

# OPTIMUM NUTRITION FOR OPTIMUM HUMAN PERFORMANCE

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**T**he word optimum, as defined by the American Medical Dictionary and Health Manual, states that it is "the best condition in which body functions take place."

Since athletes are concerned with maximizing their physical performance skills in their particular endeavour, and since much of the current literature deals with training methodology I felt a need to present a conceptual article dealing with optimum nutrition.

First of all, we must establish that, indeed, the athlete does not follow a diet in which he or she is receiving enough of the essential nutrients to respond to the physical and emotional demands of strenuous training.

Since athletes are members of the general population, they are forced to participate in general, in inadequate food consumption.

This report is based on some of the concepts and excerpts taken from "Dr. C's Vitamin Elixirs", by Kathleen Stein, Omni, April 1982; an article presented to me by one of my patients.

Eminent Pediatrician and Public Health Scientist, Joseph Beasley, Bard Fellow in Medicine and Nutrition at Bard College, Annandale on Hudson, New York, reported evidence that resoundingly contradicts government claims that Americans have never been healthier. In sharp contrast to the picture painted by the Surgeon General, Beasley states, "some illnesses, symptoms, and conditions are rising markedly — degenerative diseases that afflict up-

wards of 100 million Americans. The list of disorders is long and includes everything from massive killers like cancer and cardiovascular diseases, to diabetes, arthritis, birth defects, retardation, obesity, hypoglycemia, alcoholism, mental illnesses, drug addiction, and legions of more chronic afflictions." Beasley designates this sprouting phenomenon as the "Malnutrition-Poisoning Syndrome."

He also says that our traditional medical methodology is faltering in the face of these chronic, degenerative diseases, because "it is unduly narrow in its focus, too inflexible and restricted in its consideration of causes and connections."

Dr. Colgan, a Nutritionist, states that, "a new order must be established to turn the face of medicine *away from disease toward health; toward preventive medicine, toward individual biochemistry*, which is just the opposite of mass medicine, which is just not working anymore." Colgan also predicts that within 25 years there will be a significant shift toward custom-tailored health care. (This custom-tailored health care exists today by holistic health care practitioners who have chosen to take the time to practise in this manner.)

Athletes and the general population must realize the urgency of holistic health practitioners in their mission to prevent the degenerative and metabolic diseases that are on the increase. Here is but a small sampling of problems (as cited by Beasley, Colgan, and U.S.

Government sources):

- In both the United States and the United Kingdom the average life expectancy of a 25-year-old adult, has not changed in 30 years;
- In 1973 the Office of Technology Assessment (OTA) estimated that *70% of deaths were caused by diseases linked to diet, including high levels of fat, sugar and salt*;
- Autopsies of men between the ages of 18 and 22 killed in World War I showed no signs of atherosclerosis, according to the Journal of the American Medical Association, while in autopsies of American youths killed in Vietnam, it was rare to find a soldier who did not have atherosclerotic disease (hardening of the arteries);
- Since 1960 there has been a huge rise in the number of children with brain damage, hyperactivity, and learning disabilities. Today one child out of every five is afflicted;
- In 1910, 10% of U.S. food was factory refined or treated with artificial additives. In 1981, almost 80% of our foods were processed;
- The amount of salt in frozen vegetables can be 100% more than in fresh vegetables;
- The use of food colouring increased 995% between 1940 and 1976;



- A “designer” fast-food meal — (burger, milk shake, french fries), contains 22 chemical additives, 12 of which in fairly small amounts are known to be toxic;
- Fifty percent of an average American’s total caloric intake comes in the form of “empty calories” — refined sugars and carbohydrates;
- An average American consumes nine pounds of additives annually;
- The OTA states conservatively that 30% of American men and 40% of the women between the ages of 30 and 49 are overweight. Twenty percent are, by definition, obese;
- The U.S. Recommended Daily Allowance (RDA) of Vitamin A for pigs is 200% greater than it is for humans; for dogs, 300% greater;
- Two U.S. government studies found that 60% of those sampled who consumed a “good mixed diet” based on U.S. RDA’s showed clinical symptoms of malnutrition regardless of income level;
- Because of the reduced need for chewing, refined foods lower the amount of saliva produced, thereby lowering the entire metabolic processing and absorbing of nutrients.

According to the cited statistics our bodies are not only being malnourished but simultaneously poisoned.

Beasley states, “Every serving of processed food is treated with one or more dyes, bleaches, emulsifiers, antioxidants, moisturizers, desiccants, extenders, thickeners, disinfectants, defoliants, fungicides, neutralizers, artificial sweeteners, hydrolyzers, anticaking and antifoaming agents, curers, hydrogenators, fortifiers, antibiotics, arsenic, artificial sex hormones, and pesticides.”

So it appears almost everyone should be on a nutritional supplementation program, ideally tailored to their biochemical individuality, to insure against the nutritional pitfalls stated above.

Vitamins, by definition, are organic molecules essential for human, animal and plant life — in minute quantities. Each vitamin has a specific task to perform which cannot be accomplished by any other substance. Vitamins, unlike hormones, cannot be produced inside the body (with the exception of a few); they must be extracted from foods which are eaten. The absence or significant decrease in any single vitamin or mineral causes biochemical disruptions throughout the body. Clinical or sub-clinical functional disturbances will appear in various body tissues and organ systems.

Vitamins act as catalysts (co-enzymes) which assist enzymes and are essential to the growth, maintenance and repair of every cell. They also work together as a team and, therefore, a single deficiency can threaten the cell’s well-being. Vitamins are vital in the chemical processes of such tissues as liver, brain, bone marrow and kidney, as well as coordinating a vast array of bodily activities.

The human system will not make use of what is consumed without vitamins and minerals. Although minerals must also be present in the body for it to maintain a biochemical balance, vitamins are much more fragile and cannot be retained in the body for long periods of time. A constant supply must be maintained.

#### **How does one determine their personal requirements; (the amount and in what combinations)?**

The U.S. and British RDA’s are based solely on the absence of disease. If no overt symptoms or classical signs of malnutrition are present, there is, therefore, no disease. However, this observation can be quite misleading for “*minimizing disease is a far cry from maximizing health.*” There is obviously an intermediary phase where the body goes from health to sickness and clinical symptoms are usually the last stage. This intermediate phase is the subclinical functional portion of disease. The key to keeping people healthy is being able to determine functional illnesses, treating them with optimum portions of nutrients to allow the body to heal itself and prevent clinical symptoms from occurring. In our clinic alone, we have personally seen various chronic illnesses that drugs and surgery have had little or no effect on, respond tremendously (almost miraculously) with the use of diet manipulation, specific nutritional supplementation, and Chiropractic and Applied Kinesiology methods. When the interferences have been eliminated or minimized, and the body receives the proper nutrition in specific amounts, the body will heal itself. For example, when a surgeon sets a broken bone, he is often credited with curing the patient, whereas, in reality, the body did the mending. When we cut ourselves and apply iodine and a bandage on the wound it is not the iodine or bandage that does the healing, but the body.

Much too often we see patients who have been on prolonged drug programs and have even had organs and tissues removed, with no let-up in their symptoms. They come to our office as a last resort when in fact, it should have been the first. They are usually skeptical, impatient, and sometimes hostile. They develop these attitudes because medical doctors are supposed to get sick people well, and when they don’t “what makes the holistic practitioner who uses

natural, ‘unorthodox’ methods, think he can?”

Afterwards, when healing has begun, many orthodox practitioners rationalize the recovery as a “spontaneous remission” or misdiagnosis. Why, then, did the patient not spontaneously remiss under months, sometimes years, of drug therapy?

The body requires all of the nutrients in optimal amounts. As long as there is no structural, chemical, or emotional interference, and providing the body still has enough vital energy to do the job, it will mend itself.

In assessing RDA’s, unfortunately, little human research has been done. This has led many researchers to delve into veterinary medicine. The assessment of optimal supplementation levels in the breeding of animals is now a considerable science.

According to these researchers, “thoroughbred horses, as well as pedigree cats and dogs are better fed than their owners.” In perceiving animal nutrient tables, researchers have mapped out criteria for determining quantity and combinations that human individuals should have, and means of determining whether or not the dosage was producing the desired affect. There are variables related to biochemical, clinical and behavioural evidence of deficiency levels. According to the eminent scientist Sir Ronald Fisher, “Nature best responds to a logically and carefully thought out questionnaire.” In our clinic, detailed questions about the patient’s current health, diet, emotional level, fitness, family health, and social habits are recorded and considered. Included in the report are lingual ascorbic acid tests, and biochemical analysis of the subject’s hair, blood, and urine.

Biochemical individuality is vitally important in selecting a diet and nutritional supplementation program.

Haphazardly ingesting vitamin and mineral supplements, sometimes by the handful, with little or no reasoning behind the action, can cause many physiological imbalances. The individual’s internal and external environment must be evaluated and a nutritional program must be systematically and individually designed. Subsequent subjective and objective evaluations are done periodically to ensure that the desired response is being achieved.

Since athletes and high performance individuals are so precise and consistent with their training programs, imagine the payment in greater dividends in terms of overall health, well-being and record performances, when the body is supplied with the maximum daily requirements of all of the nutrients.

Please direct any questions to Dr. Borys M. Chambul, D.C., c/o Canadian Runner Magazine.

Suggested reading: Nutrition Against Disease, by Dr. Roger Williams.