

This is the last article in a multi-part series on the aging process and its relationship to the mechanisms of oxidative stress, including: genetic endowment, lifestyle and diet.

## THE AGING PROCESS

# Killing Us Softly - the Corporate Food Culture

If you have read the first three articles in this series, you are likely beginning to see that aging and degenerative disease are linked closely to lifestyle and nutrition. In turn, the lifestyle and nutritional choices we make partly determine the level of oxidative stress we endure.

Big Macs and fried chicken, Marlboros and Budweiser, TVs and couch potatoes; they all add up to the same thing - bad news - a life-long barrage of damaging free radicals.

For those of us who don't have the good genes to fight off this free radical firestorm, it spells big trouble ahead. For those whose family history shows susceptibility to a particular degenerative disease, such as cancer or diabetes, it means you have to be extra vigilant.

If you're not keen on open-heart surgery, radiation treatment, chemotherapy, or kidney dialysis; or if adult blindness, limb amputation or Alzheimer's disease aren't your cup of tea, then listen up and do the right thing:

- ✓ stop smoking now;
- ✓ if you use alcohol, do so moderately;
- ✓ keep away from junk foods, including high fat and high glycemic foods;
- ✓ get off the couch and get some fresh air and exercise;
- ✓ whenever possible, use the highest quality, garden-fresh foods available;
- ✓ increase your consumption of fresh fruits, vegetables, and whole grains;
- ✓ eat less red meat and more fish;
- ✓ and take a high quality nutritional supplement loaded with antioxidants every day.

Our diets and lifestyles are killing us with kindness - we're over-fed, overweight and under-nourished. Yet, a lot of people out there believe our diets are just fine.

## CORPORATE FOOD CULTURE - THE LEGACY

Poor diet and physical inactivity claim over 500,000 lives each year, 1400 lives lost each and every day. Just look at the consequences in the headlines.

### "Heart Disease Stalks Pre-teens"

Sudden cardiac deaths are increasing in young people, especially among women. The culprit? The fast-food scarfing, Nintendo-playing habits of today's kids are clogging their arteries and savaging their cardiovascular systems earlier than any generation before them.

We now know that atherosclerosis actually begins in early childhood. By the time we reach the ripe young age of 39, three-quarters of us have the beginnings of heart disease.

### "Cancer on the Increase among Young Adults"

If you don't protect yourself, your chance of avoiding cancer is about as good as the flip of a coin. Once you've contracted the disease your overall chance of survival is considerably less. The problem

is that once a cancer shows up on the radar screen it's already well advanced, having been developing silently for the past 10 to 20 years.

Doctors immediately roll out their heavy artillery—surgery, chemotherapy, and radiation—but in reality, there's not a lot that they can do at this point.

According to Nobel Laureate, Dr. Linus Pauling, "Everyone should know that the war on cancer is largely a fraud." The problem is, for 30 years we've have been desperately searching for the 'magic bullet,' while ignoring the underlying cause—oxidative stress.

A New England Journal of Medicine study cites 88 years of data to show that many cancers can be prevented through simple lifestyle choices and avoidance of environmental risk factors: poor dietary habits, smoking, alcohol consumption, lack of exercise, and exposure to environmental toxins.

A recent review conducted at University of California, Berkeley found overwhelming evidence that fruits and vegetables in the diet provide a huge protective effect against almost every type of cancer.

## "Diabetes: Impact of Disease Staggering"

It used to be that type-2 diabetes was the disease of middle age. Not any more. It has already it has reached epidemic proportions in children and adolescents:

- ✓ In Canada, diabetes and its complications consume 15% of the nation's health dollars
- ✓ In the US, the cost is a staggering \$150 billion each year

Today, type 2 diabetes is found to occur in kids who are overweight and sedentary. Obesity is, in fact, a hallmark of the disease; 85% of children who contract the disease are obese. In 1990 less than 4% of childhood diabetes was type 2; today it averages 20%—a five-fold increase in a little more than a decade.

## "Obesity is now reaching epidemic proportions in the U.S. and elsewhere."

Obesity is a contributing factor in a majority of degenerative disease processes. In the U.S., the obesity epidemic has become so bad that it may soon overtake tobacco as the leading cause of preventable death.

The US Surgeon General has called for:

- ✓ schools to provide daily physical education;
- ✓ healthier lunch options;
- ✓ and restriction of pop and junk food dispensers in schools.

The US and Canada are becoming nations of "Chubby Chickens"—and the culprit is our sedentary, couch potato lifestyle. New Obesity maps just published by Statistics Canada show that, nationwide, over 13% of Canadians are obese and 48% overweight. These rates of obesity have more than doubled over a 13-year period from 1985 to 1998. South of the border in the US, the problem is even worse—18% are obese and 61% are overweight.

## "Majority of Canadians Dangerously Unfit"

Health Canada reports that 57% of Canadian kids are so sedentary they are harming their health and inviting the premature onset of degenerative disease. The direct medical costs attributed to obesity in Canada top \$1.8 billion annually.

Multiply that by a conservative factor of 10 and you see the magnitude of the problem in the U.S. York University School of Kinesiology estimates that getting just 10 percent of Canadian butts off the couch would save at least \$150 million a year in direct health costs.

North Americans now derive over 50% of their daily caloric intake from eating out—much of that at

fast food restaurants. Recent scientific evidence suggests that the fat content of fast food meals, because of the hidden trans fats (partially hydrogenated oils), may be twice as bad for you as saturated fats.

Trans fat, because the body can't properly metabolize its unnatural chemical make-up, is a secret killer, with a strong link to heart disease. The hidden trans-fats in fries double the damage caused by their saturated fat content.

## THE VERDICT IS IN

Cardiovascular disease, cancer, osteoporosis, type 2 diabetes, obesity, and cognitive dysfunction—all are increasing, particularly in our young people. All are diseases linked to excessive oxidative stress. All are diseases that are entirely preventable with a healthy diet, a little common sense and a lot of fresh air and exercise to blow out the pipes.

## LIFESTYLE AND DEGENERATIVE DISEASE

There is no question that degenerative disease is linked inextricably to lifestyle. Therefore, the strategy in combating degenerative disease is to meet the enemy head-on—to quench uncontrolled oxidative stress. We can do that by making the right choices:

- ✓ keep away from high fat, fast foods;
- ✓ use the highest quality, garden-fresh foods available—the closer to the earth the better;
- ✓ and supplement with a high quality, broad-spectrum nutritional supplement.

Supplementation is not an excuse for eating unhealthy foods or neglecting the daily need for exercise. Supplementation adds back to our bodies many of the important micronutrients now lacking in our food supply and provides antioxidant protection against free radical-induced oxidative damage. In so doing, supplementation helps to provide protection for our bodies against the onset of degenerative disease.

The following summaries provide some powerful evidence of the efficacy of nutritional supplementation:

- ✓ *J Natl Canc Inst* 1999: women who consumed high levels of antioxidants were 3 times less likely to develop breast cancer;
- ✓ *J Natl Canc Inst* 1998: 50 IU of vitamin E reduced risk of prostate cancer by 1/3;
- ✓ *Biochem biophys Res Commun* 1998: a combination of vitamin E and lycopene inhibits prostate cell proliferation by 90 percent;
- ✓ *Biocem, Biophys Res Commun*, 1995: High doses of CoQ10 produced complete regression of tumors of the breast in cancer patients, many of whom had metastasis;
- ✓ *Nutraceutical Revolution* 1998: Supplementing with vitamin B6, B12 and folic acid reduced blood homocysteine levels by 50%;
- ✓ *Can J Cardiol* 1996: Long-term users of supplements had a 69% reduction in heart disease and a 47% reduction in the risk of cardiac-related deaths;
- ✓ *Bionutrition* 1998: 200 mcg selenium decreased risk of colon cancer by 60% and lung cancer by 30%;
- ✓ *British J Neur* 1998: men with normal prostate specific antigen (PSA) levels who supplemented with as little as 200 mcg of selenium reduced their risk of prostate cancer by 74 percent.

Back in 1992, three eminent scientists, double-Nobel Laureate Dr. Linus Pauling, and Drs. Richard Passwater and Jim Enstrom, examined the mortality rates of elderly Californians. What they found was

remarkable: the death rate for long-term supplement users was significantly lower (22% for females and 46% for males) than for non-users.

Enstrom later found that supplementation with moderate doses of vitamin C at 250 mg per day reduced the risk of mortality in males by 42% and death by all causes by 35%, providing an estimated 6 years increase in life expectancy.

In 1998, Passwater further reported that centenarians were found to have substantially higher levels of antioxidants in their blood than people 20 to 30 years younger.

Supplementation works. It's an investment in your long-term health and provides the nutritional boost needed by the body to ward off oxidative stress and degenerative disease, allowing us to age more gracefully.

Dr. Albert Szent-Gyorgi, Nobel Laureate in Physiology and Medicine once said, "Vitamins, if properly understood and applied, will help us reduce human suffering to an extent that the most fantastic human mind would fail to imagine."

## Summary

It's essential that, in our daily lives, we learn to practice a more holistic approach to wellness, otherwise—as we are witnessing today—the consequence will be an old age marred, and perhaps cut short, by the suffering and pain of degenerative disease.

With healthy lifestyle choices, a little common sense and an ounce or two of prevention, we may not add a lot of years to our lives, but we just may add a lot of good years to those that we are given.

Like the skin horse, in Margery William's children's classic, *The Velveteen Rabbit*, one day we'll all become a little shabby and loose in the joints. However, don't despair because, if you've chosen wisely—through lifestyle, education and nutrition—then, you'll be Real and healthy too!

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## Disclaimer

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