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INFORMATION FOR YOUR HEALTH **THE PRESIDENT'S COLON TROUBLES:**

A VALUABLE HEALTH LESSON FOR THE WHOLE NATION

Ronald Reagan is the most public figure in America and his health is our concern. His recent bout with colon cancer and colon polyps has made us more aware of these common diseases. Unfortunately, the information given to the public was incomplete on many accounts and the points worth remembering have been forgotten by too many of us.

History of the President's colon problems:

May 18th, 1984—a small (hyperplastic) noncancerous polyp was removed through a sigmoidoscope. No further examination was performed.

March 8, 1985—a second noncancerous polyp was found and removed. Stools were initially positive for blood. Future stools showed no blood and no further examination was done.

July 12th, 1985—a colonoscopic examination (by a long flexible tube-like instrument) found a 2 inch polyp (a villous adenoma) in the first part of the colon located on the right side of his body. Biopsies showed cancer.

July 13th, 1985—major surgery was performed to remove 18 inches of his intestines containing the cancerous polyp that had grown deep into the muscular wall of the colon.

January 4th, 1987—four noncancerous polyps were removed from his colon.

If I had a chance to counsel the president this is the information I would like to share with him.



PRESIDENT: How many other Americans have polyps and colon cancer, like me?

DOCTOR: Approximately 5 to 10 percent of our population over 40 years old has polyps of various kinds. By your age (75) over half the people have polyps of several types. The noncancerous, hyperplastic, type consists of an overgrowth of normal colon cells into a visible lump. Many investigators, but not all, believe these are precancerous growths that will in time turn into cancer. The larger polyp you had in the right side of your colon is called an adenomatous polyp and these are the kind more likely to develop into cancer—the cells making up these polyps no longer resemble normal colon cells. Approximately 5% of the adenomatous polyps contain cancer. The longer time polyps grow in the colon, the bigger they get, and the longer they are subjected to the influences

that cause cancer. Therefore, the larger the polyp the greater the chance of finding cancer—those less than 5 mm are not cancerous, at 10 mm 1% are, and at 20 mm 17% show cancerous changes.

Cancer of the colon will be found in 138,000 Americans this year and 60,000 will die from it. This killer affects between twenty and thirty percent of the families in the United States and is our country's second leading cause of cancer deaths. Eventually 6% of our population—6 million Americans alive today—will die of colon cancer.

PRESIDENT: That's shocking! What causes colon polyps and colon cancer?

DOCTOR: Common sense would suggest that the contents of the colon—the remnants of the food—would be highest on the suspect list. Colon cancer is found most commonly in economically wealthy countries where people eat a rich diet consisting predominately of meat, poultry, fish, vegetable oils, white bread (other refined grains), and highly processed foods. On the other hand, people following diets plentiful in whole grains, vegetables and fruits where meat and dairy products are used sparingly have very little colon cancer. When people move from a country of low incidence to a country where cancer is common their risk increases as they learn the richer diet—this observation shows the importance of environment, rather than genetics, in colon cancer.

Worldwide, polyps of the colon are found commonly in populations with a high incidence of colon cancer; both are believed to share the same dietary cause. In animal studies cancer-causing chemicals, known as carcinogens, produce adenomatous polyps and colon cancers that look identical to those found in people. (Annals of Surgery 161:309, 1965.) There are many kinds of carcinogens in the intestine of people that result from eating the American diet—a high-fat, high-cholesterol, low-fiber diet. Fat, and especially beef fat, results in production of many carcinogens in the colon. (Reddy B. Cancer 39:1815, 1977.) Other elements of our diet including the animal protein, cholesterol, polyunsaturated vegetable fats, sugar, a lack of vegetables and fiber deficiency also adversely affect the colon lining and contribute to polyp and cancer development (Editorial, Lancet 2:1413, 1985.)

PRESIDENT: My brother, Neil, had colon cancer and polyps diagnosed at almost the same time as I did. Are these diseases inherited?

DOCTOR: On July 3rd, 1985 Neil Reagan had a colon cancer removed. The previous January of 1985 your brother had two polyps removed. The similarity in timing is a coincidence. However, close relatives do have a much higher risk of developing colon cancer than the general population. In some families the risk for other members eventually developing colon cancer is as high as 50%. A small part of this shared risk is due to your genetic heredity, which you have no control over. Actually, most of the disease passed on in families is through education—mothers and fathers teach daughters and sons what foods to like and how to cook—unhealthy habits can be relearned!

PRESIDENT: Every year I seem to have new polyps. What is the chance they will continue to recur even after removal?

DOCTOR: Because most people fail to change their diet, the carcinogens remain present at high levels and continue to injure the colon lining. After removal of the first polyps as many as 48% of people develop new polyps and 2.7% go on to develop colon cancer over the next decade. (Wegener M. Diseases of the Colon and Rectum 29:383, 1986.) Even one year later, on reexamination approximately 30% of patients are found to have new or missed polyps.

PRESIDENT: Was my cancer present at the time of my initial examination on March 18th, 1984?

DOCTOR: There is no doubt that both the large adenomatous polyp and the cancer were present, and at a detectable size at the time of your 1984 examination. Estimates are that it takes from 15 to 20 years for a polyp to develop into a cancer (Kozuka S. Diseases of the Colon and Rectum 18:494, 1975)

Even after the first cell in the polyp becomes cancerous it takes on an average 10 years for the cancer to grow to a barely detectable size of about 1/2 inch.

It is important for you to understand how cancer grows in order to understand the value of prevention and the reasons early detection and treatment have largely been failures. Cancer cells divide into two at an average rate of every 100 days, called a doubling time. After a year of having cancer the growth consists of only 12 microscopic cells—after 6 years of growing the tumor is pencil point in size (1mm) and contains 1 million cells—after 10 years of growing 1 billion cells have accumulated and the tumor is a little less than 1/2 inch. Even worse, most cancers of the colon are detectable only after they have reached several inches in size; therefore they can be presumed to have been present for fifteen, twenty or more years before detection.

PRESIDENT: You're saying all that money and effort spent by our health care system on early detection is wasted.

DOCTOR: Early detection is largely a fallacy since we're talking about a disease that has been actively growing for ten, twenty or more years before discovery.

Efforts to prolong survival by detecting colon cancer as early as medically possible by finding minute quantities of blood in the stool have been largely disappointing (Editorial: Lancet 1:22, 1986; Frank J. American Journal of Preventive Medicine 1 (5):18, 1985.) The National Cancer Institute just published "Cancer Control Objectives for the Nation 1985-2000" and in this monograph they concluded stool tests for blood were not of proved value for cancer screening (NCI Monograph 1986; number 2.) Furthermore, there is a potential for serious harm from looking for colon cancer—the discovery of blood leads to invasive and complex medical investigations (particularly colonoscopy), which are now recommended for all patients with a positive test result. These investigations are costly and complications from tests have injured otherwise healthy patients.

In almost all cases the disease is far advanced by the time of discovery. (Evans J. Annuals of Surgery 188:716, 1978.) Cancer cells can be found in the blood draining from the tumor even in stages of colon cancer that are considered very early (Fisher E. Surgery Gynecology Obstetrics 100:102, 1955.) In your case where the cancer has grown through the muscle of the colon (classified as Duke's B stage), cancer cells are found floating in the blood of veins draining the tumor at the time of operation in over one-third of the cases. The chances are that long before your first examination in 1984

the cancer cells had already spread by way of the blood stream to other parts of your body. Cells that spread to the liver, lungs, bones and brain, cause the cancer growths (metastases) that kill their victim.

PRESIDENT: Will removal of polyps before they become cancerous save lives and prevent colon cancer?

DOCTOR: Early detection and removal of polyps is believed by many doctors to decrease the risk of future colon cancer (Gilbertsen V. Cancer 41:1137, 1978.) However, there is some disagreement on this point—definitive studies have not yet been done to prove the benefits of polyp removal—especially when the risks and costs are considered in this issue. (Frank J. American Journal of Preventive Medicine 1 (5):18, 1985)

PRESIDENT: Since the disease is so advanced and spread is so likely by the time of diagnosis, does any treatment increase the chances for survival?

DOCTOR: Long-term survival rates are very poor (Evans J. Annual of Surgery 188:716, 1978; Polk H. Archives of Surgery 89:16, 1964; Ederer S. Journal of the National Cancer Institute 26:489, 1961.) Even more discouraging, treatment appears to have little effect on the ultimate survival. (Stefanini P. Internal Surgery 66:131, 1981; Evans J. Annual of Surgery 188:716, 1978.)

PRESIDENT: What are my chances of dying of cancer?

DOCTOR: This mostly depends on whether or not you die of something else first. Other physicians commenting on your case give you a 50/50 chance of dying of colon cancer. Since you are 75, many other diseases such as heart attacks and strokes may take your life before the cancer that has probably spread to your liver and other parts of your body can grow large enough to cause you any illness or threaten your life.

Some of the information given to the public by respected cancer authorities is misleading (and at times intentionally deceptive). Figures given that you have a 50% chance of being cured of cancer are misleading—they are actually saying you have a 50% chance of living free of obvious cancer for five years. The American Cancer Society defines "cure" as five years of disease free survival. If you die in four years you weren't cured; however, if you die 6 years after diagnosis you were cured by this definition. Cancer deaths continue at a steady rate long after this initial five year period—some people live for 20-30 years after their surgery and then die of their original cancer.

If you had had a blood transfusion your chance of dying would have been increased (Blumberg N. Lancet 1:1037, 1985; Editorial, British Medical Journal 2:841, 1985.) Blood transfusions impair the immune system and the body's ability to fight off the cancer; as a direct result death comes sooner.

PRESIDENT: Since spread has most likely already occurred by the time of surgery, can't there be a simpler way of getting rid of the tumor, than major abdominal surgery?

DOCTOR: Because of lack of appreciable improvement in survival from extensive surgery, more conservative therapy is being used. For example, cancer of the very last part of the large intestine, the rectum, has been traditionally treated with an extensive surgery called an **abdominoperineal resection** which often employs two surgical teams, one working above and the other below, to remove the cancer. Recently, treatment by simply burning off the cancer with an electrocautery has been found to be as effective with even

better survival rates than from extensive surgery. (Madden *Journal of Surgery Gynecology Obstetrics* 157:164, 1983.) Doctors have not yet attempted to destroy large tumors, higher up in the colon with this simple burning technique. However, I expect this approach will be common some day soon.

PRESIDENT: So many other people I know get chemotherapy and radiation for cancer. Why wasn't I given these treatments?

DOCTOR: These two modes of therapy would not have improved the quantity or quality of your life. The whole nation was watching the management of your health. Other patients are not so lucky to have so much concern for their health.

Many doctors are experimenting on their patients with unproven treatments and even treatments that have already been proved ineffective (Kearsley J. *British Medical Journal* 293:871, 1986; Kies M. *Editorial JAMA* 247:2826, 1982.) Undeniably, chemotherapy and radiation therapy are highly profitable for the doctors, hospitals and clinics providing these services. Too often the decision to treat is based on concerns other than the welfare of the patient.

PRESIDENT: How do I keep these polyps from coming back? Could a change in my diet prevent future polyps; better yet, get rid of any I already have?

DOCTOR: The key to preventing recurrences is to improve the contents of the colon through a change in diet (Hill P. *Cancer* 34:815, 1974; Reddy S. *Journal of Nutrition* 105:878, 1975.) A change to a low fat, no cholesterol diet rapidly and dramatically reduces the amount of carcinogens in the colon, an increase in fiber dilutes the chemicals and shields the colon from their harmful effects, and an increase in vegetables—especially broccoli, cauliflower, Brussels sprouts, turnips and leafy greens—causes the colon to produce enzymes that inactivate carcinogens.

Operations that divert the flow of stool away from the segment of colon with polyps have resulted in regression of the polyps (Dunphy J. *Annals of Surgery* 150:488, 1959; Williams R. *American Journal of Surgery* 112:846, 1966.) This finding clearly shows that polyps are reversible and would suggest there is a stage in the transition toward the development of cancer of the colon that is reversible. Investigations should be done to determine if a low-fat, high-fiber diet—the diet opposite to the one believed to be the cause of colon polyps and cancer—would result in similar regression.

PRESIDENT: Could a change in diet help someone who already has cancer of the colon that may even have spread to other parts of the body, such as myself?

DOCTOR: Colon cancer patients should seriously consider a change in their diet as a major part of their therapy. Animal experiments show us that diets high in fat and cholesterol promote the growth of cancer and they further demonstrate that low-fat, no cholesterol diets retard the growth of cancer and prolong the animal's life (Littman M. *Cancer Chemotherapy Reports* 50:25, 1966; Cruse P. *Gut* 23:594, 1982.) Survival varies between ethnic groups of people in the United States, and this may be the result of differences in diets they follow. (Hirohata T. *Hawaii Medical Journal* 36:343, 1977.)

The battle is not lost 'til the end. There have been a few cases of complete regression of advanced colon cancer that has spread throughout the body. (Ferguson J. *Proceedings of Mayo Clinic* 15:407, 1954; Shapiro C. *JAMA* 250:2503, 1983.)

The healthier you are the greater the chance your body will win its personal war against cancer.

Furthermore, since a diet change does no harm and has many known benefits (relief of constipation, high blood pressure, adult diabetes, chest pains etc.), there is no reason not to switch to a low-fat, no-cholesterol, high fiber diet, even after developing colon cancer.

PRESIDENT: How do you think I should use my influence to direct our precious health dollars towards "winning the war on cancer?"

DOCTOR: For prevention! Not early detection and treatment. Doctors no longer order yearly chest X-rays to reduce dying from lung cancer—instead people are educated to quit smoking. The same effort should be made for dietary-caused cancers—colon, breast, and prostate—teach people to eat a starch-based diet with vegetables and fruits, and to keep rich foods for special occasion, like holidays.

MEDICAL RESEARCH CRUMBLING PILLARS?

Occasionally studies draw national headlines that seem to refute the benefits of a low-fat, no cholesterol diet, starch-based diet. This information is welcomed by many stubborn Americans because it seems to add support to their gluttonous dietary habits. Have you heard about this nationally publicized finding?

"EATING EGGS WON'T RAISE CHOLESTEROL?"

"Most people can eat as many as they like—up to three eggs a day—without increasing the amount of cholesterol in their blood or their chances of developing heart disease," according to news reports early this January 1987. These reports were initiated by a study of cholesterol and eggs by Margaret A. Flynn, published in the *Journal of the American Diabetic Association*, (JADA 86:1541, 1986.) Actually the results of this study showed that when two groups of men aged 34 to 66 were fed three eggs a day for 10 weeks, one group developed a significant increase in cholesterol and after two weeks of no eggs this group showed a significant decrease in cholesterol. The other group showed a decrease in cholesterol after eating no eggs for 12 weeks, but failed to show an increase when the eggs were added. Therefore, contrary to the newspaper reports this study did show that eating eggs raises cholesterol level significantly; but, there is more behind these headlines than inaccurate reporting by the press.

There have been about six studies published in the medical literature that show daily egg consumption does not raise blood cholesterol. These studies have been criticized for problems with controls and adequate time periods to see changes (Leibman B. *American Journal of Clinical Nutrition* 35:1041, 1982.) The trick all of these studies use to show little rise in cholesterol from eggs added to the diet is to saturate their experimental subjects first with cholesterol from other foods (beef, chicken, fish, etc.). Once people consume 400-800 milligrams of cholesterol a day, additional amounts have only a minor effect on blood levels (see *The McDougall Plan*—page 56, *McDougall's Medicine*—page 112.)

You may believe it is no coincidence that the research done by Margaret Flynn is paid for by the American Egg Board—an organization supported by the egg industry for the promotion of egg consumption to Americans (examples of egg industry funded research of Margaret Flynn: *Archives of Envi-*

ronmental Health 39:90, 1984; American Journal Clinical Nutrition 32:1051, 1979.) Other studies favorable to the egg industry have similar financial support. However, research by other scientists, independent of the egg industry, clearly shows that eggs raise blood cholesterol and raise your risk of heart disease. (For scientific research refer to the above books.)

RECIPES

Contributed by Vicki Saunders R.D. (St. Helena Health Center)

VEGETABLES WITH APRICOT SAUCE

Serves 4

1/2 cup quartered dried apricots
2 tablespoons raisins
1 large onion, coarsely chopped
1 pound eggplant, patty pan, zucchini, or winter squash
1 cup cooked chick-peas (garbanzos)
1/2 teaspoon cinnamon
1 cup water from soaking fruit combined with bean cooking liquid or plain water

Soak dried fruit in hot water to cover while preparing remaining ingredients. Use a non-stick 2- to 3-quart pot. Cook onions in a small amount of water over medium heat until lightly colored, about 10 minutes. While onion cooks, peel vegetables if necessary, and cut in bite-size cubes. Add to onion and stir to coat. Drain fruit, reserving liquid, and add to pot along with chick-peas and seasoning. Measure reserved liquid and, if necessary, add water or bean liquid to make 1 cup. Add to pot. Bring to a boil. Cover, and simmer over low heat about 30 minutes until vegetables are just tender.

HELPFUL HINTS: This dish is delicate with a gentle sweetness. Serve over cracked wheat, barley, millet, or whole wheat noodles.

RE-HASH

What to tell your concerned friends when they ask: Where do you get your calcium if you don't drink milk?

*Calcium is a mineral found in the ground (like other minerals, such as iron, magnesium, iodine, potassium, etc.) Plants absorb minerals in watery solutions through their roots and incorporate them in their plant parts—roots, stems, leaves and flowers. Cows, horses, people and many other animals get their calcium indirectly by eating plants. No one eats ground!

*Calcium is abundant in plants. There is enough calcium in plants to grow the enormous skeletons for horses, elephants, hippos and giraffes. Therefore, there certainly must be enough calcium in plants to grow our comparatively small bones.

*Scientists have studied various populations around the world and their dietary habits and found that they all grow normal adult-size skeletons on a wide variety of meal plans with widely different levels of calcium in their diets. You may have observed people in many parts of the world, such as Asia and Africa, who consume no milk products after they wean from mother's breast, yet they grow bony skeletons of normal size and strength.

*Scientists have looked for cases of calcium deficiency around the world and have come up empty handed. A consistent conclusion from the scientific literature has been **calcium deficiency of a dietary origin is essentially unknown in humans**. In other words, all natural diets contain an amount of calcium above the threshold of need for growing

children and adults.

*Calcium is only one component of bone tissue. Several other minerals, proteins, fats, carbohydrates, vitamins and other substances come together to form the complex skeletal system. In addition to providing support for the body, the bones also serve to store minerals, and they are the center for the production of blood cells. The skeletal system is a dynamically functioning organ—not a collection of cement-like support beams.

*The amount of calcium absorbed from the intestine is determined in part by the body's needs, but mostly regulated by the activity of the intestinal lining. When we eat large amounts of calcium, most of this mineral is blocked from absorption—only a small percentage is absorbed. By this means our intestine protects us from much of our dietary foolishness, such as taking handfuls of calcium pills and gallons of milk. Otherwise, if all that calcium entered our body the kidneys, muscles and many other tissues would become calcified—illness and possibly death would follow shortly.

*When the diet contains lesser amounts of calcium the intestinal cells efficiently remove the calcium from the foods and a large percentage of the calcium is absorbed into the body, meeting our needs. Even diets as simple as rice and vegetables contain sufficient amounts of calcium to meet the needs of millions of Chinese and Japanese—without a drop of cow's milk or a single calcium pill.

*There are other components of the diet that enhance and inhibit absorption of calcium. For example, there have been studies that show fiber, phytates and oxylates found in plant foods will decrease the absorption of calcium from the foods. However, this issue has little practical implication, since the effects are never enough to jeopardize the intestines capacity to obtain all the calcium needed for growth and maintenance of the teeth and bones. Scientific study and the testimony of healthy lives of billions of people following diets consisting mostly of plants proves this issue is only of theoretical interest. (And sometimes serves as a means to frighten vegetarians.) One of the reasons mineral deficiency does not develop is vegetables are loaded with minerals.

*Estimates of calcium needs based on scientific study (shrouded by personal and financial interests) vary from 150 mg to 1500 mg per day. The reason for this apparent confusion is because the amount of calcium in the diet really has little to do with how much calcium actually enters and remains in the body. Another nutrient—protein—has much more influence on bone health. **(Continue next month.)**

MORE HELP

The McDougall Plan—\$8.95. McDougall's Medicine—A Challenging Second Opinion by New Century—\$8.95. Volume I & II of the Cookbooks \$7.95 each. Add postage (\$2 first book—\$1 each additional)—send to POB 1761, Kailua, HI 96734.

THE MCDUGALL PROGRAM at St. Helena Hospital, Napa Valley, CA. Two weeks of physician supervised live-in care designed to get people off medication, out of surgery and living again—call 1-800-358-9195 (outside California) or 1-800-862-7575 (California).

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