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BMCC HEALTHNOTES

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We Found Your Husband

By Sonam Singh

I just came back from school and was preparing dinner for the family when there was a knock at the door. That single knock would change my whole life, even though I was just 17 years-old. It was my father's dearest friend and wife. Sitting on the stairs without anyone knowing, my brother and I eavesdropped on the important meeting that was occurring downstairs. *"We would love to make Sonam part of our family,"* my father's friend said. With that my heart beat faster than ever before. I could not believe that my whole life and destiny was being decided for me in the very next room.

"Sweetie, it is your happiness that we want most. Our happiness lies in your happiness," were the words my father said to me just before I accepted the proposal. I knew the boy, it is not like I had never seen him before.

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What Young Men Should Know About Curing Prostate Cancer

By Professor Sarah Salm

Prostate cancer is a major cause of mortality in men in the Western world[1] and is the second most common cause of cancer deaths in US men.[2] In the US, the incidence of prostate cancer is approximately 60% higher in African-American men than in European-American men, and the mortality rate from the disease is nearly twice as high.[3] One of the reasons for the higher mortality rate from prostate cancer in African-American men is that they are less likely to get regular screenings for prostate disease for a variety of reasons including low socioeconomic status; distrust in the healthcare system; cancer-related myths (many people mistakenly believe that prostate cancer only occurs in elderly men); and past health-care experiences.[3]

A Prostate-Specific Antigen (PSA) blood test is used

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Why Are Not *All* Health Professionals Promoting Vegetarian Diets?

By Professor Gloria McNamara

Half a century ago health professionals viewed meatless diets as nutritionally inadequate…that is to say a poor diet. Today vegetarianism is promoted by many health professionals as a healthful alternative to conventional diets. This begs the question, "Why are not all health professionals promoting vegetarian diets?"

Animal foods typically contain complete protein chains of essential amino acids making them a convenient and ready source of this essential dietary need. However plant foods typically contain incomplete protein chains. Thus they lack the essential amino acids necessary in our diet. Therefore a vegetarian must take great care to include complete proteins in their diet. Most American vegetarians supplement their diet with animal products to various degrees (Please see Table 1). In this way their diet includes a ready and convenient supply of the needed essential amino acids. For the Vegan, someone that does not eat any animal products, this requires a carefully planned and maintained diet.

What health benefits do you gain by avoiding or reducing animal products in your diet? By avoiding meat you minimize your exposure to antibiotics, growth hormones and stimulants which are typically given to animals to increase food production. By avoiding meat you reduce the number of calories, total fat, saturated fat and cholesterol in your diet. Vegetarian diets reduce the demand for animal products thereby decreasing the poor treatment and slaughter of animals. Also, instead of feeding grain to livestock that grain could feed people, especially starving people. It takes sixteen pounds of grain to produce one pound of beef and only one pound of grain to produce one pound of bread. The North American Vegetarian Society has calculated that 1.3 billion more people could be fed with the grain eaten by livestock.

Vegetarian diets tend to be lower than meat-free diets in saturated fat and cholesterol. ***However this is only true if the vegetarian chooses low fat products when consuming dairy.*** An added benefit is the increased amount of complex carbohydrate and fiber inherent in the vegetarian diet. Rajaram and Sabante (2000) report that vegetarians have: lower levels of serum total cholesterol; serum low density lipoproteins; lower systolic and diastolic

Table 1. ***Vegetarian Types***

Type	Food
Sometimes vegetarian	Will eat vegetarian meals several times weekly, but eats meat at other meals.
Semi-vegetarian	Will eat dairy, eggs, chicken, fish; but no other animal flesh.
Pesco-vegetarian	Will eat dairy, eggs, fish; but no other animal flesh.
Lacto-ovo-vegetarian	Will eat dairy, eggs; but no animal flesh.
Lacto-vegetarian	Will eat dairy, but no eggs or animal flesh.
Ovo-vegetarian	Will eat eggs, but no dairy or animal flesh.
Vegan	Will NOT eat any animal products.
Fruitarian	Will eat only fruit, nuts & green foliage.
Macrobiotic	Will eat 55% grain, 30% fresh vegetables, 5% beans, 5% soup, 5% other

blood pressure; lower incidence of non-insulin dependent diabetes; less diverticular disease; and lower death rates from colon cancer and coronary artery disease.

What are some of the health risks when you avoid or reduce animal products in your diet? Although very few vegetarians suffer from nutritional deficiencies, certain deficiencies are more likely to occur on vegetarian diets than non-vegetarian diets. In general, as the restriction of animal foods in the diet increases, the risk of vitamin and mineral deficiencies increase. Diets that exclude dairy products and bony fish tend to be low in calcium. However this deficit does not necessarily pose a serious health risk for vegetarians. One explanation is that when protein intakes are low, as in the case of vegetarian diets, the body compensates by increasing calcium absorption. Still plant sources of calcium, such as green leafy vegetables and calcium-fortified soy milk or tofu, should be included in vegetarian diets. Of greater concern are the sub-optimal intakes by vegetarians of vitamins D and B12. Vegetarians who avoid dairy products should consume vitamin D-fortified soy milk, cod liver oil or vitamin D supplements. Sunlight should not be relied upon for vitamin D especially in the northern climates. As vitamin B12 is in all animal foods, vegetarians who consume dairy and eggs are safeguarded. **However vegans will need to get this nutrient from fortified soy milk, meat substitutes, commercial breakfast cereals or vitamin B12 supplements.** ***Although seaweed, spirulina (algae), tempeh and other fermented foods list vitamin B12 on their labels, it is present in inactive forms, which are not absorbed by the body.*** This is an important point. A long-term deficiency of vitamin B12 could lead to megablastic anemia and permanent neurological damage. Another type of anemia common among vegetarians is known as iron deficiency anemia. Although vegetarians typically have dietary iron intakes that exceed non-vegetarians, they tend to have a lower serum iron status because the iron found in plants is not absorbed well by the body. Including iron-fortified cereals, tofu, whole grains and legumes in the diet may prevent iron deficiency, especially when combined with foods rich in vitamin C (citrus fruits, green leafy vegetables) which are known to enhance iron absorption. Further complicating vegetarian diets is the fact that plant foods contain high levels of compounds, such as oxalate, phytates and tannins which bind vitamin and minerals rendering them less available to the body. ***Thus certain vegetarians, such as vegans, may need supplements to ensure their intake of specific nutrients reach the recommended levels of the Dietary Reference Intakes (DRI).*** Any supplements used should provide vitamins or minerals in amounts similar to those specified in the Recommended Dietary Allowances (RDA).

So health professionals suggest that if you are *"Going Green"* in this case Vegetarian, you will need a nutritionally sound plan. This plan should take into consideration, among other factors: your health status; existing diseases; pregnancy; and knowledge of the nutritional value of food substances. This plan should not depend upon fad or quack literature or products for its nutritional information. This plan should not rely on large doses of health food store supplements, which can be dangerous and in some cases deadly. This plan should be a nutritionally sound plan accepted by credentialed health experts. The Health Education Department faculty invite you to seek more information and education about Vegetarian diets before you "Go Green."

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Professor McNamara is a faculty member of the Health Education Department and teaches the Nutrition for Health (HED-235) course.

Only Death & Taxes Are a Certainty: Wrong…Just Taxes

By Philip A. Belcastro, Ph.D.

An 83-year-old grandmother wanted to tattoo "DNR" (DO NOT RESUSCITATE) across her chest. She was not ill. Her end-of-life choice was simply to die if she went into cardiac arrest. She did not want a paramedic or physician or anyone to resuscitate her if her heart stopped. She did carry a living will on her person in the hope that a medical rescue team would first look for such legal direction before administering resuscitation.

What if a person wanted the physician or medical staff to do everything in their power to save them…that is to make heroic efforts to save their life? Here again such a person may be very surprised at their demise. In the absence of a signed end-of-life document there are some physicians that believe it is their right to determine if they have implied consent from a patient to issue a DNR order. In other words the physician will issue a DNR order for you. New York State law goes one step further. New York State law allows a physician to issue a DNR order over the objections of the patient or his proxy if in the physician's judgment CPR or resuscitation would be an exercise in "medical futility" (McArdle, 2002). Medical futility includes the physician's judgment that CPR will not resolve the patient's pathology (cure the illness) or CPR will result in a "low quality of life" that is to say his life will not be worth living. So if an 83-year-old grandfather tattooed on his chest, "I WANT TO LIVE. RESUSCITATE ME" he too may be very disappointed. Fortunately New York State law requires a "cooling-off" period before a DNR order is issued to allow for its review by an ethics committee comprised of lay-people and non-medical personnel.

Most people express an interest in controlling their end-of-life decisions. However the vast majority of Americans do not avail themselves to posting a living will. A living will contains an advance health directive(s) and often authorizes a health care proxy (e.g. spouse, family member, priest) to make health care directive decisions for you when you are unable to communicate your intentions. Living wills state whether or not DNR & DNI (Do Not Intubate) orders should be issued when a person suffers cardiac or respiratory arrest. (a DNI order withholds food and/or water from the patient.)

One's age is a significant factor in why Americans do not have living wills. At 50, 40, 30 years of age or younger most people believe they will never need a living will. Unfortunately many Americans each day (or in actuality their families) learn that they indeed need an end-of-life directive. The second concern which carries as much heartache, legal liability as well as financial liability is the assumption that once a person posts a living will his directives will be followed by the medical staff attending to his care. Unfortunately this is not the case for many patients.

Since 1968 living wills have generated a great deal of civil and criminal cases including a "wrongful life" suit in Ohio in which the appellate court determined that the medical staff would be liable for battery and negligence for not following a DNR order. Another case involved two physicians charged with murder after they

followed the family's directive to remove feeding tubes from a comatose patient. Most folk fail to contemplate the circumstances that would cause their DNR order to be ignored such as during elective surgery or during an out-of-hospital emergency resuscitation.

In a survey of 879 Intensive Care Units (ICUs) physicians, 96% had withheld or withdrawn life-sustaining therapy and most did so frequently. Over 80% of these physicians withheld or withdrew treatment they considered to be medically futile. Over one third of physicians continued treatment after patients or surrogates requested therapy be stopped. Physicians in the survey gave the following reasons for continuing life support despite the patient's orders to stop: (1) belief that the patient had a reasonable chance of recovery (77%); (2) belief that the family may not be acting in the patient's best interest (39%); and (3) fear of malpractice (19%) (Asch et al., 1995).

In a study of 613 patients, 149 patients were judged by a panel of experts to have conditions warranting a DNR order. Yet in 59% of these patients a DNR order was never issued (Eliasson, 1999). Eliasson (1999) wrote, "Physicians are frequently unaware of their patient's desires regarding end-of-life care. Consequently opportunities to implement do-not-resuscitate orders are often missed."

In 2002 the non-profit organization Aging With Dignity authored a model end-of-life document entitled Five Wishes. Since 2002 the Five Wishes document has become legally valid in most states (Kastenbaum, 2004). Aside from tightening the standards for identifying the client's health care representative or proxy, Five Wishes delineates which powers are assigned to a patient's health care representative. End-of-life documents are legal documents and are affected by state laws. Thus seeking legal advice is a wise choice. Be sure to take every (legal) step to ensure that your end-of-life wishes will be carried out. Many folks, young and old, consider the writing of end-of-life directives as an act of love and caring for family and friends. Some say it provides peace of mind to the author. At the very least you may avoid the expense and pain of tattooing DO NOT RESUSCITATE across your chest.

Professor Philip A. Belcastro is Chair of the Health Education Department at BMCC/CUNY.

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Prostate

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to screen men for prostate disease. PSA is a protein produced by all prostate cells. An increase in PSA levels (greater than 4.0 ng/ml, when 1.0 ng/ml is considered normal) can often indicate prostate cancer.[4] In some cases this does not hold true because the PSA level may rise due to other factors. The most common of these is an increase in PSA level that occurs naturally with age. Also, not all men with prostate cancer show an increase in PSA levels. Nonetheless, monitoring PSA levels is still considered the first step in detecting prostate cancer.[4] Men should start routine PSA level monitoring at age 50, unless they are a high-risk group (African Americans and men with a direct relative who have prostate cancer), in which case routine screening should be started at age 45.[4] Young men, age 30 and under, should have an initial PSA blood test on record. This will establish a baseline reading with which to compare PSA levels of future tests, allowing the physician to detect suspicious increases in PSA. The earlier prostate cancer is detected, the greater the potential is for curing it, in both young and old men. The PSA test is the first, easy step in monitoring prostate health.

There are four different types of treatment for prostate cancer: hormonal treatment, radiation therapy, surgery and chemotherapy. Three of these treatments (hormonal treatment, radiation therapy and surgery) work by controlling levels of the hormone testosterone[1]. Prostate cancer cells are dependent on testosterone (an androgen) for survival. Removal of testosterone (androgen deprivation therapy – ADT) often results in the death of prostate cancer cells. ADT is the most common first step to treating the disease. However, some patients develop hormone-independent cancer, which does not respond to testosterone removal and this type of cancer is often fatal.[1] Treatments at this stage are limited to aggressive chemotherapies, immunotherapies (using antibodies against cancer cells) and various experimental therapies, many of which increase the survival of patients by only a few months.[1]

Recent advances in stem cell research have lead to a new direction in prostate cancer treatment. Many adult organs including the prostate contain stem cells which are responsible for organ maintenance and repair after injury. These tissue stem cells are cells that have the capacity to divide indefinitely to form daughter cells that can differentiate (mature) into all the types of cells found in that particular tissue type.[5] Studies suggest that most human cancers start from a single stem cell, ***the cancer stem cell (CSC)***, which shares many characteristics with its normal counterpart. A cancer stem cell probably starts out as a normal tissue stem cell then undergoes a series of mutations, which transforms it into a cancerous cell. The cancerous stem cell then divides in an uncontrolled manner, giving rise to the prostate tumor. This hypothesis suggests that prostate cancer starts with a prostate CSC which in turn grows and maintains the prostate tumor.[6,7]

The prostate CSC model has important implications for the development of new prostate cancer treatments. Identify-

ing and understanding prostate cancer stem cells would increase our understanding of prostate cancer development and would provide a possibility of new diagnostic, treatment and prevention strategies for cancer patients.[8] Rather than destroying just the prostate cancer cells, the plan of attack would be to destroy the cancer stem cells, which maintain the tumor. The challenge for scientists now is to locate and characterize these cells and to be able to identify them within the general tumor population. When we reach that point, new therapies that target and destroy these cells might be developed. This branch of research holds great promise that one day this deadly disease will be conquered. At the moment however, while CSCs have been identified in the colon, mammary gland and brain, the prostate cancer stem cell has yet to be identified.[8] Until it is, current cancer diagnoses and therapies will continue to be used. For this reason, routine PSA blood testing is still an essential tool for helping to detect prostate cancer in young and old men.

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Professor Salm came to New York in 1998, when she joined the Department of Cell Biology at NYU School of Medicine and began her research on prostate disease and stem cells. Professor Salm joined BMCC in 2004, where she teaches Microbiology and Anatomy and Physiology I.

Husband

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I grew up with him and he was already my best friend. Mom and Dad certainly could have chosen someone worse or someone I did not even know. It was their right.

About a month later our parents sat in one room and placed my fiancé and me in another room. My fiancé and I spoke for a while. We decided that we would not let this marriage hinder our career or goals; that we would support each other and remain best of friends. As we finished our first meeting as a couple, our parents came out to bless us and announced our engagement date.

It is now nearly a year later and my fiancé and I are working hard to obtain our degrees before we finally tie the knot. We are both attending Borough of Manhattan Community College, where not only are we supporting one another to attain a degree, but also trying to understand one another; our likes, dislikes along with planning our future, family and financial goals…as a couple. Of course we fight and then we make up, because we have already accepted one another as husband and wife.

I was not born in the USA, but I have been raised here all my life. I come from a culture where a daughter must obey her parents and do as they say, and where a wife must obey her husband. My culture also teaches that the woman is the foundation of the family and that role is one of highest respect. For this the husband will eternally devote his love and protect and care for his wife. American culture teaches that this marital arrangement is an abuse, that somehow the woman is made less for this. But how could you be made less if you gain a husband, children and a family who will love and protect you for the rest of your life?

Some say an arranged marriage is murder, whereas marriage by choice is suicide. Although this cliché may seem humorous to some people, you can see how it truly bothers me. Marriage is a commitment between two people, two families and two lives. It is a bond that is formed with one person and is maintained for all the years to come. There are many promises that come with matrimony: a promise to stay together until death do you part; a promise to keep each other happy; a promise to have children and nurture their growth; and overall a promise to learn to love one another in this journey of life. This may just seem like a fairy tale to some, but that is how we live our lives. I have already started promising. I know that not all arranged marriages are made in heaven. I also know that I am blessed in my arranged marriage.

Sonam Singh is an undergraduate Liberal Arts major planning on a career in the medical professions.