

The Newsletter of THE AMERICAN INSTITUTE OF STRESS

Number 5

1993

SECRETS OF CENTENARIANS

To me, old age is always fifteen years older than I am.

Bernard Baruch

Centenarians are the fastest growing segment of society, and scientists are now focusing in on the secrets of these "expert survivors". This term refers to people aged 100 or more who are alert and still play an active role in community life, as opposed to being incapacitated in a nursing home or other institution. By studying these super seniors, it might be possible to identify some common denominators that characterize successful aging. This information could then be utilized to determine what medical, social or governmental services should be developed or encouraged to help others. Researchers at the halfway point of a nine year study have already come up with some unexpected findings.

They initially expected to encounter depressed, frail, and infirm individuals, but instead found that most were quite physically active, optimistic, and had a good sense of humor. The hundred centenar-

ians selected were extensively examined and evaluated for medical, genetic, and psychosocial data of every description. In some instances, this required up to twenty six hours of incisive interviews, asking such questions as, "have you ever had an affair", "have you had a pap smear", and obtaining detailed information about exactly what they ate and how much alcohol they drank. Decreased caloric intake is associated with longevity, and centenarians consumed an average of 1600 calories daily. This, despite the fact that "most of them eat things like bacon, sausage, and eggs". None were currently smokers although some had been, and average alcohol intake was about one drink a week.

What surprised researchers the most was the unusual degree of optimism and sense of humor which contrasted sharply to reports of increasing rates of suicide in the elderly. One complained about telephone calls he kept receiving from brokers who wanted him to put his money into long term accounts to receive big returns after 25 years! His comment to the interviewer was, "Is he crazy? I'm 100 years old - I don't even buy green bananas!"

Wall Street Journal-November 12, 1992

Growing old is no more than a bad habit which a busy man has no time to form.

Andre Maurois

ALSO INCLUDED IN THIS ISSUE

Cutting Health Care Costs But Saving Lives.....	2
Why Do Eskimos Have So Few Heart Attacks?.....	2
What's The Leading Cause Of Premature Death?.....	3
Golf Related Malaria?.....	3
More On Diets and Heart Attacks.....	3
Are We Losing The Battle Of The Bulge?.....	4
Job Stress Goes To The Dogs.....	4
Free Radicals, Vitamins, and Strokes.....	4
Heart Attack Stress Increases Risk Of Rehospitalization.....	5
Exercise and Cancer.....	6
How Does Exercise Reduce Stress?.....	6
Bereavement And Illness.....	7
Stress In Female Military Personnel.....	7

The NEWSLETTER OF THE AMERICAN INSTITUTE OF STRESS is published monthly. Annual subscription rate \$35.00 (U.S.), \$45.00 (Foreign). Copyright© 1993 by The American Institute of Stress, 124 Park Ave., Yonkers, N.Y. 10703. 1-800-24-RELAX. All rights reserved.

The Newsletter of
**THE AMERICAN INSTITUTE OF
 STRESS**

Paul J. Rosch, M.D., F.A.C.P.
 Editor-in-Chief

**Contributing Editors from The Board of Trustees of
 The American Institute of Stress**

Robert Ader, Ph.D., Rochester, NY
Herbert Benson, M.D., Boston, MA
Michael E. DeBakey, M.D., Houston, TX
Joel Elkes, M.D., Louisville, KY
Bob Hope, Palm Springs, CA
John Laragh, M.D., New York, NY
James J. Lynch, Ph.D., Baltimore, MD
Kenneth R. Pelletier, Ph.D., M.D., Berkeley, CA
Ray H. Rosenman, M.D., San Francisco, CA
Charles F. Stroebel, Ph.D., M.D., Hartford, CT
Alvin Toffler, New York, NY
Sue Thomas, RN, Ph.D., Baltimore, MD

Cutting Health Care Costs But Saving Lives

Everyone agrees that there is a health care crisis in the United States, but few concur on how to deal with the dilemma. A logical place to start would be to correct those problems that can be prevented. At the top of any list should be life-style habits that are self destructive. Tobacco related illness causes 500,000 premature deaths and 85 billion dollars to go up in smoke annually. One hundred thousand deaths each year are linked to alcohol, which also pours 85.8 billion dollars down the drain. Illicit drug costs are estimated at 60 billion dollars a year, although the figure would probably be much higher if one considered its contribution to the transmission of AIDS, hepatitis, and other blood borne diseases. In addition to substance abuse, many other stress-related causes of death including accidents and suicides might also be preventable by employing educational and early intervention strategies.

American Medical News-May 3, 1992

Why Do Eskimos Have So Few Heart Attacks?

Although Eskimos consume a high fat diet, they have comparatively low death rates from coronary heart disease. Death certificate figures confirm that Alaskan Eskimos have a 33% lower cardiovascular death rate than non-native residents. It has been suggested that this may be due to the fact that Eskimos may have higher mortality rates from other causes of death that occur before middle age, when coronary mortality is most common. Some believe that the lower incidence of cardiovascular disease stems from their high fish diet containing omega-3 fatty acids which have antioxidant properties that retard the development of atherosclerosis. Another factor may be that they are relatively free from modern societal stresses that contribute to cardiovascular disease, and that they have also preserved the strong social support buffers demonstrated to provide cardioprotective benefits.

To explore this further, scientists evaluated the extent of atherosclerotic lesions in the coronary arteries and aortas of native Alaskan Eskimos and compared this to the findings in over 100 non-native residents. They found that although the degree and extent of lesions increased with age in both populations, this progression was considerably less in the native Alaskan Eskimo group. Studies of native Greenland Eskimos confirmed that they similarly enjoy reduced mortality from coronary heart disease. In addition, their lipid profile is characterized by lower cholesterol and increased percentages of high density lipoproteins, or good cholesterol. This appears to be related more to dietary than genetic factors, supporting the high fish diet hypothesis. A high fish diet has also been reported to provide relief for many patients with rheumatoid arthritis.

The Lancet-April 24, 1993

"The best doctors in the world are Dr. Diet, Dr. Quiet, and Dr. Merry Man".

Jonathan Swift

What's The Leading Cause Of Premature Death?

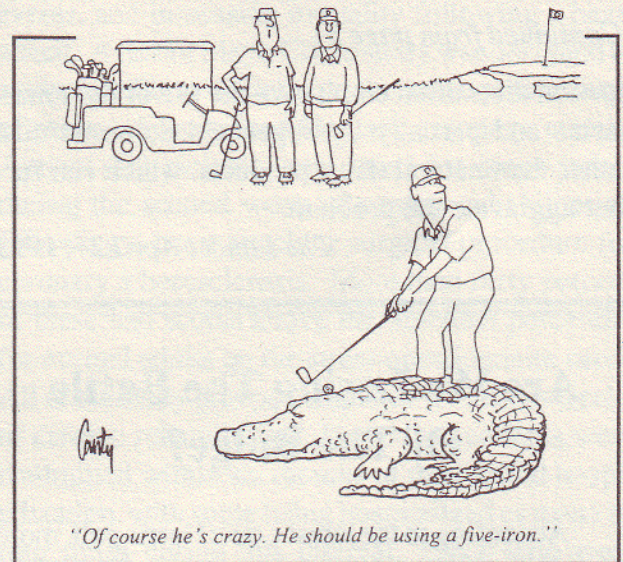
Many people might pick heart disease or cancer, but the correct answer is accidents. Although average Americans live more than 65 years, deaths prior to this age are considered to be premature. Based on this, 2.1 million years of potential life were lost due to accidents in 1991, with automobile catastrophes accounting for more than half of these. Cancer was the second leading cause of death, claiming 1.9 million potential years, and violence due to intentional homicide and suicide was responsible for almost 1.6 million years, an increase of 4.7% over the previous year. The largest rise was seen in AIDS, which stole 776,240 years from its victims in 1991, up 17.6% from 1990.

American Medical News-May 3, 1993

Golf Related Malaria?

A recent report claiming an association between malaria and working for the oil industry in the tropics has been called into question by an Irish physician. Over the previous year, he had seen three patients fitting this description. However, exposure to mosquitoes had been limited, as they were all based in major cities and they did not recall having been bitten by mosquitoes. On further questioning, all admitted that they had played golf on nearby courses, characterized by water hazards, swamps, and high temperatures, ideal breeding conditions for mosquitoes. In addition, he pointed out that golfers in the tropics often tend to play during the cooler hours around dawn and dusk when mosquitoes are most apt to abound, and that customary golf attire of short sleeved shirts and shorts provided increased exposure of the arms and legs. The World Health Organization has indicated that most major cities in the tropics are malaria free or of limited risk. Thus, although prophylactic antimalaria drugs are not mandatory recommendations, this may not apply to golfers.

The Lancet-April 24, 1993



More On Diets And Heart Attacks

Obesity is a risk factor for heart disease, and overweight cardiac patients are routinely put on weight reduction diets. Paradoxically, dieting, especially when intermittent, is associated with an increase in cardiovascular disease as well as premature death, as is seen in the Yo-yo Syndrome. The reasons for this are not clear. One possible explanation comes from recent evidence confirming the correlation between consumption of *trans* fatty acids produced by the partial hydrogenation of polyunsaturated vegetable oils such as margarine and coronary atherosclerosis. *Trans* fatty acids appear to cause more atherosclerosis in this regard than natural dairy products or even saturated fats.

Arachidonic acid is an essential fatty acid that is vital for the production of important chemicals called prostaglandins. In individuals who consume a normal Western diet, fatty tissue stores contain both arachidonic acid and *trans* fatty acids. When people go on a calorie restricted diet, free *trans* fatty acids and arachidonic acid are both released into the circulation from fat depots. However, arachidonic acid is used up much more rapidly, since it is needed as a building block for prostaglandins and vital fatty acids. This results in a relative surplus of *trans* fatty acids which tend to accelerate the development of coronary atherosclerosis. In addition, weight re-

(Continued on page 4)

(Continued from page 3)

duction diets often emphasize the use of light margarine and partially hydrogenated domestic oils, rather than natural dairy products, which can further aggravate the problem.

The Lancet-April 24, 1993

Are We Losing The Battle Of The Bulge?

According to the latest Louis Harris poll, more than two out of three Americans are overweight, up from 58% ten years ago. This may be because the nationwide survey of 1,251 adults also found that only about half of us are now trying harder to avoid fatty foods, compared to 57% in 1991. About one out of three respondents claimed that they exercised strenuously at least three times a week, and this figure has been fairly constant over the past decade. However, stress is another factor that may be relevant. One out of three complained of being under great stress at least several days a week, and a variety of other surveys have shown that stress levels have increased steadily over the past 5-10 years.

On the positive side, 76% of us are now non-smokers, an all time high, and alcohol consumption is also down. Forty per cent were teetotalers and only about one out of ten described their drinking habits as more than moderate. All of these factors can contribute to weight gain. According to the pollsters, the problem is that "We're not doing things that are hard to do - lose weight, exercise, not eat the foods that taste best".

USA Today -March 12, 1993

Job Stress Goes To The Dogs

A variety of reports have demonstrated that dog and other pet owners seem to have fewer heart attacks, and that they also live longer. This has been

attributed to the stress reduction effects provided by social support and caring for something. Some reports have demonstrated that the presence of pets, particularly dogs, can reduce stress in patients as well as staff members in hospitals and nursing homes, and many such facilities now encourage this.

Job stress is steadily increasing, and has been labeled by some authorities as America's number one adult health problem. This has prompted the development of a variety of novel programs and strategies to prevent or reduce stress in the workplace. One Florida employer encourages employees to take a "blue day" when necessary, to deal with stressful situations. In addition, he now lets his cocker spaniel roam freely around the premises as a "goodwill-ambassador-cum-security-system to help eliminate office stress".

American Family Physician-November, 1992

Animals are such agreeable friends -- they ask no questions, they pass no criticisms.

George Eliot

Free Radicals, Vitamins, And Strokes

Free radicals are not liberated members of the Communist Party, but rather unstable molecules formed during the course of normal oxidative metabolic activities in the body. Increased free radical activity is thought to be responsible for most of the manifestations of the aging process, including graying of the hair, cataracts, as well as atherosclerosis and cancer. These effects are blocked by naturally produced antioxidants, which progressively decline as we grow older. Vitamins A, C, and E, are also powerful antioxidants, and have been demonstrated to protect against many of the above age associated problems, particularly coronary atherosclerosis, which is the major cause of heart attacks. Atherosclerosis of the cerebral arteries can also contribute to strokes, and a recent study suggests that high vitamin A levels can also provide protective benefits for such patients.

(Continued on page 5)

(Continued from page 4)

A Belgian study measured Vitamin A and Vitamin E serum levels in eighty patients who sustained acute strokes. The study group was compared with eighty age and sex matched controls with other types of neurological problems. Serum Vitamin A and E values were similar in both groups. Stroke victims with Vitamin A concentrations above average were much more likely to experience a complete recovery within the first twenty four hours, had fewer neurological deficits at the end of three weeks, and decreased mortality rates compared to those with below average values. However, there did not appear to be any significant difference in outcome between patients with high and low vitamin E concentrations.

It is believed that the beneficial effects of antioxidants in stroke are due to their ability to retard damage as a result of chemical changes that occur when brain tissue is deprived of oxygen. Both Vitamins A and E are fat soluble antioxidants that readily cross the blood-brain barrier. However, animal studies have shown that Vitamin A may be more potent in brain tissue, since its antioxidant effects can be demonstrated at low oxygen concentrations. Vitamin E is most effective at higher oxygen concentration levels, and therefore may not be as protective in oxygen deprived ischemic brain tissues. These observations may have important implications for the treatment of stroke and brain damage. New synthetic antioxidant steroids have proved so dramatically successful in waking up patients who have been in chronic coma due to stroke or cerebral edema, that they have been dubbed "The Lazarus Hormones", or lazeroids.

The Lancet-June 27, 1992

Heart Attack Stress Increases Risk Of Rehospitalization

Patients who suffer severe psychological distress following a coronary event, are much more likely to be readmitted to the hospital, and run up significantly higher bills. Prior reports have suggested that psychological factors can play a significant role in the development of coronary

events, and increasing mortality following a heart attack. A recent Mayo Clinic study was designed to study the effects of stress on the subsequent course of patients hospitalized for acute coronary events. Almost 400 patients were rated for stress levels during the second week of cardiac rehabilitation following a heart attack or surgical procedure for coronary atherosclerosis. More than forty percent of these had scores above the ninetieth percentile for normal adults on the stress questionnaire used! All of the study groups completed five to ten weeks of cardiac rehabilitation. Forty-four patients were readmitted within six months of their initial hospitalization, with some being hospitalized as many as four times during this interval. Those who were judged to be psychologically distressed were almost two and a half times more likely to be readmitted and had a greater likelihood of heart attacks, sudden death, or the need for an additional surgical procedure. They were also more apt to be readmitted for stress related chest pain not demonstrated to be due to cardiovascular disease. Other risk factors, such as abnormal exercise tests, poor ejection fraction, and diabetes, which might have contributed to rehospitalization were taken into account. The researchers concluded that psychological distress increased the risk of early rehospitalization, by more than twenty percent. Psychological distress was also associated with significantly greater costs with an average total of \$8,556 for the severely distressed patients, as opposed to \$2,035 for those that did not fall into this category. Efforts are now underway to determine whether appropriate stress reduction measures during the cardiac rehabilitation period might be effective in improving these figures.

Internal Medicine News-May 1, 1993



Exercise And Cancer

Regular exercise appears to confer a variety of health benefits, and the most recent addition to the list may be cancer of the colon. One review of the health habits of seventeen thousand male Harvard Alumni which began in 1962, revealed that those who burned one thousand or more calories a week through exercise, were only half as likely to develop colon cancer as non-exercisers. A California survey of nearly three thousand men also found that those who with sedentary jobs had a sixty percent higher rate of colon cancer than controls with physically active duties. A Swedish study of more than a million men followed over twenty years similarly revealed that those who spent at least half of their time at work sitting down were thirty percent more likely to get colon cancer than others who spent less than twenty percent of their time in passive activities.

Regular exercise may reduce the incidence of other malignancies as well, and benefits are not confined to males. A review of some fifty four hundred college alumnae compared the health records of those who had been former athletes with other classmates. The non-athletes had two and a half times as much reproductive system malignancies, and twice as many breast cancers, than those who had been more active physically.

The explanation for these findings is not clear, although one possibility is that exercise may strengthen immune system defenses against cancer. With respect to colon cancer, it is likely that exercise facilitates a more rapid passage of food through the gut, thus minimizing exposure to potential carcinogens. Links between stress and cancer have increasingly been recognized. Some of the cardiovascular benefits associated with mild regular exercise have been attributed to its associated stress reduction attributes, and this may be another factor.

American Health-March 1992



How Does Exercise Reduce Stress?

Exercise can provide a variety of stress reduction benefits for many individuals, and various explanations for this have been offered. Many people under stress experience a "fight or flight" response characterized by increased muscle tension, blood pressure, and heart rate due to the release of stress related hormones and increased sympathetic nervous system activities. These are designed to increase alertness and improve strength for fight, or greater speed for flight. However, if this state persists, or is not followed by a period of relaxation, a variety of physical and emotional problems can ensue. Exercise may relieve stress by providing an outlet for increased energy stores which have not been utilized. In some instances, exercise may provide emotional benefits, as stressful thoughts are replaced by focusing on the activity being pursued. There may also be increased endorphin secretion, which promotes a sense of well being or euphoria, and greater resistance to pain. When we stop exercising, heart rate and blood pressure fall, breathing becomes slower and more regular, and muscle tension is dissipated. In addition, during the post exercise period, we are more apt to fall into a relaxed and contemplative state that provides other emotional benefits.

One study of several hundred female runners between the ages of twenty and fifty found that those who ran ten to twenty miles per week reported much lower levels of anxiety, mental tension, and depression. Other psychological rewards included improved decision making and concentration capabilities. Regular outdoor running may provide additional benefits because of surroundings of natural beauty and a relative

(Continued on page 7)

(Continued from page 6)

lack of noise and other forms of pollution, as well as time pressures. In certain instances, the rhythmic repetitive sound of the feet hitting the ground may provide an additional tranquilizing effect.

The secret to successful exercise is to find some non competitive activity such as running, walking, swimming, or aerobic dancing that you look forward to and enjoy. It is also important to take advantage of the post exercise cooling down period to relax and experience the natural release of tensions, and adequate time should be set aside for this.

It is essential to recognize that exercise is not a panacea for stress and that it can be overdone. In the study cited above, emotional and stress reduction benefits began to decline in women who ran more than twenty miles a week. Another survey of over one hundred professional women aged thirty to sixty revealed that those who were using exercise to cope with their stress, more than half of those working out over three hours a week still had stress levels described as "incredibly high". The explanation for this was that they were "skipping meals, eating junk food, neglecting sleep and quiet time, smoking, and abusing alcohol". It is difficult to define stress since it is so different for each of us. However, the feeling of being out of control is always distressful, and exercise does provide a temporary sense of control for many individuals. Nevertheless it cannot compensate by itself for the stressful, mental, and physical consequences that result from poor life style habits.

New Woman-October 1991



Bereavement And Illness

Death of a spouse is generally recognized as the most stressful life change event, and widowed individuals have significantly higher mortality rates from cancer and cardiovascular disease than married controls. This was confirmed by a review of almost 100,000 Finnish death records from 1972 through 1976, which also found an almost 100 percent increase in the rate of violent deaths. Suicides were 242 percent and traffic deaths 153 percent higher than expected. The rise in death rates was greatest shortly after the event, with suicides being 17 times higher in widowers and 4.5 times higher in widows during the first month following their loss. This has been attributed to the severe stress imposed by abrupt lifestyle changes, along with insomnia and psychotic reactions that disturb mood and the ability to think or concentrate.

American Journal of Public Health -3/1987

Stress In Female Military Personnel

The Navy "Tailhook" incident and other reports of sexual harassment have recently focused attention on these and other sources of stress for female members of the Armed Forces. This has led to a clamor for equal rights and growing tendency to assign women to duties which were previously restricted to men. More female soldiers are being exposed to war zones, and many are concerned about the lack of research on differences in the ways that men and women may cope with traumatic stress. As a result, the VA has now established the Women's Health Sciences Division for Post Traumatic Stress Disorder at the Boston VA Medical Center, under the direction of a female physician. As she noted, "There's an increasing concern about the special needs of women who experienced stress disorders as a result of war zone experience or military-related sexual abuse."

Gannett Westchester News-6/21/93

Book Reviews • Meetings and Items of Interest

Book Review

Mind Body Medicine: How To Use Your Mind For Better Health, Goleman, D., and Gurin, J., eds. Consumer Reports Books, Yonkers, NY (1993) No. of pages: 482 \$24.95

This is an excellent and timely publication, comprehensive in scope, and presented in an attractive format. Both editors are experienced in the field of mind/body medicine, and they have amassed an impressive array of talent. It is difficult to think of any relevant topic that has not been authoritatively addressed. More importantly, this volume provides a consistent balance which should be particularly useful in view of the growing popularity of alternative medical approaches. According to a recent article, Americans made 388 million trips to primary care physicians in 1990, compared to 425 million visits to other providers of unconventional medical care, at a cost of 213.7 billion dollars, the vast majority of which represented out of pocket expenses. Another 1992 survey revealed that 93% of physicians revealed that their patients had asked them about unconventional treatments, up from only 53% in 1989. In some cases, this growing trend stems from an uneasy feeling about the long term or unknown side effects of drugs and a quest for alternative naturopathic approaches. Another factor is dissatisfaction with the time urgent, impersonal nature characteristic of much of contemporary medical practice, and a cookbook approach that seems to emphasize treating the disease rather than the individual patient. As a result, a host of well meaning zealots, as well as entrepreneurs and even charlatans have stepped in to fill this void, hawking their wares. Some patients will undoubtedly achieve benefits from almost any approach because of the placebo effect, and as Seneca noted over two thousand years ago, "Part of the cure is the wish to be cured." It is often difficult to separate the wheat from the chaff, and this volume does a remarkable job in this respect. Its major virtue is an extraordinary balance that derives from always keeping an open mind, but at the same time a healthy skepticism, when therapeutic claims are devoid of any objective

backing. Excellent examples of this are the chapters on "Emotions and Cancer", and "Mind and Immunity". It is not possible in a Review of this length to discuss any of the other more than two dozen chapters in this volume, other than to reiterate that each represents a state-of-the-art presentation. In addition, there are abundant, up-to-date references, as well as a listing of responsible resources for individuals who wish further information in any of these areas. Alternative medicine is a controversial subject, it often seems characterized by violently contested claims and counter claims, that shed more heat than light on the subject. It is a difficult task to steer a course between the Scylla of arbitrary rejection of all alternative approaches by the medical orthodoxy, and the Charybdis of quackery. Fetzter Institute, which has frequently supported this pursuit, should be congratulated for finding two captains and a crew who have been able to safely navigate these troublesome waters.

Meetings and Items of Interest

July 19-23 Menninger Clinic - Steven Fahrion & Patricia Norris on Effective Psychiatric Interventions Using Biofeedback, Sheraton Steamboat Resort, Steamboat Springs, CO (800) 288-7377

July 21-24 The 17th Annual Update in Neuroscience, Virginia Beach VA (804) 230-1316/1300.

July 26-30 New England Educational Institute - 10th Annual Cape Cod Summer Symposia with Stephen Lankton on Hypnosis and Post Traumatic Stress Disorder, Cape Cod, MA (413) 499-1489

August 11-15 International Love & Health Congress, Southern CT State University, New Haven, CT, (203) 397-4786

August 13-18 University of California, San Diego School of Medicine, Office of CME - The Power of the Art: Introduction to Medical Hypnosis, Colonial Inn, Del Mar, CA (619) 259-6790

ISSN # 1047-2517

The Newsletter of
**THE AMERICAN INSTITUTE OF
STRESS**

124 Park Ave., Yonkers, New York 10703

Non-Profit Organization
U.S. Postage
PAID
Yonkers, NY
Permit No. 400