

## Answers to a Desperate Problem Facing a Glorious People



*The First Nutritional  
Supplement For Our  
Needs*

### Forward

Everyone deserves the same unalienable rights and freedoms. The right to freedom of speech, the right to freedom of religion and the natural right to a healthy productive life. This may be true in your circumstances, but may I ask, What color is your skin? What does my skin color have to do with my health? Simple, ethnicity is extremely important, and may be the key factor overlooked...until NOW.

What in the world can be more important than a nation filled with individuals that silently suffer either unaware of their internal torment, or simply just do not

care. As we blindfold ourselves to the enormity of neglect to the black community, we quickly lose the unifying attributes that make our country great...our diversity.

But why are we in this mess? Much is attributed to a lack of awareness that a crisis exists at all in the black community; however, there is a simple answer. The research outlined in the following pages exposes the presence of a problem with the health of black people. We take an in depth investigative look at the specific health, diseases and answers affecting the black population. The documented research will have you questioning whether we are doing everything within our power to make life better for our friends, family and ourselves.

Sacrificing our health is like playing Russian roulette not knowing if the gun is pointed at our head. When will we receive the fatal blow, but this doesn't have to happen. We have unlocked the RIGHT TOOLS necessary to abolish and ratify these starving internal mechanisms. Simply nurturing our body can eliminate the time bomb and increase our life and vitality.

We have spent years of study to help solve our poor health problem and we believe we have the answer. We have created a nutritional product Migenetics, which provides all the nutrients, enzymes, phytochemicals and much more that our body needs to sustain while helping combat these disease processes. In the following pages are the disease processes that affect black people more than other ethnic groups, as well as the nutrients that are required to help correct these health issues. Perhaps the GREATEST news of all is Migenetics has all you need.

If you have a healthy diet, exercise regularly and rest at least 6 hours a night, then just ONE Migenetics a day will give you all you need. However, if you suffer from diabetes, heart disease, intestinal problems, arthritis, have a poor diet, don't exercise and are not sleeping well; then for MAXIMUM benefit, up to FOUR Migenetics a day will help you reach the level of health you wish to achieve.

**The World Health Organization Technical Report Series 916 on Diet, Nutrition and The Prevention of Chronic Diseases, Geneva 2003, claims on page 42: Understanding the evolutionary aspects of diet and its composition might suggest a diet that would be consistent with the diet to which our GENES were programmed to respond. Targeted dietary advice for susceptible populations, subgroups or individuals is desirable.**

**Why Develop a Nutritional Product for Black People?**

Facts and Stats:

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## Chapter One

### *Loss of Life:*

The CDC reports, Black People live 6.2 years LESS than all other U.S. ethnic groups (except Native American)

### TRANSLATION:

- A. 6.2 years less to add to family wealth
- B. 6.2 years less to mentor their own children or grandchildren
- C. 6.2 years less to enjoy life's relationships: Incl. marriage
- D. \$75,204 LOSS of Social Security Benefits
- E. 6.2 years less to establish a legacy
- F. 6.2 years less to serve their respective Churches
- G. 6.2 years less to contribute to their chosen communities
- H. 6.2 years less for personal development
- I. 6.2 years less to enjoy the benefits of Medicare

## Chapter Two

What do the Scientists Say?

1. Wilma Johnson, the former acting Associate Director for Minority Health at CDC, stated: "When we see a new [health] problem on the front, we know it will probably be worse for our [Black] people. If white people cough, Black people develop pneumonia.
2. Research consistently show that Black adults report more health problems, poorer health status and are more likely to spend more time in bed as a result

of their health problems than Whites. (Williams 1990, Williams and Collins 1995; Williams Yu, Jackson, & Anderson 1997)

3. For this group of people who live to their seventieth birthday they live with more disabling conditions in their golden years than others including amputation, paralysis and glaucoma. (The Ten Biggest Killers of Blacks, Ebony, July 2001)

4. African Americans in particular have a higher death rate than Whites for 12 of the 15 leading causes of death. (Minority Health, Information about Minority Health, Internet FAQ Archives, Medical Encyclopedia)

5. Black men are dying at a rate of three times higher than White men. (Ethnic News Watch, Soft Line Information, Inc, Stamford, Ct.)

6. The health status of Blacks is frightening, even with recent advancements. (The Ten Biggest Killers of Blacks, Ebony, July, 2001)

## Chapter Three

### What Diseases Affect Black People and Their Death Rate

The Authorities all agree we have a problem. Let us investigate the diseases that Cripple, Steal Our Energies and Kill Us. (Reported by the Federal Government for 2004)

1. What is really known about the health and longevity of the American Black female?

Mortality rates for African American women are higher than any other racial/ethnic group for nearly every major cause of death including heart disease, lung cancer, cerebrovascular disease, breast cancer and chronic obstructive pulmonary diseases. (Making the Grade on Women's Health: A National and State-by-State Report Card: National Women's Law Center: August 2000)

2. What is really known about the health and longevity of the American Black man?

Black men are dying at a rate of three times higher than White men. Most Black men from 35 to 64 years of age are dying from treatable diseases. (Ethnic News watch, Soft Line Information, Inc, Stamford, Ct. Cleveland Plain Dealer)

3. What diseases are maiming and killing us?

Arthritis:

A. Arthritis is the third most common chronic condition and the leading cause of activity limitation.

B. African Americans suffer more frequently with osteoarthritis than White people. (Estimates of the Prevalence of Arthritis and Other Rheumatic Conditions in the United States, Part I and Part II)

C. Older African Americans males endure the agony of gout, and inflammatory arthritis, more than older White males.

Auto-Immune Diseases:

African American women are three times more likely than white women to get lupus. This is a very serious life shortening painful condition. (The Many Shades of Lupus. U.S. Department of Health National Institutes of Health of Arthritis and Musculoskeletal and Skin Disorders)

Asthma:

A. African Americans are two to six times more likely to die from asthma than White people are. (Michael LeNoir, M.D., Chair of the Allergy and Asthma section of the Association and Associate Professor of Pediatrics at the University of California in San Francisco)

B. The reason why asthma is more common among Black people and other inner city residents is unclear. The disease disproportionately affects African Americans. (British Medical Journal, August 11, 2001, Asthma Crisis for Black Americans. Janice Hopkins Tanne)

4. Cancer:

A. Black women have the highest incidence of mortality from colon and rectal cancer than any ethnic or racial group. (Ries LAG, Eisner M.P., Kosary C.L., et. Al. SEER Cancer Statistics Review, 1973–1993, National Cancer Institute, Bethesda, MD. National Institutes of Health, National Cancer Institute, accessed August 22, 2002.)

B. The death rate combined for all cancers is 35% higher in African American men than in White men. (Cancer Facts & Figures For African Americans 2007–2008, American Cancer Association)

C. The death rate combined for all cancers is 18% higher in African American women compared to White women. (Cancer Facts & Figures for African Americans 2007–2008, American Cancer Association)

5. Diabetes:

A. The prevalence of diabetes in African American women is approximately 85% higher than in Caucasian women. (Diabetes Surveillance System: Prevalence of Diabetes. U.S. Department of Health & Human Services, Centers for Disease Control and Prevention, National



Center for Chronic Disease Prevention and Health Promotion. Accessed August 22, 2002.)

B. In 2005, African Americans were 2.2 times as likely as non-Hispanic whites to die from diabetes. (United States Department of Health Human Services, The Office of Minority Health)

#### 6.HIV/AIDS:

A. The AIDS case rate for Black women is 22 times higher than for non-Hispanic White women. (Centers for Disease Control and prevention, Department of Health and Human Services)

B. The AIDS rate for Black men is 8 times higher than for non Hispanic White men. (Centers for Disease Control and Prevention, Department of Health and Human Services)

#### 7.Kidney:

A. African American men are 2.1 times as likely to start treatment for end stage renal disease related to diabetes, compared to non-Hispanic White men. (United States Department of Health & Human Services, The office of Minority Health)

B. African Americans experience a much higher rate of kidney failure than do Whites when they suffer from diseases such as hypertension and diabetes. (Minority Health)

#### 8. Heart Disease:

A. Heart disease is the leading cause of death for Black women in the U.S.

B. In 2005, African American men were 30% more likely to die from heart disease as compared to non-Hispanic White men. (U.S. Department of Health and Human Services, The Office of Minority Health)

#### 9. High Blood Pressure:

A. African Americans are 1.5 times as likely as non-Hispanic Whites to have high blood pressure. (U.S. Department of Health & Human Services, The office of Minority health)

10. Stroke: Vascular

African American adults are 1.7 times as likely than their White adult counterparts to have a stroke. (U.S. Department of Health and Services, The Office of Minority Health)

11. Mental Health:

A. According to the Surgeon General, only one-third of Americans with a mental health problem seek treatment; the percentage of African Americans getting help is only half that of non-Hispanic white. (Medical News Today, Addressing Mental Health Disparities Among African Americans, August 20, 2009.)

12. Reproductive Health:

A. The Maternal mortality rate for African American women is nearly five times the maternal mortality for White women. (Kenneth Kochanek, Sherry Murphy, Robert Anderson, et. Al., National Vital Statistics Report 2004, 53, No. 5 (Atlanta: Centers for Disease Control and Prevention, Division of Vital Statistics, October 2004)

B. Infant mortality is more than twice as high for African American infants as it is for White, non-Hispanic infants. (13.9 deaths per 1,000 births versus 5.8 deaths per 1,000 births) (Federal Interagency Forum on Child and Family Statistics, America's Children: key National Indicators of Well-Being. Washington D.C.: U.S. Government Printing Office, 2005)

13. Children:

A. 25 percent of African American children are in less than very good or excellent health compared to 12 percent for White children.

(Federal Interagency Forum on Child and Family Statistics, op. cit.)

14. General health of African American:

A. Research consistently show that Black adults report more health problems, poorer health status and are more likely to spend more time in bed as a result of their health problems than Whites. (Williams 1990; Williams and Collins 1995; Williams, Yu Jackson & Anderson 1997)

15. Health status while in fetus and at birth:

A. Data shows African American Children are born with lower birth weight on average than their European-American counter parts and often somewhat pre-term. (Miller-McCune, Mother's Travails May Appear in Offspring's DNA, By: Michael Haederie)

B. "What has been shown is: If you're born with low birth weight, you are at risk later in life for high blood pressure, diabetes and cardiovascular disease. (Miller-McCune, Turning Research Into Solutions, Mother's Travails May Appear in OffSpring's DNA, Michael Haederie) ( Quoting: Christopher Kuzawa, Northwestern University Anthropologist)

C. A child born pre-term and under-weight would provide for slightly underdeveloped kidneys, which potentially could mean the kidneys are smaller and with fewer nephrons (the filtering devices with in the kidney). This would lead to sub normal filtering of the blood and retention of toxins and poisons. This is a prescription for a life of compromised health by keeping the immune system in a mild state of distress and the system itself minimally in a state of sepsis.

D. Continuing the above logic, consider the lungs and other vital organs. What are the true organ contributions and production

deficiencies in a human being that did not get the proper time within the incubator called the uterus with all its paraphernalia to properly care for a developing fetus? Was the cause lack of nutrition? What caused the lack of nutrition?

Death Due to Digestion:

1. All digestive cancers
  2. Cancer of the esophagus, twice as high as Whites
  3. Cancer of the intestines
  4. Cancer of the Colon and Rectum
  5. Primary liver cancer
  6. Cancer of the gall bladder
  7. Cancer of the Pelvis
  8. Gastro–esophageal reflux disease
  9. Chronic constipation
  10. Liver disease
  11. Pancreatic disease (25% higher and 52% higher for females than males)
  12. Hospitalization rates higher for Blacks with hemorrhoids
  13. Hospitalization rates were greater for diverticular disease
- (The Burden of Digestive Diseases in the United States, by James E. Everhart, M.D., Editor, National Institute of Diabetes and Digestive and Kidney Diseases, National Institute of Health, United States Department of Health and Human Services)

## Chapter Four

*It's the FOOD and LACK of Proper Nutrition!*

Food quality and nutrients:

## *POOR Health is a Result of POOR Nutrition!*

We now know that Black Americans will suffer the most from almost every negative health condition and age yields no mercy to the Black Americans either in the womb or at doorstep of the grave. Scientist and the government have not ignored this dilemma. Studies are beginning to unravel the mystery and show us the answers. Moreover, the answer may be something as simple as foods we consume or meeting our daily nutritional requirements. Either our day-to-day diet has too many harmful ingredients or not nearly enough proper nutritional elements to build, maintain and fuel a healthy strong vibrant body. After years of Study we have concluded it's the nutrition we are consuming or lack there of causing much of the problem. The following list details some of the issues.

1. For 9 of the 10 Healthy Eating Index Components, fewer than 50% of African Americans meet the dietary recommendations. (Report Card on Diet Quality of African Americans, Family Economics and Nutritional Review, Summer, 1998, By: P. Peter Basiotis, Mark Lino, Rajen S. Anand)

2. African American seniors were significantly less likely than White seniors to use daily multivitamins and calcium, as well as all other categories of dietary supplements. (Kaiser Permanente Medical Care Program, by Nancy P. Gordon, and Donna H. Scaffer, Published February 9, 2005, National Institutes of Health, Public Access Policy)

3. Study of women ages 15 to 49 years:

- A. Lack of vitamin D (Hypovitaminosis) was 10 times more prevalent in African American women than in White women. (Published: American Journal of Clinical Nutrition, June 2002, Nesby-O'Dell et. al.)

B. How important is Vitamin D? I don't know of another vitamin that has effects on multiple tissues like vitamin D. As pediatricians, we're still doing research on health outcomes, (and) the relation between vitamin D deficiency during childhood or adolescence and outcomes later in life like osteoporosis, cancer risk, and risk of developing multiple sclerosis. But there are compelling data in adults suggesting an association. (Catherine Gordon, M.D., director of the bone health program at Children's Hospital Boston, Oct. 13, 2008, Doctors double vitamin D for children, By: Leigh Oberholzer, BostonGlobe.com)

C. We see lots of long-latency diseases linked with vitamin D deficiency. There's interplay between vitamin D and the immune system. (Carol Wagner, M.D., pediatrician at the Medical University of South Carolina and a member of the American Academy of Pediatrics Section on Breast-feeding Executive Committee. Article: Doctors double vitamin D for children, by Leigh Hopper Oberholzer, Boston Globe.com, Oct. 13, 2008)

#### 4. Need for Improved Nutrition:

A. The Reason for the study was the high death rate of African Americans in relation to other ethnic groups.

B. A study of health habits among urban teen-agers found African American females had the poorest health habits due to their high intake of foods high in saturated fat, cholesterol, salt and simple sugars.

C. There were four areas of concern:

1. Folate: Vitamin B-9: The researchers discovered a significant lower amount than the Daily Recommended Intake. (Essential for the development and growth of Red Blood Cells, responsible for the manufacture of nucleic acids (RNA) and DNA. This vitamin is critical for life.)

2. Calcium: Significantly low in all age groups except the ages 4 - 8. (Critical for Nerve function, muscle contractions, Bone strength, protects from high blood pressure and heart attacks, aids in the prevention of colon cancer. These are just a few contributions calcium offers)

3. Iron: Significantly low in ages: 9-13 and ages 19-50. The ages 4-8 and ages 14-18 were not significantly low in dietary iron, but the average hemoglobin for these groups was 129g/L, which is the very low end of normal. (Deficiency Diminishes the capability of individuals who are affected to perform physical labor, and it diminishes both growth and learning in children. (Webmd.com, emedicine, Marcel E. Conrad, M.D., professor of Medicine, University of South Alabama, August 4, 2009)

4. Vitamin D: This study documented a deficiency of vitamin D. (This vitamin is vital to life, assisting in the regulation of the DNA in over 2,000 genes.)

5. NEWSONE says, Blacks Need Health Food As Much As Health Care:

A. Many of the health issues that African Americans suffer from come from bad diets.

B. If we are to truly fix health care, we cannot just focus on treating diseases, we must also prevent them. (Beta NEWSONE FOR BLACK AMERICA, By: Casey Gane-McCalla, August 5, 2009, 11:24 A.M.) (NEWSONE is:

The Largest African American Multi-media Company. They were created to provide the African American community with provocative news that affects our community Says, Smokey D. Fontaine, Chief Content Officer.)

6. Our people are dying, says Elaine Williams, PhD, a doctor at CDU. This is real for us. Health disparities in this country widen every year, and this

chronic condition is threatening our lives. (CDU is the Charles R. Drew University of Medicine Sciences (CDU), a medical school and college in Los Angeles. The report was: Correlation Found Between Poor Nutrition and Disease For African Americans, 2001, summer)

7. African American teens are not the only ones participating in these unhealthy behaviors, the study concludes Black adults increased risk of many types of disease is, in part, a result of their own poor nutrition and lack of exercise. (Study by: The Public Health Institute (PHI), and the California Department of Health Services (CDHS))

8. African American men suffer much higher rates of almost every type of cancer than White men, and they're more likely to have heart disease and high blood pressure, these leading causes of death are largely preventable through changes in our lifestyle choices. The 9 a Day campaign will help us to start emphasizing prevention of this epidemic by letting African American men know the vital importance of eating fruits and vegetables to their own overall health. (HHS and NCI launch National Campaign To Address Diet-Related Diseases Affecting African American Men: Major Campaign Urges Men To Eat 9 Servings of Fruit a and Vegetables a Day to Reduce Chronic Disease Risk. U.S. Department of Health and Human Services (HHS) and National Cancer Institute (NCI))

9. Only 35.1 percent of African Americans surveyed consumed two or more servings of fruit a day. (That means 64.9% of all Black Americans failed to eat any meaningful fruit on a daily basis.) Only 23.7 percent of African Americans surveyed consumed two or more servings of vegetables per day. (That tells us that 76.3% of all Black Americans are starving themselves for the vitamins, minerals, phytonutrients and etc found in the vegetables.) (Data from the 2005 Behavioral Risk Factor Surveillance System, U.S. Gov.)

## Chapter Five



## Why Are Black People Lacking the Proper Nutrition?

Potential causes for nutrition failure:

1. Failure to eat a reasonable balanced diet. That means almost no vegetables, very little fruits, but lots of fried meat, hamburgers, hotdogs, French fries and several soft drinks each day and sweet treats for an energy boost.

2. Intestinal irritation: 2 types may be more

- A. It can be caused by any food that contains wheat, barley, or oats. This condition is called Gluten Intolerance and is very destructive to health. The intestinal tract simply cannot properly digest the food consequently the entire digestive process becomes toxic to the human body. Researchers are now claiming that over 55 different conditions are caused by this intestinal failure. The conditions caused are Dementia, Diabetes, Parkinson's, Rheumatoid Arthritis, Multiple Sclerosis, ADHD, Lupus, Cancer and etc. (Review paper in the New England Journal of Medicine, Listed 55 diseases)

- B. Foods that contain milk. Milk contains lactose. 70% of all Black Americans are Lactose Intolerant, which drinking milk is simply causing an irritation to the intestines, which eventually will cause health problems.

These two conditions, Gluten Intolerance and Lactose Intolerance are serious and a doctor should always be consulted. Diets chosen for a person suffering with these conditions is critical. All gluten products must be stricken from the diet. This includes all wheat products which means breads, cakes, donuts, cookies and most breakfast cereals. Stay away from products that contain oats, rye and barley. Consume no alcohol, with the exception of wine, preferably red

wine. No milk or milk products, such as: cheese, yogurt, ice cream, etc. Intestinal irritation and inflammation interferes with almost every aspect of the intestine and sets off the emergency mechanism, which turns the immune system with devastating results.

What must happen to correct the nutritional deficiencies?

1. Evidence suggests that, within the period of a week, at least 20 and probably as many as 30 biologically distinct types of foods, with the emphasis on plant foods are required for healthy diets. (Diet, Nutrition and The Prevention of Chronic Diseases, WHO Technical Report Series 916, Report of a Joint WHO/FAO Expert Consultation, World Health Organization, Geneva 2003)

2. Scientists all over the world claim the human body has a need for up to 70 different minerals, 13 to 15 different vitamins, several different types of fats, 22 different Amino acids and the list of Phytonutrients is enormous. This is going to require a variety of nutritional foods. When discussing Phytochemical studies it almost becomes mind numbing as to the number of molecular substances produced by just one plant. According to just one study of one plant, Plants have an almost limitless ability to synthesize aromatic substances mainly secondary metabolites, of which at least 12,000 have been isolated, a number estimated to be less than 10% of the total.

(Phytochemical Studies of *Strychnos potatorum* L.f.- A Medicinal Plant, P.B. Mallikharjuna, L.N. Rajanna, Y.N. Seetharam and G.K. Sharanabasappa, Biosystematics and Medicinal Plants Laboratory, Department of Botany, Gubarga University, Gulbarga - 585 106, Karnataka, India, R & D Division, Shashi Phytochemical Industries, Accepted by medical review march 30, 2007.)

Imagine 120,000 different nutrients/metabolites stemming from one plant.

3. How can the body successfully obtain those nutrients? Through a commercially available encapsulated fruit and vegetable powder concentrate:

Research at the University of Florida:

Has successfully demonstrated a method by which mankind can consume most of the vital nutrients required for a healthful and vibrant life. The researchers understood the daily consumption of fruits and vegetables is a common dietary recommendation to support good health and hypothesized that a commercially available encapsulated fruit and vegetable powder concentrate could support functional indices of health due to the increased intake of various phytonutrients.

This was a double blind study, randomized, placebo-controlled investigation of 59 healthy law students who consumed both fruit and vegetable juice powder concentrate or placebo capsules for 77 days. Blood was collected on day one (1), thirty-five (35) and day seventy-seven (77) to examine the number of circulating alpha-beta and gamma-delta-T cells, cytokine production, lymphocyte DNA damage, antioxidant status, and levels of carotenoids and vitamin C.

A log of illnesses and symptoms was kept. The fruit and vegetable juice powder concentrate group tended to have fewer total symptoms than the placebo group. By day seventy-seven there was a 30% increase in circulating gamma-delta - T cells and a 40% reduction in DNA damage in lymphocytes in the fruit and vegetable group relative to the placebo group. Plasma levels of vitamin C and beta-carotene, lycopene, and lutein increased significantly (50%) from baseline in the fruit and vegetable juice powder concentrate group as did plasma oxygen radical absorptive capacity. Interferon-gamma (associated with Auto-Immune Disorders) produced by phorbol-stimulated lymphocytes was reduced 70% in the fruit and vegetable juice concentrate group, whereas other cytokines (IL-4, IL-6, transforming growth factor beta) were unchanged relative to treatment or time.

Fruit and vegetable juice powder consumption during this study period resulted in increased plasma nutrients and antioxidant capacity, reduction in DNA strand breaks, and an increase in circulating gamma-delta T-cells. (Journal of Nutrition,

2006, Oct;136(10): 2606–10. Nantz, M.P., Rowe, C.A., Neives, C. Jr., Percival, SS. Food Science and Human Nutrition Department University of Florida, Gainesville, Florida 32611, USA.)

4. Through supplementation with Mixed Fruit and Vegetable Juice Concentrates Increased Serum Antioxidants and Folate in Healthy Adults (Original research by: Ingrid Kiefer, PhD., Peter Prock, M.D., John Wise, PhD., Wilfried Bieger, M.D., Peter Bayer, et. Al. Institute of Social medicine, Department of Public health, Medical University Vienna, Vienna, Austria (I.K., P.P., C.L., P>B., T.R., M. K., A.R., Natural Alternative International Research Foundation, San marcos, California (J.W.) ANTOX Center, Munich Germany (W.B.)

The study pointed out, Epidemiological studies have shown the importance of a diet rich in fruit and vegetables in the prevention of illnesses, such as heart disease, cancer, metabolic disorders and the like. Fruit and vegetables, are associated with a decreased risk for these diseases. Recommendations for consumption of fruit and vegetables are currently given as five or more servings per day; however, surveys have shown that these guidelines are rarely met. The conclusions of this research project; The antioxidant nutrients and folate play a major role in maintaining human health, and consumption of fruits and vegetables are promoted as a first line of defense in the prevention of serious illness. Supplementation, in general, proved to be effective for raising plasma levels of all the nutrients studied. Plasma levels of vitamin C reached values associated with a reduced risk for cancer. Selenium levels also correlated with values shown beneficial in other investigations. A supplement derived from dehydrated natural mixed fruit and vegetable juices therefore, maybe beneficial in the prevention of disease and may offer synergistic benefits from nutrient combinations.

5. Are there additional studies? Yes, The 6-a-day study: effects of fruit and vegetables on markers of oxidative stress and anti-oxidative defense in healthy nonsmokers

Objective: We investigated the relative influence of nutritive and nonnutritive factors in fruit and vegetables on oxidative damage and enzymatic defense.

Conclusions: Fruit and Vegetables increase erythrocyte glutathione-peroxidase activity and resistance of plasma lipoproteins to oxidation more efficiently than do the vitamins and minerals that fruit and vegetables are known to contain. Plasma protein carbonyl-formation at lysine residues increases because of the vitamins and minerals in the fruit and vegetables.

6. What's in the Fruits and vegetables that can't be found in just minerals and vitamins?

### Phytochemicals

Polyphenols

Flavonoids

Phytosterols

Proanthocyanidins

Carotenoids

Beta carotene

Lutin

Zeaxanthin

Tocopherols

Phenolic compounds

Enzymes

Each fruit presents a different set of nutritional beneficial plant elements, such as, Flavonoids, carotenoids and each of these have their own antibacterial, anti-inflammatory, anti-tumor, and antioxidant properties are ESSENTIAL for a healthy life.

7. The Body Requires Phytophenolic acids:

What we propose to demonstrate in this section is the value of Phytochemicals called Phenolics, which are critical to good health. The importance of Phenolic can be shown in the results of a research project at Cornell University: The anti-oxidant activity of the vitamin C in apples with skin accounts for only 0.4% of the total antioxidant activity suggesting the majority of antioxidant activity of fruits and vegetables may come from Phenolics and Flavonoids. We propose that the additive and synergistic effects of phytochemicals in fruits and vegetables are responsible for their potent antioxidant and anticancer activities, and that the benefit of a diet rich in fruits and vegetables is attributed to the complex mixture of phytochemicals present in whole foods. (Health benefits of Phytochemicals in Functional Foods, R. H. Liu, Department of Food Service, Cornell University, 108 Stocking hall, Ithaca, New York 14853-7201)

8. There are more than 8,000 phytochemicals present in whole foods. (Health benefits of fruit and vegetables are from additive and synergistic combinations of phytochemicals. Rui Hai Liu, From the Dept. of Food Science and the Institute of Comparative and Environmental Toxicology, Cornell University, Ithaca, Ny, Presented at the 4<sup>th</sup> International congress on vegetarian Nutrition, held in Loma Linda, Calif. April 8, 2002 and Supported by the USDA Federal Formula Food)

## Chapter Six

### *Comparing Nutritional Supplements and Prescription Drugs Results*

Prescription drugs are like a sledgehammer. Instantaneous and begin immediately to kill infectious bacteria. Nutritional supplements are like a chisel

that chip away at deficiencies that cause problems, simultaneously reconstituting the Immune System and balance the internal Chemical Functions. For those who know this tidbit of information more often choose safe quality produced nutritional supplements as their choice of restorative health. The underling factor is: How many of us actually know that our bodies are nutrient deprived at all? Moreover, are there discrepancies between gender and race? The research speaks for itself. The following data will tell a story of perpetual sickness, disease and imminent death primarily of the black community. The numbers are astonishing.

*According to Insurance Actuaries, African Americans can expect to live 6.2 years less than the average white American does.*

- African-Americans in particular have a higher death rate than whites for 12 of the 15 leading causes of death. (Minority health, Information about Minority health, Internet FAQ Archives, Medical Encyclopedia)
- Research consistently show that black adults report more health problems, poorer health status and are more likely to spend more time in bed as a result of their health problems than whites. (Williams 1990; Williams and Collins 1995; Williams Yu, Jackson, & Anderson 1997).
- Statistically, Black males in America are at increased risk for just about every health problem known. They have a shorter life expectancy than any other racial group in America except Native Americans.

So what are the elements that cause these destructive health patterns for the Black American community? One critical answer seems to be nutrition, according to studies on deficiencies. First, let us answer the question: What is malnutrition?

## Chapter Seven

## Malnutrition

Malnutrition is a condition in which a person's diet is inadequate to meet minimum daily requirements for nutrients such as proteins, fats, vitamins, and minerals. One of two factors causes it. First, a person simply may not get enough food to eat and, thus, fail to take in the nutrients needed to remain healthy. Someone who is hungry all the time obviously is not eating enough food to remain healthy. Second, a person may eat a limited diet that fails to deliver vital nutrients to the body. No one who tries to survive on a diet consisting of potato chips, candy bars, and sodas will obtain the complete range of nutrients his or her body needs.

### It Begins At Time of birth:

- Data shows African-American children are born with lower birth weight on average than their European-American counterparts and often somewhat pre-term. (Miller-McCune, Mother's Travails May Appear in Offspring's DNA, By: Michael Haederle)
- What has been shown is: If you're born with a low birth weight, you are at risk later in life for high blood pressure, diabetes and cardiovascular disease, (Miller McCune, Turning Research into Solutions, Mother's Travails May Appear in Offspring's DNA, Michel Haederle) (Quoting: Christopher Kuzawa, Northwestern University anthropologist)
- If a child is born in low weight that could certainly indicate the baby may have been undernourished in the womb. And this probability could cause the child to have smaller kidneys, and fewer nephrons in the kidney to filter the blood and this may predispose that child to hypertension, renal failure and cardiac issues.
- Because African Americans have shorter gestations and lower-birth weight babies than Whites, and because these factors are strong



determinants of infant mortality, many researchers adjust for the length of gestation or birth weight. (Infant mortality Differences between Whites and African American: The Effect of maternal Education, Rebecca Din-Dzietham, Md,MPH and Irva Hertz-Picciotto, PhD., MPH, Department of Epidemiology, school of Public Health, University of North Carolina at Chapel Hill.)

## Chapter Eight

### *Health challenges Facing the Black American Community*

For Starters:

Mortality rates for African American women are higher than any other racial/ethnic group for nearly every major cause of death including heart disease, lung cancer, cerebrovascular disease, breast cancer and chronic obstructive pulmonary diseases. (Making the Grade on Women's Health: A National and State-by-State Report Card: National Women's Law Center; August 2000)

#### I. Arthritis:

- A. Arthritis is the third most common chronic condition and the leading cause of activity limitation in African Americans.
- B. African Americans suffer more frequently with osteo-arthritis than white people. (Estimates of the Prevalence of Arthritis and Other Rheumatic Conditions in the United States, Part 1 and Part II)
- C. Older African-American males endure the agony of gout, an inflammatory arthritis, more than older white males.

Amaranth Sprout (vitamin B3, nicotinic acid), Niacinamide: Vitamin B3 is made up of niacin (nicotinic acid) and its amide, niacinamide, and can be found in

many foods, including yeast, meat, fish, milk, eggs, green vegetables and cereal grains. Dietary tryptophan is also converted to niacin in the body. Vitamin B3 is often found in combination with other B vitamins including thiamine, riboflavin, pantothenic acid, pyridoxine, cyanocobalamin and folic acid. Human studies suggest that niacinamide may be useful in the treatment of osteo–arthritis.

**Pantothenic acid (vitamin B5):** Pantothenic acid (vitamin B5) is essential to all life and is a component of coenzyme A (CoA), a molecule that is necessary for numerous vital chemical reactions to occur in cells. Pantothenic acid is essential to the metabolism of carbohydrates, proteins, and fats as well as for the synthesis of hormones and cholesterol.

Pantothenic acid deficiency likely only occurs only in cases of the most severe life–threatening malnutrition. It has been reported that pantothenic acid (vit. B5) levels are lower in the blood of patients with rheumatoid arthritis compared to healthy individuals.

**Manganese Mineral:** Manganese is a trace mineral that is present at very tiny amounts in our body. Your body most likely would contain around 20 milligrams of manganese and most of them will be found and concentrated in your bones, kidneys, liver and pancreas. Supplementation of manganese has been seen to relieve osteoporosis, osteoarthritis and in fighting premenstrual syndrome.

**Bromelain:** Bromelain is a mixture of enzymes found naturally in the juice and stems of pineapples. Called a proteolytic enzyme, bromelain is believed to help with the digestion of protein. Bromelain is often used as a natural anti–inflammatory for conditions such as arthritis. It's one of the most popular supplements in Germany, where it is approved by the Commission E for the treatment of inflammation and swelling of the nose and sinuses due to surgery or injury. Bromelain may help with mild pain associated with osteoarthritis. Helps treatment for digestive disorders, rheumatoid arthritis and osteoarthritis. Relieves pain caused by joint disorders such as arthritis, carpal tunnel syndrome and premenstrual syndrome.

Parsley: Regular intake of fresh parsley is associated with reduced risk of inflammatory conditions like Rheumatoid Arthritis (RA) and Osteoarthritis (OA) and also the innumerable side effects associated with these conditions.

Kale: Research has indicated that intake of vitamin C rich foods such as kales acts against inflammatory polyarthritis, a type of RA (Rheumatoid Arthritis) that involves two or more joints.

Reishi Mushrooms: Rheumatoid arthritis is an inflammatory form of arthritis. The anti-inflammatory properties of reishi mushrooms may help reduce pain and inflammation among sufferers.

Broccoli Sprout: Helps prevent arthritis

Cauliflower Sprout: Helps prevent arthritis

Nettle: Nettle has been studied extensively and has shown promise in treating arthritis. In the United States many remarkable healing properties are attributed to nettle and the leaf is utilized for different problems than the root. The leaf is used here as a diuretic, for arthritis, rheumatism and rheumatoid arthritis.

Cilantro Leaf: Coriander is an herb, also known as cilantro, which packs a lot of nutritional value. Coriander has anti-inflammatory properties that might alleviate symptoms of arthritis.

Pomegranate: Pomegranate is believed to help prevent cartilage deterioration and thus, keep osteoarthritis at bay.

Omega-3: Potentially assists in the prevention of autoimmune disorders, such as, Rheumatoid arthritis and Lupus

II. Auto-Immune Disease:

A. African-American women are three times more likely than white women to get lupus. This is a very serious life shortening painful condition. (The Many Shades of Lupus. U.S. Department of Health, national Institutes of Health, National Institute of Arthritis and Musculoskeletal and Skin Disorders)

B. The death rate from lupus among Black women rose by 70%. There was only a small increase in what was reported in the rate for white women. (Trends in Deaths From Systemic Lupus Erythematosus - United States -1979-1998. MMWR. May 3, 2002; 51 (17) :371-374)

Information regarding Lupus: There are three types of lupus:

1. Discoid Lupus: Affects only the skin. Red marks on the skin including face and neck.
2. Systemic Lupus: Can affect most any organ or organ system in the body.
3. Medication induced: Stop taking the prescription drug and the condition will go away.
4. General information about Lupus: Can cause High body temperature, pain in elbows and knees. Women with lupus are at great risk for heart troubles. Between 30 - 50% of lupus patients will develop lupus related kidney disease known as lupus nephritis

C. African-American women tend to have more severe disease than do white women. For example, African American women are more likely to suffer seizures and strokes. (The Many Shades of Lupus. U.S. Department of Health, national Institutes of Health, National Institute of Arthritis and Musculoskeletal and Skin Disorders)

Amaranth Sprout (Zinc): Zinc is necessary for the functioning of more than 300 different enzymes and plays a vital role in an enormous number of biological processes. Zinc is a cofactor for the antioxidant enzyme superoxide dismutase (SOD) and is in a number of enzymatic reactions involved in carbohydrate and protein metabolism.

Its immune-enhancing activities include regulation of T lymphocytes, CD4, natural killer cells and interleukin II. In addition, zinc has been claimed to possess antiviral activity.

There is strong scientific evidence to suggest that zinc may help manage or reduce symptoms of sickle cell anemia. Most of these studies reported increased height, weight, immune system function, and testosterone levels and decreased numbers of crises and sickled cells following zinc treatment.

Zinc appears to be an essential trace element for the immune system, but research on the effect of zinc supplementation on immune function is scant and mostly focuses on patients with specific diseases. Zinc gluconate appears to have beneficial effects on immune cells.

**Amaranth Sprout (Vitamin D):** The major biologic function of vitamin D is to maintain normal blood levels of calcium and phosphorus. Vitamin D aids in the absorption of calcium, helping to form and maintain strong bones. Recently, research also suggests vitamin D may provide protection from osteoporosis, hypertension (high blood pressure), cancer and several autoimmune diseases.

**Iodine:** Chronic iodine deficiency can lead to numerous health problems in children and adults, including thyroid gland dysfunction (including goiter) and various neurologic, gastrointestinal and skin abnormalities. Iodine deficiency in pregnant or nursing mothers can lead to significant neuro-cognitive deficits in their infants. Cretinism or severe mental retardation is a rare outcome of severe iodine deficiency during early development.

**Selenium:** Selenium is a trace mineral found in soil, water and some foods. It is an essential element in several metabolic pathways. Thyroid function is thought to depend on selenium and thyroid problems are common in patients with selenium deficiency. Selenium has been suggested to improve goiter, as well as inflammatory activity in chronic autoimmune thyroiditis or Grave's disease.

Omega-3: Potentially assist in the prevention of autoimmune disorders such as, Rheumatoid arthritis and Lupus

Lycopene: Lycopene is a carotenoid present in human serum and skin as well as the liver, adrenal glands, lungs, prostate and colon. Lycopene has been found to possess antioxidant and antiproliferative properties. It has been proposed that lycopene and other carotenoids, such as beta-carotene, may stimulate the immune system.

Bifidobacterium longum: Boosts the immune system.

Bromelain: Enhances the immune system.

L-Glutathione: Improves the immune system by promoting antigen presentation and stimulating CD8 cells.

Raw Camu Camu Powder: Provides immune system support

Parsley: It helps strengthen the immune system, enhance the absorption of iron from intestines, maintain the elastic properties of skin and blood vessels and prevent the bruising of skin as well.

Wheatgrass Benefits: Chlorophyll also increases the production of hemoglobin in the blood and helps strengthen the immune system.

Chlorella: Chlorophyll also increases the production of hemoglobin in the blood and helps strengthen the immune system.

### III. Asthma:

- A. Age adjusted asthma death rates are three times higher for African Americans than for whites. (MarshaLillie-Blanton et alop. Cit.)

B. Dr. Michael LeNoir, chair of the allergy and asthma section of the association and associate professor of pediatrics at the University of California in San Francisco, said that African-Americans are two to six times more likely to die from asthma than White people.

C. A Black man in New York City is 11 times more likely to die from asthma than other men in the city. (British medical Journal, August 11, 2001, Asthma crisis for Black Americans, Janice Hopkins Tanne)

D. The reason why asthma is more common among black people and other inner city residents is unclear. The disease disproportionately affects African Americans. (British medical Journal, August 11, 2001, Asthma crisis for Black Americans, Janice Hopkins Tanne)

Amaranth Sprout (Pantothenic acid, vitamin B5): Vitamin B5 has been used to treat the following conditions: Acne (topical dexpanthenol), adrenal gland stimulation, aging, alcoholism, allergies, alopecia, Alzheimer's disease, anxiety prevention and asthma.

Lycopene: Laboratory research suggests that lycopene, like other carotenoids, may have antioxidant properties. It has been suggested that antioxidants may be helpful in the prevention of asthma that is caused by exercise.

Pyridoxine: Pyridoxine is effective for treatment of acne and other skin problems, alcohol intoxication, asthma, hemorrhoids, kidney stones, mental problems, migraine headaches, morning sickness and menstrual problems, or to stimulate appetite or milk production.

Selenium: Preliminary research reports that selenium supplementation may help improve asthma symptoms.

Cordyceps: Tuberculosis along with chronic bronchitis and asthma as exemplified cordyceps sinensis ability to treat and improve respiratory functions resulting in cellular oxygen absorption increasing by 40%.

Cabbage: Drinking 25–50 ml of cabbage juice helps treat headache, asthma, bronchitis and digestion problems.

#### IV. Cancer

A. African–American men were 1.3 times as likely to have new cancer cases of lung and prostate cancer, compared to non–Hispanic White men. (U.S. Dept. of Health and Human Resources, The office of Minority Health)

B. The death rate combined for all cancers is 35% higher in African–American men than White men. (Cancer Facts & Figures for African–Americans 2007–2008, American Cancer Association)

C. The death rate combined for all cancers is 18% higher in African–American women compared to White women. (Cancer Facts & Figures for African–Americans 2007–2008, American Cancer Association)

D. The overall rate of breast cancer in African–American women is not as high as compared to White women, African–American ladies suffer the highest death rate from the disease once it's detected. (Meadows M, More Research Needed on Breast Cancer in Black Women. U.S. Department of Health and Human Services, Office of Minority)

E. Black women have the highest incidence of and mortality from colon and rectal cancer than any other ethnic or racial group. (Ries LAG, Eisner MP, Kosary CL, et.al. SEER Cancer Statistics Review, 1973–1999, National Cancer Institute, Bethesda, MD, National Institutes of Health, National Cancer Institute, accessed August 22, 2002)

F. This is a Shocker: While Hispanic women have almost 50% higher incidence rates of cervical cancer than Black women, Black women are 75% more likely to die from the disease. (Ries LAG, Eisner MP, Kosary CL, et.al. SEER Cancer Statistics Review, 1973–1999, National Cancer Institute, Bethesda, MD, National Institutes of Health, National Cancer Institute, accessed August 22, 2002)



Amaranth Sprouts: Amaranth is one of the grains highest in fiber content, three times that of wheat. This makes Amaranth an effective natural agent against cancer and heart disease.

Lycopene: Lycopene-containing foods or high lycopene serum levels with reduced incidence of cancer. Ovarian cancer (prevention) Lycopene intake in food seems to decrease the risk for ovarian cancer.

Amaranth Sprout (Vitamin D): Vitamin D may provide protection from cancer. Breast cancer prevention; High-dose vitamin D supplementation may be associated with a slightly reduced risk of developing breast cancer. Colorectal cancer; Data from a meta-analysis suggest that supplemental vitamin D may prevent the development of colorectal cancer. Prostate Cancer; There is preliminary evidence based on laboratory and human studies that high-dose vitamin D may be beneficial in the treatment of prostate cancer.

Vitamin K: For cancer prevention

Riboflavin: Some conditions may increase your need for riboflavin. These include: Cancer.

Amaranth Sprout (Niacin (vitamin B3, nicotinic acid), Niacinamide): Uses based on tradition or theory, breast cancer, cancer prevention, liver cancer and prostate cancer.

Vitamin B12 (Methylcobalamin): Breast cancer

Selenium: The role of selenium in cancer prevention has been the subject of recent study and debate. Initial evidence from the Nutritional Prevention of Cancer (NPC) trial suggests that selenium supplementation reduces the risk of prostate cancer among men with normal baseline PSA (prostate specific antigen) levels and low selenium blood levels. Cancer prevention: Several studies suggest that low levels of selenium may be a risk factor for developing cancer,

particularly gastrointestinal, gynecological, lung, colorectal, and esophageal cancer. Studies have shown significantly reduced risk of some (but not all) cancers in subjects taking selenium supplements. Selenium supplementation may reduce cancer incidence in men more than women.

**Chlorophyll:** Research studies show that chlorophyll effects include decrease in colon cancer risk, and other forms of cancer can be adversely affected by the use of chlorophyll. Research continues with chlorophyll and chlorophyllin as a prevention and intervention against liver cancer, specifically aflatoxin-associated liver cancer. Aflatoxin-B1 (AFB1) can be found in moldy grains and legumes, in conjunction with Hepatitis B liver cancer may occur. This type of cancer can be found more often in countries such as, Asia and Africa.

**Vanadium:** Exposure of breast cancer cells to vanadium led to the induction of apoptosis in a dose-dependent manner. It was found that vanadium treatment brought about a prominent chromatin condensation, cell cycle arrest leading to apoptosis. These apoptosis based assays demonstrate that vanadium has the as an anti-cancer drug.

**Bifidobacterium longum:** These benefits include: cancer prevention

**Kamut Grass – Nature's Most Powerful Detoxifier:** It offers the benefits of a liquid oxygen transfusion since the juice contains liquid oxygen. Cancer cells cannot exist in the presence of oxygen. Another claimed benefit of wheatgrass is its anti-cancer ability, specifically due to selenium and laetrile which are anti-cancer compounds found abundantly in wheatgrass. It is believed that cancer cells like acidic atmosphere and wheatgrass helps alkalize the body. With wheatgrass, the body becomes unidyllic for cancer cells to continue thriving.

**Beet Juice:** Betaine, an amino acid in beet root, has significant anti-cancer properties. Studies show that beet juice inhibits formation of cancer-causing compounds and is protective against colon or stomach cancer.

**Tomato Juice:** Tomato juice also contains the antioxidant lycopene which some people believe might protect against cancer. Lycopene, present in tomatoes, has been known to neutralize free radicals and cut the risk of prostate cancer. Those who eat raw tomatoes have been found to have much less risk of developing rectal, colon or stomach cancer. It is believed that tomatoes block the effects of nitrosamines and thus, reduce the risk of lung cancer.

**Parsley:** One of the major health benefits of consuming parsley is that they lessen the risk of cancer in human body. The volatile oil myristicin, present in parsley leaves, prevents the proliferation of cancer cells in the body. The vitamin C, along with beta carotenes present in parsley, scavenge free radicals from the body, maintain cell wall integrity and reduce the occurrence of heart diseases, cancer and other degenerative diseases.

**Spinach:** A particular substance known as flavonoid is present in spinach, which is a powerful anti-oxidant and also has anti-cancer agents like carotenoid, preventing the formation of tumors.

**Kale:** The beneficial effects of cruciferous vegetables like kales over cancer have been known for a long time. The vegetable is very effective in reducing the risk of lung, breast, bladder, colon and ovarian cancer. The presence of certain organosulfur phytonutrients in kale helps to reduce the risk of certain types of cancer in humans like bladder cancer and colon cancer and helps in the general strengthening of the immune system of the body.

**Collard Greens:** The mineral calcium, present in collard greens, helps protect colon cells from cancer-causing chemicals and reduces PMS symptoms during the second phase of the menstrual cycle.

**Reishi Mushrooms:** Reishi mushrooms are thought to be effective for reducing the growth of tumors and have been used as a supplement in the treatment of cancer patients. According to the BC Cancer Agency, the use of reishi supplements may help reduce some side effects that accompany radiotherapy and chemotherapy, such as fatigue and bone marrow suppression.

Maitake mushroom: In a study of cancer patients without anticancer drugs, researchers found that maitake D-Fraction hindered metastatic progress, lessened the expression of tumor markers and increased NK cell activity in all patients examined. In a study, researchers supplied 22- to 57-year-old cancer patients in stages II-IV with a combination of MD-fraction and whole maitake powder. They observed cancer regression or significant symptom improvement in 58.3 percent of liver cancer patients, 68.8 percent of breast cancer patients, and 62.5 percent of lung cancer patients.

Cordyceps: Researchers in Asia found Cordyceps to have strong anti tumor properties in mouse and human studies for various forms of cancer. Cordyceps has also been shown to help respiratory conditions, improve heart function and promote liver and kidney health. Reductions of tumor sizes and improved subjective symptoms were seen in a study on 50 lung cancer patients who were given 6g cordyceps sinensis.

Broccoli Sprout: Has anti cancer properties and suppresses lung, colon and breast cancers. May prevent cancer in organs and glands with epithelial tissue, because of its high Vitamin A content. Contains a substance called Sulphorafane, which reduces the production of malignant tumors.

Cauliflower Sprout: The high amount of fiber in cauliflower improves colon health and can even help prevent cancer. Recently, it was found that cauliflower contains indole-3-carbinol, a substance that can prevent breast and other female cancers. Sulforaphane, a substance in cauliflower, can remove cancer causing chemicals and also stop the spread of cancer cells, even in the later stages of their growth. Researches have suggested that cauliflower contains certain phyto-chemicals that might help reduce the risk of some hereditary cancers.

Spirulina: Twenty years of research proves eating beta carotene rich fruits and vegetables gives us real anti-cancer protection. As suspected, natural

carotenoids in algae and vegetables have the most antioxidant and anti-cancer power. One gram a day caused total regression of mouth cancer lesions in 44% of male tobacco chewers.

**Wheatgrass:** Another claimed benefit of wheatgrass is its anti-cancer ability, specifically due to selenium and laetrile, which are anti-cancer compounds found abundantly in wheatgrass. It is believed that cancer cells like acidic atmosphere and wheatgrass helps alkalize the body. With wheatgrass, the body becomes unidyllic for cancer cells to continue thriving.

**Chlorella:** Chlorella has been used to treat cancer and also help protect the body from the effects of cancer radiation treatment. Research conducted in Japan suggests that chlorella may have antitumor activity against breast cancer. However, its main use in cancer therapy is to help remove radioactive particles from the body after radiation treatment.

**Resveratrol:** Benefits include cancer fighting

**Cabbage:** Cabbage has been found to be associated with lower incidence of cancer, especially lung, stomach and colon prostate cancer.

**Rosemary:** Scientists from Cancer Research Institute of Slovak Academy of Sciences, Slovak Republic, have found that rosemary helps in protecting DNA against free radical damage. Rosemary inactivates oestrogen hormones like oestrone and oestradiol, which are responsible for breast cancer, by stimulating liver enzymes.

**Apple Extract:** Apples are abundant in Quercetin, a flavonoid, which helps prevent the growth of prostate cancer cells. Apples, because of the presence of flavonoids, inhibit the growth of carcinogenic substances in the bladder and thus, diminish the risk of bladder cancer, especially in smokers. The phytonutrients present in the skin of apples have been found to inhibit the

growth of colon cancer cells. Researches have also suggested that foods like apples, which contain flavonoids, might reduce the risk of lung cancer.

Redcurrants: Fights especially against various forms of cancer, as well as helps in many specific everyday functions.

Aronia Berry: The aronia berry has many health benefits. Aronia berries contain antioxidants (the highest antioxidant berry), which everyone knows help protect the body against cancers; research from the University of Maryland suggests that aronia berries may be great at fighting colon cancer in particular.

Pomegranate: Researches have indicated that pomegranate compounds might prevent prostate cancer and even slowdown its growth. Pomegranate juice has also been associated with reducing the risk of breast cancer.

Blueberry: Blueberries are powerful antioxidants and hence prevent cancer-causing cell damage of the body. Kaempferol present in blueberries reduces the risk of ovarian cancer in females.

Grapes: Breast Cancer: Through a latest study, it has been discovered that purple colored Concord grape juice helps in preventing breast cancer. Significant reduction in mammary tumor mass of laboratory rats was seen after they were fed the grape juice on the experimental basis. Grapes are found to have strong anti cancer properties due to the anti-inflammatory effect of resveratrol present in grapes. It is particularly effective in colorectal cancer and breast cancer. Anthocyanins and proanthocyanidins present in grapes have properties of an anti-proliferate and can inhibit the growth of cancer causing agents. Grape juice not just prevents the risk of cancer but also suppresses the growth and propagation of cancer cells. The pigments contained in grapes enhance the overall immunity of the body.

Sour Cherry: The Flavonoids, Carotenoids and the vitamins like vitamin-A and C are extremely well anti carcinogens. The efficiently inhibit the growth of

cancerous cells as well prevent triggering of new cancerous growths, free radicals being the main culprit behind them.

Raspberry (Red & Black): Raspberries can restrain proliferation of cancer cells and even the formation of tumors in various parts of the body, including the colon.

## V. Diabetes

A. The prevalence of diabetes in African-American women is approximately 85% higher than Caucasian women. (Diabetes Surveillance System: Prevalence of Diabetes. U.S. department of Health & Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. Accessed August 22, 2002)

B. African-American adults are twice more likely than non-Hispanic White adults to have been diagnosed with diabetes by a physician. (U.S. Department of Health & Human Services, The Office of Minority Health)

C. In 2005, African-Americans were 2.2 times as likely as non-Hispanic Whites to die from diabetes. (United States Department of Health and Human Services, The Office of Minority Health)

Amaranth Sprout (Vitamin D): Type 1 Diabetes : It has been reported that infants given calcitriol during the first year of life are less likely to develop type 1 diabetes than infants fed lesser amounts of vitamin D. Other related studies have suggested using cod liver oil as a source of vitamin D to reduce the incidence of type 1 Diabetes. Type 2 Diabetes: In recent studies, adults given vitamin D supplementation were shown to improve insulin sensitivity.

Amaranth Sprout (Niacin, vitamin B3, nicotinic acid, Niacinamide): Niacinamide may prevent diabetes or delay the need for insulin. Niacin has been used to treat dyslipidemia associated with type 2 Diabetes.

Biotin (vitamin B7): In early research, biotin has been reported to decrease insulin resistance and improve glucose tolerance, which are both properties that may be beneficial in patients with types 2 (adult-onset) Diabetes. Other research suggests that a combination of biotin and chromium may help improve blood sugar control.

Amaranth Sprout (Magnesium): Magnesium depletion is commonly associated with both insulin dependent (IDDM) and non-insulin dependent (NIDDM) diabetes mellitus. Between 25% and 38% of diabetics have been found to have decreased serum levels of magnesium (hypomagnesemia) (37). One cause of the depletion may be increased urinary loss of magnesium, which results from increased urinary excretion of glucose that accompanies poorly controlled diabetes. Magnesium depletion has been shown to increase insulin resistance in a few studies and may adversely affect blood glucose control in diabetes. One study reported that dietary magnesium supplements (400 mg/day) improved glucose tolerance in elderly individuals (38).

Amaranth Sprout (Zinc): Diabetic patients typically have significantly lower serum zinc levels compared with healthy controls. In early high-quality studies, zinc supplementation for type-2 diabetics may have beneficial effects in elevating serum zinc level and in improving glycemic control that is shown by decreasing HbA1c concentration.

Chromium: Chromium was found to correct glucose intolerance and insulin resistance in deficient animals, two indicators that the body is failing to properly control blood-sugar levels and which are precursors of type 2 Diabetes. There is considerable interest in the possibility that supplemental chromium may help to treat impaired glucose tolerance and type 2 Diabetes. Chromium deficiency impairs the body's ability to use glucose to meet its energy needs and raises insulin requirements. It has therefore been suggested that chromium supplements might help to control type 2 Diabetes or the glucose and insulin responses in persons at high risk of developing the disease.



Vanadium: Human studies suggest that vanadium reduce blood sugar levels and improve sensitivity to insulin in people with type 2 Diabetes. In one study of people with type 2 Diabetes, vanadium also lowered their total and LDL (bad) cholesterol.

Kale: Kale also helps to maintain the normal blood sugar level and hence, is very advantageous for people suffering from diabetes.

Cordyceps: Researchers from University of Macau, China, isolated a polysaccharide of molecular weight approximately 210kDa was isolated from cultured Cordyceps mycelia. When administered at a dose of higher than 200mg/kg body wt. daily for 7 days, CSP-1 produced a significant drop in blood glucose level.

Broccoli Sprout: Controls Diabetes as it is a rich source of chromium that helps regulate insulin and blood sugar.

## VI. Heart Disease

A. Heart disease is the leading cause of death for Black women in the U.S.

B. In 2005, African-American men were 30% more likely to die from heart disease, as compared to non-Hispanic White men. (U.S. Department of Health and Human Services, The Office of Minority Health)

Amaranth Sprout (Niacin (vitamin B3, nicotinic acid), Niacinamide): Niacin decreases levels of cholesterol, lipoprotein (a), and fibrinogen, which can reduce the risk of heart disease. Used to treat coronary heart disease (CHD).

Pyridoxine: Heart disease may increase your need for pyridoxine.

Vitamin B12 (Methylcobalamine): Vitamin B-12 has been looked at as a treatment for many diseases and conditions. These include fatigue, Alzheimer's disease, heart disease, breast cancer, high cholesterol and sickle cell disease.

Vanadium: The ability of vanadium compounds to activate these signaling events may be responsible for their ability to modulate cardiovascular functions. Vanadium compounds improves cardiac performance, smooth muscle contractility and modulates blood pressure in various models of hypertension and insulin resistance.

Parsley: The vitamin C, along with beta carotenes present in parsley, scavenge free radicals from the body, maintain cell wall integrity and reduce the occurrence of heart disease

Collard Greens: Another vitamin present in collards, which helps counteract cardio-vascular defects, is niacin. This vitamin is known to reduce high cholesterol levels and thus, helps prevent conditions like diabetes, heart diseases and atherosclerosis.

Barley Nutrition: Barley is also seen to be rich in tocotrienols, which is an antioxidant which helps lessen risk for contracting heart disease and cholesterol problems.

Aronia Berry: Fights against heart disease and other cardiovascular problems.

Pomegranate: Regular consumption of pomegranate juice is said to be beneficial for those suffering from heart diseases.

Grapes: Grapes increase the nitric oxide levels in the blood, which prevents blood clots thereby reducing the chances of heart attacks. In addition the antioxidant present in grapes prevents the oxidation of LDL cholesterol, which blocks the blood vessels.

Sour Cherry: The nutrients in cherries like vitamins, anti oxidants (Flavonoids and particularly Carotenoids) and minerals like phosphorus in it are excellent cardio-protectors. They protect the heart from nearly all damages done by the oxidants. They help maintain proper heart rate, prevent blood-vessels from

hardening, reduce cholesterol, blood pressure and thereby reduce the risk of heart attacks. They also strengthen the cardiac muscles.

Cranberries: The anthocyanins present in raspberry have been found to reduce the risk of heart disease and also delay the effects of aging.

## VII. High Blood Pressure

A. African-Americans are 1.5 times as likely as non-Hispanic Whites to have high blood pressure. (U.S. Department of Health & Human Services, The Office of Minority Health)

Amaranth Sprout (Vitamin D): Recently, research also suggests vitamin D may provide protection from osteoporosis and hypertension (high blood pressure). Low levels of vitamin D may play a role in the development of high blood pressure. It has been noted that blood pressure is often elevated under the following conditions: during the winter season, at a further distance from the equator and in individuals with dark skin pigmentation (all of which are associated with lower production of vitamin D via sunlight).

Amaranth Sprout (Niacin (vitamin B3, nicotinic acid), Niacinamide): Used in the prevention of high blood pressure.

Lycopene: There is some evidence that short-term treatments of Lycopene may reduce blood pressure. Based on early studies, Lycopene may reduce the development of preeclampsia and intrauterine growth retardation in women having their first child.

Magnesium: Used in treatment of hypertension.

Vanadium: The ability of vanadium compounds to activate these signaling events may be responsible for their ability to modulate cardiovascular functions. Vanadium compounds improve cardiac performance and smooth muscle

contractility and modulates blood pressure in various models of hypertension and insulin resistance.

Coenzyme Q10: Preliminary research suggests that CoQ10 causes small decreases in blood pressure (systolic and possibly diastolic).

Bromelain: The United States National Library of Medicine states that bromelain could aid in lowering blood pressure/hypertension when used in conjunction with Angiotensin-Converting Enzyme (ACE) inhibitors.

#### VIII. HIV/AIDS

A. AIDS case rate for Black women is 22 times higher than for non-Hispanic White women. The AIDS rate for Black men is 8 times higher than for non-Hispanic White men. (Centers for Disease Control and Prevention, Department of Health and Human Services)

B. Blacks accounted for 49% of the estimated 35,962 AIDS cases diagnosed in the 50 states and District of Columbia. 40% of the 562,793 persons with AIDS who died were Black. (CDC. HIV/AIDS Surveillance Report, 2007. Vol. 19. US Department of Health and Human Services, CDC: 2009: 1-63)

C. Blacks accounted for 51% of the 42,655 (including children) new HIV/AIDS in 34 states with long-term, confidential name-based HIV reporting. (CDC. HIV/AIDS Surveillance Report, 2007. Vol. 19. US, Department of health and Human Services, CDC: 2009: 1-63)

Amaranth Sprout (Niacin (vitamin B3, nicotinic acid), Niacinamide): Used based on tradition or theory for the prevention of HIV.

Coenzyme Q10: Coenzyme Q10 (CoQ10) is produced by the human body and is necessary for the basic functioning of cells. CoQ10 levels are reported to decrease with age and to be low in patients with some chronic diseases such as heart conditions, muscular dystrophies, Parkinson's disease, cancer, diabetes, and HIV/AIDS.

Cordyceps: Reverses HIV. In late 2004 study free fouls on HIV patients in Ghana were given a formula with cordyceps sinensis as the primary ingredient. When results came back the most amazing thing happened, all 300 patients had no trace of HIV in their blood.

Spirulina: Scientists in Japan have published new studies showing a purified extract unique to spirulina inhibits replication of HIV-1. Exciting new research in Japan and the USA has confirmed spirulina extracts in vitro can inhibit replication of the HIV virus. The National Cancer Institute found sulfolipids in blue-green algae were remarkably active against the AIDS virus in vitro.

#### IX. Kidney Disease

A. African American men are 2.1 times as likely to start treatment for end-stage renal disease related to diabetes, compared to non-Hispanic White men. (United States Department of Health & Human Services, The Office of Minority Health)

B. African Americans experience a much higher rate of kidney failure than do Whites when they suffer from diseases such as hypertension and diabetes. (Minority Health)

Nettle: Nettle has been studied extensively and has shown promise in treating kidney stones.

Lemon Grass: It helps to detoxify the kidney.

Dandelion Leaf: Diuretic, tonic and slightly aperient. Is a general stimulant to the system, but especially to the urinary organs and is chiefly used in kidney and liver disorders.

Rosemary: Rosemary extract, when consumed on a daily basis, improves kidney functions, increases urine flow and preserves essential minerals such as sodium, potassium and chlorium.

Alfalfa Grass: Commonly used to treat urinary tract-infections, kidney, bladder and prostate disorders.

Grapes: Grapes can substantially reduce the acidity of the uric acid and helps in the elimination of the acid from the system, thereby reducing the work pressure of kidneys.

Cranberries: Cranberries are packed full of vitamins that can help one avoid urinary tract infections and kidney stones.

#### X. Stroke

A. African-American Adults are 1.7 times as likely than their white adults counterparts to have a stroke. (US Department of Health and Human Services, The Office of Minority Health)

Amaranth Sprout (Niacin (vitamin B3, nicotinic acid), Niacinamide): The below uses are based on tradition or scientific theories. Stroke.

Amaranth Sprout (Magnesium): Vascular endothelial cells line arterial walls where they are in contact with the blood that flows through the circulatory system. Normally functioning vascular endothelium promotes vasodilation when needed, for example, during exercise and inhibits the formation of blood clots. In cardiovascular disease, arteries develop atherosclerotic plaque. Atherosclerosis impairs normal endothelial function, increasing the risk of vasoconstriction and clot formation, which may lead to heart attack or stroke. Recent research indicates that pharmacologic doses of oral magnesium may improve endothelial function in individuals with cardiovascular disease.

Collard Greens: The presence of high levels of this molecule causes damage to the walls of the blood vessels and increases the risk of heart attack and stroke. To avoid this, it is essential to eat foods that are high on both vitamins, such as collard greens.

Cauliflower Sprout: The Allicin in cauliflower is known to promote a healthy heart and reduce the risk of strokes.

Apple Extract: Apples have been found to have a positive result on those suffering from risk of stroke, Type II Diabetes and asthma.

Pomegranate: It has been seen that pomegranate juice helps prevent heart attacks and even stroke.

Cranberries: cranberries can help aid in recovery from a stroke and can help blood vessels to function better.

## XI. Mental Health

Amaranth Sprout (Thiamine): lack of thiamine may cause mental depression, memory problems, weakness, shortness of breath and fast heartbeat. Thiamine is effective for treatment of skin problems, chronic diarrhea, tiredness and mental problems.

Amaranth Sprout (Pyridoxine): Lack of pyridoxine may lead to mental problems.

Amaranth Sprout (Folic Acid): The neural tube defects that folic acid can prevent, including Spina bifida and Anencephaly, are among the most serious and frequently occurring birth defects. Spina bifida occurs when the fetus' spinal column does not close to protect the spinal cord; this closure should happen within the first few weeks of the pregnancy. Spina bifida causes neurological problems and sometimes, varying levels of mental retardation.

Amaranth Sprout (Zinc): Zinc deficiency causes include growth retardation, hair loss, diarrhea, delayed sexual maturation, impotence, eye and skin conditions

and loss of appetite. Additional symptoms may include weight loss, delayed wound healing, taste changes and mental lethargy.

**Amaranth Sprout (Magnesium):** In association with preeclampsia late in pregnancy or during labor. Magnesium is believed to relieve cerebral blood vessel spasm and increasing blood flow to the brain

**Vitamin B12 (Methylcobalamino):** Lack of vitamin B-12 may lead to mental problems.

**Iodine:** Iodine deficiency in pregnant or nursing mothers can lead to significant neurocognitive deficits in their infants. Cretinism or severe mental retardation is a rare outcome of severe iodine deficiency during early development. Iodine deficiency is considered to be a preventable cause of mental retardation. Iodine is required for the production of thyroid hormones, which are necessary for normal brain development and cognition. One study showed that oral iodized oil significantly improved performance on cognitive tests in 10–12 year-old school children.

**Rosemary:** Rosemary oil is used to shield the brain from neurodegenerative diseases.

**Cabbage:** Red cabbage contains an antioxidant known as anthocyanin. This antioxidant is believed to be helpful in protection of brain cells and thus, in the avoidance of Alzheimer's disease.

**Ginkgo Biloba:** Ginkgo biloba brings relief from diseases related to brain, as it increases blood flow to the brain and regulates neurotransmitters. It also stimulates and tones the brain. It is very effective in preventing Alzheimer's disease. The herb increases memory and concentration power and hence is advised for children and adults alike.



Pomegranate: Studies have shown that maternal consumption of pomegranate juice might protect the neonatal brain from damage after injury.

Blueberry: Blueberries also protect the brain from oxidative stress and reduce the effects of Alzheimer's disease or dementia.

Grapes: Studies suggest that grapes can enhance brain health and stall the onset of neurodegenerative diseases.

Sour Cherry: Flavonoids and carotenoids are very effective in improving efficiency of the brain, improving memory and keeping it active, which are otherwise reduced due to action of free radicals with aging. So, those who are afraid of a dull brain and a low memory in their old age; beware and start eating cherries. You can keep smart like the 007 even in your nineties. The anti oxidant properties of these cherries also protect the nervous system from age-related disorders. Thus, they can be helpful in treating nervous disorders like Alzheimer's disease, Parkinson's disease, depression, disappointment, undue anxiety, stress, etc.

## XII. Reproductive Health

A. Black women have a much higher pregnancy related death rate compared to White or Hispanic women. (Barnholtz-Sloan, Js, Tainsky, MA, Abrams, J, et al., Ethnic differences in Survival among women with Ovarian Carcinoma. *Cancer*. 2002;94 (6):1886-1893)

B. Infant mortality is more than twice as high for African-American infants as it is for White, non-Hispanic infants. (13.9 deaths per 1,000 births versus 5.8 deaths per 1,000 live births) Federal Interagency Forum on Child and Family Statistics, *America's Children: key National Indicators of Well-Being*, Washington, D.C.: U.S. Government Printing Office, 2005)

C. The maternal mortality rate for African-American women is nearly five times the maternal mortality for White women. (Kenneth Kochanek,

Sherry Murphy, Robert Anderson, et al, National Vital Statistics Report 2004, 53, No.5 (Atlanta: Centers for Disease Control and Prevention, Division of Vital Statistics, October 2004)

**Amaranth Sprouts:** The body requires a balance of certain amino acids to ensure optimum health (and growth for children). Amaranth protein content is a remarkable 16% made up of all the essential amino acids.

**Amaranth Sprouts (Beta-Carotene, Vitamin A):** The carotenes possess antioxidant properties. Vitamin A serves several biological functions including involvement in the synthesis of certain Glycoproteins. Vitamin A deficiency leads to abnormal bone development and disorders of the reproductive system. Observational research suggests that greater dietary intake of beta-carotene may lower the incidence of adverse effects in children undergoing chemotherapy for lymphoblastic leukemia.

**Amaranth Sprouts (Vitamin D):** In children, vitamin D deficiency causes rickets, which results in skeletal deformities. Rickets develop in children with vitamin D deficiency due to a vitamin D-deficient diet, a lack of sunlight or both. Infants fed only breast milk (without supplemental vitamin D) may also develop rickets.

**Amaranth Sprouts (Calcium):** Children and adolescents may need more calcium than they normally get from eating calcium-rich foods. Other bone diseases in children and adults are also treated with calcium supplements.

**Iodine:** Chronic iodine deficiency can lead to numerous health problems in children and adults including, thyroid gland dysfunction (including goiter) and various neurologic, gastrointestinal and skin abnormalities. Iodine is required for the production of thyroid hormones, which are necessary for normal brain development and cognition. One study showed that oral iodized oil significantly improved performance on cognitive tests in 10–12 year-old school children.

Amaranth Sprouts (Zinc): Multiple studies in developing countries found that zinc supplementation in malnourished children with acute diarrhea may reduce the severity and duration of diarrhea, especially in children with low zinc levels. Zinc supplementation may be a more effective treatment for older children with higher body mass index (BMI) scores. In several studies, zinc supplements seemed to counteract hypothyroidism and slightly reduce the number of infections in children with Down syndrome.

Coenzyme Q10: There is early data to support the use of CoQ10 in children with mitral valve prolapse.

Spirulina: Spirulina's Beta-carotene has been widely studied in India with thousands of people. Just one gram a day for a year given to 5000 pre school children, significantly reduced the incidence of eye disease. One gram a day caused total regression of mouth cancer lesions in 44% of male tobacco chewers.

### XIII. Children

- A. 25 percent of African-American children are in less than very good or excellent health compared to 12 percent for White children. (Federal Interagency Forum on Child and Family Statistics, op. cit.)

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## Chapter Nine

### What is AMARANTH?

A traditional food plant in Africa, this vegetable has potential to improve nutrition. It is often referred to as the crop of the future. In Africa, Amaranth leaf is known in Chewa as Bonongwe and in Swahili as Mchicha and is sometimes recommended by some doctors for people having low red blood cell count.

Amaranth is a highly nutritious small seed used as an alternative to grains for people with gluten intolerance and grain allergies as well as those who want to eat more healthy foods. It is one of the best-kept secrets to hit the food industry in recent years---a powerful, organic, alternative grain super food that delivers measurable health benefits.

Amaranth <http://en.wikipedia.org/wiki/Amaranth> - [cite\\_note-6](#) produces large amounts of protein and essential amino acids, such as lysine. Reported to have a 30% higher protein value than cereals, such as rice, wheat flour, oats, and rye.. Good source of vitamins including vitamin A, vitamin K, vitamin B6, vitamin C, riboflavin and folate and dietary minerals including calcium, iron, magnesium, phosphorus, potassium, zinc, copper and manganese. Its seeds, have a protein content greater than that of wheat. However, unlike that found in true grains (i.e. from grass seeds) its protein is not of the problematical type known as gluten. Several studies have shown that like oats, amaranth seed or oil may be of benefit for those with hypertension and cardiovascular disease. Regular consumption reduces blood pressure and cholesterol levels, while improving antioxidant status and some immune parameters.<sup>[16][17][18]</sup> While the active ingredient in oats appears to be water-soluble fiber, amaranth appears to lower cholesterol via its content of plant stanols and squalene.

It also has a more complete protein profile than most other grains, containing certain essential amino acids that are not commonly found in other grains. Amaranth has twice the iron as wheat does; though vegetarian sources

of iron are generally difficult to absorb. (But eating iron-rich plant foods like amaranth with vitamin-C rich foods, like fruit, can help with absorption.) National Academy of Sciences recommended it as part of a healthy, diverse diet.

Amaranth, unlike other grains, is a good source of protein, containing anywhere from 15–17% protein by weight. It is rich in the amino acids lysine, methionine, and cysteine, with a higher content of lysine than any other grain. It is also high in fiber, with three times the fiber of wheat. In terms of nutrition, amaranth is loaded with vitamins and minerals. It has more than 20% of the recommended daily amount of calcium, iron, magnesium, and folate. Amaranth is also a good source of potassium, phosphorus and vitamins A, C, and E. It is a cholesterol-lowering food, with-both tocotrienols and phytosterols, two natural compounds known to help the body eliminate bad cholesterol. With such a potent nutritional content, amaranth is an ideal addition to any health-conscious diet.

- Helps prevent and treat osteoporosis due to high levels of calcium, magnesium and iron.
- Great source of foliate, B vitamins and zinc, all of which improve brain function, including memory.
- Several studies have shown that amaranth seed or oil may benefit those with hypertension and cardiovascular disease; regular consumption reduces blood pressure and cholesterol levels, while improving antioxidant status and some immune parameters.
- It is high in iron, protein and has three times the calcium of milk.

### *100% GLUTEN FREE – TESTED & CERTIFIED*

Amaranth has been tested by a certified AOAC food analysis laboratory (ELISA tested) and is certified gluten-free. Amaranth is recognized by the Gluten Intolerance Group, the Celiac Disease Foundation, the Celiac Sprue Association, the American Dietetic Association and other groups as gluten-free.

Health Problems: (Gluten)

Autism is a developmental neurological disorder that typically appears by three years of age. Initial research shows that 50% of patients with this disease are unable to break down gluten and casein proteins that cause the neurological malfunctioning. Some of these proteins enter the bloodstream and it is believed this can result in abnormal brain activity that depresses the nervous system. Gluten-free, casein-free foods have been shown to decrease the symptoms in those who are unable to tolerate these substances.

1. Venereal Diseases: Amaranth is considered highly beneficial in the treatment of gonorrhoea. About 25 gm's of the leaves of this vegetable should be given twice or three times a day to the patient in Venereal Diseases.
2. Leucorrhoea: Amaranth is beneficial in the treatment of leucorrhoea. It should be given to the patient daily in the morning as well as in the evening. It is a very effective remedy for this disease and quite often the very first dose gives relief.
3. Bleeding Tendencies: The use of amaranth is valuable in all bleeding tendencies. It should be taken every night in conditions like bleeding from the gums, nose, lungs, piles and excessive menstruation. It acts as a natural tonic.
4. Premature Ageing: The regular use of amaranth is useful in preventing premature old age. It prevents the disturbance of calcium and iron metabolism which usually occurs in old age. According to Dr. Van-Sylke, calcium molecules begin to get deposited in the bone tissues as one becomes old. This haphazard calcium distribution is influenced by the improper molecular movements of iron in the tissues. If this molecular disturbance of calcium and iron is prevented by regular supply of food, calcium and iron as found in amaranth and the health is maintained by its regular use from the early age, the process of ageing can be prevented.
5. Retarded Growth: Amaranth is very useful in preventing retarded growth in children. It will prevent constipation and ease the teething process as

the baby grows. It contains all the essential amino acids such as arginine, histidine, isoleucine, leucine, lysine, cystine, methionine, phenylalanine, threonine, tryptophan and valine.

6. Pregnancy and Lactation: Regular use of amaranth during pregnancy and lactation is highly beneficial. It will help the normal growth of the baby, prevent the loss of calcium and iron from the body, relax the uterine ligaments and facilitate easy delivery without much pain. Its use after child birth will shorten the lying in period, check the postnatal complications and increase the flow of breast milk.
7. Respiratory Disorders: Amaranth is valuable in respiratory system disorders. Drinking fresh juice along with honey is remedy for chronic bronchitis, asthma, emphysema and tuberculosis.

This is truly an essential part missing from the diet of the black population. By adding this product into your daily nutritional routine will enhance the life that you have been lacking.

*If the body is operating at a deficient level of any of these Vitamins or Minerals, it will influence the virulence of otherwise harmless pathogens.*

Deficient levels of nutrients, such as selenium, may increase not only host susceptibility to infection, but also the virulence of the pathogen itself. (Nutrition: a Foundation For Development, Health, Brief 4 of 12, Frances Davidson is senior nutrition advisor, Office of Health and Nutrition, U.S. Agency for International Development. UN ACC/SCN)



## Chapter Ten

### Key Points

**Antioxidants/Phytochemicals:** The antioxidant activity of the vitamin C in apples with skin accounts for only 0.4% of the total antioxidant activity suggesting the majority of antioxidant activity of fruits and vegetables may come from Phenolics and Flavonoids. We propose that the additive and synergistic effects of phytochemicals in fruits and vegetables are responsible for their potent antioxidant and anticancer activities and that the benefit of a diet rich in fruits and vegetables is attributed to the complex mixture of phytochemicals present in whole foods. (Health benefits of Phytochemicals in Functional Foods, R. H. Liu, Department of Food Service, Cornell University, 108 Stocking hall, Ithaca, New York 14853-7201)

**Enzymes:** We included SIX very important enzymes to help your intestines break down food and prepare the food for absorption into the body. Enzymes calm the intestinal lining reduces inflammation and speeds digestion. One of the critical enzymes is Lactase. Up to 90 percent of all African Americans, Asian Americans, Mexican Americans and Native Americans have intolerance to dairy products. Lactase will help the intestines by cleaning up any accidental dairy product that a person may have consumed.

**Genetically Compatible:** This nutritional formula actually contains certain ingredients that are Native to Africa; consequently, those nutritional products are genetically favorable and agreeable to the African Americans digestive system. This is a huge advantage over any other product available in the market place. The World Health Organization Technical Report Series 916 on Diet, Nutrition and The Prevention of Chronic Diseases (a Report of a WHO/FAO Expert Consultation), Geneva 2003, claims on page 42: Understanding the evolutionary aspects of diet and its composition might suggest a diet that would

be consistent with the diet to which our genes were programmed to respond. Targeted dietary advice for susceptible populations, subgroups, or individuals is desirable. That is exactly what this product does it fulfills a genetic need.

Gluten intolerance: Irritation of the intestinal wall results in 3 problems.

A. Restricts breakdown and preparation the intestinal tissue's ability to manufacture digestive components.

B. Inflammation of mucosa, may permit partial nutritional elements to gain access into the blood vascular system and affect the immune system

C. Interferes with ability to assimilate nutrition.

Secondary Conditions Caused by Gluten Intolerance:

New England Journal of Medicine listed 55 diseases.

Physical health: Irritable bowel disease, inflammatory bowel disease, anemia, cancer, osteoporosis, fatigue, rheumatoid arthritis, lupus, multiple sclerosis, and most all the auto-immune diseases

Mental health: dementia, anxiety, depression, schizophrenia, migraines, epilepsy, neuropathy, neurological disorders and autism (Listed in the Cochrane Database System Rev. 2004 (2):CD003498)

Acid/ Alkaline Balance Stomach: The select products included in this product will potentially assist in maintaining the proper Ph. Any number below 7.0 Ph is acid and 6.8 or lower retards nerve function and is corrosive and anything above 7.0 is alkaline and 7.4 or higher forms alkaline salts, denatures enzymes and stimulates nerve function. Vitally important to maintain the Ph designed for each segment of the stomach or will cause irritation and inflammation.

Probiotics: We have added 3 important probiotics to this formula for intestinal and body health. These important intestinal flora, to begin the seeding process in the intestines to produce new healthy probiotics. Intestinal flora helps to maintain acid/alkaline balance, prepare nutritional elements (vitamins and minerals) for assimilation, aid the immune system, control bacterial growth and reinforce the mucosal intestinal barrier. Probiotics help block dangerous pathogens, toxins and allergens. Some flora produce natural antibiotics and anti fungal substances, some contain anti-tumor and anti-cancer effects. The probiotics we have selected are the most effective science has discovered.

The gut is the body's principal immune organ with more than 400 cultivable species, while a majority of the indigenous flora are benign or exhibit health-promoting properties, some possess the potential to cause disease. Experts claim that Bifidobacteria and lactobacilli are associated with health and commonly used as probiotics, while clostridia are considered detrimental to health. The adult colon is 150 centimeters long with a typical transit time of 24 to 72 hours. Glen Gibson, PhD. Professor of Food microbiology, University of Reading, United Kingdom stated, probiotics prophylactically manage acute and chronic gut disorder; evidence is accumulating for a more therapeutic role, also higher levels of these beneficial organisms can thereby reduce the activities of more problematic pathogens --- either present in the gut or transmitted in food and/or water.

Sentinel G-protein receptors: These are the most unique elements in the intestinal tract. Located in the intestinal tract to monitor food as it passes through the intestinal tract and reports to the brain, is co-joined by a like molecule that projects in the opposite direction into a blood vessel. Intestinal receptors must be kept healthy for proper function of the food monitoring system. This product helps to provide strong probiotic, enzymes and balanced pH in the gut.

Villi, Micro-Villi and Lacteals: These are the absorption parts that project into the intestine and absorb all of the nutritional elements for the body. The

enzymes, acid/base balance and the probiotics must properly digest food. Intestine must be cleansed. No inflammation. Any inflammation results in swelling and tissue pathology, which causes the absorption of food to be poor and in some cases, badly prepared food molecules to be absorbed which may contribute to an immune response that holds the potential to set the stage for one of the 80 different auto-immune diseases.

Intestinal Enteric Nervous system: Consist of 100 million neurotransmitters and manufactures nearly every chemical that has been identified in the brain: Co-controller of the intestinal digestive system. Cannot tolerate any irritation or inflammation that is why the formulation has been so carefully crafted to give the body those elements it requires to embolden nutrition but calm the intestinal tract.

Intestinal endocrine system: The intestines are the largest endocrine system in the body and are co-controller of the intestines. They cannot tolerate an irritation process or an inflammatory process within the intestinal mucosa, because that is where the critically important hormonal cells are located. The endocrine system helps regulate the intestinal system by secreting hormones (Hormones are little chemical messengers sent by way of the blood that inhibit, stimulate or regulate the physiology of specified cells.) Such as: Gastrin: A stomach hormone that controls the gastric acid secretion or Secretin and Cholecystinin hormones stimulate the Pancreas and causes the Gall Bladder to secrete a strong digestive mixture of several different types of digestive enzymes to break down fats. This hormonal system is meant to function without irritation and this nutritional product offers safe guards in the form of probiotics, enzymes and a genetically compatible nutritional formula that re-enforces function and aids in the prevention of irritation and inflammation.

## Chapter Eleven

### Fruits and Vegetable Consumption & Benefits

Fruits and vegetables provide more than 100 dietary compounds including vitamins and minerals that may also have the potential to reduce the risk of obesity and many other chronic diseases including stroke, diabetes and diverticulitis, according to reviews of the research by NIH, CDC and academic experts. Experts advise consuming a variety of fruits and vegetables to ensure an adequate intake of all known and yet unidentified dietary compounds.

According to USDA and NIH researchers, consumption of the deeply colored fruits and deep green or orange vegetables falls far short of what is recommended for disease prevention. Indeed, only about 8 percent of Americans get the recommended number of servings of vegetables and at least 1 serving daily of a dark green or orange vegetable. (USDA's most recent consumption data from the 1994-96 continuing Survey of Food Intakes by Individuals (age adjusted to the standard population for 2000)

The consumption of dark green or orange vegetables most likely to prevent disease and promote health totaled only 0.4 serving per-day, well below the 1 or more daily servings suggested for the average person.

An analysis of a 20 year follow-up data from nearly 10,000 men and women who participated in a 1970s study showed that individuals who developed diabetes had a lower average consumption of fruits and vegetables. (E.S. Ford, A.H. Mokdad. Fruit and Vegetable consumption and Diabetes Mellitus Incidence Among U.S. Adults (Preventive Medicine, 2001) 32:33-39)

There are a number of possible mechanisms by which fruit and vegetable consumption could affect diabetes and additional studies will be needed to conclusively determine the relationship between fruit and vegetable consumption and diabetes. For example, fiber and magnesium in fruits and vegetables have positive effects on the primary manifestations of diabetes - the control of glucose and peripheral insulin sensitivity. The potential benefit in preventing diabetes also may stem from antioxidant vitamins and phytochemicals found in high levels in fruits and vegetables. Families that

increase fruit and vegetable consumption had greater weight reduction. (L.H. Epstein, C.C. Gordy, et al. Increasing Fruit and Vegetable Intake and Decreasing Fat and Sugar Intake in Families at Risk for Childhood Obesity, (Obesity Research, 2000) 9:171-178)

This data supports the positive benefits of including fruits and vegetables in weight loss diets and suggest that an effective approach to weight loss might focus on increasing the consumption of healthy foods rather than emphasizing dietary restriction.

Studies show that people who consume 5 or more servings daily have about one-half the cancer risk of those who consume 2 or fewer servings, according to the National Institute of Health report. (National Institutes of Health Cancer Institute, 5 a day For Better Health Program Evaluation Report, NIH Pub. No. 01-4904 (Bethesda, Md.: November 2000)

Small Capsule Can Do So Much: Size has very little to do with actual value, example: It has been estimated that a single human cell, roughly one-Billionth the size of a drop of water, contains about 3,000 different enzymes and performs a minimum of 4,000 different functions per second. Each human cell has 400 billion molecules conducting millions of processes between trillions of atoms (200 trillion atoms per cell). The total cellular activity in one human body is staggering: A septillion actions at any one moment (That's a one with twenty-one zeros after it). In a millisecond, our body has undergone ten times more processes than there are stars in the universe.

One enzyme can catalyze up to several million reactions per second. And most of those catalytic reactions require a vitamin, mineral or phytonutrients.

How many cells are there in the human body?

1. It is believed that there are 75 to 100 trillion cells in the human body.

2. 50% of the cells are not human. These cells are bacteria that live primarily in the intestines (Primarily in the large intestine.) These bacteria are smaller than human cells. Therefore, they require a very small space.
3. 10% of the cells (about 4 to 5%) make up the solid tissues that we think of as body ex. Muscles, bones, brain, kidney, stomach, skin, etc.
4. 45% of the cells in the body are blood or lymph cells that are not associated with any solid tissue. Of this mix: there are 30 trillion Red Blood Cells, 2 trillion cells are Platelets and 500 million are White Blood Cells in the circulatory system. 1 trillion lymphocytes and immune related cells.
5. Dying cells: Not counting the intestinal bacterial cells. There are 30 trillion Red Blood Cells and we know they have a lifespan of 120 days. Every 120 days or every 4 months there is a complete turn over of the Red Blood Cells. Consequently, every second of our lives about 3 million Red Blood Cells die and have to be replaced. The other solid tissue cells die at the approximate rate of 1 million cells per second. (How many cells does the human lose every second?: Steve Mack, Post-doc/Fellow, Molecular and Cell Biology, Children's Hospital Oakland Research Institute, ID: 978577566)

*This is why great nutrition is important: every one of these cells must be re-built, restored, renewed or remade and all the nutrients we discussed represents the material to constantly rebuild the body.*