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A Chronic and Fatal
Progressive Disease

THE AGING PROCESS

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Dr. Enrich Greppe, of Italy, recently said that age can be considered "a disease consisting of deficiencies and illness—a chronic and fatal progressive disease."

A disease, according to the medical dictionary is "any departure from a state of health, an illness." This also means that a disease is a departure from the normal. In other words, according to Dr. Greppe, the ageing process is not a normal process. Perhaps, this is true, as we see it today, but under normal circumstances the ageing process is, or should be, a normal progressive condition that takes place in the body according to chronological age. Maturity should be a continuation of growth as long as health and vitality exist. If for any reason, these regular progressive changes of ageing are speeded up, we say that the biological age is more rapid than the chronological age. This, then, is an abnormal state or a disease. According to present day morbidity statisticians in the U. S. it is estimated that 1 out of 7 older people will be chronically ill each year for a period of 3 months or longer. It has also been estimated that about half (50%) of the people 65 years or older have some form of chronic ailment or physical disability. Therefore, we are now faced with an abnormal state of health in the older age group which has already become a major medical and economic problem. These chronic degen-

erative diseases will increase in the future as medical science continues to prolong the lives of the sick and physically weak as well as the healthy and strong. The results of this scientific achievement is shown in the rapid and progressive increase in the total number of older people in the U. S. today.

Health Defined

As defined by the World Health Organization of the United Nations, "Health is a state of complete physical, mental, and social well-being, and not merely the absence of disease and infirmity." The above statistics on the health of older people show that we are a long way from this health goal today.

Is it inevitable that older people will develop a degenerative disease and live out their last years in sickness and pain? Is there any way to prevent the development of these crippling diseases? These are two important questions that medical science is faced with today.

Gerontology is a specialty in medicine concerned with the problems of ageing and how to preserve a healthy and vital body to a ripe old age. The slogan of the Gerontology Society is—"To add life to years, not just years to life."

Perfect health throughout life may not be obtainable for the general population in this generation but it is an ideal goal towards which medical science is striving.

It is important to understand that health is a personal problem and cannot be taken for granted nor can we depend altogether on the government and other agencies to give us this precious gift. Each individual must become aware of the seriousness of growing old by default and must exert every effort to maintain optimum health and longevity.

We usually compare our body with a mechanical machine, but a deeper concept of the nature of a living organism readily reveals the superiority of the human body.

According to Dr. Alexis Carrell "the strength of the machine depends on the metal used in its construction and perfection with which its parts are assembled. But the strength of man comes from other causes. His endurance comes from the elasticity of his tissues, their property of growing and repairing instead of wearing out. Man looks upon himself as destined to fight, to love, to think and to conquer." These are traits beyond pure mechanics. The living organ is capable of repairing itself while a machine wears out.

Cell Growth

Growth is not like adding one brick on another as in a building. Although the body is composed of cells as a house is of bricks, it is born from a cell that manufactures other cells. The cells themselves contain a built-in blue print and need no architect to draw up the plans. They are predestined and have a knowledge of the future building, that is, cells from any organ in the body will continue to grow and form the same organ. For example, liver cells will repair and reproduce a liver and no other organ. A machine does not have such capacities. Also the germ cell of a certain species will produce no other species. The original machine must be received and constructed by a human being. The trend today is to feed the body with refined and synthetic foods as if it were a combustion engine.

What is ageing? Homeostasis designates the maintenance of a steady state of the cellular environment of the body. Abnormal ageing and disease are due to the inability of the organism to maintain this homeostatic or balanced condition within the body.

We do **not** have to accept the fact that the ageing process is a disease and that degeneration and breakdown of the tissues and organs is inevitable.

When abnormal biological ageing occurs, it is usually the result of a disturbance in the enzyme activity and metabolic system in the body. This is produced by repeated insults, that is stresses, caused by the imperfect environment in which we live.

Chronological Aging

We must accept the fact that chronological ageing increases by mathemati-

cal progression and is inevitable, but biological ageing is to a certain extent under our personal control. We **must** also accept the fact that the body's energy reserve, or sometimes called "life forces," according to Dr. Hans Selye, can be too rapidly expended. The time factor of life is limited by many factors in each individual's life. In other words, at any age we are the **sum total** of all our past physical and psychological stresses.

Heredity apparently is the major factor in longevity. This extra genetic factor plays a major role in giving strength and resistance to the tissues and organs to withstand stress and infections. Dr. Oliver Wendel Holmes said: "One of the ways to insure a long life is to make a careful and wise selection of grandparents."

The important thing to remember is that some people with this strong constitution may violate all the laws of nutrition and remain in good health. But this is true for one generation only. When a mother violates the laws of nutrition, the first defects appear in the baby at birth. Dr. Albert G. Hogan, Professor Emeritus of Animal Nutrition at the University of Missouri, states, "Inadequate nutrition in some form is **one** of the three causes of abnormalities, (in the fetus); the others being genetic defects and positive injury." In animal experiments, diets deficient in folic acid, vitamin A, riboflavin and other nutrients produced in the litters a high incidence of anomalies. On the other hand a recent medical report shows that merely supplementing the mothers diet during pregnancy with vitamins alone will reduce the incidence of deformities in children, such as cleft palate, hydrocephalus, fused ribs, and monstrosities beyond description. These feeding tests reveal the fact that there is a relationship between poor nutrition and fetal defects on the one hand and good nutrition and healthy children on the other.

The question then must now be asked —At **what** age and **when** does preventive geriatrics begin? We can see from the above experiments that the role of nutrition in preventive geriatrics begins before conception. In other words, the mother should prepare her body with good nutrition at least six (6) months before pregnancy begins, so that at the time of conception her body should be in complete homeostasis or nutritional balance. That is, there should be a state of harmony in the cellular and enzymatic systems of the body. This healthy pattern is then transmitted to the next generation. The prenatal period is the stage when a solid foundation for future health and longevity is built into the tissues and organs. Unfortunately, nutritional surveys in the U. S. reveal that today most women enter pregnancy nutritionally deficient. One sur-

vey revealed signs of vitamin deficiencies in 98% of the pregnant women examined in a hospital clinic. Because of these facts we **no longer** inherit a completely original model of the perfect human body. Accumulated defects over the years produced by environmental, emotional and nutritional stress as well as chemicals, smog, alcohol and cigarettes, have contributed to the deterioration of the original perfect model produced by the Creator. Animal feeding tests have shown that it is possible to repair these tissue defects and again produce a healthy body, but this requires good nutrition over a period of 4-5 generations. We must become conscious of this problem and utilize the available nutritional information in order to bring about the necessary changes in our dietary pattern as rapidly as possible.

The Perfect Body

The human being has within himself the **key**, which is based on independent thinking and conscious awareness. Unfortunately this human faculty is too often underdeveloped. The perfect body **cannot** be easily reproduced. Although certain features of the tissue defects can be corrected or improved with proper nutrition, if a major tissue defect is present in the body it cannot be repaired during one life time.

The mother has within her power the ability to produce a more perfect and healthy child, by consuming all the essential nutrients before and during the first 3 months of pregnancy, or during the formative stage of development of the fetus. If this is continued each new generation will reach a higher degree of perfection until a perfect body is restored. This is the ideal long range plan.

The next important step in the development of a healthy body is in the first year of life. The foundation for good teeth, strong bones and a healthy body is formed at this stage of life. The one and only dependable protective factor during this period is breast feeding. The modern tendency is to feed infants artificially on pasteurized milk which is inferior to mother's milk. For instance, the protein in breast milk is composed of 40% casein and 60% lactalbumin, while cow's milk contains only a small amount of lactalbumin. It is important to note that lactalbumin has special properties essential for infant growth, development and well-being. Mother's milk also contains antibodies which develop immunity in infants to certain childhood diseases, possibly including poliomyelitis. Incidences of allergy is seven (7) times higher in artificially fed babies. A recent survey shows that bottle feeding is on the increase. The future health pattern of a child is established early in life.

Tissue Weakness

This altered nutrition in early life is

like a "time bomb." Tissue weakness develops through lack of nutritional elements which is "triggered" off later in life, into some form of degenerative disease, when the body comes under the various forms of stress associated with everyday living.

Due to our modern medical science and sanitation, the weak as well as the strong children are saved. Natural selection or adaptation no longer plays its part in the development of a stronger race.

In certain parts of Tibet they test their children for strength and endurance. In the high altitudes of Tibet people dip newborn babies in icy streams to test whether or not they are strong enough to be allowed to live. If the baby dies they feel that it has been spared much suffering on earth. They believe that in such rough country, it is better that a few babies die than to live as incurable invalids.

Certainly I do not advocate the Tibetan method of separating the weak from the strong, but I bring up this point to draw our attention to a new medical problem that is of our own creation. These children born with weak constitutions will more likely develop a degenerative disease early in life and be either partially or completely handicapped. The only way this condition can be overcome is by proper nutrition during pregnancy and early childhood in order to prevent the deformities from developing later in life. They can never be completely corrected by palliative therapy.

Aging Problem

What are some of the problems of ageing after infancy and childhood? C. M. Childs (University of Chicago Press 1915) writing on the subject of senescence and rejuvenescence in 1915 believed that ageing results from accumulation of toxic substances in the cell and that rejuvenation is affected by their elimination. Later, Benedict placed the intoxication theory on a physiochemical basis by suggesting that the permeability of the cell is decreased with age by the retention of toxic metabolic-end products. Today we have definite evidence of this theory in incomplete carbohydrate metabolism. This results in the accumulation in the cells of the body of two (2) toxic metabolites, "pyruvic acid" and an abnormal carbohydrate molecule. These toxic substances can be eliminated by the administration of a sufficient amount of B-complex vitamins to complete the carbohydrate metabolism to CO₂ water and the release of energy and oxygen to the cell. This reveals the role of complete nutrition in the ageing process to prevent the production of these and other toxic metabolites in the body due to faulty metabolism. The importance of this fact is realized when we take into consideration the extensive

use of refined carbohydrates in the normal daily diet. It is estimated that approximately 500 calories per day consist of this non-vital food.

Dr. Tom Spies in his address at the 1957 Annual Meeting of the American Medical Association stated—"All diseases are caused by chemicals, and all diseases can be cured by chemicals. All the chemicals used by the body, except for the oxygen which we breathe and the water which we drink are taken in through food. If we only knew enough, all diseases could be prevented and could be cured through proper nutrition. As tissues become damaged because they lack the chemicals of good nutrition, they tend to become old. They lack what I call tissue integrity. There are people of forty (40) whose brains and arteries are senile. If we can help the tissues to repair themselves by correcting nutritional deficiencies, we can make old age wait." I agree with Dr. Spies that proper nutrition is the answer to the ageing problem.

Long Life—Why?

Homo sapiens very rarely have the ability to pass the mark of 100 years, but there are on record many cases that have exceeded this mark. A review of these cases shows that they all had one thing in common: on autopsy there was no evidence of disease or degeneration of any of the vital organs of the body.

Recently in Paris, M. Renaud found that Sclerosis does not necessarily accompany old age. Post mortem examinations were made of 50 bodies of persons over 80 years of age of whom six were 83. Although 27 showed sclerosis of the valves of the heart, the aorta, large blood vessels, and cerebral arteries, 23, or approximately 50% had normal vascular tissue. He concluded that sclerosis therefore is not a necessary accompaniment of old age, but apparently a pathologic condition provoked by secondary environmental factors. (Medical Science Feb. 25, 1958) as Dr. Wrench reported on his study of the healthy Hunza people—"Death comes about in that way of a fully natural life time." Dr. McCarrison in his classical rat feeding test in the early twenties show that rats fed on natural food grown on fertile soil and free of chemicals were healthy and lived an extended life span for many generations. Autopsy on these test animals revealed no pathology of any of their vital organs. Where as the control rats fed on deficient diets died early in life and developed all the pathology known to man.

Another important factor with all these people which apparently played a role in their longevity is "Moderation in the quantity of food consumed. Today we must add to this, the quality of the food and the amount of chemicals in and on the food.

We know that all living organisms have a limited time of life, but this is not necessarily the Biblical allotted span of threescore and ten years. Biologically we should live five times the growth period, which in man is approximately twenty (20) years. Therefore, our biological life span should be 100 years.

According to Hans Selye—Physiological ageing is not determined by the time elapse since birth, but by the total amount of wear and tear in the form of stress, to which the body has been exposed. He believes that life gradually spends the given amount of adaptation energy that we inherit from our parents. When this reserve energy is depleted, life forces cease to function and death ensues.

Stress is not always physical, in fact the body can readily recuperate from physical or mechanical stress. The greatest stress that our bodies encounter today is emotional and environmental, and this includes nutrition, which in my opinion, tops the list.

Dr. Clive McCay, of Cornell University stated, "Our studies with animals for many years have convinced us that there is almost no stage in the life span when improved nutrition will not lead to improved well-being in the remaining period of life. He also showed that a low calorie diet gave a longer and more vital life span.

Today it is **no longer** possible to maintain homeostasis or perfect balance of cellular metabolism in the body due to deficiencies in our basic foods. One of the main reasons is the fact that our soils are rapidly being depleted of the organic matter which is the storehouse of a "living soil"—without which quality food cannot be grown. This means that the food available on the market today is not quality food and is not in balance regarding its vitamin-mineral and amino acid composition. Add to this the stimulating effects on plants of large quantities of N. K. P. fertilizer and a greater imbalance is produced. This imbalanced amino acid pattern is transmitted to the cattle which are used for food and to the human being that must live on this defective food. Dr. Pfeiffer in some of his preliminary amino acid studies has been able to reveal this unstable and unbalanced pattern in both plants and animal protein.

The animals are further subjected to a period of concentrated carbohydrate feeding plus stilbestrol plus antibiotics to increase the fat in their bodies. Recent studies in the relationship of fats to atherosclerosis points to the fact that fats are one food element of which we already produce and use in excess.

Premium beef is known as "marbled beef." This means that the beef has fatty infiltration into the muscle which is pathological. Healthy tissue should have a definite line of demarkation between the fat and muscle. Does this

type of fat have the same chemical structure as normal animal fat and what is its effect on the body metabolism? As far as can be determined there have been no studies made on this theoretical health problem. What beef cattle really need before entering the food channels is food that will increase the protein content and balance the amino pattern. What long term influence stilbestrol and antibiotic feeds will have on the health pattern of human beings is still an unsolved mystery. We do know that laboratories using small animals such as rats cannot use the meat from commercial animals that have been raised on stilbestrol supplemented feeds. This meat causes glandular disturbances and infertility in rats which destroy their usefulness as test animals. Will this type of meat eventually cause menstrual disturbances and imbalanced hormone secretion in young girls and feminization of young boys?

Food Additives

There are also other factors today that are above and beyond basic nutrition as it is generally understood. Unless we become aware of this extra stress factor associated with today's foods we will be neglecting a major influence on our health and longevity. Legally this problem is divided into two categories—one comes under the term of "chemical additives" in foods. There are more than 500 different chemicals used as food additives today, of which 150 have not been adequately tested for their toxicity to human beings.

The other category is chemical insecticide sprays that are present on every article of food consumed from birth until death. We know more about

the toxic effects of these chemicals on human health. They are known as neurotoxins and hepatoxins. In other words they have a direct toxic effect upon the nerves and liver as well as other vital organs. They are also known to interfere with the delicately balanced enzyme systems of the body metabolism.

Therefore, one can readily understand, with all these extra daily environmental stresses, why it is **not possible** for a body to maintain a balanced metabolism or homeostasis that is essential to good health and longevity.

There are many other environmental stresses in our way of life today that are too numerous to discuss in this paper. Some of these include polluted waters, automobile exhausts in the atmosphere, chemicals from industrial plants, radioactive fall-out and many others.

The Fatal Disease

So perhaps today Dr. Greppi is correct in stating that age is a chronic and fatal progressive disease. But should we be satisfied or complacent about this situation and allow it to continue until we reach the point in degeneration beyond which there is no chance of return to normal health?

Although the prolongation of life in itself is not the real goal for human beings we should endeavor to live in metabolic balance and not to destroy ourselves. This is a basic principle in human evolution.

It is the duty of every individual to protect himself and preserve a balanced metabolism in order to carry out the higher duties of human life and endeavors. For this we need strength and

courage and the freedom of the will to achieve through the higher faculties the ultimate goal of mankind.

This gives us as individuals and members of N.F.A., a goal toward which we can direct our forces and help keep this nation from being destroyed from within by the process of physical and mental degeneration.

There is much written today regarding the great scientific advances by science in the treatment of many of the degenerative diseases. They talk of amazing prospects of a golden age in health and longevity. You will note that much of the talk is about a steady parade of new chemical weapons in the treatment of acute diseases. There have also been tremendous advances in surgery such as repairing damaged hearts, transplanting organs and arteries. These methods are certainly praiseworthy and are playing a tremendous part in the prolongation of lives, but this is merely patching up and repairing degenerated tissue and organs. We should not lose sight of the fact that quality nutrition free of toxic chemicals is the basic necessity in preventing metabolic diseases and maintaining homeostasis in the body so that these repair jobs will not be necessary. We can then live out our normal life span physically **strong** and **active** and **mentally alert**. Death then should come about in that way of a fully natural life time—as the energy reserves and "life forces" are gradually expended and ultimate sleep ensues.

This, then, will be carrying out the basic principles of preventive medicine by not only adding years to life but also adding life to the years.

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