angeles as a psychology major with a minor in education and a love for dance. He wanted to be a teacher, or even a professional dancer, but, he admits, "I never thought I'd be a scientist."

He took one chemistry class only to fulfill a science requirement and enjoyed

the class so much, he switched his major from psychology to chemistry. And the rest is history. Science would become his vocation; dance would always be his avocation.

Shared interests

By the time he came to Neo-Life in 1976 at the invitation of Company Founder Donald Pickett, Dr. Furst had already published over 170 scientific studies in various journals and periodicals. He was also holding three concur-

sional positions who would guide and direct the future of Neo-Life's product research and development.

Today, as Senior Member of the SAB, Dr. Furst is convinced that the this group makes Neo-Life significantly different. "This is an industry which is full of hype and fly-by-night companies," he explains. "They find this to be a lucrative business, buying bulk amounts, finding some artist to draw nice, beautiful labels, rebottling the product but not having any idea how good the product is. Neo-Life is unique because they have a Scientific Advisory Board that is train-

"If you were to put together all the people in the world who have the same qualifications and experience as Arthur Furst, you could probably seat them at a table for four."

*Dr. Fred Hooper
Scientific Advisory Board Member*

rent positions: he was a research associate at Mount Zion Hospital in San Francisco, and at the University of San Francisco, he was both the director of the Institute of Chemical Biology and the dean of the graduate division.

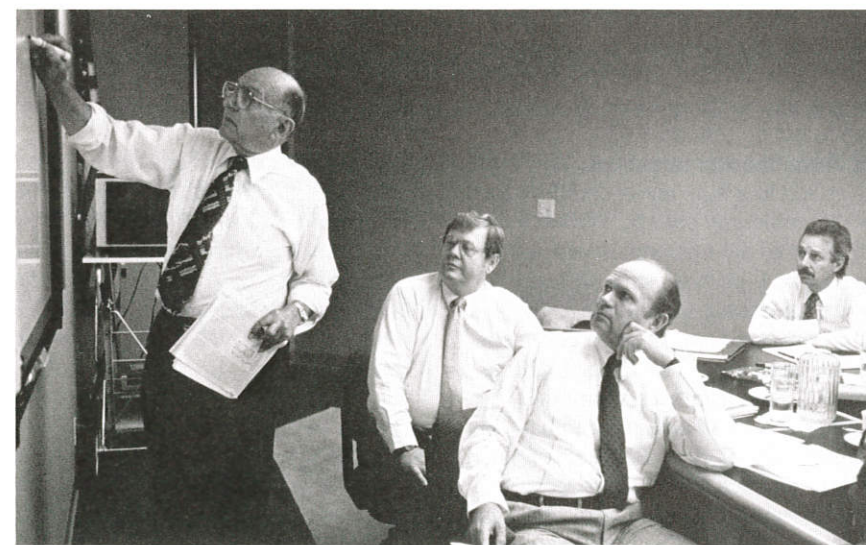
In spite of this demanding schedule, Mr. Pickett encountered little resistance when he asked Dr. Furst join Neo-Life as director of research. "I liked Neo-Life's philosophy," Dr. Furst recalls. "They wanted good products and nutrition was one of my interests. A lot of my research included nutrition because I knew how important that was."

One of Dr. Furst's initial projects for Neo-Life was the development of the Donald E. Pickett Research Laboratory. Before the laboratory was established, Neo-Life was forced to rely on its suppliers to test the quality and purity of the raw materials used in production, as well as the final products. Dr. Furst specified the type of equipment that would provide the best testing available and was also instrumental in hiring the right people to operate the laboratory.

This early work set the precedent that ultimately lead to the formation of Neo-Life's Scientific Advisory Board (SAB), a group of science and medical profes-

ed to make the latest information available and to see that we are scientifically correct."

Dedicated to the efforts of the SAB, Dr. Furst spends much time at the Neo-Life Home Office. He is constantly updating and adding information and reference material to the Arthur Furst Library, as well as the library of resources



All attention is directed toward Dr. Furst, as he illustrates his point at a Neo-Life Scientific Advisory Board (SAB) meeting. Seated from left to right: Jim Arnott, Executive Vice President; Bob Brassfield, Neo-Life President; and John Miller, Vice President of Marketing and SAB member.

in his own office. He spends a great deal of time travelling to various conferences and seminars as Neo-Life's representative, collecting valuable and useful data to keep the resources current. Recently, he attended the International Conference on Vitamin and Mineral Oncology, a symposium on the treatment and prevention of cancer with nutrition.

The impact of computers

In order to stay abreast of all the current research and literature and to update his many libraries, Dr. Furst uses a computer to help scan the hundreds of scientific abstracts he receives. Although he agrees that computers make reviewing the vast accumulation of scientific data very convenient, he's concerned that volumes of important data are losing their place in history in the wake of computerization. Research abstracts were first entered into the National Library of Medicine's computer banks in 1962. But no one has gone back to enter the data published prior to that year. This vast data base lies virtually untapped in the wake of the computer.

This situation is creating a tremendous waste of resources in scientific research. To illustrate the problem, Dr. Furst recalls a time he was asked by a

private organization to review a project submitted by a university research team before granting almost one-third of a million dollars for the study. According to the university's computer review, only seven references world-wide could be traced for this project.

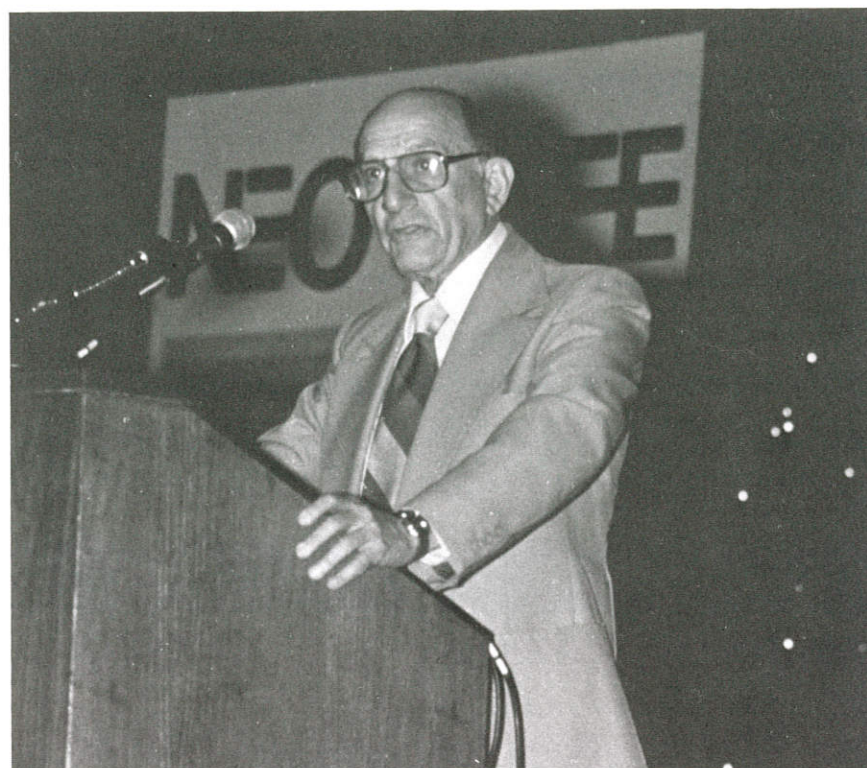
Dr. Furst began the review process, checking the computer banks but more importantly, reviewing periodicals and journals prior to 1962 for relevant data. His thorough investigation revealed over 200 references. He discovered that all the work the university research team wanted to do had already been done. Because of his findings, funding for the study was denied, saving the organization hundreds of thousands of dollars.

Discoveries living on

Dr. Furst knows that much of his own research, done in the 1940s and '50s, lies dormant on library shelves and is rarely cited in current studies. However, two of his discoveries have been applied in practice for so many years that both are considered standard procedure and utilized by almost all physicians involved with cancer treatment.

His first breakthrough had a major impact on treatment for cancer patients. Until the 1950s, chemotherapy patients received intravenous treatment in a hospital, immobilized until the treatment was completed. Dr. Furst's discovery brought relief from these restricting confinements. He developed the first oral chemotherapy treatment. This discovery led to a new life of freedom for the chemotherapy patient, allowing for mobility and the resumption of a somewhat normal lifestyle while still receiving the necessary treatment.

Dr. Furst's second major achievement was the discovery that cancer cells become resistant to cancer chemotherapy agents much like bacteria becomes resistant to antibiotics. Because of this breakthrough, cancer patients receiving chemotherapy are treated with multiple anticancer agents. The body becomes resistant to a variety of agents much slower than just one, thus allowing for extended chemotherapy treatment and



A popular guest speaker at Neo-Life Conventions, Dr. Arthur Furst reminds Distributors that the SAB is a very valuable Neo-Life Difference. He explains, "We're an active Scientific Advisory Board - we're real. Neo-Life's SAB is not just a photogenic doctor with a stethoscope around his neck. We're just a motley crew, but we're here. We keep abreast of the literature. We want to know what's going on. We try to develop new products when they are real, not when they are new. And above all, we try to keep you healthy."

better chances of controlling the cancer growth.

Dr. Furst's extensive research with cancer and cancer treatments evolved to include his new interest, heavy metal carcinogenesis and toxicology. His discoveries in this field firmly established him as the world's foremost authority on toxicology, and he has been honored by numerous organizations and institutions in this area of science.

In 1982, he became the first holder of the Erna & Jakob Michael Visiting Pro-

fessorship at Weitzmann Institute of Science in Rehovot, Israel. In 1986, Dr. Furst was awarded the prestigious Klaus Schwarz Commemorative medal for his pioneering work in metal carcinogenesis. He is listed in seven different editions of *Who's Who*, including *Who's Who in America*, *Who's Who in the West* and *World Who's Who in Science*.

Currently, Dr. Furst is spending a lot of time in the laboratory investigating his latest interest. He is testing the pos-

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"We are well aware of the praise and respect given to him by his peers, but to the ordinary lay person (like me) he is a caring, compassionate friend who always 'lends an ear' and tries to be of help."

Betty Bockman
Sales Department



To live in a toxic world

The price we pay for major advances in technology to make our lives more comfortable is the accumulation of vast quantities of wastes and the constant pollution of our environment. Hopefully, within the foreseeable future, adequate measures will be taken by the appropriate government agencies, or the industries involved, to reduce our exposure to these toxic substances.

Unfortunately good intentions and good programs move slowly. We are not losing the war on the toxic front, some progress is being made to somewhat lessen our exposure. But, we are not winning the war either, and thus, the problem of surviving in our toxic world continues to become more acute. Around us, impinging on us at any given time are so many pollutants, that it is impossible to name all of them.

But, we are not helpless. We can take measures to protect ourselves. The purpose of this two-part article is to outline these risks and talk about what we can do to help minimize them.

Part 1 - Our cities

Everyone has their own ideas about city life. Some love the hustle and bustle, all the people and activities, and living close to cultural centers and shopping. Others see living in the city environment as life in a pressure cooker, a fast-paced, frenzied lifestyle of too many people and too little space; of traffic jams and crowded transit systems, where noise becomes an environmental pollutant unto itself.

Whether you live in a city by choice or by necessity, it presents challenges unique to the urban environment. You need to be aware of these challenges because they represent risks to your long-term health.

Our cities are a compilation of tremendous advances in our technology. Just the "life support system" that supplies us with food, water, energy and shelter represents an incredible techno-

logical achievement. Without such advances, modern cities as we know them could not exist.

What price do we pay to live so closely together and enjoy all these conveniences? The price is an ever-increasing presence of pollutants and the ever-increasing risks that accompany them.

City air outdoors

Too often, the air we breathe in the urban environment is full of fumes from the combustion gases of cars, trucks and buses. Contained therein are oxides of nitrogen, powerful oxidizing agents. Combustion gases also contain carbon monoxide. Recently there have been reports that diesel fumes contain carcinogens.

The combination of internal combustion engine exhausts with normal air in the presence of sunlight as a catalyst results in the smog that visibly hangs over our cities and suburbs. Breathing in smoggy air continuously can result in lung injury, especially in asthmatics. Just breathing the air in such major

What price do we pay to live so closely together?

By Dr. Arthur Furst

cities as Los Angeles, can be equivalent to smoking a pack of cigarettes a day.

In addition to all this, factories too often spew out fumes that are surrounding us with pollutants we cannot always see or smell.

City air indoors

Our homes should be relatively free of pollutants, but this is not the case. The U.S. Environmental Protection Agency (EPA) has recently measured the pollutants in a typical home and announced that indoor air pollution may be many times more severe than outdoor. Once again, combustion gases are a big part of the problem. Gas stoves can give off nitrogen oxides and carbon monoxide at concentrations as great or greater than the most polluted parts of a smoggy city. Wood fires contribute aromatic hydrocarbons, which at moderate levels, may be cancer-producing. Other contaminants common to indoor air include cleaning fluids which vaporize from freshly commercially cleaned clothes and formaldehyde-urea, found in many materials around the home, such as insulation, carpeting, draperies, furniture fabrics, paints and wallpapers. The formaldehyde in these materials is slowly, but constantly being released into the home atmosphere.

City water

In 1987, I was appointed to be the toxicology consultant to the EPA. In my travels to Washington, D.C. and my discussions with government scientists, I learned that 80 percent of the big cities were in compliance with regulations in that they had to sample and analyze drinking water. This meant that 20 percent of the city utilities did not analyze drinking water or failed to meet the standards set by the EPA - and these standards were not too strict.

Most cities use chlorine gas to kill bacteria, like coliform. Hopefully, this

will also effectively kill viruses and giardia lamblia, a small parasite that causes stomach upset recently discovered in many city waters. Chlorine gas reacts with natural organic matter in water and forms trihalomethanes (THMs). Under some circumstances, THMs induce liver cancer in rodents, while another experiment revealed no tumors resulted when the rats drank water containing dissolved THMs.

Survival in our toxic world is still survival of the fittest.

Disinfection does not mean purification. A number of our drinking waters have been contaminated by various organic solvents. These come mainly from leaking tanks buried in the ground or from gasoline stations. Another source

of solvents in drinking water is due to the dumping of solvents outside on the ground, as is often done by dry cleaning establishments. The solvents percolate through the soil and get into the surface water. From here they can move into deep ground water and ultimately show up in our drinking water.

Many city waters are transported from the main source to the local reservoir by cement pipes; some of these pipes

were made from a natural cement containing serpentine rock; this is an asbestos-type material. As a result, many city waters contain fine fibers of asbestos.

There are other problems to consider as well. The analysis of the water supp-



ly for impurities and microbiological content by city inspectors does not tell us enough about the "point source," what comes out of the tap. Residential water pipes can also contribute to our toxic environment. Some types of copper water pipe appear to dissolve and stain sinks blue. Galvanized pipes may contain cadmium, as an impurity in the zinc used to coat and protect the iron pipes. Plastic pipes may leach out the plasticizers (organic compounds that help make the plastic pipes flexible).

What can be done to make our water safer? Although it would appear that this would be a responsibility of the local government, too many of them do not have the financial resources to do this. Some people opt to purchase bottled water from a supermarket, not knowing the source of that water. Some people try to purify their household water by installing ion-exchangers. These do remove the inorganic ions, but replace them with sodium. A study has shown that children who live in an area with a natural salt content only slightly higher than normal, had higher blood pressure than those children in a neighboring county.

City food supply

A good diet should keep us healthy, but city dwellers face problems in this area as well. Our supermarket shelves display a wide variety of processed foods and feature produce areas with nice looking fruits and vegetables. To keep these commodities fresh and appetizing-looking, it is essential to use preservatives and pesticides. In foods, the preservatives are permitted up to a limited amount. For some fruits and vegetables the government requests no residues, but some pesticides do not remain only on the peel or skin, but actually get into the meat of the fruit. As one herbicide is banned, another soon takes its place.

Working in the city

Now we find that even the workplace can also be a hazard. Factories are being cleaned up, but the dusts, the smoke, the odors, the fumes are still there. Certainly at lower levels than previously found, but the regulations only require a relatively low level of exposure, and not complete elimination. Office buildings are also not free of pollution, even though they may be neat and clean looking. The air vents and air conditioning systems can carry allergens, dusts, and bacteria at all times, and with the tendency to circulate the air over and over again, the pollutant concentrations increase.

There are even books written about "sick buildings." These are buildings where an unusually large number of workers have become sick working in offices that look nice and clean on the surface, but have seriously high concentrations of pollutants.

Survival strategies

To survive in this toxic world, we can demand that the government clean up all toxic waste dumps, purify our air and water and return the environment to its original pristine condition. This is not realistic; and furthermore, the world has never been pristine. Forest fires and volcanic activity have always been part of it. And, pollens appear every spring. There is no doubt that we must take the responsibility to protect ourselves by learning what will help our bodies combat the pollutants and how to avoid them as much as possible.

Certain nutrients have been shown to function as protectors within the body. Some act as free radical antioxidants such as vitamin A, vitamin C, vitamin E and beta carotene, while others participate in detoxifying processes, such as B-complex vitamins and selenium. Assuring a dietary abundance of these nutrients through proper food choices

and prudent use of food supplementation seems an obviously beneficial measure.

Point-of-use water filtration is another seemingly obvious measure we can take. The best approach at the tap is to filter out the insoluble impurities such as giardia and asbestos and then adsorb the organic and inorganic impurities to a compressed carbon block. This last step significantly reduces many types of toxic contaminants including THMs, chlorine and solvents.

Filtering the air we breathe is perhaps our greatest challenge, because pre-filtering outdoor air is not feasible. Minimizing the presence of air pollutants in specific areas is possible, however. We can become more conscious of the pollutants we create inside our homes and those we bring home with us. We can clean our indoor air to create a sanctuary that reduces our exposure for prolonged periods of time. Filtering air in bedrooms where we sleep and offices where we work can be of the most benefit.

Even though we may not be winning the war on pollution, science is showing us that there are things we can do. Survival in our toxic world is still survival of the fittest. In this day and age as before, the fittest are expanding their knowledge of the challenges they face and are utilizing the most effective tools they have available to them to meet those challenges. ■

Dr Arthur Furst is internationally recognized as a leading authority on toxicology and cancer research. He has served as consultant to the World Health Organization and various government agencies throughout the world. This accomplished scientist has published more than 200 articles during his distinguished career and is currently listed in Who's Who in the World, 9th edition, 1989-1990.



Neo-Life's Scientific Advisory Board

Translating science into choices for your health

The Neo-Life Scientific Advisory Board is a special team of scientists, doctors and professionals whose areas of expertise offer different perspectives on health. These differing viewpoints compliment each other and expand the base of understanding for all. From this atmosphere of diversity come superior products that can effectively support and promote good health and reflect the Neo-Life Difference.



Arthur Furst

Arthur Furst, Ph.D., Sc.D., D.A.T.S. Vice Chairman

Internationally recognized as a leading authority on toxicology and cancer research, Dr. Arthur Furst serves as Senior Member of the SAB. Throughout his illustrious career, spanning over 50 years, he has received world-wide acclaim for his contributions as a research scientist.

Dr. Furst views health from an environmental perspective. His concerns involve the body's response to toxic challenges in our air, water and food supply. He studies the burdens these toxins impose and the potential health risks they represent. In his quest for knowledge, he has come to believe there are definite relationships between certain diseases and improper nutrition.

Dr. Furst is dedicated to sharing his knowledge and contributing his experience to the improved health and welfare of others. He sees Neo-Life products as a way to reduce exposure to environmental toxins and enhance the body's defenses against damage they can cause. ■

Kenneth Hirsch, M.D.

As a Board Certified Pathologist, Dr. Hirsch studies organs and tissues to identify the presence of disease and determine its probable cause. As a medical physician, he stays informed of current events in medicine reviewing medical journals and research abstracts.

Dr. Hirsch's perspective on health stems directly from his work as a pathologist. He believes that the whole body is only as healthy as its organs and tissues. A healthy body and healthy tissue are maintained or restored through the amounts and qualities of nutrients received through diet.

Dr. Hirsch is Neo-Life's window on the medical community and provides current information on disease and its prevention from a medical perspective. He sees Neo-Life products as tools individuals can use to support the healthy aspects of their diet and address the problems dietary deficiencies and excesses create. ■

Kenneth Hirsch



Fred Hooper

Fred Hooper, Ph.D.

With a doctorate in biochemistry and nutrition, Dr. Hooper is a nutrition resource professional, staying apprised of the latest research from around the world through a vast network that includes "Med-Line," a direct computer link to the National Library of Medicine. His interest covers everything affecting the complex biochemistry of the body.

He views health cell by cell, function by function, action by reaction. He knows and understands the processes involved in breaking down food, utilizing the nutrients it contains and eliminating waste to keep the body healthy.

Neo-Life depends on Dr. Hooper to know exactly how each product will react with the body and to insure that each product fulfills the body's nutritional needs in the area of focus. He sees Neo-Life products as a means of helping assure an abundance of the kinds of nutrients that support and protect good health at the cellular level as well as the whole body. ■

John Miller, Vice-president of marketing

Mr. Miller has been involved in the formulation and introduction of over 200 new products in his 20-year career. His background provides him the necessary tools to determine feasibility of products even before they are developed.

Mr. Miller views health from a product and information perspective. He is concerned with creating specific formulations that address health needs effectively. He investigates and evaluates potential solutions and helps determine the best manufacturing technology to maximize results. He believes that improved health can result from informed choices.

Neo-Life looks to Mr. Miller to turn new research and technological capabilities into superior products and to communicate the needs and benefits of these products in a manner people can apply to everyday life. He sees Neo-Life products as the best possible solutions to the challenges of modern living. ■

John Miller



What this means to you...

You don't have to worry because we do.

The existence of the SAB and the presence of their seal on product labels means:

As a Consumer...

- you know qualified scientists and professionals are determining and evaluating the health challenges and nutritional needs you face and are searching for possible solutions.

- you know these same individuals are working to make these solutions into practical, nutritional products.

- you know Neo-Life products are being tested and certified by scientific methods to ensure safety, reliability and effectiveness.

As a Distributor...

- you know Neo-Life products are of the highest quality and you can represent them with pride and confidence.

