

THE JOURNEY BEGINS

The first thing I would admit is that I do not know all the answers or that I am an expert. What I offer with the information presented in this book is a view from a small window about cancer survival and healthy living. My conventional (allopathic) experience includes medical school, a rotating internship in a large charity hospital, five years of surgical training, several medical missions to Third World countries, and 30 years in private practice. I then add my doctoral training and personal adventures with patients using natural medicine alternatives. This section contains opinions based on my studies, observations, and experience. I feel they are unbiased, developed from a wide background, and initiated by curiosity. In this chapter, I plan to cover a wide range of material with no specific references since the information provided is widely available. It is by no means comprehensive but presented in a general sense and in the manner I approach patients using lay terms.

One purpose of this book is to present a remarkable story about defeating cancer. This is not about “percent response to therapy” with eventual recurrence that is quoted in the medical literature regarding accepted cancer treatments. Donna has quality survival with no current evidence of gross active disease either locally in the chest wall or in other parts of the body (metastatic). She provides inspiration for dealing with one of the situations in life that is quite scary. Donna continues working inside and outside the home and interacting with her family while she deals with the fear of losing a body part and potentially her life.

This story is about observations and experiences that may or may not be able to be proven scientifically, but minimally should arouse curiosity and encourage thinking beyond conventional wisdom. My dissertation attempts to perform a scientific analysis of her survival. However, I am not able to identify any “magic bullet” or remarkable cancer cure. A holistic view of the overall human organism is portrayed.

Another purpose of this book is to introduce how to fit healthy living into an individual lifestyle. My approach with patients is realistic. There is a perfect world and there is a real world. The ideal world is living in a monastery in the Himalayan mountains. This is not realistic for most people. Rigid routines would not be followed if it took all the fun out of living. The key word here is balance.

The word physician means two things to me. The first is “healer” and the second is “teacher.” A healer has the patient foremost as a goal. This means listening to patients’ concerns and fears. It also means understanding their lifestyle and habits. A

healer uses the wide variety of information available for promoting health. One of the advantages of my position is that I have experience on both sides of the fence. Neither allopathic medicine nor natural medicine provide a complete picture/answer for the patient. With information that is currently available on the Internet, patients spend time reading about complementary aspects outside the boundaries of conventional medicine. They may have had experience with a relative or friend who benefited from one of these alternative methods. Out of respect for their physician, many patients will not say anything or argue whatever alternative method is discouraged. However, they have their own thoughts and feelings which may or may not be medically valid, but are still an integral part of their own healing process.

The traditional Greek word from which physician is derived means “teacher.” As such, the doctor must be able to provide information and direction for the patient to make decisions on their own level. I discourage the use of scientific and medical terms that may be confusing for the lay person. Treatment and lifestyle changes need to be acceptable for compliance.

Quality-of-life needs to be preserved. I know my father spent the last six months of his life going back and forth for cancer treatments and finally told me one day “this is not worth it.” A large percentage of the health-care budget is spent on patients in the last months of their life. Expensive treatment modalities are available to attempt to deal with things that are broken. If the patient understands the basics about what should be accomplished they are in a better position to implement any changes for their own particular lifestyle. To prescribe so many pills that need to be taken so many times a day discourages compliance besides changing the underlying chemical balance. To spend the last few months of life receiving toxic chemotherapy is not sensible if the horse is out of the barn and quality of life is not maintained.

A third purpose is to arouse curiosity about complementary and alternative methods. For this we need to briefly discuss natural medicine. Conventional medicine is disease-based. In other words, treatment involves approaching an established illness or treating the resultant symptoms. Basically, an acute illness or symptoms are the body's response to disease. Natural medicine encourages the body to heal itself. I have patients who tell me they are glad that I am now using natural techniques. If they have a sore throat they ask “what herb do I take?” No, no, no! They are missing the boat. The real question is: Why did the machine break down and you developed a sore throat?

There are various components that comprise “natural medicine.” Among these are Chinese medicine, Ayurvedic (Asian Indian), chiropractic, homeopathy, naturopathy, yoga, acupuncture, and iridology. Physical therapy in conventional medicine does not

usually include massage or deep tissue manipulation such as rolfing. Various treatments used in these areas that are not approved by conventional third-party payers include chelation, oxidative therapy (hydrogen peroxide), and prolotherapy/prolozone.

Look at the long history of natural health spas that were originally started in Europe. The basis of most of these institutions consists of rest, fresh air, whole food nutrition, and clean water. They rely on the ability of the body to heal itself. Natural herbs are used rather than purified or manufactured medications. However, the primary modalities are those mentioned above. There is a lot written in the current scientific literature regarding chronic inflammation in the development of many pathologic processes such as autoimmune disease, atherosclerosis, diabetes, and cancer. The methods used in these health spas aim to diminish inflammation and improve resistance.

There are many people who suffer from allergies and they do not want to be outdoors because of a runny nose and itchy eyes. Natural medicine points out that lack of fresh air and staying in a climate controlled environment inside a building or car may worsen allergy symptoms. Many ventilation systems contain dust and molds. Fresh air and daily exposure to allergens improve resistance.

A natural technique to improve allergies is to ingest a teaspoon of *local* honey daily. Witchcraft? The honey contains pollen of many plants that cause allergy symptoms. The use of a small amount every day is similar to desensitization with allergy shots. There is no immediate effect, but I have seen many patients with improved symptoms after using *local* honey on a daily basis for one year.

Used in both conventional as well as natural medicine, nutrition is one of the most important aspects in prolonging health. It is hard to give a specific diet as a general guideline. Genetics, chemical balance, lifestyle, and potential compliance need to be considered. My general comments to patients about nutrition concern whole foods. In other words, when you are in the checkout line at the grocery store there should be no boxes, no bottles, and no cans. I have also received feedback that “Gee, Doc, then I will not have any groceries.” Packaged and processed food contains preservatives and other chemicals. Carbonated beverages and fruit drinks loaded with high fructose corn syrup are killers, although some will consider these their daily serving of fruit. High fructose corn syrup may contribute to increased body stores of mercury. Many diet drinks or foods contain potentially harmful sweeteners.

Although there has been a lot of interest regarding cholesterol and fat, the real factor in nutritional health is sugar. Sugar causes insulin spikes even if a person is not diabetic. This also occurs with starches since these are comprised of many sugar

molecules hooked together that break apart with digestion. Insulin is chemically closely related to growth hormone. As such, it may tie up growth hormone receptors on cells and interfere with the hormone axis. Ingestion of fat or protein at the same time blunts this insulin spike, but avoiding refined sugar and starches is one of the most important aspects of prolonging health.

In my opinion, the food pyramid is upside down. The American diet should comprise 40 to 50% fats, 30% protein, and 20% carbohydrates in an ideal world. Obviously, the fats need to be good fats, such as nuts, seeds, and olive oil with the avoidance of oxidative damage of good fats during cooking at high temperatures. Some saturated fats, such as the short chain butyric acid found in butter, have good effects. Butyric acid has clearly been shown to reduce cancer risk. However, this does not mean eating tons of butter is healthy. What I want to point out is that natural sources are preferred and generally more healthful than products presented to us after processing. Margarine is chemically very close to plastic.

Protein intake needs to be high-quality protein and there does not need to be only chicken and fish with exclusion of red meat. The ideal world would use lean wild game since this should be void of the hormones and chemicals fed to livestock in preparation for the market. Dairy products may also contain hormones and antibiotics. Range fed cattle can be exposed to pesticides and other chemicals depending on weed control where they are raised which, theoretically, could also affect wild game. Toxins are stored in animal fat. Keep this in mind when detoxification is covered.

The carbohydrates should be mostly vegetables with a few fruits. Vegetables promote an alkaline environment which is important for chemical balance. We function better if our system is alkaline. Fruits tend to provide more sugar and an acid environment. Variety is the key. Simple carbohydrates and starches obtained from processed grain have lost most of their nutritional value as well as fiber content. I feel it is a real travesty when bread or other packaged food states 'vitamin fortified'- in other words, putting back what was taken out.

Vegetables are more nutritious when eaten raw or lightly steamed. This is due to active enzymes which help our body assimilate the nutrients. When patients say that they have had a remarkable improvement with one agent such as Acai or some other juice extract, this likely has more to do with the fact that they are receiving active enzymes that have not been destroyed during pasteurization. These patients were probably severely deficient in these enzymes and thus note a rapid and short term benefit. I do not believe in magic bullets.

There has been an overemphasis on the danger of cholesterol to our health. It is important to recognize that cholesterol is an essential nutrient. It serves as a precursor in the synthesis of vitamin D, a precursor to sex hormones, and an essential component in the formation of every cell wall. It is incorporated into the myelin sheath which surrounds nerves and may affect transmission of nerve impulses in the brain or peripheral nerves. It is also a component of bile salts which are used for digestion. Perhaps the response of the body if there is a deficiency in one of these areas would be to elevate the cholesterol level.

To simply throw a pill at a high number without looking at the underlying cause is an example of a disease or symptom oriented system. When statins are used to treat high cholesterol, a deficiency of CoQ10 can subsequently occur since its synthesis in the liver follows the same pathway and is also blocked by these drugs. CoQ10 is used by mitochondria in cells to produce energy. Lack of CoQ10 may decrease the energy production in cells to the point where it could affect the pumping ability of the heart. Now more drugs need to be given because the patient develops congestive heart failure. Another domino in the line falls. CoQ10 deficiency can affect other muscles causing weakness and muscle pain. CoQ10 can be given as a supplement but cost is not covered by insurance. This doesn't make sense.

A high glycemic (sugar) diet disrupts the hormone axis and plays a major role in altered lipid (fat) metabolism, elevating cholesterol and triglyceride levels. The ratio of good and bad cholesterol is adversely affected by a high glycemic diet. It also promotes an acid environment. Oxidation of fat that occurs with cooking or frying is more detrimental than overall fat intake in the development of hardening of the arteries. Fats are necessary for health, but the chemistry is quite complex and it is not as simple as avoiding fat in the diet to prevent deposits inside the arteries.

I feel that whether a whole food is organic is not as important as using whole foods. Yes, there will be exposure to pesticides and chemicals in the nonorganic variety. I am not convinced that the organic foods are entirely toxin free since there is no guaranteed control. Food from the local farmer's market or someone's garden may be helpful. However, despite precautions we are still exposed to many environmental toxins. Consider the neighbor who puts fertilizer and pesticides on the lawn- we are still exposed on our side of the fence. There may be run off during a rainstorm or the water source may be contaminated. Grapes, cherries, strawberries, apples, pears, and peaches are some of the worst sources of fruits loaded with toxins. Companion planting uses lemon balm, chives, and rose bushes next to fruit trees to control pests instead of using chemicals. Even if pure apple or grape juice with no sugar added was chosen as healthy, there can be a concentration of toxins in the product. So from the nutritional aspect, I look at eating whole foods and then consider detoxification.

These are the main aspects of Donna's program. Her multiple supplements have a lot of detox properties.

Many types of detoxification methods are available including various liver and bowel cleanses. A formal initial extensive detoxification followed by a regular routine may be helpful. The most important daily measure includes eating whole raw vegetables while avoiding processed and fast food. Fresh, raw garlic and onions can help detoxify the liver. Milk thistle (silymarin) and dandelion root extract can also be used for this.

Chelator means "claw" and represents an agent that will grab onto and hold tightly another molecule. Substances harmful to health then can be eliminated from body stores using chelating agents. Chlorophyll is an excellent chelator of organic substances and some heavy metals. Cilantro chelates mercury. Vitamin C is an antioxidant as well as a natural chelator. Lactic acid produced by anaerobic exercise serves as a chelator. Chlorella is a good general system cleanser.

Glutathione is one of the most effective methods for enhancing liver and brain detoxification. In general, this has to be given intravenously, although I will talk later about a product that aids in absorption by mouth using a means called liposomal encapsulation. I have actually seen patients who have had gray hair turn back to its natural color and pigmented age spots become lighter following detoxification. Lipofuscin is found in these pigmented spots and contains iron. Iron is one of the first heavy metals removed with EDTA chelation, which will be discussed later. Iron increases oxidation in the body just like rust on steel. You do not want too much iron.

The skin is the largest organ for excretion of toxins. Many rashes and skin conditions may be a manifestation that the body is trying to eliminate toxicity. Psoriasis has been shown to improve following systemic detoxification. Weight loss can release toxins stored in fat and cause symptoms. Feeling lousy during diet programs may be on this basis as well as chemical imbalance from lack of essential nutrients.

Water is an important nutritional aspect of health. Good hydration at the cellular level allows optimal chemical functioning. Water is a means to rid the body of toxins through the kidneys. Good pure water is not widely available and many filtration systems lack a true beneficial result. Chlorine and fluoride in water are killers. As physicians, we now see more thyroid dysfunction than 50 years ago. The periodic chemistry table shows that chlorine, fluorine, and bromine are all in the same line as iodine. These other halogen elements may compete with iodine and affect thyroid function.

Not only are we exposed to these substances in drinking water that is not filtered properly, but they can also be absorbed through the skin during long, hot showers.

Another gray area has to do with pharmaceuticals used by patients that go into our sewage. Water treatment plants may not filter out all these chemicals which can be ingested or absorbed during a shower or bath. Too much iron in water is not good.

Two quarts of water a day should be a reasonable minimal goal. One way to achieve this is to drink 20 to 30 ounces in the morning upon arising. Ingesting more than 2 quarts of water daily only improves the filtration through the kidneys and excretion of toxins from our system. It would be quite rare to overdo the intake of water. Bottled water may contain dioxins from the plastic containers. Amines are another toxic water contaminant that damage DNA by a process called methylation. This affects genetic expression which will be discussed later.

While coaching my son's Little League baseball team in the middle of a hot summer, I always encouraged the intake of water. I look at professional athletes who may be having an "off day" as a reflection of some nutritional aspect or mild dehydration affecting their overall performance. I know when I told the boys on the baseball team to "tank up on water" intake was still inadequate since they did not relate to a specific quantity. A very good marker for sufficient fluid intake is the frequency of visits to the bathroom. I certainly note on travel days when it is difficult to find a restroom and I decrease my water intake I just feel more "draggy." I told the baseball team to drink water until they had to go the bathroom every 30 minutes as a sign they were adequately hydrated. Chronic dehydration is a major element in premature aging.

The ideal world would have a whole house water filtration system that not only treats the drinking water but also that coming from the shower head. The real world would at least have some sort of filtration system for the drinking water and very short, cool showers. I have even become more aware of this from a wellness standpoint for my puppies. Although they drink out of a puddle of water when we are out for a walk and they are thirsty, I feel much better when for the most part they are drinking filtered water from home.

The best natural sources I have encountered is water directly from the lakes in the Canadian wilderness or from a spring in the Flint Hills of Kansas. I do not need to use filters with water from these areas. This water may contain many important trace elements currently missing in our processed food diet.

Perhaps some benefit from natural water sources is ozonation. Ozonation of water increases the oxygen content. The cost of an ozone system at home would be out of

the price range for many people. Formation of a hexagonal structure of the water molecules can occur after water passes over a magnetic field. This may allow improved absorption leading to better hydration inside the cell. I am not convinced that ionizers and alkalizers actually add any benefit to water preparation. Diet is probably the most important element in trying to maintain an alkaline environment.

An interesting aspect of water and natural medicine is related to cold water therapy. Sebastian Kneipp, among others, utilized this treatment over 100 years ago. Father Kneipp discovered the healing power of the cold gush or pour, and also used cold compresses. Cool or cold water was poured over the entire patient or a body part several times a day. Think about diving into a cold pool and how this seems to take your breath away. What happens is that blood contained in the skin surface is shunted internally. This shunting of blood has been shown to boost the immune system and increase lymphatic flow. There may also be some stimulation as far as hormone secretion.

As an example, try taking a regular shower and when finished turn the water to cold and stand in this for thirty to sixty seconds. An indication that there is improved lymphatic flow and shunting of surface blood to internal organs is the resultant increase in urination in the subsequent hour. Comfortable? Remember, you decide where to be in your real world. This aspect certainly is not expensive.

Vitamins and supplements are another component of nutrition. As pointed out in my dissertation, many billions of dollars a year are spent on these items. Basically, taking high doses of vitamins and supplements while continuing with a high glycemic, fast food diet is a complete waste of money. The fact that we have to fortify processed food with vitamins is a travesty of the industrialized world. In addition, chemically manufactured vitamins may actually be a mirror image of the natural molecule. These are called isomers. As such, they may not fit precisely into receptor sites on the cell and therefore are recognized as foreign to the body and not utilized properly. Natural sources are best.

With a proper diet and food preparation handfuls of vitamins and supplements are not necessary and may not need to be taken on a daily basis. However, with the widespread interest in these nutraceuticals, I fear the pharmaceutical industry will soon lobby for control over these items. After all, there is money to be made in an industry. The quality of the resultant product may not be efficient or favorable to optimal health. In addition, television commercials will begin to push “magic bullets.” Pyridoxine (vitamin B6) is an example of a vitamin currently being reviewed for availability by prescription only.

Taking certain vitamins or supplements in high doses may also alter the chemical balance in the body. Vitamins are defined as micronutrients which are substances required in small amounts to facilitate function at the cellular level. Review of nutritional textbooks will explain the interactions between various micronutrients. High doses of a specific one may work against the fine chemical balance in the body. For instance, concomitant vitamin A intake may decrease vitamin D levels. One source can be a high concentration of vitamin A that is found in fish oil preparations. Surely the body may compensate at times for this, but vitamins/supplements still present some type of exogenous substance to the body. In addition, many vitamins are synthetically manufactured and may be recognized differently by the body than natural sources as explained above.

There is quite a balance between different trace minerals. Absorption of calcium is improved by simultaneous ingestion of magnesium and zinc. Zinc at the same time may compete with copper and selenium utilization. These trace minerals are cofactors involved with many enzyme systems. Taking too much of one could upset the balance. Relatively small doses of many nutrients working together is the key rather than large amounts of certain supplements.

Soy products provide another example of balance. The active chemical component in soy is genistein. At a low dose this may have an antiestrogen effect, whereas at a higher dose it simulates estrogen. Depending on the processing of soy, the amount of genistein available can vary in products. As pointed out in my dissertation, there may be a genetic difference in the assimilation of soy in the body. In addition, ingesting soy in certain amounts at different ages can also lead to a variable effect. Men do not do as well with high amounts of soy products. Estrogen is a man killer.

Intestinal health and gut flora, as well as a deficiency in digestive enzymes that occurs as we get older, may also affect the digestion and assimilation of soy as well as other nutrients. Look at this as far as the absorption of fat soluble substances and minerals. For example, calcium requires acid for optimal absorption. The purple pill commonly taken for acid reflux problems affects assimilation of many supplements. Protein digestion can use enzymes from vegetable sources as well as the pancreas, such as papain from papaya and bromelain from pineapple. Bromelain has excellent anti-inflammatory properties and is used in anti-aging programs.

The word *probiotics* means the good bacteria that make up the intestinal flora. I think of this in terms of “the good guys.” These good bacteria balance and stimulate normal immunity. There is an extensive lymphatic system in the gut that makes up a significant portion of the immune system. In other words, we need to balance our system and learn to exist with other living organisms in the world. Concomitant

probiotics need to be considered when antibiotics that disrupt the normal gut flora are given. This is more than the Lactobacillus in yogurt, which is the right idea, just not the right product and not enough of “the good guys.”

MRSA, the so-called “flesh eating bacteria,” is commonly found but does not attack everyone like a wild tiger waiting for a kill. Why would God make the world and then leave us to coexist trying to wipe out all the bacteria? Yes, there are some that cause disease, but when our system is out of balance natural resistance is lowered. Certainly, there is a place for antibiotics but an intact immune system continues to be essential in fighting an infection.

Another example is colitis diarrhea from C. difcila bacteria (clostridium colitis). This can occur following antibiotic treatment for an infection in the face of an overall lowered resistance. Probiotics should be considered in patients treated for MRSA as well as other infections.

When taking probiotics these little guys need to be fed, and that is referred to as prebiotics. Intestinal flora will thrive on a ripe banana or raw vegetables. These should be taken at the same time that any probiotics are taken. “The good guys” do not do well with fast food. Routine probiotic use can be helpful but is even more important after someone has been subjected to antibiotics.

Colonoscopy screening for colon cancer is currently promoted in cancer prevention. During these exams, many patients will be found to harbor small polyps. I always wondered if this could be the response of the inner lining of the colon to whatever irritant may be in the waste material contained in the bowel. Many patients are subjected to repeated colonoscopies to burn and obliterate these polyps since they can be precancerous.

I looked at improving bowel health and changing the environment where these polyps grow. Using probiotics along with milk thistle and dandelion root for liver detoxification, I found many patients would be free of polyps on subsequent scope exams. Now, frequent repeat colonoscopies were not necessary even though I was making a living with this procedure.

One of the most commonly used drugs is the purple pill for acid reflux or GERD. When there is not enough acid or digestive enzymes, the body reacts by keeping food in the stomach and not letting it pass on to the intestine. Delayed emptying from the stomach aggravates acid reflux. Although it makes the patient feel better, the purple pill cuts back on acid production and further interferes with proper digestion. Our stomachs were made to function with acid. One of the drugs used to help the stomach

empty better is metaclopramide. There is a current class-action lawsuit pending because of side effects from this medication.

Garlic and ginger are spices frequently used in third world countries and recommended by the local physicians for acid peptic disorders. *H. pylori* is a bacteria that has been implicated in stomach ulcers, GERD, and possibly stomach cancer. The two above mentioned spices have antibacterial, antiviral, and antiparasitic properties. Here is a natural medicine tip. I have found that fresh garlic alone can wipe out residual *H. pylori* in patients who have a resistant form that does not respond to the usual antibiotic regimen given in this country.

Ginger root can be prepared as a tea. It is a natural prokinetic that improves emptying of the stomach and transit of material through the intestine. Using a combination of ginger root, a small amount of additional acid such as betaine hydrochloride, and supplemental digestive enzymes, I have seen many patients resolve their acid reflux symptoms. Probiotics also play a part in proper digestion and improving transit through the intestinal tract.

There have been many studies and a lot written about vitamin C, a natural chelator as well as antioxidant. It generates hydrogen peroxide in spaces outside the cell which may be how it affects cancer cells. Our white blood cells (leukocytes) do the same when attacking bacteria, viruses, or parasites. The limiting factor with vitamin C use relates to the amount that can be absorbed when taken by mouth. This allows only so high of blood levels before the body begins to excrete ascorbic acid in the urine. Large amounts taken by mouth may also be irritating to the stomach. The reason for giving vitamin C intravenously in certain conditions is to achieve higher blood levels than those obtained from oral intake.

Liposomal encapsulation is a recently available new technology. Liposomes are phospholipids, or a healthy type of fat that is incorporated into our cell membranes. With a poor diet healthy phospholipids are replaced by oxidized fat which results in a weaker structure. This process affects every cell in the body and leads to the degenerative changes in tissues seen with aging. These include sagging or wrinkled skin and weakening of connective tissue such as ligaments and tendons.

Liposomal encapsulation is based on a process where attraction of individual phospholipid molecules forms globules. When this is performed in a certain solution containing, for example, vitamin C, the phospholipids form around and encapsulate the vitamin C. After ingestion these phospholipids are absorbed directly from an empty stomach, transported to the liver where they enter the liver cells, and then release whatever chemical they contain. Supposedly, higher blood and intracellular levels of vitamin C are obtained comparable to an intravenous dose of ascorbic acid.

The phospholipids do not taste the best, but can be mixed with juice or another liquid to be made more palatable. Besides their utility as a delivery agent, ingestion of liposomes may provide repair of cell membranes. Saggy skin improves without plastic surgery.

I performed some personal experimentation using liposomal encapsulated EDTA. EDTA stands for ethylenediaminetetracetic acid and is used for chelation. Without going into the details of chelation or arguing its beneficial effects, I found that this is quite similar to using EDTA intravenously. EDTA by itself is not absorbed well orally (only five percent). However, with liposomal encapsulation there appears to be about eighty percent absorption. I checked a 24 hour urine collection after intravenous infusion and also after oral chelation using the liposomal encapsulated form. There were similar results of heavy metals removed with both methods.

Glutathione is another substance that is not effective when given by mouth and previously was effective only by intravenous administration. The body manufactures glutathione from precursors. As glutathione is used up it needs to be replenished. Liposomal encapsulation provides another more practical alternative as a method in delivering glutathione for detoxification.

The advantage of liposomal encapsulation allows chelation or detoxification to be performed in the home setting while maintaining a normal daily routine. Again, talking about a real world versus an ideal world, the use of liposomal encapsulation with certain substances may be beneficial and avoids having to go into a doctor's office or clinic setting once a week for an intravenous infusion. The one to four hours the IV would take may not be practical for many people. This provides an example of how preventive measures can be made to fit a real world.

The bottom line is that the human body assimilates foodstuffs and micronutrients and can provide a better balance than that provided artificially by trying to ingest and manipulate certain amounts. Consider alkalized water to try to achieve a less acid system. Despite alkalization of ingested water, the body will still tend to provide an acid-base balance relative to its overall chemical status. This is basically what is meant by the holistic approach-that is, allowing the body to act as a whole machine with self repair and control of the individual parts.

Chemical balance is the key to prolonging health and longevity. It allows optimum expression of genes- hopefully, the same as when we were in our thirties. This chemical balance will also allow what Donna refers to as her "freedom day" where she can trash her system a little bit with fast food. If the majority of the time the body is in good chemical balance it will compensate and recover well. However, regular daily insults allow the system to be overwhelmed. Thus, the body produces

symptoms of disease and we see the degenerative conditions that arise with aging. It is amazing how long some people like alcoholics survive despite significant self-abuse. The body has a remarkable ability to reverse changes and heal itself if the proper groundwork is done. It continues to fight back until it finally wears out. Changes seen with premature aging can be slowed and possibly reversed to some extent.

An example of proper gene expression is the p53 gene which inhibits malignant transformation of cells. There are many environmental insults which may turn off the protective properties of the p53 gene and allow cancer cells to develop. Another gene that has been studied is the so-called sr gene for longevity. Resveratrol is a supplement that is being promoted as far as stimulating this particular gene. I am not convinced that one agent is able to promote gene expression without an underlying receptive environment. The bottom line is a chemical balance in the entire body to allow proper gene expression for cancer and disease prevention along with promotion of longevity. The goal is to establish an environment where genes express themselves as they did in our 20's and 30's.

Another modality currently available in many European countries, referred to as "live cell therapy," uses injectable nucleic acids. Nucleic acids make up our DNA. A dietary source of nucleic acids is chlorella, rich in proteins, vitamins and minerals, and growth factors. Remember that chlorella also serves as a natural chelator and detoxifier. Folic acid is important in supporting DNA. Brewers yeast is an excellent source of primordial nucleic acids which can be used as building blocks for repair of genes.

One thing covered extensively in the dissertation is the complexity of the hormone axis. Let us discuss some aspects. Thyroid dysfunction seems to be increasing. I pointed out the chlorine and fluoride in the water to which we are exposed. One of the common preservatives in bread contains bromide. This can be another current factor that possibly interferes with iodine utilization by the thyroid gland. I also look at the dental x-rays we have all received in the past without a shield placed over the thyroid gland for protection. Although each time represents a small amount of x-ray exposure, repeated doses over many years may have something to do with a hypoactive thyroid. These are simply observations to try to explain the increasing frequency of thyroid problems.

Consumption of coffee reportedly decreases the incidence of some cancers. This may be due to antioxidants (polyphenols) in the coffee bean. Green tea also contains polyphenols. Natural sources contain many polyphenol chemicals working together synergistically. Some promote caffeine as the helpful chemical in these drinks.

However, caffeine also works as a whip to the adrenal glands to put out catecholamines (adrenaline) and cortisol. Many popular street drugs and some medications do the same. High cortisol levels are definitely an adverse factor involved in aging compared to those of growth hormone. I am not promoting exogenous administration of growth hormone as the “fountain of youth” since in most instances certain patterns of exercise, nutritional aspects, and a good sleep cycle will naturally stimulate sufficient amounts of growth hormone for prolonging health and longevity. Then we get back to the real world and the ideal world: Am I willing to give up my daily Starbucks? What is the balance that I am willing to accept?

HRT (hormone replacement therapy) in females has followed a swing in the pendulum during my career. The most comprehensive evaluation of HRT is the WHI (World Health Initiative) study which shows that the benefit of hormones in women far outweighs no hormone replacement. These include cardiovascular health, improved bone density, less diabetes, and prevention of dementia. A recent study also showed a decreased incidence of colon cancer in elderly women receiving HRT. This probably reflects boosting the immune system. However, there were also some confusing results.

The increase in strokes that was seen in one arm of this study occurred in females who were more than 10 years postmenopausal and had not received any hormones prior to the start of replacement therapy. Tissue changes that occur in this time period from lack of hormone stimulation may play a part. It takes healthy tissue to allow a response to estrogen. It is important to maintain continuous chemical balance.

In addition, hormones used in this study were not bioidentical but consisted of synthetic progesterone and an estrogen derivative from pregnant mare urine. The increase in breast cancer seen in one portion of the study is a gray area when trying to make firm conclusions. It is important to use bioidentical hormones with careful monitoring of overall health. Women also need some testosterone and this can be compounded with an estrogen cream. Donna’s cancerous nodules seemed to respond better when she used progesterone.

As far as male hormone replacement, it is interesting to note that in age-related groups of men today compared to the 1950s the testosterone levels in the 1950s group were 35% higher. This either means that we are not as much “men” today as in the past, or is a reflection of chemical exposure in our current environment to substances that mimic estrogen (xenoestrogens) as well as other toxins. Testosterone can be metabolized to estrogen in a process known as aromatization. This occurs with increasing body fat, so obesity encourages much of the naturally produced testosterone to be converted to estrogen. The result is feminine type symptoms such

as a further increase in body fat around the hips and waist. A vicious cycle has started.

Another aspect that needs to be considered is the fact that the organ with the most testosterone receptors in the body is not “that little guy between our legs” but the heart. Heart health in men is closely related to testosterone levels.

Many male patients with adult onset diabetes are also found to have low testosterone levels. Boosting testosterone does not cure the diabetes, but improved sugar metabolism may allow simplifying the medications used in management. Some trace elements such as chromium are also helpful.

Testosterone replacement is not expensive and costs about \$25 per month. As far as the prostate cancer scare with testosterone, I refer you to Abraham Morgentaler’s work in my dissertation. He actually found an increased incidence of prostate cancer in testosterone deficient men. The important aspect is maintaining an even physiologic level with appropriate monitoring. Improved immune function may also play a part. There is no quick fix and HRT should be viewed as a process. There is safety and benefit in hormone optimization.

Congestive heart failure (poor pumping ability) is one of the more common conditions leading to hospitalization of patients. There may be a slow accumulation of toxins causing a chemical imbalance that affects the function of heart muscle. Hormone deficiency can play a part. Besides considering the importance of testosterone in heart disease, growth hormone has been shown to improve the contractile ability of heart muscle. It may be more rational to consider hormone replacement with or without other drugs as part of the treatment. The effect of calcium as far as muscle contraction will be mentioned in chelation.

Exercise has certainly been shown to benefit good health. Results of different patterns of exercise are reflected in body habitus. Compare a long-distance runner to a sprinter. The long-distance runner generates lactic acid through anaerobic activity. This type of exercise tends to use fat as an energy source. Short bursts of high-intensity output with sprinting will stimulate growth hormone and increases lean muscle mass.

Overall, an interval, high-intensity pattern can be used with any type of exercise program including resistance training. This should be considered when looking at personal goals. Many long-distance runners have worn-out joints and show premature aging when they hit 60 years of age. Too much exercise may generate excessive free radicals that could overwhelm the antioxidant stores in the body. After extreme exercise the body needs rest, recovery, and nutritional support. Benefits from high-

intensity exercise can be achieved in a matter of 15 to 20 minutes total exercise time per day. All exercise stimulates endorphins which chemically feed into the hormone axis. Even low intensity exercise such as walking increases lymphatic flow by muscles acting as a pump, squeezing lymph fluid and blood back to the heart. We were made to be active.

All of the above are vital components to improve health, but the conventional third-party healthcare system has many weaknesses that inhibit wellness programs. Generally, part of a complete longevity workup on a patient includes an extensive panel of blood to look at the metabolic and hormone status. One component is a vitamin D level. Currently, it is difficult to jump through enough hoops for the insurance companies to approve paying for a vitamin D level.

Why are these tests important? There are several silent markers that, if abnormal, can be addressed before symptoms arise. Practicing in the Midwest, I have had a lot of patients such as farmers and ranchers with extensive sun exposure over the years. Some of these appeared to be patients for life as they returned time and again with precancerous skin changes or skin cancers. As part of a wellness program, I began to draw vitamin D levels and many times found blood levels that were quite low despite the apparent amount of sunlight that these patients received. Boosting vitamin D levels definitely improved the status of their skin with resultant decreased skin breakdown and lowered incidence of skin cancer. This emphasizes the importance of vitamin D in skin healing and repair.

Do we hide from the sun that is provided for us? There is a proper balance. Ravaging the skin is not good but energy from the sun is part of the natural world. Ultraviolet exposure itself promotes Vitamin D synthesis in the skin. There has to be some other benefit since depression has been shown to be higher in patients deprived of certain levels of sunlight for an extended period of time. This is related to melatonin secretion- another hormone. Also, the chemical structure of Vitamin D is made up of a steroid ring similar to other hormones. Can you begin to see the complexity?

Other benefits from Vitamin D on cardiovascular health and cancer prevention have been shown. This may be the result of the ability of vitamin D to decrease inflammation, such as an inhibition of the oxidation of fats which form buildup in arteries.

Vitamin D is not expensive. Consider what the system is paying for treatment of skin cancers. I now see less skin cancers in patients with high vitamin D blood levels. I have seen no evidence of vitamin D toxicity when giving up to 10,000 units per day and I try to boost levels to the 75 to 80 ng/ml. range. Look at the application of PABA as a sunscreen. There goes another chemical to be absorbed. Fernblock is a natural

product that concentrates in the skin to protect from harmful effects of ultraviolet rays. We were made to be outdoors.

Insurance programs do not permit a bone mineral density in middle-aged men as a screening test. Low bone density is a silent aspect of health. Obviously, the importance is to identify the patient who is on a path to develop osteoporosis. Low bone density also represents a symptom of a chemical or hormone imbalance.

A bone mineral density test is permitted after a hip is broken. Men have a mortality rate three to four times higher than that of women when a hip fracture occurs in an osteoporotic bone. By the time the patient arrives at that point they have lost a lot of ground and it is almost impossible to reverse the changes. Treating bone mineral density early with significant amounts of vitamin D, possible hormone replacement therapy (testosterone in men), and appropriate combinations of mineral supplements (more than just calcium) that will be adequately absorbed is another potential aspect of a wellness program that benefits the whole system. Although it is difficult to justify to the insurance company a bone mineral density test on middle-aged men as part of a preventive health program, there is no problem paying to repair a fractured hip.

To take this a step further, blood clots are frequently seen as a complication in patients with hip fractures, presumably from immobility. I would suggest this occurrence also implies an underlying chemical imbalance that increases the coagulation properties of the blood. Increased clotting problems are also seen in smokers even in the face of normal blood tests.

Scanning the carotid arteries in the neck with ultrasound is an inexpensive and noninvasive means to evaluate the lining of the blood vessel. Eighty percent of strokes are caused by buildup in this location. Since hardening of the arteries is a systemic condition, this scan also reflects what may be occurring in other blood vessels in the body. Thickening of the inner lining (intimal thickening) is very good marker of aging. Again, in my experience I have found that it is very difficult to justify this test to the insurance companies unless the patient has already had a stroke or is having current symptoms. The horse is out of the barn.

Many people are scared that the recently passed Healthcare plan might ration care. The above examples show that it has been rationed for many years. I suspect that thirty years ago a group of men in suits and ties saw the money involved in health care. To share this wealth, a "health care industry" was developed. Profits became a priority over patient care. I used to be a doctor. Now, I am a "health care provider" for big business. Professionals become employees. Decision making is taken out of my hands.

Concerning the extensive metabolic and hormone panel that I draw as part of a wellness exam, patients have brought me the billing statement showing that their insurance companies have been charged approximately \$3000 for this lab work. When copayments and non-allowable tests are factored in, many patients wind up paying \$500-\$600 of the bill. I am currently using a lab where this same panel can be obtained for about \$600 as a cash only price. In addition, I do not have to pay one of my employees to make phone calls and fill out forms trying to jump through appropriate hoops with third-party payers. Furthermore, there is no paperwork or registration required at the hospital to draw the blood. As far as the patient is concerned, the part that they pay is the same. As far as my office is concerned, there is less employee time required. As far as the system, \$2500 that previously disappeared into some black hole is now not available to support the health care industry. I do not see an incentive from the industry standpoint to decrease this cost.

As stated earlier, there are alternative treatment modalities that are not approved by third party payers. EDTA chelation has benefited many patients. Some of the benefit may be due to drawing heavy metals out of the body. We all have extensive exposure to these since the Industrial Revolution. As mentioned previously, high fructose corn syrup may slowly add to body stores of mercury and progressive development of a variety of subtle symptoms.

Multiple sclerosis is an elusive disease that fits in the category of an autoimmune disorder. This may be secondary to an exaggerated immune system response to a viral illness. There is a recent report showing an accumulation of iron in the tiny blood vessels in the brain in patients with MS. Some patients have shown an improvement in symptoms after chelation and detoxification using glutathione. Iron is one of the first heavy metals to be removed by EDTA chelation. Interesting! How about the detox?

I really do not want to get into the complex pathophysiology of the chelation treatments, but the cardiovascular effects are really more than just pulling calcium out of plaque buildup inside arteries. For example, too much calcium inside a cell may affect its function. In heart muscles, this can alter the ability for contraction as well as increase oxygen demand of the cell. A common heart and blood pressure medication is called a calcium channel blocker. These affect the so-called calcium pump in muscle cells to achieve results. Chelation may balance calcium levels inside and outside the cell and accomplish the same thing as these drugs.

Chelation increases the secretion of parathormone, which is involved with calcium balance and bone growth. As such, it may also play a significant role in treating osteoporosis. Chelation to stimulate improved bone density is overlooked along with providing adequate vitamin D. I am not talking about those four hundred units of

vitamin D which is the amount usually provided with a calcium supplement, but more in the range of 5000 to 10,000 units per day. Chelation treatments are not approved by Medicare or third party payers. Commonly prescribed for treatment of osteoporosis, biphosphonates are covered. These are expensive drugs. Comparatively, vitamin D is cheap. There may be effective alternatives to treat osteoporosis. The fact that this is a frequently seen condition suggests a significant portion of our population has a metabolic and/or hormone imbalance.

Let me relate another observation. During my father's treatment for cancer a bone scan showed spread of tumor to the pelvic bones. This was discovered when Dad began to have groin pain and thought he had pulled a muscle. Tumor weakens bone and there was concern he would fracture the pelvis while standing or walking since this is a major weight bearing part of the skeletal structure. A pelvic fracture would have left him bedridden.

My father had significant underlying osteoporosis involving the vertebral (spine) bones and ribs. After treating the cancerous spot with radiation treatments, it was recommended that he receive a biphosphonate by IV to strengthen the pelvis and prevent a fracture. Although immediately prior to this treatment a bone scan had shown tumor only in the pelvic bone, within two months a repeat scan showed spread of the tumor throughout the ribs and spine. Apparently, as the body tried to build up bone in the pelvis that was eroded by tumor it also worked to restore bone in the most severe osteoporotic areas. Unfortunately, cancer cells were incorporated in the repair process. My father continued to teach me lessons until his death.

I am not faulting the doctors for what went on although my father had significant bone pain and a difficult final month of his life. The thought process to attempt to strengthen bone and prevent a fracture was good. An established quality clinical pathway was followed. The point is to try to learn from this encounter. There is not a simple answer but this example emphasizes the importance of observation to improve judgment in the care of subsequent patients. Good judgment comes from experience. Experience comes from making errors or having adverse results. Blindly following guidelines promoted by the healthcare industry without individual consideration is one weakness of the current system. Physicians need to be able to use their experience and not be forced to follow established clinical pathways out of fear that they will be punished for stepping outside the box. Non-physicians can follow a cookbook. Judgement requires more. For instance, current clinical pathways for diabetes do not say anything about checking testosterone levels. The definition of insanity is doing the same thing over and over expecting different results.

Another unapproved beneficial treatment is prolotherapy. This stands for “proliferative” therapy and consists of injection of an inexpensive combination of substances which stimulate growth factors in tendons, soft tissue, and joints. Ozone can be added to the prolotherapy solution (called prolozone) when injected into large spaces such as joints. This adds an antiviral, antibacterial, antifungal, and antiparasitic benefit to the treatment. The ozone releases additional oxygen and provides a free oxygen molecule which serves as a scavenger. Attaching to many substances that should not be in the body, this promotes their elimination. Prolotherapy serves to strengthen supporting structures of the joint, such as the ligaments, and may even promote cartilage growth.

My personal experience with the use of prolotherapy involves chronic tendonitis (tennis elbow) and a lax ligament around one knee from an old injury. Since ozone cannot be injected into a ligament (there is no space for the ozone gas), I added a small amount of hydrogen peroxide to the prolotherapy solution. This resulted in intense inflammation and increased pain for about a week, with subsequent resolution of the tennis elbow pain I had for more than a year. In addition, the ligament around the knee tightened. I have been impressed by these personal results as well as those in many of my patients.

Prolotherapy is not approved by Medicare or third party payers, but the use of cortisone for injections is permitted. If there is an inflammatory process taking place and causing damage in a joint, cortisone injections may settle down the pain but the destructive elements of the underlying inflammatory pathway continue and rebuilding does not occur. The result is eventual joint destruction to the point where replacement is required- a further example of an expensive treatment used and a preventive modality ignored. But the healthcare industry was developed to generate income.

Oxidation is the process by which sugar is burned for energy in our bodies. Oxidation also generates free radicals which are harmful and need to be cleared out of our systems using antioxidants. We have covered some aspects of antioxidants in the section on vitamins and supplements. As mentioned previously, oxidation of fat is bad for us, leading to weakening of cell membranes and buildup inside blood vessels.

Oxidative therapy focuses on the use of hydrogen peroxide which breaks down to form water and oxygen. The foaming that is seen with peroxide represents the release of oxygen in this reaction. As discussed previously, vitamin C and white blood cells use hydrogen peroxide in normal body chemistry. It is a natural substance found in our systems. As such, it cannot be patented which lessens interest from the industry standpoint.

Intravenous hydrogen peroxide has been used since 1920 in attempts to provide more oxygen for tissues to promote healing. Charles Farr in Oklahoma City began using this in 1984 for treatment of a long list of various conditions and it is now utilized in more than fifty countries. Why have you not heard of the availability? Insurance companies will not pay for medical services or care which they do not classify as “usual and customary.” Usual and customary means that most physicians provide the same service or treatment. The average physician is not educated about oxidative therapy. I know I did not hear about this in medical school. Therefore, coverage for this service is denied by insurance. Are there benefits? No doctor is going to spend his time to look at this if he has no way to be reimbursed.

I was also told in medical school that chiropractors were quacks. Patients have been sent to me because of swelling in one leg or a cold or discolored extremity. After I ruled out a serious circulation problem I found that many of these patients resolved their problem after a visit to the chiropractor. Structure somehow must play a part that interferes with lymphatic flow and leads to swelling. Nerves affected by a structural problem might lead to a cool or discolored limb because the nerve endings go to tiny blood vessels which then dilate or constrict causing these signs.

When my son was in sixth grade he woke up one morning with a swollen knee. He did not remember any injury or event that might have caused this. The orthopedic doctor recommended crutches to relieve weight bearing. Cory was a good athlete and after two weeks he was in my face to find some way to make him better. He next underwent an arthroscopy (looking into the joint with a scope) and had fluid drawn off his knee. Nothing abnormal was found. He was told to continue crutches and take ibuprofen. Two more weeks went by. I was going to kill him or he was going to kill me. We then went to see a rheumatoid specialist. The doctor came into the room and told us he had good news. This was not rheumatoid arthritis. I asked him about the diagnosis. He told me it was ‘idiopathic monoarticular arthritis’ -which means ‘his knee is swollen and we don't know why.’ His recommendations: continue crutches and take ibuprofen.

At this point Cory was almost in tears. He wanted back into sports and to be a normal 13-year-old boy. I took him to the chiropractor who examined my son and said “Cory, you must've taken a pretty good lick on the football field. One side of your pelvis is locked up.” Corey underwent an adjustment and within two days the swelling of the knee which had been present for eight weeks was gone. Apparently this was related to structure. I learned something and soon developed a good relationship with many chiropractors. This is only one example of similar results I have seen over the years.

CAT scans and expensive imaging techniques are replacing a careful history and physical exam in the evaluation of patients. I was taught that if you listen to a patient eighty five percent of the time they will give you the diagnosis. The system reimburses for procedures, not physician time and judgment. Simple treatment that requires lifestyle changes is not acceptable to many patients. These are not comfortable and take time to see results. Short term bandaids with instant relief are preferred. Also, think high tech. Some of my patients request a CAT scan as if it were the diagnostic machine seen on Star Trek. The x-ray exposure from a full chest, abdominal, and pelvic CAT scan is equivalent to five hundred chest x-rays and eight years of normal background irradiation. Can this cause DNA damage? The threshold to affect or break genes may be lower depending on underlying chemical balance.

CAT scans routinely used to diagnose appendicitis in young patients can deliver a significant dose of radiation. Physician judgment may not be perfect with the preoperative diagnosis of appendicitis confirmed at operation in ninety-five percent of patients using clinical judgment alone. However, CAT scans are not perfect and can also miss appendicitis in addition to adding X-ray exposure and expense to the evaluation. Again, what balance are we willing to accept?

One of the most important elements of Donna's recovery has to do with spirituality. As mentioned in the dissertation, this is certainly an aspect that is difficult to quantify or identify quality. However, spirituality involves personal responsibility and the capacity to change in dealing with life's stresses. This personal responsibility is seen in many patients who take supplements since they also tend to change other aspects of their lifestyle.

My grandmother used to say if you start the day by opening your eyes, it is already a good day. She also told me to begin with "Good morning, God." If it was "Good God, it's morning" an attitude adjustment was needed.

Patients comment that my life as a surgeon must be stressful. To me, it is no more stressful than what occurs on a daily basis for most people. What is important is to do your best and tackle life one moment at a time. If the present is not handled properly, everything that follows will contribute additional stress. It is essential not to create our own difficulties. My brother once told me "If you enjoy what you do then you never work another day in your life." Unfortunately, surveys have shown that seventy percent of Americans do not like their job.

What is difficult for me to accept when dealing with cancer is the statement "There is nothing further we can do." How about addressing the patient's fears? How about communicating with the patient and family regarding what to expect and potential comfort measures? How about giving the patient a hug or holding their hand? These

measures cannot be evaluated in the lab or with sophisticated imaging techniques, but I am convinced they play a part in health and well-being.

I know this is not a complete synopsis on healthy living. There are many other detailed sources available. I look at the road to better health as a journey—one step at a time. There are no magic bullets. It is difficult to do everything at once. We are not changing oil in a car. In dealing with patients, I attempt to reach certain goals and then change the game plan as overall health changes and a new level is achieved.

I want this book to begin to help direct patients in their search for prolonging health and longevity. The comments are my current opinion and can change as I continue to review more literature and gain more experience with observations.

I hope you are inspired by Donna's story. I hope you find the scientific analysis interesting. I hope this arouses your curiosity about the function of “the human machine.”