THE RUMBLE IN HUMBLE:

HEART SURGERY . . . AND ALL THAT *JAZZ!*

Modern Diagnosis
and
Treatment of Heart Disease

Are you hoping to avoid surgery?

Understand Your
Surgical and
Non-Surgical Choices

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LIFE
CENTER
HOUSTON

DIAL 1-800-FIX-PAIN

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HEART SURGERY ... AND ALL THAT *JAZZ!*

Modern Diagnosis and Treatment of Heart Disease

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This book is dedicated to those victims of heart and blood vessel diseases who were *never told* about choices that might have helped them and to those who *were told* by friends but they only heard and *never listened*

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RECOVER YOUR HEALTH ONCE MORE

This book is for YOU if you .....

... want to have more energy and become more active again in your life

... hope to feel younger and recapture your earlier enthusiasm

... look for a future that is brighter rather than graying

... hope to feel better than you have in years

... want to find out about NON-surgical alternatives that might be able to help relieve your suffering with heart and blood vessel diseases

The kinds of benefits that could be within your reach include .....

... more energy

... better blood pressure

... fewer chest pains

... better memory

... better sleep

... brighter outlook

... better attitude

...less shortness of breath

... breathing better overall

... better vision

... more alertness

... warmer feet and legs

... fewer leg pains

... better skin color

... better blood sugar control

... better heart beats

These and other health benefits have been reported by many of the several hundred thousand people who have received non-surgical chelation therapy treatments. They are enthusiastic again about walking, gardening, playing with grandchildren, visiting friends and family, traveling, and enjoying the later years for which they worked and planned so long. Find out what worked for them!

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The pages listed here are correct for the *published* book but are included only for your "general reference" when downloading from the Internet, due to the changes that happen during several file conversions. For your convenience in being able to "search" to get to a chapter you want to read, the words "page 8" or "page 19" or "page *(whatever)*" have been entered under the title of each chapter in the text file. In this way, you can enter "page (whatever)" as your "find" entry and easily "jump" to that particular chapter. Happy reading! Remember that you are welcome to print and share with family and friends but commercial reproduction or distribution are expressly prohibited by the copyright owner.

THROWING PUNCHES OR BUILDING BRIDGES ..... WHAT'S "THE RUMBLE" ALL ABOUT?

"Regular" medical doctors prescribe drugs and send patients to cardiology heart doctors. Cardiologists prescribe drugs and perform "angioplasty" balloon operations – and send patients to cardiovascular surgeons – who perform bypass operations. BUT WHAT ABOUT ANY NON-SURGICAL ALTERNATIVES?

People who find out about non-surgical chelation therapy and nutritional supplements are often thrilled that their health improves without surgery – or after surgery – or after they've been told that they can no longer have another operation. These patients ASSUME that chelation doctors and surgeons "DON'T LIKE EACH OTHER!" But nothing could be further from the truth.

In the future, a more "integrated" view of medical practice will be understood by everyone, doctors and patients alike. What that means, simply stated, is that doctors will diagnose disease problems and will treat them more precisely with the best "tools" available for that particular patient, at that particular time. "What you need is what you get" ..... what could be better for you?

Drugs will always be useful to "stop bad things from happening" – but they can do little to correct or repair underlying problems. (That's why patients are often told "you'll need to take this for the rest of your life.") On the other hand, nutritional supplements are the vitamins, minerals, amino acids, essential fatty acids, and other items from which your body is made. Properly prescribed, "therapeutic dosages" of nutritional supplements have been shown to be very helpful in aiding your body to correct or repair underlying problems.

Operations – whether balloon "angioplasty" (done since the 1980s) or other "bypass" procedures (done since the 1960s) – can be lifesaving, when they are needed to get blood past a blockage in major blood vessels. However, surgery is restricted to a few dozen inches of larger blood vessels – and it does nothing to help correct or repair underlying problems that caused the blockage ..... and these problems are still affecting the other 60,000 MILES of blood vessels in your body. Indeed, "repeat" operations are common, because the newly opened or bypassed areas can block off again.

Chelation therapy (done since the 1950s) is a prescribed medical treatment, offered only by licensed, trained physicians – just the same as operations are offered only by licensed, trained surgeons. Chelation is used to "turn on" body repair processes. This can result in better function of body cells and organs – AND improved blood flow to many areas of the body. The results can be remarkable.

Are these SEPARATE and EXCLUSIVE treatments for patients suffering with heart and blood vessel diseases? Absolutely NOT! But which ones are right for YOU? These programs – drugs, nutritional supplements, operations, chelation therapy – along with proper dietary and exercise prescriptions, provide a wide range of treatment options to help each and every patient survive better. The key is understanding how to use them best.

And that's what "THE RUMBLE IN HUMBLE: HEART SURGERY AND ALL THAT JAZZ!" is all about, building bridges between different schools of thought in medical care, so that our patients WIN by getting the best possible combination of treatments that they need.

The more your doctors talk with each other, the more complete can be the planning for your care. The more your doctors talk with you, the more you can become a true participant in your own care. Have you really found out all the facts that you need to know? Did your doctor explain to you all of your treatment options – or make all the choices for you? Now is the time for you to start taking a more active role in making your own choices ..... for living.

LIVING ON THE EDGE .....
TAKING RISKS THAT *CAN* HURT!

Your age in years – older age, higher risk
Your gender – men are more likely to suffer at an earlier age – but older men and women (past menopause) are equally at risk
Your tobacco usage – smokers are at much higher risk
Your iron status – higher blood ferritin levels ("excess iron"), higher risk
Your blood pressure – higher pressures, higher risk
Your blood cholesterol – higher levels, higher risk
Your blood cholesterol lipoprotein Lp(a) – higher levels, higher risk
Your blood HDL cholesterol – lower levels, higher risk
Your blood triglycerides – higher levels, higher risk
Your blood homocysteine – higher levels, higher risk
Your tissue B-vitamins – lower levels, higher risk
Your blood uric acid – higher levels, higher risk
Your blood fibrinogen – higher levels, higher risk
Your blood sugar – higher levels, higher risk
Your blood insulin – higher levels, higher risk
Your blood C-reactive protein – higher levels, higher risk
Your activity lifestyle – less exercise, higher risk
Your weight – higher than your "ideal" weight ("overfat"), higher risk
Your genetic heritage – parents with higher risk bear children with higher risk
Your emotional stress – more distress, prolonged distress, higher risk
Your use of drugs – birth control pills + smoking, higher risk; use of cocaine, higher risk
and even .....
Your antioxidant status (vitamins C, E, beta-carotene; minerals selenium, zinc, manganese, copper; other items) – lower levels, higher risk
Your essential fatty acids – lower levels, higher risk
Your levels of minerals magnesium and potassium – lower levels, higher risk
Your drinking water "softness" – softer water, high risk
Your tendency for blood platelets to be "sticky" – higher levels, higher risk
Your "style" in handling time and life (Type A) – higher urgency, higher risk
Your blood oxygen levels – lower levels, higher risk

CHOICES, CHANGES, and CHANCES

Each of us makes many choices in life, every single day. Even the choice to do nothing differently is a choice – to continue doing the same things. But if you want different results, you have to make different choices and do different things. If you continue to do the same thing, you continue to get the same results you have already gotten. If you are not happy with your state of health right now, then you should consider choosing to do different things. Now.

Choices mean changes in your future survival and wellbeing and happiness. If the changes you make help to get what you want from life, then your choices are good for you. But what if the changes you make get do not get what you want from life? Then your choices are not good for you.

Changes mean chances. In making a choice to do something, you are counting on the chance that things will work out pretty much as you have hoped and planned. But there is also the chance that things might not work out as you have hoped.

Life is full of such risks. Indeed, risks fill your tomorrows with surprise and the excitement of new experiences and challenges. You would not have much of a future to look forward to, if you could predict that tomorrow would be exactly like today and yesterday and the days before. Your life would become dull and boring.

So life if made of choices ..... which involve changes ..... and the chances that your life might take turns that you don't expect. Such is "the spice" of life.

But when illness strikes, the risks to your survival and wellbeing and happiness become much more of a concern. Doing nothing different would be one of your choices – but you risk worsening and suffering more. So what should you do when you face the choices available to you to help with illness?

Surgery certainly has risks that can threaten your very survival. This is why so many people say "I'll do surgery only as a last resort." By making surgery only a "final" choice, they are ignoring benefits that might be available to them much sooner. As young surgeons in training learn, "A chance to 'cut' is a chance to 'cure.'" In fact, the chance to "be done with" a problem is one great appeal that surgery offers. That appeal can be so great that some people choose an operation when that is not the most appropriate treatment for them.

Modern medical treatments are so powerful that many people fail to realize that we live, literally, in an age of miracles. Medications are available from every pharmacy that can dramatically improve comfort. Drugs have risks that must be considered and side effects that must be managed. Operations that couldn't even be dreamed of 40 or 50 years ago are now done routinely, in both university and community hospitals, on patients newly born and those in their nineties. Surgery, too, has risks

that must be considered and side effects that must be managed.

Our modern understanding of the ways the body works has given us other tools to use as well: exercise, dietary changes, nutritional supplements, herbs, and other "natural" remedies. The choice to use these tools involves far fewer risks, because these approaches support and encourage your body's efforts to heal and repair itself. Rather than acting "against disease," these "natural approaches" work to "aid healing." Still, you would be foolish to resort only to these and to ignore drugs and operations that might benefit you greatly.

This book is designed to help guide you on your journey to better health right now. If you better know what choices are available, then you can better understand what changes might be desirable, and you can better understand and control your risks. Choose wisely – your future survival and wellbeing and happiness are at stake.

Thomas Paine, a great patriot of the American Revolution, is credited with saying, "Government, even in its best state, is but a necessary evil; in its worst state, an intolerable one." The obvious truth in this statement can be seen as it is applied to surgery: "Surgery, even in its best state, is but a necessary evil; in its worst state, an intolerable one." The same is also true for medications: "Drugs, even in their best state, are but a necessary evil; in their worst state, an intolerable one."

You know these truths to be so because your body is your way of passage through this life. Unlike your car, you cannot "leave it somewhere to be fixed" and pick it up later – although many people think that surgery works this way. No, instead, you suffer with the limitations and discomforts of illness and injury as you move your body through life.

As you make better choices, you can make changes in how your body feels, what limitations and discomforts with which you must live. As you make better choices, you can reduce the risks and threats to your survival. You can see clearly that your future wellbeing and happiness depend on your choices – and only on your choices to make changes that are best for you.

Are you hoping to avoid surgery?

Do you long for the days when you were younger .....

..... when you had more energy and enthusiasm?
..... when you felt stronger and more capable?
..... when you awoke rested and refreshed and ready for a new day?
..... when you did not need drugs to help your body along?
..... when you did not fear that another operation was your only hope?

Then read this book thoroughly and well. Learn what choices might be best for you, given your condition and the urgency with which it must be treated. Choose wisely – your future survival and wellbeing and happiness are at stake. And they are under your control, as an active partner in your own healthcare. Right now.

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August 7, 1997

If you have questions about any of the topics covered in this book, we invite you to mail them to our Chief Medical Consultant at:

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CHOOSE WISELY ..... FOR *LIVING*

The Centers for Disease Control, a major branch of the United States Public Health Service, list 4 major factors affecting your health, and the degree that each influences your survival and wellbeing might surprise you:

LIFESTYLE	**53%**
ENVIRONMENT	**21%**
HEREDITY	**16%**
MEDICAL CARE	**10%.**

Understanding that you can make choices to change your lifestyle and your environment gives you a great deal of control over your future. And taking responsibility for those choices right now can make a difference. Every 25 seconds, an American has a heart attack. Every 45 seconds, an American dies of heart disease, the number 1 killer of men and women in this country. Cardiovascular disease claims as many lives as the next 8 causes of death combined, including cancer, accidents, and AIDS. To the 50% of deaths caused by heart disease, add the 15% of deaths caused by stroke – and you see that 2 out of 3 Americans are dying from heart and blood vessel diseases ..... an average of 2600 deaths each day.

If these silent losses are measures of our medical success, then our "doctoring system" hardly seems more than a dismal failure at preventing or controlling circulatory diseases. A total of 7.9 million Americans are disabled by heart and blood vessel conditions *each year*. If the future of medical care depends on what's already generally practiced, then you see how little is being done to reduce suffering with these deadly degenerative diseases. If all forms of major cardiovascular disease were eliminated, the National Center for Health Statistics estimates that average life expectancy would rise by almost 10 years. So the wise choice is to understand the choices you can make with regard to lifestyle and environment – and to explore what choices might be best for you when you do need medical care, including drugs and surgery.

Understanding "heart disease" and "hardening of the arteries" is really quite easy. Consider that your heart is a "pump" and your arteries – the blood vessels that carry oxygen-rich blood from the heart to the body – are "pipes." So think of your blood circulation system as simply a "pump and pipes."

Your heart is a fist-size muscle that pumps about 60 times a minute – about 100,000 times a day, about 3 million times a year, perhaps 250 million times in a lifetime. Your body organs demand a steady flow of blood to perform their functions –

nearly 2,000 gallons a day, over 50 million gallons during a lifetime, enough to fill 4 supertankers, continuously pumped through 60,000 miles of blood vessels ..... more than twice the distance around the earth at the equator.

Even though all of your blood passes through the heart as it pumps, none of that blood nourishes the heart muscle itself. Instead, the heart has its own "pipes" – called coronary (or heart) arteries – that bring blood directly to it. This brings up an important distinction for you. Many people think of "heart disease" as a separate problem from "blood vessel disease." But in most cases of "heart disease" doesn't involve something wrong just with parts of the heart structure (the muscle of the "pump"). Instead, the "pipes" delivering blood to the heart muscle have become hardened and blocked with deposits – reducing the ability of your heart to function. So most cases of "heart disease" are just a special kind of problem with your "pipes," the ones your heart depends upon for its own blood supply. If your heart blood vessels have blocking deposits, you can expect that many other blood vessels throughout your body are also starting to get into trouble as well.

When surgeons talk about doing a "balloon angioplasty" or a "coronary artery bypass graft operation," they are treating the "pipes" for your heart. So when people talk about "heart" disease, usually they're referring to blockage changes in the "pipes" delivering blood to your heart.

Other kinds of "heart" disease involve changes or damage to the structure – the actual parts – of the heart itself. As a pump, your heart is divided into 4 chambers. Valves control the flow of blood between these chambers. Heart "valve" disease comes in several different varieties – and very often surgery is the best treatment for such problems.

The heart muscle itself can suffer damage and scarring as a result of sudden and complete blockage of a heart blood vessel – which is called a heart attack. Sometimes a scarred area will weaken and stretch or bulge, creating an "aneurysm" (bulging or ballooning) on the side of the major pumping chamber, the "left ventricle." Surgery might be needed, if the aneurysm bulges too much.

The heart muscle itself also can suffer from several disease problems, often called "cardiomyopathies" ("heart muscle diseases"). Certain viruses, for instance, can create permanent heart muscle damage, even to the point of considering a heart transplant operation. Other infections might even increase heart attack risk.

The sac covering the heart muscle also can be damaged by certain viruses and other factors, creating problems called "pericarditis" ("heart covering disease"). Drugs

and surgery might be needed to help these disorders.

The heart is a complicated structure, so mistakes can occur during the growth and development of a baby. Holes in the muscle walls – called "septal defects" – and errors in the ways that blood vessels come into or go out of the heart – are among the several "congenital" (or birth) defects that often require early surgery for repair.

Another type of "heart disease" involves malfunctions in the beating process, which are called "rhythm disturbances." Some of these might be due to reduced blood flow to the "wiring" in the heart muscle, which is electrical "conduction tissue." In many cases, drugs are used to help control heart beat patterns that are too fast, too slow, or irregular. In other cases, surgery is used to place a pacemaker, an artificial timing device intended to prevent the heart beat from stopping.

In this book, you'll learn about diagnosis and treatment of hardening of the arteries – called "arteriosclerosis" – and blockage of the arteries – called "atherosclerosis" – as these conditions affect the "pipes" (artery blood vessels) going to all of your organs. And that includes your heart – in other words, the most common "heart disease."

You might guess that, if you have the common form of "heart disease" that involves the "pipes" to your heart, then you are very likely at the same time to have disease in the "pipes" going to other organs as well – and you'd be right! Take a moment to let this understanding help you realize why so many people have "heart bypass" operations AND other blood vessel operations as well – such as in their neck, in their belly, or in their legs.

When blood vessel disease – in other words, blockage in your "pipes" – is finally discovered in many areas, it is called "generalized." This means that many of your organs can be suffering at the same time with problems due to limited blood flow. Your brain can suffer, which you can see as difficulties with memory, thinking processes, or balance. Your eyes can suffer, which means decreased vision. Your heart can suffer, which you can see as fatigue, shortness of breath, dizziness, even chest pains. Your kidneys can suffer, which is diagnosed as various degrees of kidney failure. Your legs can suffer, which can show as leg cramps or pains, easy tiredness, cold feet, thinning skin, even sores that are slow to heal.

If this list of symptoms sounds like "old age," then you're beginning to understand that many of the changes of "aging" are actually due to disease in your "pipes." As blockages decrease the blood flow to your organs, their functions begin to fail –

sometimes slowly, sometimes quickly. Surgery is a very "specific" treatment – meaning that it is performed only on specific blood vessels in one area. This explains one of the major limitations of surgery: it can't "open" or "bypass" troubled blood vessels that are even one inch away from the site of operation. So, your "generalized" disease problems continue to worsen in every part of your body – or you continue to get more and more operations, to help with blood flow to this organ or that.

You might have heard that "balloon angioplasty" or "bypass surgery" can "fix you up as good as new." First of all, remember that an operation never stops the underlying disease – the problem that is causing your blood vessels to become blocked – so you continue to create more blockages and to suffer more problems as time goes by.

Unfortunately, surgery is performed only for a specific problem, because it can "fix" only the few inches or so where the operation is performed. Your many organs – including your heart – depend on many thousands of MILES of blood vessels that are too small for the surgeon to treat. For instance, let's suppose that you have an operation to "bypass" a blocked area in an important artery to your heart. You might expect that blood flow would be improved to your heart. However, the tinier arteries beyond the blocked area might also be blocking – and this would limit the volume of blood they could carry. In Texas terms, you can't force more blood through by sticking a bigger hose into a pipe that's blocked downstream. These smaller blood vessels are too small for any operation to be performed. So you might not get all of the improvement that you were expecting from your operation. And you certainly can't expect heart surgery to help open the blockages already worsening in your neck or in your legs or elsewhere.

This situation – where many more blood vessels are "in trouble" than can be "fixed" by surgery – is all too common. When you realize that any operation "treats" only a few inches of blood vessels, you might ask, "Isn't there a treatment that is more generalized, that treats more of the areas where I have these problems?" The answer is, "YES! There is such a treatment – it's called chelation therapy."

You might wonder why you hadn't heard about this "chelation therapy" before. Simply because none of your doctors told you, you didn't hear about it on TV or the radio, you didn't read about it in the newspapers or magazines, and none of the books you found on "heart disease" had any mention of chelation. Most people find out about this remarkable treatment from a friend or family member – or occasionally from a "health" newsletter. Sadly, the ones who don't find out about chelation never have the choice to try this non-surgical approach to improve the condition of their organs and blood vessels. Now that you know you have a choice,

let’s discover more of the facts you need to know to make a truly informed decision.

HEART AND BLOOD VESSEL DISEASE – HOW IT CAN HAPPEN TO *YOU*

Are you worried about a future of suffering with heart disease, high blood pressure, cold feet, failing memory or sight? Are you hoping to avoid surgery? Or daily medications? Or a future of "rusting" in your "golden years"?

Regular medical care for heart and circulation has sometimes been based on a misunderstanding that daily drugs and surgery are the only options -- besides "learning to live with it." Yet, common sense can show how your condition might respond better than you ever hoped. You owe it to your family to find out more.

Your heart pumps blood through tubes called arteries to every organ of your body. When blood flow is great, you count on your body to function as intended. When you function like when you were younger, you are at ease with daily activities.

Chemicals can injure the delicate linings in your blood vessels. Tiny injuries can progress over years to artery blockage. This is just one way pollution can steal your health and shorten your life.

Every part of your body depends on clean air, clean water, and clean food. Chemical pollution includes smog, water contaminants, pesticides, tobacco, and preservatives or additives on labels whose names you can't pronounce. Toxic metals include mercury (in dental fillings), aluminum (cookware, antacids, antiperspirants, cans) and lead (engine fumes, paints, pipes) -- and many are found in foods and other items we contact daily.

As blood vessel blockage (called plaque) progresses, blood flow to your organs gradually slows. They begin to suffer and decline in function. You become less and less at ease, which is the slow beginning of disease. The technical names are arteriosclerosis (hardening arteries) and atherosclerosis (blocked arteries). Either can steal your health.

You can see how you start to suffer with various symptoms. You reach for relief on pharmacy shelves or at the prescription counter. Perhaps your symptoms are severe enough -- or last long enough -- that you have balloon angioplasty or bypass

surgery.

But none of these treatments aim at the true cause of many pains: blockage in the many, many miles of very tiny arteries that you depend on to carry blood to every organ of your body.

Indeed, medications slow or stop certain uncomfortable symptoms but they can have disturbing side effects. Surgery can open or bypass a few dozen inches of the larger blood vessels -- but no operation can bypass the tiniest arteries in your organs. Finally, you worsen to the point of crisis, where stronger drugs and bigger operations seem to be your only choices. At some point, toxic side effects or surgical limitations can lead to your steady worsening.

Rather than getting conventional (usual) treatment, you can choose an alternative medical solution: health recovery through Chelation Therapy.

This non-surgical treatment is aimed at treating your problem where it arises, correcting the tiniest blood vessel hardening that often is the problem causing circulation problems.

Chelation (key-LAY-shun) stimulates natural healing processes by removing toxic metals lodged in body organs, by changing your calcium balance, and by reducing "rusting" damage (called “free radical” injury).

Your body responds by removing hardening calcium from your arteries, allowing more blood flow to your organs, improving your function, restoring your ease. Makes sense.

Do you hope for lasting relief? Are you looking for alternatives to daily drugs or surgery? Do you remember the days when you had more energy, better memory, better vision, fewer discomforts, better rest? Most patients get wonderful results in as few as 24 to 36 treatments and can enjoy life, family, sports, and work more.

Many physicians don't know about this medical alternative and thus can be skeptical. Treatment does not involve cortisone or aspirin or "pain drugs". As with all treatments, individual results may vary, and no doctor can guarantee to help with any specific problem. It's not too late for you to find out whether your heart or circulation problems might find relief with Chelation Therapy, by treating the real cause of your problems.

For more information, read any of the following books .....

Questions from the Heart, by L. Terry Chappell, M. D.
Forty Something Forever, by Arline and Harold Brecher
Is Heart Surgery Necessary?, by Julian Whitaker, M. D.
Toxic Metal Syndrome, by Richard Casdorph, M.D. and Morton Walker, D.P.M.
Chelation Extends Life, by James J. Julian, M. D.
The Healing Powers of Chelation Therapy, by John Parks Trowbridge M. D.
and Morton Walker, D. P. M. – and several other fine books by Dr. Walker
Dr. Atkins' Health Revolution, by Robert C. Atkins, M. D.
and look for the unique *book-on-tape* audiocassette program,
***LIVING WELL PAST 50:* Rejuvenate Your Heart and Arteries**
by John Parks Trowbridge M. D.

CHOOSE CHELATION .....
TO BEGIN LIVING AGAIN

Available in America as a useful medical treatment since 1952, chelation is one of the oldest "new" ways to help a person feel dramatically better... even if your doctors have said that "nothing else can be done" to help you. Chelation is the only medically approved method to help clear out poisonous toxic metals that have been collecting in your body for years, silently stealing your health over time. Even more dramatically, chelation has often helped many patients to improve heart and blood vessel function, even beyond the results they obtained from surgery and daily drugs. Chelation has successfully been used to treat an estimated 1 million-plus patients worldwide over the past 45 years, with a remarkable safety record.

By many estimates, medical practice in the future will be a harmonious blending of both "conventional" and "complementary" care strategies. Conventional, or usual, medical care has traditionally focused on fighting disease and relieving symptoms. The complementary approach considers more the whole person -- focusing on improving the overall health of the individual, making him or her better able to withstand stresses and overcome illness. Both medical approaches deal with disease and health and both are necessary. The best of both worlds is a combination approach, administered by a medical doctor well-trained in conventional medicine and who has incorporated complementary methods of promoting health and healing into his or her practice.

In Forty Something Forever, authors Arline and Harold Brecher noted that Dr. Emilio Giuliani, Professor of Medicine at the Mayo Medical School in Rochester, Minnesota, was summing up the scientific papers presented at the 30th Annual Scientific Session of the American College of Cardiology in 1981: "It is difficult," he said, "to spot arteriosclerosis [hardening of the arteries] early. It presents no symptoms and develops slowly over a period of years. The condition usually goes undetected until it produces a heart attack or stroke. All too often, sudden death occurs before any sign of clogged arteries appears."

He continued with these observations: "Every patient, on becoming symptomatic, should first be treated with every medical means available. Only those patients who fail to respond to the maximum medical programs available should be considered for surgery. The great majority of patients with coronary artery disease are NOT candidates for ... bypass surgery."

Chelation therapy has been documented to correct or improve a number of chronic or long-lasting disease problems. These include many common heart diseases, heart angina pains, high blood pressure, blood vessel disorders such as arteriosclerosis (hardening of the arteries) and atherosclerosis (increasing blockage of the arteries) -- including stroke or near-stroke, senile dementia, macular vision degeneration, diabetic retina eye changes, blockage in leg blood vessels, leg pains when walking, even the effects of early gangrene. Such maladies as diabetes, sexual impotence, osteoporosis (softening of the bones), arthritis joint pains, even vague feelings of ill-health and lack of vitality have been greatly diminished for many people. Patients have described improvements with rheumatoid arthritis, unusual diseases such as lupus and scleroderma (hardening of the skin), Parkinson's disease, Lou Gehrig's disease, and early stages of Alzheimer's disease.

Let's take the mystery out of this treatment process right away by explaining how simple and painless it is. If you qualify for chelation treatments after an appropriate evaluation, you relax in a special room in the doctor's office -- sometimes in comfortable reclining chairs. A nurse places a small needle in a vein in your arm, so a solution can drip gently into your body from an IV bag. During the hour or two or more it takes to receive the treatment, most patients chit-chat, exchange success stories about their treatments, read a book, or watch TV. Treatments are usually taken weekly for a period of four to nine months, depending upon individual body needs. After a patient has received much of the benefit available from chelation to restore his or her health as desired, a maintenance program of once-monthly treatments is usually advised to help keep (and often extend) these personal benefits. That's about all there is to it!

Chelation therapy most often depends on a medication called EDTA that is carried by the blood throughout your circulatory system. This medication helps to remove toxic metals, such as lead, cadmium, aluminum, arsenic, tin, and mercury from hiding places in body organs. It also briefly and safely lowers the level of calcium in your bloodstream and helps remove excessive iron and copper. The net result of these actions is to serve as an antioxidant, helping to reduce the "rusting" deterioration all over your body. Studies show it reduces the "stickiness" of your blood, so you are less likely to form deadly clots, such as ones that can cause heart attacks, strokes, and other crises. Chelation instructs your body to remove calcium deposited in hardened arteries and in other tissues showing aging changes, including your organs and joints. These functions help stabilize your cells, so they are less likely to deteriorate.

Chelation can also help move magnesium into your cells in place of calcium, creating a much healthier body balance, especially in your energy-production system. These changes appear to reduce the process of blocking your arteries,

especially by removing toxic metals that encourage injury to your blood vessel walls. Chelation also appears to reduce blood pressure in some patients by removing toxic lead and by reducing the tendency of blood vessels to tighten in spasm.

These actions can help improve cellular health and blood circulation to -- and inside -- all organs of your body. And, THAT helps to explain why chelation appears to be so remarkably helpful in so many different disease conditions.

When trying to understand how chelation could be so helpful for you, remember this key point: studies have shown this treatment makes the walls of your blood vessels softer and more flexible by helping your body remove abnormal calcium deposits – *and* it helps more blood to flow through. Bypass operations skip over or remove blockages in only a few dozen feet of BIGGER blood vessels. But chelation helps to improve the condition of thousands of miles of bigger *and SMALLER* blood vessels -- the very ones your organs depend upon in order to function. Improving blood flow to organs which are "in trouble" almost always improves their function.

Many people have worried that bypass surgery might be the ONLY way to help open blocked blood vessels. Drs. McDonagh and Rudolph reported in 1993 on one patient with rather striking improvements, even though he refused surgery. Although this case report is not, by any means, a research "study," it suggests what might be possible in any one patient. In 1990, this gentleman complained of fatigue, shortness of breath, and angina heart pains. His angiogram catheterization pictures showed a 30% blockage of his right heart artery and a 100% complete blockage of a critical blood vessel, the left anterior descending (also called the "artery of sudden death" or the "widow-maker"). His heart could pump out only 30% of the blood present in the main chamber with each stroke, less than half of the 70% considered normal. Nevertheless, he refused bypass surgery and chose instead to have chelation therapy. After 72 IV treatments, he had another angiogram test in 1992. The original 30% right-side blockage was gone completely. The original 100% left-side blockage was reduced by one-third, to only 65%. With each beat, his heart was pushing out 70% of the blood -- a <u>normal</u> reading and dramatically improved from the 30% measured just 2 years earlier. His symptoms of shortness of breath, fatigue, and angina chest pains had disappeared.

In 1955, Dr. Clarke and his associates at Providence Hospital in Detroit first described chelation therapy as a new approach to successfully treat atherosclerosis in their article published in the American Journal of Medical Sciences. They correctly speculated that using chelation to gently remove calcium from the hardening deposits inside blood vessels could allow the body to remove the cholesterol and other components of these blocking deposits, which are called "plaque." A similar build-up of calcium "scale" can often be seen inside older

teapots, hot water heaters, and car radiators. Even though this was the first medical report regarding calcium removal, these doctors wisely predicted that chelation therapy could have far-reaching effects to improve the function of many body organs, simply by triggering the body's natural calcium-balancing system.

Dr. Ray Evers, another American pioneer in making chelation therapy available for people suffering with various deadly diseases, offered his emphatic conclusions in the early 1960s: "From our experience in treating these approximately 3,000 patients with varying degrees of ... [hardening and blockage of the blood vessels], we will unequivocally state that it is our opinion that EVERY patient with this disease in ANY part of the body should be given a therapeutic trial [with chelation] before ANY type of vascular surgery is performed."

Drs. Clarke and Mosher summarized their study of 283 patients treated with chelation between 1956 and 1960 for atherosclerotic blood vessel blockage diseases. They published two articles in 1960, one in the American Journal of Medical Sciences and the other in the American Journal of Cardiology. Simply stated, 87% of their chelation patients showed improvement, a remarkable statistic for these crippling and deadly diseases that strike every organ of the body.

Understanding THAT chelation can help many people with serious disease problems isn't all that complicated. A great deal of medical evidence is now available. But, all you really have to do is talk to chelation patients about their experiences, find out how much more activity they can do, and find out how much better they feel. Do you have to be a rocket scientist to admit that rockets work?... An electrical engineer to enjoy watching television?... A great chef to savor a wonderful meal? Most people trust what they see and hear with their own eyes and ears and are happy to leave the detailed understanding of HOW and WHY it works to the experts.

In a most delightful way of describing the problem, the late Dr. Richard Brennan, a Houston physician who offered chelation therapy, shared this perspective when asked why doctors from the "older school" of practice didn't endorse chelation: "You're always <u>down</u> on what you're not <u>up</u> on," he said.

In a simple way, this idea shows how unrealistic we sometimes are in expecting our family doctor -- or even our internist or cardiologist -- to be "<u>up</u> on" the latest details in other specialty medical fields. Chelation therapy is, indeed, a specialty in its own right, requiring a detailed understanding of biology, physiology, and chemistry -- much more so than for treating colds and cuts. The knowledge base for chelation includes nutritional biochemistry, routinely ignored in the training of

medical doctors, and heavy metal toxicology diagnosis and treatment, again a highly specialized area of study.

Is it fair for us to expect that our regular doctors are "up on" all the newest information in this expanding area of medical treatment? Would it not be more reasonable to ask for a medical opinion only in those areas where doctors are trained, experienced, *and* well-read? To do otherwise is asking them to speculate in areas of medical practice where they might be as unknowing as the patients who are inquiring of them. After all, who has time to review *thousands* of new periodical and medical journal articles on a weekly basis, as well as new information that is not published? New data is being developed so fast no one can possibly absorb a fraction of it. Among all the professions, none is perhaps more specialized than medicine. A patient with a detached retina goes to an eye doctor, not a foot doctor, if he or she wants proper treatment. If someone wants to get factual data about chelation, they need to ask a medical specialist who has been trained to do chelation, and who has used chelation on hundreds of patients -- not someone who has never treated a patient with chelation and likely knows little or nothing factual about it.

Surgery bypass can cost 40 to 50 thousand dollars or more – and deals only with a few *inches* or a few feet of the many thousands of *miles* of blood vessels in your body. However, bypass surgery does absolutely nothing to stop more and more hardening and blockage of all your arteries, since these changes are caused by biochemical imbalances.

In contrast, chelation therapy can cost about 6 or so thousand dollars and directly addresses calcium imbalances, toxic metals that injure blood vessel linings, and cell energy systems that are critical for healing and repair. *AND* chelation does this for all the arteries, capillaries and veins throughout the body, including areas where surgery simply isn't possible -- such as inside the liver, kidneys, pancreas and other vital organs. Is it surprising to you when chelation is not mentioned as a real alternative to other popular medical procedures?

Dr. Norman Clarke and his associates began in 1952 to study patients WITH heart disease but WITHOUT obvious lead poisoning. In 1956, they reported their findings in The American Journal of Medical Sciences. Nineteen patients out of 20 reported "unusual symptomatic relief" with consistent decrease or disappearance of their angina pains. Several showed EKG heart tracing changes back to normal. They achieved these striking results in an average of 35 IV ("in the vein") treatments. After giving over 4,000 high-dose treatments to various patients, they reported mostly mild gut discomfort symptoms which were reduced by adding vitamin B6 to the treatment program. This safety record was a pleasant surprise, given the 95% rate of improvement with serious heart disease patients.

Dr. Wilder and coworkers at the Department of Surgery, Hahnemann Medical College in Philadelphia, were among the first to report on the ability of chelation therapy to remove calcium from hardened arteries. They published their findings in the journal Surgery in 1962.

Dr. Martin Rubin and clinical coworkers reported to the American Chemical Society in 1994 on the significant reduction of calcium in the heart arteries of two patients treated with chelation therapy. The first patient also had major improvements in his clinical status during his chelation treatments. The second had a history of heart attack and a five-vessel bypass operation 14 years before chelation treatments. Clinical evidence of their improvement was shown by before- and after-treatment ultra-fast CAT scans, which have proven that lower calcium levels correlate very closely with less blockage disease in the heart arteries.

A striking degree of recovery of vital function was reported by Drs. Efrain Olszewer and James Carter in their 1988 analysis of 2,870 patients treated in Brazil. 77% of the heart patients showed marked improvement and 17% showed good improvement, a total of 94% obviously better with chelation therapy, as published in the journal, Medical Hypothesis.

Danish cardiologists Hancke and Flytlie published results of their 1993 study in the Journal of Advancement in Medicine. Of 265 patients with impaired heart circulation, improvements were found in 80 to 91% of them, depending on which "before and after" tests were reviewed. 65 of these patients had been told by surgeons to have heart bypass surgery but had not yet undergone operation. After chelation, 89% no longer needed it. Of the 253 patients showing EKG heart tracing abnormalities, 69% showed improvements with chelation therapy.

In 1993, Drs. Terry Chappell and John Stahl published in the Journal of Advancement in Medicine a sophisticated meta-analysis of 19 clinical research studies with a total of 22,765 patients with heart and blood vessel disorders. 87% of the patients showed clinical improvements by objective medical tests, not just their claim of "feeling better." The statistical correlation showed a value of 0.88, which is a very strong indication that chelation therapy was the actual reason for the measured improvements cardiovascular function. Few of the treatments in American medicine have been confirmed to this extent in their claims of patient improvement.

In 1964, Dr. Carlos Lamar was the first to document dramatic improvements in 15 diabetic patients suffering from severe blockages in their leg blood vessels. All

showed relief of their symptoms, with rare side effects encountered. He published his findings first in the journal Angiology and then in 1966 in the Journal of the American Geriatric Association.

In the early 1970's, Dr. Ray Evers privately circulated a paper detailing his experience with over 3,000 patients over a 6 year period, noting: "... that 90% of these problems in the lower extremities make significant gains, including regaining ability to walk long distances comfortably, freedom from claudication [leg pains with walking], and evidence of improved ... circulation [in the feet]."

In 1982, Dr. J. M. Porter and associates reported in the American Heart Journal that a new drug, Trental, had been studied in several medical centers in a double-blind trial. The results showed a 24% improvement in walking distance before the onset of leg pain. This increase was sufficient for the U. S. Food and Drug Administration to approve the drug as effective in the treatment of leg artery blockage disease. But a 24% increase in walking distance would be considered a dismal failure by any chelation therapy doctor, who routinely sees patients who can walk farther by 500% or more as a result of treatments!

Drs. Olszewer and Carter published in 1988, in the journal Medical Hypothesis, the results of 1,130 patients treated in Brazil for leg blood vessel blockage disorders. 91% of their patients showed marked improvement -- defined as the ability to walk 5 times as far without leg pains and improvement to normal of the appearance of the legs and the non-invasive sound-wave test results.

Drs. Casdorph and Farr in 1983 reported in the Journal of Holistic Medicine on a most remarkable experience with 4 patients, each having had a leg proposed for amputation. As a result of chelation therapy treatments, all 4 still had their legs intact and pain-free one year later. In 1993, Danish cardiologists Hancke and Flytlie published their study of chelation therapy for blood vessel disorders in the Journal of Advancement in Medicine. They treated 27 patients who were recommended for amputation; 24 affected legs were saved. They concluded that chelation therapy is safe, effective, and cost-saving. Dr. Terry Chappell, in a letter analyzing their results, observed that if similar results were found in this country with chelation, in 1992 alone 102,000 Americans would have saved their legs. Perhaps these could have been your neighbors or friends? Your father or mother? Your husband or wife? Maybe even yourself?

In 1985, also reported in the Journal of Holistic Medicine, Dr. McDonagh and coworkers studied 117 lower extremities in 77 patients with severe artery blockage disease. After 26 chelation treatments given within 2 months, they documented

blood flow to the legs had improved significantly, as measured by blood pressure comparisons. Drs. Olszewer, Sabbag, and Carter published results of a small double-blind crossover study in 1990 in the Journal of the National Medical Association. All patients treated with chelation improved with their claudication walking pains, despite their history of smoking and the presence of diabetes or hardening of the arteries.

In 1996, Dr. Philip Hoekstra III and colleagues from several chelation offices shared their clinical data, recently prepared for submission to medical journals. They studied 19,147 patients with leg blood vessel blockage disease. All were treated with chelation therapy and measured before and after their treatment series with a sophisticated heat-sensitive camera. 86% of their patients showed a significant improvement in blood flow to the legs, with those having more treatments showing even more improvement.

In 1981, Dr. Richard Casdorph published the first sophisticated study of chelation and brain blood vessels. He reported in the Journal of Holistic Medicine that 93% of 15 treated patients showed improved brain blood flow measurements, but 100% of this small sample improved clinically. Some showed dramatic improvement in thinking abilities after only 20 chelation treatments.

Drs. Olszewer and Carter reported on 504 patients treated in Brazil with brain blood vessel disorders and central nervous system diseases. Brain disease symptoms included poor balance, frequent falls, dizziness, numbness, and ringing in ears, along with thinking problems. 24% of their patients showed marked improvement and 30% showed good improvement, as published in the journal Medical Hypothesis in 1988.

Drs. Rudolph and McDonagh reported experience with a single patient suffering with severe carotid neck artery disease. After only 30 chelation treatments, her 98% blockage had reduced to only 33%, with dramatically smoother blood flow. They published in the Journal of Advancement in Medicine in 1990. This observation prompted them to study 30 patients, each given 30 chelation treatments. Noninvasive sound wave testing showed reduction of neck artery blockage by 21% on average, with patients who came in with more severe blockage showing even better results. This evidence that chelation might work to reduce blood vessel blockage was published in 1991 in the Journal of Advancement in Medicine.

In 1994, Dr. Charles Rudolph and coworkers published a brief case report in the Journal of Advancement in Medicine. Their 59-year-old patient with macular degeneration of his vision showed measurable improvement on retina photographs

and visual fields after only 30 chelation treatments. This report supports others offered by other chelation physicians, such as that from Dr. Leonard Klepp, published in the book The Healing Powers of Chelation Therapy by Drs. Trowbridge and Walker in 1985. The 79 year old diabetic patient was losing vision in both eyes due to macular degeneration. After 21 chelation treatments, his usual eye doctor documented improved blood flow in both eyes, a 300% improvement in left eye function, and a 60% improvement in right eye function. For the first time in several years, the patient was able to read a book.

On ALL counts, many people conclude that chelation therapy is the clear choice. It has been found to be SAFER in terms of survival and side effects, very often MORE EFFECTIVE than you had hoped, EASIER than most other choices, and LESS EXPENSIVE than many choices. The RESULTS are usually so OBVIOUS that your friends and family will tell you that <u>they</u> notice your improvement, too, and -- unlike other medical treatments -- most patients notice that MANY of their body functions IMPROVE. More than any other choice, chelation appears to help control the underlying CAUSE of your problems, even though NO treatment can promise a cure for chronic diseases.

Skepticism, or cautious doubting, plays an important role in making sure that what people claim is what they deliver, and in the best way possible. But ignoring outright the obvious successes that chelation therapy has exhibited in treating many deadly illnesses perhaps goes far beyond an honest or even healthy skepticism. The real tragedy is simply this: in the name of "science," which is the claim used by physicians to restrict information about chelation therapy, people are suffering and dying because they never find out about the choices they have for non-surgical treatments -- or their option to have chelation therapy in addition to surgery, to improve their success and survival.

As medical leader Dr. James Julian states in his book, titled Chelation Extends Life, "If you are disappointed or even frightened by what you have discovered about your health, STOP, LOOK, and LISTEN. Never again will there be a better opportunity to STOP the destructive lifestyle habits which will demean and shorten your life. LOOK at the results of your lifestyle to date. ... LISTEN to the signals your body is giving you and respond. ... If you find yourself close to that 'stitch in time,' the option of [starting] appropriate therapy [such as chelation] is immediately available; or, you may gamble on the future. The choice is yours. ... If we are ever to be any better, NOW is the time to begin."

For more information on chelation therapy, read any of the following books .....

Questions from the Heart, by L. Terry Chappell, M. D.

Forty Something Forever, by Arline and Harold Brecher
Is Heart Surgery Necessary?, by Julian Whitaker, M. D.
Toxic Metal Syndrome, by Richard Casdorph, M.D. and Morton Walker, D.P.M.
Chelation Extends Life, by James J. Julian, M. D.
The Healing Powers of Chelation Therapy, by John Parks Trowbridge M. D.
and Morton Walker, D. P. M. – and several other fine books by Dr. Walker
Dr. Atkins' Health Revolution, by Robert C. Atkins, M. D.
For general information on treating heart and blood vessel diseases, read .....
The Essential Heart Book for Women, by Morris Notelovitz, M. D., Ph. D.
and Diana Tonnessen
Heart Disease and High Blood Pressure, by Michael T. Murray, N. D.
Texas Heart Institute Heart Owner's Handbook,
foreword by Denton A. Cooley, M. D.
The Woman's Heart Book, by Frederic J. Pashkow, M. D. and Charlotte Libov
Healthy Heart Handbook, by Neal Pinckney
and the unique *book-on-tape* audiocassette program,
***LIVING WELL PAST 50:* Rejuvenate Your Heart and Arteries**
by John Parks Trowbridge M. D.

STITCHING BROKEN HEARTS

Heart surgery is a general term, describing several different kinds of operations that can be performed on your heart -- in other words, to help fix the function of your "pump." In this book, the key topic is surgery for heart (coronary) artery blockage disease – atherosclerosis. This is known as coronary artery bypass graft surgery ..... or CABG (pronounced "cabbage") ..... the most common type of heart surgery.

A CABG operation – also called simply a "coronary bypass" or "heart bypass" or "heart graft" operation – starts with the taking of a several-inch segment of vein (thin blood vessel) from your thigh or calf ..... or a segment of artery (thicker blood vessel) from inside your chest wall (internal mammary artery). This will be sewn in place to "bypass" or circumvent the blocked portion of a heart artery. The key point here is that fixing your "pump" involves inserting a new piece of "pipe," the vein graft. Remember that the most common form of heart disease is actually due to blockage in the pipes (coronary arteries) that deliver blood to the heart muscle (the pump itself).

If the "left main" or the "left anterior descending" (LAD) arteries are blocking, your condition can be more serious; the main pumping chamber ("left ventricle") depends on these (and their branches) for much of its blood flow. When the "right coronary artery" is blocking, your condition might not be nearly as dangerous, because your body often can tolerate this limitation better.

When several arteries are blocking, this condition is called "multiple-vessel" or "multi-vessel" disease. As you might expect, this can be more serious than having just one artery in trouble. However, the number of bypass grafts that are placed by your surgeon (whether double, triple, quadruple, or more) does not always mean that your condition was more or less severe.

In the classical procedure, each segment or length of vein is sewn into the root of the aorta – the large blood vessel coming immediately off your heart, carrying blood to your entire body. The other end is then sewn into the side of one of your heart arteries, past the blocking area. The "internal mammary" procedure can leave the artery attached to its origin point in the chest, with just the "tail" end sewn into a heart artery. The idea, in either procedure, is to improve blood flow to your heart muscle (pump) by providing a new route – the "bypass" (pipe) – around the blockage. In this way, oxygen and other nutrients can be delivered in greater amounts, so your heart muscle can function more normally.

A key feature of coronary bypass surgery is that your surgeon does not need to enter any of the chambers of your heart. Nevertheless, bypass is usually called "open-heart surgery." Surgical heart valve repair or replacement usually require opening one or more heart chambers. The same is true when repairing a defect (hole) between the chambers or when repairing an aneurysm, a bulging, weakened area of heart muscle (often due to heart attack damage).

An increasing number of angioplasty ("blood vessel repair") procedures are being done, often saving the patient from having his or her chest opened for a "cabbage" bypass operation. The most common form uses a tiny tube (catheter) passed (from your arm or groin) into the affected heart artery and threaded past a blockage. Very skillfully, your surgeon positions the deflated balloon, which lies just behind the tip of the tube, so that it crosses the blocking deposit, where your artery is narrowed. The balloon is carefully blown up for several minutes. When it is inflated, the wall of the balloon breaks up the blocking deposits and push these pieces into the wall of your blood vessel. When the balloon is deflated, the "pipe" is open more than before, allowing for more blood flow to the heart muscle nourished by the artery.

A more recent addition to the angioplasty procedure is the use of a "stent," which is a tiny coil that can be inserted in an attempt to hold open an artery after the balloon has been deflated. A stent acts in much the same way as a Chinese "handcuff," into which you insert a finger from each hand – when you pull your fingers apart, the "handcuff" tube tightens down. In the case of a stent, it is stretched to slide over the end of the catheter tube. When the stretch is released, the stent coil expands, pressing outward against the walls of the artery. Some studies have shown very promising results, with "ballooned" blood vessels staying open for a much longer time than ones that haven't been "stented."

Other highly sophisticated techniques – such as using a laser on the tip end of a catheter tube to "dissolve" blocking deposits inside the artery or using a very tiny rotating blade on the tip end of a tube, to carve away the blocking deposits – are also in various stages of development. Their popularity, though, has been limited when compared to the use of the balloon followed by coiled stents.

Before you consent to having heart surgery, ask your surgeon whether your condition is stable enough that you could safely take a few days to read some background material regarding your choices. The first book to get and read is .....

Is Heart Surgery Necessary? – What Your Doctor Won't Tell You

by Julian Whitaker, M. D.

Then the next book is .....

Heart Failure – A Critical Inquiry into American Medicine and the Revolution in Heart Care, by Thomas J. Moore

Finally, you should read at least one of the following books .....

Questions from the Heart, by L. Terry Chappell, M. D. OR Forty Something Forever, by Arline and Harold Brecher.

Write down your questions that come to mind while you are reading. Return to your heart surgeon (or cardiologist) and ask to discuss your questions. Get detailed enough answers that you feel comfortable in making your decision, whether for surgery or for chelation. Keep your options open, stay on good terms with all of your doctors. Remember that the choice is yours – and yours alone. And you can make an informed consent only when you have all of the information YOU need! Your doctors can give you the benefit of their knowledge, their experience, and their advice – take all three happily, consider them in the framework of your own life, and make the best decision that YOU can.

The reason to find answers to your questions is because heart surgery – just like any important medical treatment – carries with it the prospect of serious and potentially long-lasting limitations. The National Institutes of Health estimates that up to 5% of patients who undergo heart bypass surgery die, but the true figure of surgery-<u>related</u> deaths might be even double that. The older you are, the worse are your chances for survival. For every year you are over the age of seventy, mortality risk looms ever greater. For younger patients in their 50s or 60s, second and third heart bypass procedures -- so-called "re-do's" or "repeaters" -- are becoming far more common. Why? The short-term effects of the operation simply do not last as long as many patients hope. Repeat procedures expose patients to additional risks -- of heart attack, stroke, disability, even death for both men and women.

Even those who survive surgery might suffer in ways they did not expect, especially within 12 months following the procedure. According to the New York Heart Association, up to 10% of bypass patients might suffer a heart attack soon after surgery. Despite the best efforts of the best surgeons, heart tissue damage is among the most common complications. About 2% of patients might suffer a stroke and about 2% of patients might show bleeding hemorrhage after surgery.

Even more dreadful for some people is the fact they might come out of the operation as a "changed person" -- plagued by memory loss, reduced mental function, or an altered temperament. These signs of neurological brain damage can be subtle or obvious – and <u>very</u> long-lasting. They might occur in up to 20% of bypass

survivors. One in five patients who seem to have made it through the physical dangers might suffer serious depression for a year or longer. Many friends and relatives report that patients "simply aren't the same" after bypass surgery.

Perhaps these risks would be justifiable if heart bypass surgery produced and maintained desirable results for a majority of patients. But reports from major studies have fallen short of conclusively proving this outcome.

Dr. Thomas Preston, professor of cardiology at the University of Washington in Seattle, has spoken before many groups of physicians with the same message each time: "It's a particularly dramatic and expensive surgery, and scandalously overused." As Dr. Preston concluded in an interview in MD Magazine in February 1995, "It is the epitome of modern medical technology. Yet, as it is now practiced, its net effect on the nation's health is probably negative. The operation does not cure patients ... and its high cost drains resources from other important areas of need."

Perhaps Dr. Preston also finds unsettling the report by Dr. Jeffrey Isen and others, published in the journal Circulation in 1981. They found that using an angiogram picture to determine the degree of narrowing of the main heart artery – the largest and easiest to see – is subject to considerable error. Their study showed that 25% of the readings of blockage were OVER-estimates – the patients actually had LESS blockage than reported.

Even more disturbing, Dr. Preston declares that "Fully half of the bypass operations performed in the United States are unnecessary. A decade of scientific study has shown that, except in certain well-defined situations, bypass surgery does not save lives or even prevent heart attacks: Among patients who suffer from coronary-artery disease, those who are treated without surgery enjoy the same survival rates as those who undergo open-heart surgery."

This west-coast opinion held by Dr. Preston is shared by his east-coast colleagues at Harvard, where Dr. Thomas Graboys is head of a clinic that gives second opinions for cardiovascular problems. In an article published in the Journal of the American Medical Association in 1988, he reviewed 88 patients who had previously been advised to have heart bypass surgery. He and his staff advised 74 of them not to have surgery, based on non-invasive sound-wave testing -- in other words, without having to look at any angiogram catheter tests. Sixty out of the 74 said they didn't want to have any surgery that wasn't urgently needed. All 60 remained alive during the two years of follow-up. Instead of being "walking time bombs," they were happy survivors without buzz-saw tracks up the center of their chest.

Dr. Graboys followed this with another report in the Journal of the American Medical Association in 1992, reporting on 168 patients who had been previously advised to have heart angiogram catheter pictures taken. These procedures are considered routine by many physicians and patients, but they, too, have risks of serious side effects. His group recommended that 94% of the patients -- 158 out of 168 -- did NOT need to have the potentially risky angiogram test. Over a follow-up period of almost 4 years, only 7 of those who decided against the angiogram died of heart-related problems -- only 1.1% each year. These patients were hardly a "walking time bomb," hardly poised with one foot in the grave, but generally fared at least as well as those who underwent the risks and rigors of the angiogram test and the bypass procedure that usually follows a day or two later.

In fact, the risks of death from choosing bypass surgery or balloon angioplasty might well be greater, as the Emory University Angioplasty versus Surgery Trial reported in the New England Journal of Medicine in 1994. 392 patients underwent surgical bypass or angioplasty. In the next 3 years, 6% of the bypass patients died; 7% of the balloon group died. The German Angioplasty Bypass Surgery Investigation report in the same journal issue was even more specific. The in-hospital death rate was 2.5% for the surgical bypass group and 1.1% for the balloon group.

Statements like this might seem to be bold exaggerations, said just to make a point. However, published facts appear to bear them out. For example, The Veterans Administration Bypass Surgery Trial was first reported in the New England Journal of Medicine in 1984 and then reported as a ten-year follow up in the journal Circulation in 1990. Their conclusions: overall, surgery does not significantly increase long-term survival rates. Further, surgery does not appear to decrease the incidence of non-fatal heart attacks.

Need more proof? The Coronary Artery Surgery Study, reported in 1984 in the New England Journal of Medicine, combined patients from some of the country's best cardiovascular surgeons at Stanford, the Cleveland Clinic, and other prestigious centers. Comparing heart attacks and deaths in medically- and surgically-treated groups over a 10-year period, they found that the operation does not reliably relieve pain and there were no significant differences in the work status or the recreational activities of patients. Exactly how did they word their conclusions? Like this: "Therefore, as compared with medical therapy, coronary bypass surgery appears neither to prolong life nor to prevent myocardial infarction [heart attack] in patients who have mild angina [heart pain] or who are asymptomatic [without obvious symptoms] after infarction [heart attack] in the five-year period after coronary [heart] angiography [pictures]."

None of these studies can be taken to mean that YOU would not do well with heart surgery. In fact, many people are living proof that the operation has worked well for them. But when facing surgery that can change your life in more ways than just "good" ones, you should prepare yourself with ALL the facts. Remember, you can still have surgery if chelation therapy fails to help your problems well enough. Remember that you can still have chelation therapy after recovering from your heart surgery well enough to leave the hospital. Keep your options "open."

PLUMBING WITH FANCY WRENCHES

Thanks to major advances over the past 40 years, cardiovascular surgeons now have a broad selection of tools to help repair (or even replace) damaged areas of blood vessels. Even though balloon angioplasty is often considered to be a "heart operation," it can be equally useful to help open short segments of blockage in blood vessels to other body areas.

Fancy procedures are under development, using technological tools that have recently become "miniaturized," so that they can be placed on the tip of a catheter tube (just like the balloon mentioned above). These include an operating laser beam, which "evaporates" blockages, and a tiny whirling blade or "sander," which gently "shaves off" blocking deposits.

An older tried-and-true technique is called "endarterectomy," which involves opening and scraping out the blockage deposits in an artery. One of the most common areas this has been done is in the "carotid" arteries along the front sides of the neck. Some controversy surrounds this operation, since a percentage of patients undergoing the "arteriogram" pictures or the operation itself will suffer the stroke they are hoping to avoid by having the operation.

An aneurysm, bulging of the weakened wall of a blood vessel, can progress to the point of rupture. For a critical blood vessel, such as your aorta, this event could be life-threatening. For this reason, your doctor will thoroughly evaluate and carefully follow any changes suggesting an aneurysm. Surgical repair will be needed when the bulging reaches levels that are more likely to worsen and even rupture. The operation usually involves removal of the damaged portion of blood vessel wall, with a new fabric tube ("graft") sewn in as a replacement. Because disease changes can extend over a long length of artery, these operations sometimes involving sewing the graft into two or more arteries. Whenever such a new graft crosses a joint, you are more prone to future problems requiring more medical attention and even reoperation. The risks are even higher for smaller arteries, such as those that cross behind the knee or the elbow, or where blockage is below the knee or the elbow.

THE CHALLENGE FOR SURGERY IS ..... KNOWING WHAT, WHERE, WHEN?

A heart surgeon is at the pinnacle of modern technology in medical practice. The training, experience, skill, and judgment demanded when treating every patient is well rewarded by the miraculous successes of rescuing people, literally, from the jaws of death. But, just like every other medical or surgical treatment, heart surgery fails to deliver a spectacular result for every single patient. And the patients are older and sicker than most others in medicine, so a number of people suffer unexpected problems afterwards -- and some of them die during or soon after the operations. So it's easy for people to become distressed at the prospect of surgery and with the surgeons themselves. But indeed we need heart surgeons – and we need them available on short notice, to help solve problems that could be deadly without proper care.

The following heart and blood vessel conditions clearly need surgical attention when they reach the point that they risk your survival, wellbeing, and lifestyle:

- **damaged heart valve, worsening to point of needing replacement or repair**
- **worsening bulging aneurysm of heart muscle damaged by heart attack**
- **injury to heart, to its surrounding sac, or to the great blood vessels in some accident**
- **congenital heart disease (defects and distortions in structure)**
- **unstable angina heart pains (pains coming at rest, awakening from sleep, dramatically limiting activities and lifestyle)**
- **worsening angina heart pains despite appropriate heart medications**
- **worsening blockage of left main coronary artery ("left main") or left anterior descending coronary artery ("LAD"), when associated with worsening patient symptoms (angina chest pains) and worsening abnormal changes on EKG or stress test EKG**
- **worsening blockage of left main coronary artery ("left main") or left anterior descending coronary artery ("LAD"), without worrisome patient symptoms BUT with seriously decreasing heart efficiency (lowering ejection fraction or increasingly larger areas of reduced blood flow to heart muscle as documented on thallium stress test)**
- **injury to heart coronary blood vessels after attempted angioplasty or similar procedures**
- **worsening bulging aneurysm of aorta (largest blood vessel, coming off the**

heart and going through chest and belly) or other main arteries

- *** injury to aorta or other main arteries in an accident**
- *** worsening blockage of a main artery to or along an arm or leg or to the head, with worrisome patient symptoms**
- *** steadily worsening heart muscle function, requiring repair or replacement of the heart ("heart transplant")**

Other heart and blood vessel conditions can benefit from surgical attention – these should be handled on a case-by-case basis, with individualized diagnosis and treatment planning discussed in detail by the surgeon.

You will be wise to remember in the conclusion offered by Drs. Terry Chappell and Michael Janson offered in a 1996 article in the Journal of Cardiovascular Nursing: "... Chelation therapy does not [prevent] the use of surgery, and in spite of receiving chelation treatments, some patients will require [surgery]. There is usually time for patients to try chelation therapy before surgery or amputation, as [Harvard cardiology professor Thomas] Graboys and associates found in 1987 and 1992.... In addition, patients who are not surgical candidates and who are doing poorly often benefit from chelation therapy.... This approach offers great potential benefit and is quite safe. It is also relatively inexpensive and does not interfere with other treatments."

Appendix 1

NO LONGER FEELIN' GROOVY?

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Diseases and other disturbances of natural function can show as symptoms – or feelings that you have, that you have to describe to others – or as signs – conditions or changes that can be observed and measured by someone else. Unfortunately, many people ignore the changes that they "sense" happening to them on the inside until they finally develop obvious signs ..... or suffer with "unexpected" sudden crises, such as a heart attack, stroke, gangrene, or other serious medical emergency.

The following is a short list of basic changes you might notice. As with any health concern, any change that is definitely different – especially one that starts to limit you in any way – should be reviewed with your doctor. Smokers and diabetics (especially when blood sugars are not well controlled) are at much higher risk of developing many of the following problems.

Knowing that problems are developing gives you a valuable opportunity to take corrective measures early, before catastrophe strikes. Knowing that you have several risk factors gives you the BEST opportunity to take preventive measures early, often delaying (maybe permanently?) the onset of disease problems or otherwise reducing their severity.

Heart and blood vessel diseases are critical because your "pump and pipes" deliver nutrients and oxygen to every organ of your body (and take away wastes as well). Thus, both earlier and later symptoms and signs can appear to be "generalized" changes in your body, not just specific to your chest or to an arm or leg. Fatigue and sluggishness or weariness might be the earliest problems you experience. If you're an adult, especially with a number of risk factors, you should seek prompt medical attention for proper diagnosis and treatment, regardless of the underlying cause. Remember that many heart ("pump") problems are due to blockage changes in the "pipes," the heart coronary arteries upon which your heart exclusively depends for its own blood flow.

Shortness of breath, often starting with extreme activities but later coming with less exertion (such as climbing a flight of stairs, then with walking even short distances, then with minimal activity) is another symptom of concern. If this occurs while you are sleeping – or if you sleep more comfortably on several pillows or in a recliner chair – definitely discuss these changes with your doctor. Often shortness of breath comes with "fluid loading," mild or worsening swelling in your feet, ankles, or

forelegs. Sometimes you'll notice this as "banding patterns" from your socks or stockings or shoes, when you remove them after standing much of the day – or as an unusual snugness or tightness to shoes that used to fit comfortably.

"Congestive heart failure" is the term used when your heart is gradually less able to keep up with your body's demands that it pump enough blood to all your organs. Over a period of years, months, or sometimes weeks or days, you can become more and more fatigued and weary, noticing slight then worsening shortness of breath, sometimes even frequent wheezing or coughing or increasing difficulty taking a deep breath, perhaps awakening from sleeping gasping for breath. Many people find themselves more comfortable when sitting than lying down. Your feet and ankles begin to swell, gradually more and more often, sometimes not returning to normal even after lying down all night.

"Angina" (ann - JY - nuh or ANN - juh - nuh) – also called "angina pectoris – is the squeezing, pressing, or dull heavy pain in your chest, signifying that your heart is not getting enough blood flow and oxygen to do its pumping comfortably. Often these pains begin in the middle of your chest and radiate out to your left arm, shoulder, or hand, occasionally to your left jaw or left shoulder blade. Angina heart pains most often occur during physical exertion (even though it doesn't seem like much activity to you) or "stress," whether work or home stress, or emotional distress.

People with heart rhythm disturbances sometimes notice the changes happening in their chest. You might describe "palpitations," where your heart seems to bump, pound, jump, flop, flutter, or race. Occasionally these disturbances create a lightheadedness or "fainting" feeling, where your heart isn't pumping blood efficiently enough to deliver needed blood flow to all parts of your brain.

Blood vessel disease problems -- especially blockage changes -- show as symptoms in the organs depending on blood flow for their function. Sometimes heart valve disease problems can look like blood vessel diseases – so a prompt and thorough diagnostic evaluation is always important. When flow is decreased to your brain, you might notice brief disturbances to your vision, difficulties with your speech, spells of confusion or dizziness or emotional instability, even episodes of difficulty controlling your balance, your legs, your arms, or your hands. These symptoms can represent early changes, which can suddenly become more severe – so-called "TIA's" or "transient ischemic attacks," called "come-and-go strokes."

Blood vessel problems in your belly, your pelvis, or your legs can show most commonly as cramping pains in one or both legs. This is called "intermittent

claudication" (claw - dih - KAY - shun), meaning that it comes and goes, most often starting when walking or with other exertion and then quickly disappearing when you stop to rest. You might also notice decreased sensation or even prickling numbness in your feet, sometimes coolness of your feet or forelegs, which might become very sensitive to cold (air conditioning, drafts, winter weather). When pains become more persistent, you might even be suffering early gangrene changes.

The biggest body blood vessel, your aorta (a - OR - tuh), comes off the heart and then branches to provide blood flow to every organ of your body. All the "pumping pressure" of the heart is pushing blood through the aorta. Thus, as blocking plaque deposits occur and as hardening changes occur, your aorta can suffer quite dramatically. You can develop an "aneurysm" (ANN - your - is - um) in the chest or the belly segment of your aorta. This aneurysm can bulge and even start to split the walls of this major blood vessel – as these changes worsen, they can create a life-threatening surgical emergency. You might notice constant or intermittent pains radiating to both shoulders, to your neck, or to your upper or lower back. You can suffer with shortness of breath, a husky change to your voice, a metallic cough, even difficulty swallowing. Sometimes the blood vessels to your kidneys are affected, reducing their function and even leading to kidney failure. Other organs, such as your intestines, your pelvic organs, even your legs and feet can suffer as well. Any suspicious changes need to be promptly diagnosed and properly treated.

Appendix 2

DISCOVERING WHETHER *YOU* COULD BE SUFFERING

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The first three "tests" are nonspecific and could represent changes due to heart disease, blood vessel disease, or both – or neither. You always deserve to see a physician for proper diagnosis, since changes in your wellbeing can come from problems with one or more of several different body systems. Heart and blood vessel disease, of course, are among the most important because they can have sudden and serious consequences.

FEELIN' GROOVY

The first "test" is simply the answer to this question: "How do you *feel*?" Especially important are any recent changes from comfort to discomfort – or worsening of mildly disturbing symptoms to more distress, more frequency, or longer duration. This question is after what you can feel privately, on the "inside," instead of what we can measure by testing. Do you feel energetic? Enthusiastic? Rested after a full night's sleep? Are you optimistic – or blue? Are you even-tempered – or moody? Perhaps even irritable? Are you achy and stiff? Do your muscles feel plump and hearty, like they used to, or are they limp and too weak to move you easily? Does your skin feel soft but snug, like it used to, or is it thin and crusty – or otherwise altered in texture? Do you hurt in your joints? Or maybe all over? Are you suffering with headaches? Neck or back pains? Dizziness or problems with your balance? Muscle cramps when you walk "too far"? Do you still have an interest in sex?

MIRROR, MIRROR ON THE WALL

The second "test" is done by friends and family all the time – and can be done by you at any time: Just study how you *look* in the mirror. Do you look tired? Is your skin color less pink, perhaps even "bluish" or "flat" or "grayish"? Has your skin become more wrinkled that you had expected? Do your eyes lack the sparkle they had before? Has your hair lost its luster? Are your fingernails or toenails thin and splitting? Or thick and crusting, perhaps yellowing? Do you look older than your calendar years? Have these changes happened only recently – or have you perhaps ignored (or not noticed?) them for quite some time?

Lesser known risk factors include a diagonal crease in the ear lobe, from the side of the face outward and down, and a soft grey circular outline around the colored part of the eye. A more obvious risk factor is whether you look "overfat" or overweight, muscles sagging, shoulders stooped from inactivity. You can be at a good weight level but still have excess body fat, often from leading a sedentary ("sit-down") lifestyle.

VITAL SIGNS

So-called "vital signs" are the third set of "tests," measuring "vital" life functions. While you think of these as done in a doctor's office or hospital, they are quite easy to measure at home. If you are familiar with how your body "measures up" when healthy, you can more easily discover "abnormal" changes earlier, when they are more treatable.

PULSE – Felt easily at your wrists ..... is your pulse steady in rhythm, about 55 to 75 times a minute, arriving about the same time at each wrist, and strong instead of "thready" or weak? Your pulse is a direct reflection of the rhythm of your pump (heart) coupled with its strength of contraction ("beating" or pumping action). Think of your fist, with fingers gently curled – now squeeze tightly then relax, squeeze tightly then relax, repeating this cycle about once each second. That's how your heart works while you sleep or play, day in and day out, year after year. Too fast a heart beat (called "tachycardia") is inefficient and exhausting. Too slow a heart beat (called "bradycardia") can be deadly. An irregular heart beat can be nothing more than a distressing nuisance or can indicate a potentially deadly interruption in your heart's electrical conduction system. Always bring any abnormal rates or rhythms to the attention of your doctor, for prompt diagnosis and any needed treatment.

BREATHING – Counted easily as your chest moves with each breath ..... is your breathing steady in rhythm, about 10 to 12 times a minute, smoothly in and out, and softly silent? A number of breathing problems can complicate heart and blood vessel function and need to be corrected for best treatment results.

TEMPERATURE – Taken by thermometer or other "space-age" probes or strips ..... is your temperature comfortably steady through the day, without episodes of feverish feelings or coolness? Dr. Broda Barnes, in a fascinating lifetime of research, explored the role of low thyroid function ("hypothyroidism") in contributing to heart disease. He measured thyroid function by taking the body temperature with a "basal" thermometer under the arm on awakening in the morning. His book, Hypothyroidism: The Unsuspected Illness, describes the benefits that are available from treating low thyroid function.

BLOOD PRESSURE – Measured by arm or finger cuff (sphygmomanometer, if you can say it!) ..... is your blood pressure below 140 for the top (systolic or pumping) number and below 90 for the bottom (diastolic or resting) number? The ideal values are 120 over 80 – and lower readings are healthier than higher ones, which place a mechanical stress (wear-and-tear) that can damage both your pipes (arteries) and your pump (heart). When the numbers are higher, this means that your heart is working harder in order to move the blood through your pipes to your body organs. The bottom number is the pressure against which your heart must push when it starts each pumping stroke. Keeping this number below 90 is extremely important in order to preserve your heart function. One reason that high blood pressure ("hypertension") is called "the silent killer" is that your blood pressure can be elevated without any altered sensation that you can feel or detect. All the while, without your knowing it, elevated pressures can be stressing your heart and blood vessels, finally to the point of breakdown.

PHYSICAL EXAMINATION

The next "testing steps" are more complicated, requiring medical training. The first of these is careful observation or inspection, then palpation or touching, then auscultation or listening, and finally percussion or thumping. These need to be divided into two areas, first reviewing those tests that evaluate your heart (your pump), then those tests that evaluate your arteries (your pipes).

OBSERVATION – HEART – Occasionally a patient shows obvious evidence of the beating heart, such as a heaving chest. Sometimes this observation indicates serious underlying heart disease. In a patient with more serious "congestive heart failure," sometimes the trained physician can see distended (full) veins on both sides of the neck.

PALPATION – HEART – The physician's hand placed gently on the left chest sometimes can detect the heave of a straining heart beat, the "thrill" of blood flowing past a diseased heart valve, or even the pumping of an enlarged heart.

PERCUSSION – HEART – Gentle "thumping" on the chest can create sound waves that help to outline the size and position of the heart, especially one that is enlarged. This is similar to "tapping" gently to locate a "stud" behind the wallboard.

AUSCULTATION – HEART – Using a stethoscope, the trained physician can listen to the normal sounds of blood flowing through the valves of the heart – and to abnormal murmurs and clicks that need to be clearly diagnosed by "picture" tests, described below.

OBSERVATION – BLOOD VESSELS – The forelegs and feet sometimes have a rich story to share with the trained observer. "Trophic" changes result from decreased blood flow to the skin. These include thinning skin, easy bruising, browning spots or "stains," sores that persist or are slow to heal, and even thickened, crusting and cracking callouses on the soles of your feet. Other changes include loss of hair on the toes, top of the foot, and the shin, and thickening, crusting, and yellowing changes of the toenails. In many cases, toenail changes are due to fungus growth, which can be treated fairly easily – rather than changing your shoe size to accommodate! Think about this: when you walk through the woods, you see mushrooms growing on the dead and dying branches and piles of leaves. What could this mean about the blood flow to your feet?

PALPATION – BLOOD VESSELS – Occasionally a trained physician can feel hardening, widening, or altered pulsations of arteries, especially at points where these pipes come out of your trunk into your neck, arms, or legs – or where your blood vessel cross a joint, such as behind the knee. In a thinner person who can relax the belly muscles enough, occasionally a physician can feel the abdominal aorta (the largest blood vessel of the body, from which branches come off to your organs and legs). When the aorta starts to widen and harden, the condition is called an "aneurysm" (spreading out like a bloated sausage, like a balloon when it is first being inflated), which finally requires surgery to prevent a "blow-out" (called a "dissection" or rupture).

AUSCULTATION – BLOOD VESSELS – The trained examiner can use a stethoscope to listen for the sounds made by abnormal blood flow through your pipes. If you walk next to a quiet stream, that's very much like what your blood should sound, flowing smoothly from your pump, through your pipes, to your organs. When you come to some big rocks and a gentle slope, the quiet stream becomes a babbling brook. These sounds are what your physician hears when he listens for "bruits" (BREW-eez), the whooshing sounds of blood flowing through an area of blockage inside an artery. These sounds are best heard in your neck (blood flow to your brain), in your belly (in the large abdominal aorta, going to your organs and legs), and in your groin (blood flow to each leg). Abnormal sounds sometimes require tests to measure how much blockage is present in your pipes.

FUNCTIONAL CAPACITY

The next "tests" are simple measurements of your general function, sometimes called your "functional capacity." An informal evaluation is walking up and down stairs to see how much straining or "huffin' and puffin'" results – that's a rough measure of your circulation system, your pump and pipes.

2-STEP TEST – An old and rarely used but simple test of your heart and blood vessel condition is the "Masters 2-Step Test." You step up onto a small stool and then back down onto the floor. Measurement is made of your heart rate and blood pressure before and after this timed exercise – minimal elevations of both heart rate and blood pressure indicate better health.

LUNG VOLUMES – Another simple test involves blowing air out of your lungs, to measure your lung capacity and the volume of air you can blow out in a timed interval. These are called "FVC" or "forced vital capacity" and "FEV" or "forced expiratory volume" and they measure the potential efficiency of your lungs for moving oxygen into your system.

ANKLE/ARM INDEX – A simple test of blockage of your blood vessels relates to their ability to maintain blood pressure at a distance farther from your heart. The "ankle/arm blood pressure index" (A/AI) is a quick and easy way to assess an increased risk for blood vessel disease (called peripheral artery disease) and, indirectly, an increased risk from heart attacks. The top (systolic) number of your blood pressure in your ankle is compared to the top number of your blood pressure in your arm. These two numbers should be about the same. The lower your ankle pressure number, the more likely you are to be developing heart and blood vessel blockage diseases.

MEDICAL TESTS OF YOUR HEART FUNCTION

EKG or ECG – ELECTROCARDIOGRAM – BASELINE EKG – Certainly the most common test of heart function is an EKG, which uses tiny skin sensors (called "electrodes") to measure electrical signals from your heart. The EKG provides indirect information about the size of your heart chambers, whether your heart rhythm is regular and is started and carried normally through the conduction "wiring" in your heart, and whether your heart might have suffered muscle damage from an earlier heart attack.

HOLTER MONITOR – HOLTER EKG – If your heart rhythm might be a problem, wearing an EKG tape recorder for 24 hours can help determine precisely what is going on and whether you need special treatment. This tiny machine, slightly larger than a portable radio, records an EKG tracing while you go through your normal daily routine. Also, computer programs can scan this lengthy EKG record to see whether you might have episodes of "silent ischemia" – where your heart is suffering from decreased blood flow but you don't feel any chest pains or other limitations to warn you to slow down and to seek appropriate medical treatment. Fancier tests, called "electrophysiologic studies," can be done at

university medical centers if your doctor is concerned that you might develop a life-threatening rhythm disturbance or if you have a disabling rhythm problem that has been very difficult to treat.

CHEST X-RAY – This simple test can show whether your heart pumping chambers appear to be enlarged. On the x-ray, you might also see hardening changes ("arteriosclerosis") or abnormal widening ("aneurysm") of chest aorta (the largest blood vessel of your body, coming directly out of the heart). Finally, you might see changes of congestive heart failure, filling your lungs with fluid that can also reduce the efficiency of your breathing.

ECHOCARDIOGRAM – "CARDIAC ECHO" – Bats use "echos" to locate objects in their flight path. Submarines use "echos" (called "sonar") to outline the bottom of the sea and rock formations (or other submarines!) that might lie ahead. Doctors use sound-wave "echos" to make a general outline the chambers and valves of your heart – and to "see" them functioning. This test can give an estimate of how efficient your heart is in terms of pumping blood out of the main chamber ("left ventricle") into the pipes going to the organs of your body. This measurement is called your "ejection fraction" (or "EF," for short). It represents the percentage of blood that your heart pumps out to the body with each stroke, compared to the amount that is filled into your pumping chamber. Since you can't "squeeze it dry," some blood always remains inside your pump. If you pump out 70% or more each time, this is a normal value associated with "good" heart efficiency. While most "echo" tests are done with a sound probe on your chest, special ones can be done with a tiny probe that slips down your swallowing tube ("esophagus"), to a position just behind your heart. The "exercise echocardiogram" is a newer test that is done in combination with an "exercise stress test." Less expensive than several other tests, the "exercise echo" appears to be a fairly accurate reflection of heart function – in other words, of heart artery circulation – but it cannot provide images (outlines) of the heart blood vessels.

EXERCISE STRESS TEST – "STRESS EKG" – "TREADMILL EKG" – "TOLERANCE TEST" -- "EXERCISE EKG" – The purpose of the exercise stress test is to evaluate the way your heart responds to the physical stress of a carefully measured exercise load, whether walking and jogging on a treadmill or pedaling a stationary bicycle. Skin sensors are placed on your chest just like for a resting EKG. Since your heart is pumping harder during exercise, a cuff is placed on one arm, to watch your blood pressure responses as well. The physician conducting your test will start your exercise slowly and then gradually increase your pace, aiming at a calculated heart rate for you.

The test is completed when you reach your "target" heart rate, or when your legs

are too fatigued to continue, or when you are too short of breath to continue, or when you complain of chest pains or leg muscle cramps, or when your blood pressure rises or falls abnormally, or when your EKG pattern changes abnormally, whichever comes first. Unfortunately, a stress test alone is not accurate enough to establish that disease is present in the heart arteries. However, a "negative" test result can be fairly reassuring. A "positive" or "borderline" test needs to be confirmed by other evaluations. Incidentally, people who cannot exercise with their legs (because of arthritis or other limitations) can be tested using a drug ("Persantine") that can increase the stress on the heart.

THALLIUM EXERCISE STRESS AND REST TEST – "THALLIUM EKG" – This specialized exercise stress test is identical to the usual stress test with a key exception. At the peak of exercise, radioactive thallium is injected into a vein in your arm. Then a nuclear medicine imaging camera is placed over your chest, like a fancy "Geiger counter," to scan your heart for about 20 minutes. This camera measures gamma rays coming from the thallium in the blood flowing through your heart muscle – thus, this is a "perfusion" (or blood flow) scan. The thallium scan pictures are repeated several hours later, when your heart is "at rest," and the "exercise" and "rest" picture sets are compared. When blood is flowing through the heart muscle, the camera records thallium as present by outlining the muscle. Any area not outlined – a "hole" or "defect" in the picture – indicates that blood flowed poorly if at all. When a "defect" present on the "stress" pictures "fills in" on the "rest" pictures, this suggests a blood vessel blockage that is significantly slowing the blood flow. When the same "defect" is present on both sets of pictures, this suggests either a severe blockage of blood flow or a scarred "dead area" of heart muscle, such as would be injured during a heart attack.

MUGA SCAN – This specialized radioisotope scan measures radioactive tracer material that is injected into your vein, makes a "first pass" through your heart, and then remains in the blood cells for several hours while more pictures are recorded. The test name comes from MUlti-Gated Acquisition of images, which help to evaluate the overall function of the heart and muscle damage done by a heart attack. Further, the MUGA scan accurately shows the percentage of blood pumped out of the major pumping chamber – the left ventricle – with each stroke. This amount is called the "EF" or the "LVEF," the left ventricle Ejection Fraction, and it directly relates to heart muscle performance. A less complicated way to measure the ejection fraction is by using an echocardiogram, described earlier.

SPECT SCAN – Single photon emission computed tomography ("SPECT") is another nuclear scanning test, but this one provides a three-dimensional image of the heart itself. You lie on a special examination table and a small dose of radioactive material is injected into your arm. A photon camera – somewhat like a

"Geiger-counter" – rotates around you, taking pictures from several different angles. The SPECT scan provides clear pictures of damaged heart muscle and reduced perfusion (blood flow) through areas of the heart chamber walls. This test is available in only a few university medical centers and is not yet widely used.

PET SCAN – Positron emission tomography ("PET") scanning is another university medical center test, expensive and also not widely used yet. The test provides a sophisticated measurement of areas of the heart muscle that are not receiving blood flow and have been damaged.

ULTRA-FAST CAT SCAN – ULTRA-FAST CT SCAN – Computerized axial tomography is the formal terminology, but what it really means is computer-generated pictures displayed as "slicing through" the body. You lie flat on a special table, which slides into a "donut"-shaped machine, which takes the x-ray pictures. These outline "slices" give an idea of internal organ anatomy in a way that other tests cannot easily "look." The "ultra-fast" version is a highly specialized test that is timed to your EKG. When your heart is "resting" between beats, several CAT scan pictures are taken. Calcium hardening in the heart (coronary) arteries appears on the pictures as "white dots." Counting the white dots gives a direct measure of hardening in the heart arteries, which is related to their degree of blockage. Ultra-fast CAT scanning is being promoted as a "screening" examination, to determine who might be more at risk for suffering with serious heart disease.

MRI – MAGNETIC RESONANCE IMAGING – The MRI test is similar to the CAT scan in that it uses a computer to produce pictures looking like "slices" through the body organs. It differs from the CAT scan by using magnetic fields and radio waves instead of x-rays to create images; it differs from radionuclide scans by not needing any injected radioactive material. Instead of sliding through a "donut" hole, you slide into the center tube of a hollow magnet that holds your whole body. Among its many uses, the MRI assists evaluation of heart valve disease and congenital birth defects in the heart and blood vessels. People made anxious by "confined spaces" might need sedation before sliding into the tube. Pacemakers, hearing aids, and other metal "parts" prevent the use of MRI testing.

CARDIAC CATHETERIZATION – CARDIAC ANGIOGRAM – CORONARY ANGIOGRAM – CORONARY ARTERIOGRAM – "HEART CATH" -- This test is the most invasive one and the most expensive. Cardiologists, cardiovascular surgeons, and other physicians often rely on it as the most definitive way to diagnose heart coronary artery disease. This procedure might be recommended when other tests don't provide a "definite" answer but your doctor still suspects serious heart artery disease and needs to make decisions regarding your treatment plan.

Catheterization – the passing of a very tiny tube into your blood vessels – and angiography – taking pictures of your blood vessels – involves many of the risks usually associated just with an operation. So the testing often is done in a hospital setting, with needed sedation. A long, flexible tube is inserted into a large artery (or sometimes into a vein) in your groin or in your arm, near your elbow. Various tubes can be inserted and interchanged, to take blood pressure readings, to collect blood samples, and to inject dye to take pictures ("angiograms") of heart chambers and heart (coronary) arteries. These movie pictures and pressure readings can help to diagnose scarred, injured, or narrowed heart valves, open or weakened defects in the chamber muscle walls, the efficiency of heart pumping, and blockages in the heart arteries.

MEDICAL TESTS OF YOUR BLOOD VESSEL FUNCTION

ULTRASOUND IMAGING OF ARTERIES – Using a special probe pressed gently across your skin, sound-wave images can be made of the inside of your blood vessels and of the pattern of blood flow. No dye is injected, no x-rays are needed, no radioactive tracers are used. Ultrasound testing has become a major tool for evaluating blockage of your carotid (neck) arteries, heading toward your brain. Also, ultrasound can measure and picture your mid-belly abdominal aorta (large artery, heading toward the legs), looking for stretching and bulging (aneurysm changes). Using slightly different techniques, ultrasound testing can be used to look for "plugging" inside veins, such as in your legs – this is called "venous imaging."

NON-INVASIVE VASCULAR STUDIES – PLETHYSMOGRAPHY, DOPPLER WAVEFORMS, AND PRESSURES – In a special testing laboratory, blood pressure cuffs are placed at various levels on your legs, to measure blood volume changes (plethysmography) and Doppler (ultrasound) waveforms (tracings) with each heart beat (pulse). When these pulse-volume patterns are compared with blood pressure readings and ultrasound wave patterns at the same leg levels, conclusions can be made estimating the degree of blockage in your blood vessels (arteries). Sometimes these tests are compared before and after exercise – such as walking on a treadmill – to make more obvious the changes that can be associated with early blockage disease in the arteries or to help more precisely locate an area of blockage.

CAT SCAN – Just the same way ultra-fast CAT scans can be used to look deep into your chest to evaluate your heart arteries, regular CAT scans can look inside blood vessels in your chest, inside your belly, in your neck, and in other body areas.

ANGIOGRAM – ARTERIOGRAM – AORTOGRAM – Just the same way a coronary angiogram ("blood vessel picture") is used to provide images of the inside of the heart arteries, similar pictures can be made of other arteries in your body.

Commonly these are made as images of your aorta (the largest blood vessel, coming off your heart and heading down in your belly, toward your legs), of your (iliac and femoral) arteries heading down into your legs, and of your arteries heading upward into your neck and skull (carotid arteries). Another technique, called "Digital Subtraction Angiography" (or "DSA" for short), can provide rough outlines of your arteries without having to have a catheter tube inserted into your major arteries. This fancy procedure is used less, partly because the images are much less distinct than regular angiograms.

BLOOD TESTS
RELATED TO HIGHER RISKS FOR HEART AND BLOOD VESSEL DISEASES

Many people think that a "good physical" with "blood tests and an EKG" is good enough to diagnose early changes of heart and blood vessel diseases. Unfortunately, this is often not true. Indeed, your personal history – describing what you feel as symptoms, especially changes – might be the most important "test." For example, no "test" can feel angina heart pains that you might be having, whether at rest or with activity. A key concept here is that these blood tests help to calculate risk factors but they cannot determine whether you are CURRENTLY suffering with any changes -- early or advanced -- of heart and blood vessel diseases.

"Usual" blood tests do help to determine a few general risks for the development of heart and blood vessel diseases. For instance, a high blood sugar level can be associated with diabetes or with Syndrome X, each of which carries a higher risk for heart attacks, strokes, gangrene, and similar changes. Ideally, your fasting (morning, before eating) blood sugar should be just about 100 mg/dl – and your 2-hour after eating blood sugar should be less than 140 mg/dl (below 120 is even better). A low carbohydrate (sugars/starches) diet, aggressive nutritional therapies, and chelation therapy have been shown to improve blood sugar levels, along with medications as needed.

Elevated levels of blood fats – total cholesterol, LDL (so-called "bad") cholesterol, HDL (so-called "good") cholesterol, lipoprotein Lp(a) ("bad"), apolipoprotein A-1 (Apo A-1, "good"), apolipoprotein B (Apo B, "bad"), and triglycerides – and the ratio of total cholesterol/HDL cholesterol give useful information of these risk factors for heart and blood vessel diseases. Ideally, these levels should be about .....

total cholesterol ..... above 150 and below 180 mg/dl
LDL cholesterol ..... below 130 mg/dl
HDL cholesterol ..... above 45 mg/dl
triglycerides ..... about 100 mg/dl
total cholesterol/HDL cholesterol ratio ..... below 4.5

Lipoprotein(a) might be one of the better genetically-controlled, independent predictors of the severity of coronary artery disease (and of the extent of carotid neck artery blockage) than most other fat measurements. Indeed, high levels of Lp(a) might explain why otherwise "healthy-appearing" people suffer with heart attacks, while low levels of Lp(a) might explain why people overloaded with other risk factors seem to escape heart attacks and strokes.

Apolipoprotein A-1 (Apo A-1) is a major component of HDL cholesterol; thus, higher levels predict a lower risk for cardiovascular disease. Apolipoprotein B (Apo B) is the primary substance in LDL cholesterol; thus, higher levels correlate with a higher risk for heart and blood vessel disease. The ratio Apo A-1 / Apo B has been found to be an effective indicator of future heart disease risk – higher values correlate with lower risks.

Dietary changes, aggressive nutritional therapies, and chelation therapy have been shown to improve elevated blood fats levels, along with medications as needed.

Uric acid is a metabolism (biochemistry) product that is routinely measured in standard blood tests. Normally it is used to look for kidney disease or metabolic disorders, such as gout. Higher blood levels of uric acid – above about 7.5 mg/dl – have been found in some patients to be related to heart (coronary) artery disease, high blood pressure, high blood fats levels, diabetes, and obesity. Dietary changes and aggressive nutritional therapies can be helpful to reduce elevated uric acid levels, along with medications as needed.

Homocysteine is an amino acid that can be measured in the blood but very rarely is. Higher levels have been found, in a number of medical studies, to be related to an increased incidence of stroke and heart attacks – possibly by directly "scraping" the inner layer of blood vessels. Dietary changes and aggressive nutritional therapies have been shown to be helpful in lowering elevated homocysteine levels.

Ferritin is a special iron transport molecule that floats in the blood – it is not often measured by standard testing panels. Its level can be elevated during states of inflammation – but when chronically elevated this suggests there is too much "free" iron in the body. Excess iron can dramatically increase the level of "free radical" (or "rusting") damage, which can contribute to heart and blood vessel disease. Chelation therapy and donating blood have proven to be effective ways to lower blood ferritin levels.

Fibrinogen, a blood protein made in the liver, is rarely measured but it is central to the blood clotting process. Elevated levels suggest an increased tendency to form

clots. This condition would make you more prone to heart attacks and strokes. Recent studies suggest that higher fibrinogen levels are correlated with higher death rates from strokes. Smoking, obesity, stress, birth control pills, and aging are all associated with increased blood levels. Fibrinogen is a major "acute-phase reactant" (early indicator of inflammation). Aggressive nutritional therapies and tiny doses of aspirin (one "baby" aspirin – 81 mg – daily or every other day) can help to reduce the platelet stickiness and their contribution to abnormally easy clotting.

C-reactive protein (CRP) used to be measured quite often in the past, to evaluate inflammation activity inside the body, but it is less commonly tested now. However, inflammation might be a crucial factor in the development of fatty deposits inside the blood vessels. C-reactive protein mobilizes white blood cells, so your body can respond to injury or infection. Chemicals released in this process might create damage to the delicate lining of the artery, creating changes leading to atherosclerosis. Recent studies suggest that CRP is a strong independent predictor of the future risk for heart attack and stroke.

Insulin is not normally measured in blood tests, but high levels can be present whether you are diabetic or not. Dr. Gerald Reaven of Stanford University has spent almost 30 years publishing his discoveries on how "Syndrome X" – high insulin levels with normal blood sugar levels – contributes to heart and blood vessel disease. This pattern, also called "Reaven's Syndrome," is clearly associated with increased blockage deposits inside your blood vessels. A low carbohydrate (sugars/starches) diet is useful, along with aggressive nutritional therapies.

Research continues to show other biochemical compounds that correlate with higher or lower risks for heart and blood vessel diseases. In the future, diagnostic profiles might become even more specific with measurements of melatonin hormone (higher levels mean lower risks), estrogen and testosterone levels (lower levels mean higher risks), cortisol and DHEA-sulfate (higher levels mean lower risks), and fatty acids (EPA and DHA and alpha-linolenic acid) (higher levels mean lower risks). Insulin and glucose tolerance testing, to evaluate Syndrome X (insulin resistance and higher levels of blood sugar), is likely to become more commonplace.

WHAT IS THE IDEAL "WORK-UP" BEFORE YOU DECIDE ON SURGERY?

Several prominent cardiologists have criticized the "rush to surgery" they have witnessed, feeling that performance of tests in an orderly plan would show that some patients do not even need to consider heart surgery.

The following list is the protocol established for LIFE CENTER HOUSTON. **This is**

strictly advisory in nature, since the actual "work-up" is completed by cardiologists and cardiovascular surgeons actually managing the patient.

1. A thorough history of heart and blood vessel symptoms, including likely risk factors that could justify a higher concern for definite diagnosis.

2. A general physical with emphasis on cardiovascular function.

3. Blood, urine, and hair tests to help determine your risk factors.

4. A resting EKG tracing and possibly a chest x-ray.

5. If abnormalities are found in the above tests or if your history or physical exam suggests a possible heart or blood vessel problem, then non-invasive studies are appropriate, such as an exercise EKG. Remember that every patient is an individual and that these general guidelines must be customized to each person's needs.

6. If your exercise EKG is abnormal, then an echocardiogram and a thallium stress-and-rest EKG test might be needed.

7. If either of these suggests a higher risk for impaired heart performance, then an ultra-fast CAT scan might be needed – also even a MUGA heart scan.

8. If your heart function (as measured by your "ejection fraction" pumping efficiency and by the areas of decreased blood flow on your thallium stress scan or marked calcium deposits on your ultra-fast CAT scan) shows serious concern about heart disease, then angiogram catheter pictures (a "heart cath") might be needed to outline the anatomy and blockages pattern in your heart coronary arteries. If your heart artery pattern suggests high risk for heart attacks (worsening blockage in your "left main" or "LAD" arteries, along with angina heart pains and EKG tracing changes), you might be a candidate for angioplasty or heart bypass surgery.

PLEASE REMEMBER ..... that you can start a chelation therapy treatment program at any point in this evaluation – and that you often *do* have enough time to read about your surgical AND non-surgical options before you ever have to make a choice for surgery or chelation or other treatments.

Appendix 3

DRUGS – GETTING WHAT YOU DON'T NEED ..... NEEDING WHAT YOU DON'T GET

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Medications are the most common treatments used to help with heart and blood vessel diseases. But we have grown up in a culture where a standing joke is that you call the doctor at 2 am and, regardless of your problem, he says "Take 2 aspirin and call me in the morning." And advertisements for new drugs are almost unavoidable on television and in magazines. So it is easy to believe that drugs are both safe and effective – and appropriate. But in some cases, nothing could be further from the truth.

Your problem is knowing which drugs are safe and appropriate – and which might be dangerous and wrong. According to Sidney M. Wolfe, M. D., Director of the Public Citizen's Health Research Group, in America "each year there are approximately ... 659,000 [older adults] who have to be hospitalized because of adverse drug reactions, including 41,000 hospitalizations – 3,300 deaths – from ulcers caused by nonsteroidal anti-inflammatory drugs [like aspirin, ibuprofen, and similar], usually for arthritis, and hundreds of thousands with drug-induced dizziness or fainting. Over half of the Food and Drug Administration adverse reaction reports and 39% of hospitalizations related to adverse drug reactions are in older adults. All told, 9.6 million older adults suffer an adverse drug reaction each year." (From Worst Pills, Best Pills II, copyright 1993)

As you grow older, your risks become higher with taking medications. An adverse drug reaction is about 33% more likely in people in their 50s than those in their 40s, according to Dr. R. E. Vestal, editor of the book Drug Treatment in the Elderly (1984). He also noted that practically any symptom in older adults can be caused or worsened by drugs. Some serious side effects might be overlooked or not recognized until they have caused major problems, because some patients – and some doctors – assume that they are seeing signs of aging rather than what really are adverse drug reactions. According to a 1986 report by P. S. German and L. E. Klein, published in Pharmaceuticals for the Elderly, more than 9.6 MILLION adverse drug reactions occur each year in older Americans.

A study reported in 1992 in the journal Medical Care by H. L. Lipton and

coworkers produced some disturbing conclusions. They intensively reviewed 236 patients who were discharged from a community hospital with 3 or more prescriptions to treat chronic illness. In 59% of patients, one or more prescriptions was an inappropriate choice of therapy because it was considered less than optimal medication for the patient's diagnosis or no reason was given for needing the drug. The dosage for at least one drug prescribed was too high for 28% of patients – an overdose. Drugs with one or more harmful drug interactions were prescribed for 48% of patients. And 20% of the patients were given drugs which duplicated the intended treatment effects of another drug they were taking.

Older adults are more likely than younger ones to suffer with adverse drug reactions because their organs often are working less well. The liver has a decreased ability to detoxify and process drugs, the kidneys are less able to clear drugs out of the body. Due to changes in body muscle and fat composition, older adults may be more sensitive to even "normal" blood levels of some drugs. They are less able to make blood pressure compensations, so they are more sensitive to heart and blood vessel side effects of some drugs. The same is true for their body temperature regulation system, where drugs can make them more susceptible to heat waves and cold spells. Also, older adults are more likely to have chronic diseases – poor circulation, liver or kidney damage, and so on – that change the ways they respond to drugs. As they present with more problems and complaints to their doctor, often they are prescribed more and more drugs, which have more interactions and adverse effects. Many of the drugs used for years by older people were approved for marketing after being tested for only a few months in younger adults.

An excellent reference for the actions and adverse reactions of drugs used for heart and blood vessel diseases is The Essential Heart Book for Women by Morris Notelovitz, M. D., Ph. D., and Diana Tonnessen, published in 1996. In their book, they have summarized a list of drugs in each category, the reasons why they are prescribed, how the drugs work, and their potential adverse actions. Noted below are some precautions derived from their list for the various drug classes. Ask your physician or pharmacist what class of drugs into which your prescriptions are grouped – better yet, buy and read their wonderful book.

Type/Class of Drug – Potential Adverse Effects

Beta-Blockers

(used for angina heart pains, high blood pressure, heart rhythm disturbances, other conditions)

Fatigue, sluggishness/weariness, depression, sexual impotence, increased

blood fats, increase in blood uric acid level (even gout), decreased tolerance for exercise, possible worsening of angina heart pains after medication is stopped

Calcium Channel Blockers

(used for angina heart pains, high blood pressure, heart rhythm disturbances)

Headache, water retention ("fluid-loading"), heart rhythm disturbances, constipation

Nitrates

(used for angina heart pains and during recovery after a heart attack)

Unexpected drop in blood pressure when standing or rising, headache, dizziness, flushing, fast heartbeat

Antiarrhythmic Drugs

(used to control heart rhythm disturbances)

Possible worsening of rhythm disturbances, nausea, vomiting, diarrhea, confusion, sedation, dizziness

Antiplatelet Drugs

(used as an aid to prevent heart attack or stroke)

Stomach irritation, mild indigestion, ringing in the ears ("tinnitus"), loss of hearing

Anticoagulant Drugs

(used as an aid to prevent blood clots caused by heart attacks, atrial fibrillation rhythm disturbance, and artificial heart valves)

Internal bleeding (can be severe), excessive bruising

Angiotensin-Converting Enzyme ("ACE") Inhibitors

(used for high blood pressure, congestive heart failure)

Rash, itching, fever, dizziness, lightheadedness, headache, low blood pressure

Lipid-Lowering Drugs

(used to help lower high blood fat levels)

Constipation, bloating, indigestion, diarrhea, bleeding, flushing, abnormal liver function tests, muscle pains, muscle inflammation, possible increase in total blood cholesterol level, reduction in HDL ("heart-

protective" or "good") cholesterol level

Diuretics ("fluid pills" or "water pills")

(used for high blood pressure, congestive heart failure, fluid-loading)

Abnormal lowering of blood sodium level , abnormal lowering or increase of blood potassium level, abnormal lowering of blood magnesium level, increase in blood fats, possible increase in blood sugar level, possible increase in blood uric acid level (even gout), increase in blood calcium level, excessive hair growth

Adrenergic Inhibitors

(used for high blood pressure)

Abnormal lowering of blood pressure, fatigue, depression, slow pulse (heart beat), sexual function problems, sluggishness/weariness, "rebound" higher blood pressure after drug is discontinued, unexpected drop in blood pressure when standing or rising

Vasodilators

(used for high blood pressure, especially difficult-to-control cases)

Water retention ("fluid-loading"), worsening of angina heart pains, excessive growth of body hair

While these possible adverse affects are ones you would not want, remember that this listing is for a single medication, taken by itself. When drugs are combined, as happens many times for older adults, particularly those with chronic degenerative diseases, the potential for harm rises considerably. Ask your pharmacist to "plug into his computer" the list of ALL medications you take daily or almost so, including those "over-the-counter," in order to produce a list of possible drug-drug interactions. Be aware that some of these can be very serious.

The Public Citizen's Health Research Group, under the direction of Sidney M. Wolfe, M. D., reviewed 351 medical references and drew some important conclusions about heart and blood vessel medications. Their book, Worst Pills, Best Pills II, published in 1993, is one of the most useful that you will find regarding drug effects, adverse reactions, advice, and precautions. Below is a summary of the circulatory system drugs that they concluded are of limited use – or that should not be used at all.

For details on their reasoning and on alternatives you should discuss with your doctor, buy and read their excellent book, available through any fine bookseller.

Remember that doctors prescribe drugs to create a specific effect inside the patient – use of these drugs in no way reflects "bad doctoring" or "bad medicine." You should always feel free to discuss your treatment program with your physician, so that you are assured of proper medical attention to your needs.

HEART AND BLOOD VESSEL DISEASE DRUGS
DETERMINED BY DR. WOLFE TO BE OF LIMITED USEFULNESS
– listed by brand name (generic name) –

Aldactone (spironolactone)
Apresazide, Apresoline-Esidrix (hydralazine with hydrochlorothiazide)
Bumex (bumetamide)
Capoten (captopril)
Capozide (captopril with hydrochlorothiazide)
Cardene (nicardipine)
Cardizem, Dilacor (diltiazem)
Diulo, Zaroxolyn (metalazone)
Diuril (chlorothiazide)
Dyazide, Maxzide (triamterene with hydrochlorothiazide)
Dynacirc (isradipine)
Enduron (methyclothiazide)
Hytrin (terazosin)
Inderide (propranolol with hydrochlorothiazide)
Lasix (furosemide)
Lorelco (probucol)
Lozol (indapamide)
Metahydrin, Naqua (trichlormethiazide)
Mevacor (lovastatin)
Mexitil (mexiletine)
Micro-K, Klotrix, Slow-K (potassium salts)
Minipress (prazosin)
Pravachol (pravastatin)
Prinivil, Zestril (lisinopril)
Prinizide, Zestoretic (lisinopril with hydrochlorothiazide)
Procardia, Adalat (nifedipine)
Questran, Cholybar (cholestyramine)
Quinaglut, Duraquin (quinidine)
Tenex (guanfacine)

Trandate (labetalol)
Vaseretic (enalapril with hydrochlorothiazide)
Vasotec (enalapril)

HEART AND BLOOD VESSEL DISEASE DRUGS
DETERMINED BY DR. WOLFE AS ONES NOT TO BE USED
– listed by brand name (generic name) –

Aldactazide (spironolactone with hydrochlorothiazide)
Aldomet (methyldopa)
Aldoril (methyldopa with hydrochlorothiazide)
Catapres (clonidine)
Combipres (clonidine with chlorthalidone)
Cyclospasmol (cyclandelate)
Diupres, Chloroserpine (reserpine with chlorothiazide)
Dyrenium (triamterene)
Enduronyl (deserpidine with methyclothiazide)
Hydropres, Hydroserpine (reserpine with hydrochlorothiazide)
Hygroton (chlorthalidone)
Lopid (gemfibrozil)
Moduretic (amiloride with hydrochlorothiazide)
Pavabid, Cerespan (papaverine)
Persantine (dipyridamole)
Quinamm, Quinite, Strema (quinine)
Regroton (reserpine with chlorthalidone)
Salutensin (reserpine with hydroflumethiazide)
Ser-Ap-Es (reserpine with hydralazine with hydrochlorothiazide)
Serpasil, Sandril (reserpine)
Tenoretic (atenolol with chlorthalidone)
Trental (pentoxifylline)
Vasodilan (isoxsuprine)
Wytensin (guanabenz)

DRUGS DON'T HAVE ANY "SIDE EFFECTS"

One last point deserves your careful attention. Doctors and pharmacists – and even patients – talk about "side effects" of medications, often hoping to avoid the more

serious ones. But NO drug has ANY so-called "side effects"!

Understanding how this can be is quite simple. When a drug enters your body, it interacts with various biochemical systems in many different cells and organs of your body. When the result of these interactions are what you want to happen, this is called the "therapeutic" or "treatment" effect – and that's considered a "benefit," a good thing, because you feel better or your body works better.

When the result of these drug-body interactions is something that you don't want to happen, this is called a "side effect" – and that's considered a "risk," a bad thing, because you can suffer or worsen in how your body works.

But the drug doesn't consider that one effect is different than any other. All it is doing is "doing its thing," interacting with your biochemistry – and with any other medications (or even toxins, such as alcohol or tobacco, home chemicals, other pollutants). So, avoiding "side effects" isn't something you can "choose" or "hope for" – it's something that happens or doesn't. You get ALL the effects that taking the drug produces.

Hopefully the effects you get that you want – the benefits – outweigh the effects that you get that you don't want – the risks. But remember that no one can predict your "risks." If what you don't want doesn't happen to you, then the risk is zero – if what you don't want does happen to you, then the risk is 100%. Weigh your risks carefully by deciding whether you are willing to accept the more serious side effects if they happen to you ..... before you decide to take any drug!

And remember to make this choice with regard to lifestyle challenges to your wellbeing, such as alcohol, tobacco, and so-called "social drugs" (illegal drugs), and with regard to exposures to chemicals, toxins, and other pollutants at home, at work, and in other areas of your life.

THE QUESTION OF ASPIRIN

Several "prospective" (looking into the future) medical studies have examined whether aspirin can reduce the incidence of recurrent heart attack and death. Various dosage levels – from 325 mg to 1,500 mg daily – have been investigated. No single study demonstrated a statistically significant decrease in deaths with aspirin use.

Since it is not known whether 75 (or 81) mg of aspirin daily (a "baby" aspirin) will be useful in preventing a second heart attack, many physicians recommend at least 300 mg (a standard adult dose tablet). However, 75 mg daily reduces gut bleeding by 40% compared to 300 mg daily. Indeed, NO dosage of aspirin appears to be completely free of the risk of peptic ulcer complications.

Natural (nutrition) substances appear to have a significant effect of reducing platelet "stickiness." Omega-3 fatty acids (EPA, fish oils), antioxidant nutrients (beta-carotene, vitamin C, vitamin E, and so on), bioflavonoids, garlic, and vitamin B6 appear helpful and might well replace any benefits that aspirin might offer.

Appendix 4

TOXIC METALS ..... HERE, THERE, EVERYWHERE

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These details on toxic metals encountered in our environment have been provided courtesy of Great Smokies Diagnostic Laboratory (Asheville, North Carolina). This laboratory provides sophisticated measurement of elements in hair, urine, and red blood cells, as an aid to determining excess body burden and excretion pathways. The lists of "possible sources" includes unusual (even bizarre) activities and items, often with confusing names. These are included for your reference because people do the strangest things in their working lives – even YOU might have been involved in the past in a facility where some of these activities were conducted routinely.

The key concepts here are that toxic metals are present in our environment – that you can be exposed to toxics without even being aware of their hazards – that an undiagnosed problem is one that is never treated correctly – that you have to do specialized testing in order to discover hidden toxic metals that can be damaging your body – and that many different and often vague or generalized symptoms might be caused by toxic metals, not by "aging," or "stress" or other illnesses. For example, several of these toxic metals are associated with "fatigue" or with "high blood pressure." Unless the true cause is discovered, all attempts at treatment will fail to treat the real problem that is causing your problems.

ALUMINUM (Al) is a potentially toxic element. Possible sources include .....

- **aluminum cookware, especially if used for acidic foods (tomato sauce)**
- **aluminum coffee pots**
- **oral antacid preparations containing aluminum**
- **aluminum paints, hardware, packaging, and containers**

some cosmetics and many antiperspirants
contaminated foods
some herbal products containing significant aluminum
foods and baked goods with alum additives
drinking water treated with alum
water from hot water tanks with magnesium-aluminum anode terminal

Aluminum accumulates progressively in the body following the paths of increasing phosphate concentrations: blood fluid >> cell fluid >> cell nucleus >> cell DNA and RNA (nuclear material). Long term deposition occurs in long-lived cells such as neurons, where aluminum can be toxic to these nerve cells -- it likely has some part to play in Alzheimer's dementia. Aluminum slows or blocks the energy production system inside cells. In bones, it can block tissue growth and repair. There might be no evidence for aluminum intoxication for a long period of time. Acute or increasing exposures might cause headache and fatigue.

ANTIMONY (Sb) is widely used in alloys to increase hardness or strength. Possible sources include .....

metal type solders (as in printing)
antifriction allows (as in bearings)
ammunition, bullets, and powders
lead batteries
paints, enamels, glass and pottery glazes
flame-proofing and retardants for textiles
mordant aid in the dyeing process for textiles and leather dyes
vulcanizing and colorizing agent for rubber
tobacco
mines and smelting operations

Symptoms associated with low-level or long term antimony contamination might have a delayed or insidious onset. It clears from the blood quickly and accumulates in the adrenal (stress) glands, thyroid, kidneys, liver, spleen, and bone. Higher levels can block certain metabolic steps (by combining with sulfur groups on enzymes) and can lead to elevated uric acid, ammonia, inosine, or hypoxanthine. Various chronic toxic symptoms are possible: metallic taste, loss of appetite, fatigue, muscle changes, gout-like joint pains, low blood pressure, fragile red blood cells, interference with nerve transmitters, and heart pains. Skin spots can show with contact – nose congestion, nosebleeds, and lung irritation can occur from inhalation exposure.

ARSENIC (As) is a potentially toxic element. Possible sources include .....

- **contaminated shellfish or other seafoods**
- **processes for the production of semiconductor or photoelectric components**
- **electroplating, galvanizing, and etching processes**
- **some fungicides and pesticides**
- **chemical process industry (used in "chemical reagents" and "catalysts")**
- **fireworks (intense white and "blue flame" colors)**
- **leather tanning and taxidermy**
- **textile printing (calicos)**
- **lead and copper alloys (used in cable sheaths, solders, shot)**
- **specialty glass manufacture (opal glass, infrared transmitting, decolorizing)**

Arsenic has been used to preserve wood, to prevent fungal growth on coated surfaces, and to kill pests, including rodents. The most common source of ingested arsenic is contaminated seafood. It clears quickly from the blood and transfers rapidly to other body tissues, especially liver, kidneys, spleen, skin, bone, and muscle. Arsenic can bind to selenium (essential mineral), phosphate compounds, and sulfur in various proteins – and it inactivates lipoic acid, a key cofactor for metabolism. Symptoms of excessive exposure include garlic breath, increased salivation, fatigue, chest pain, diarrhea, and low blood pressure. Long term exposure can include loss of hair, loss of skin coloring, white streaks on fingernails, loss of appetite, nerve disease changes in the arms or legs, low white blood cell count, and fragile red blood cells.

CADMIUM (Cd) is a clearly toxic element. Possible sources include .....

- **cadmium-plated hardware (nuts, bolts), electroplating processes**
- **Ni-Cd ("ni-cad") batteries, some photovoltaic cells**
- **brazes and solders**
- **cadmium pigments (paints, inks, glazes)**
- **cigarettes**
- **old copy machine drums**
- **plastics for which cadmium compounds are heat stabilizers**
- **photographic and engraving chemicals**
- **sewage sludge and "earths" from sewage treatment**
- **ore-smelting operations, power plant exhaust plumes**

Symptoms with low level or long term exposure might not be evident for years. Cadmium accumulates in the kidneys, bones, nerve cells, and heart and blood vessels. It interferes with energy production systems, red blood cell and muscle proteins, and detoxification pathways, and it can block needed zinc activation of

enzymes. Cadmium can worsen the toxic effects of lead or mercury also present. Toxic effects can include sugar and protein spilled into the urine (along with beta-2 microglobulin, a marker for kidney damage), fatigue, sexual impotence in men, and anemia looking like iron deficiency.

LEAD (Pb) has multiple toxic effects. Possible sources include .....

- **leaded or soldered joints in water systems**
- **contaminated herbal preparations and teas, "dolomite" calcium**
- **chips of old lead-containing paint**
- **art supplies, colored glass kits**
- **bullets, fishing sinkers, balance weights, radiation shields**
- **lead-acid batteries**
- **bearing alloys**
- **some ceramic glazes or pigments**
- **sewage sludge and "earths" from sewage treatment**
- **soils and vegetation along highways (from engine exhaust fumes)**

Historic uses of lead – housepaint, anti-knock gasoline additives, and soldered joints in water systems – have mostly been discontinued, due to its toxic properties. Absorbed lead quickly leaves the blood and accumulates into red blood cells; it later binds in bone tissue and also in the aorta (largest body blood vessel), kidneys, liver, adrenal (stress glands), thyroid, and brain. Deficiency of calcium, zinc, and/or iron can increase absorption of lead that gets into the gut. Lead binds to multiple chemical groups in enzymes, proteins, and cell membranes. It interferes with formation of red blood cells, kidney transport of uric acid, and detoxification pathways. Lead can worsen toxic effects of cadmium or mercury also present. Toxic effects in children include loss of intelligence (I.Q.) and behavior disorders. Anyone can show loss of appetite, metallic taste, headaches, fatigue, low blood counts, and gout changes.

MERCURY (Hg) is clearly toxic. Possible sources include .....

- **contaminated shellfish or seafood**
- **contaminated water supplies**
- **dental amalgams ("silver" fillings), recent dental work**
- **electrical switches and relays, explosive detonators**
- **batteries and certain electrodes (calomel)**
- **laboratory equipment, barometers, thermometers**
- **some specially-formulated fungicides**
- **old paint containing mercury fungicide**

chemical process industry ("chloralkali electrolysis")
mining and smelting operations

Mercury binds tightly to sulfur sites on proteins and enzymes throughout the body, so it can deposit in many tissues and organs, especially the kidneys and liver, as well as the brain. It interferes with body metabolism processes, including detoxification and energy production. Symptoms are variable and can include metallic taste, increased salivation, nerve sensory changes, decreased hearing, decreased sense of touch, decreased vision, high blood pressure, headaches, fatigue, insomnia, and fine muscle tremors (such as poor handwriting), as well as an emotional disturbance pattern (bipolar depression or excitability and poor concentration).

NICKEL (Ni) is a potentially toxic element. Possible sources include .....

foods, especially hydrogenated cooking oils, cocoa, and chocolate
cigarettes
contaminated water supplies
nonprecious dental materials
costume jewelry, "German silver," nickel-plated objects
nickel-containing implantable prostheses (artificial parts, dental "plates")
batteries (Ni-Cd, "ni-cad")
exhaust gases from combustion of coal, oil, or diesel fuel
chemical process industry, catalyst formulations
mining and smelting operations

Nickel deposits into the kidneys, liver, brain, bone, intestines, and skin. It can cause "hypersensitivity," inflammation, contact sensitivity, and allergy reactions for the skin, sometimes continuing after no other evidence of nickel is present.

THALLIUM (Tl) is a highly toxic element. Possible sources include .....

cadmium-lead-zinc mining, smelting, purifying operations
sulfuric acid production from mineral sulfides
contaminated ground water
chemical industry processes – hydrocarbon oxidation, polymerization
liquid amalgams in low-temperature electrical switches
semiconductor materials
photoelectric cells, infrared detectors, and scintillation counters
some luminous (glowing) paints
colored glass, artificial gems
lenses and prisms (high-refractive-index glass)

Thallium can get into the body by ingestion, inhalation, or skin contact. Different forms thallium distribute in different body tissues, mostly going to kidneys, heart, muscles, testicles, and brain. It interrupts formation of genetic material (DNA, RNA), energy production systems, and nerve cell function. Symptoms can be insidious and multiple, including walking and coordination difficulties, inflammation of nerves in arms and legs, loss of appetite, mental confusion, tremors, and facial palsy. Longer-term symptoms can include high blood pressure, weight loss, loss of hair, crossed eyes, slow degeneration of eye tissue, worsening nerve degeneration, and severe mental disturbances.

TIN (Sn) is a potentially toxic element. Potential sources include .....

- **tin-plated cans ("tin cans") with damaged polymer coatings**
- **toothpaste and perfumed soaps**
- **metal alloys: brass, bronze, pewter, babbitt, printer's alloy**
- **soldered joints in cans and water systems**
- **manufacture of polyvinylchloride ("PVC") plastics (used as a heat stabilizer)**
- **dyes and pigments (used as a mordant aid in the dyeing process)**
- **electroconductive coatings on glass (window defrosting systems)**
- **porcelain, ceramic glazes**
- **tin biocides**
- **mining, smelting, and ore processing facilities**

Chemical forms of tin vary in where they deposit, with the inorganic form going first to the kidneys then liver tissue and later to bone; organic tin distributes to liver, brain, kidneys, and lymphatic (immune defense) system. Organic tin interferes with the energy production system. Excessive organic tin (which has a very high toxicity compared to the inorganic form) can cause walking and coordination difficulties, headaches, blurred vision, dizziness, high blood sugar, and spilling of sugar into the urine. Liver changes are possible, including liver pain (right upper belly). Kidney damage, low white blood cell count, low lymphocyte white blood cell count, and reduce immune defense responses can occur with certain forms of organic tin.

URANIUM (U) is a potentially toxic element. Possible sources include .....

- **ground drinking water containing dissolved natural uranium**
- **geological phosphate deposits or mines**
- **uranium mining and ore-milling operations**
- **uranium enrichment (U-235) operations**
- **nuclear power plants, nuclear stockpiles, nuclear weapons**

military ammunition containing "depleted" uranium (U-238)
fallout or vented debris from nuclear weapons tests
dry copying inks (uranyl acetate)
photography (uranyl nitrate toner)
ceramics, glazes, colored glass (yellow uranium oxide)

Biochemical toxicity is the primary concern with natural uranium (mostly U-238), though exposure to fuel-grade uranium (U-235) would pose a radiological health hazard as well. Since uranium is reactive and can combine with organic acids, phosphates, and carbonates, it can deposit in liver, kidney, spleen, and bone. Most of the documented toxicity deals with damage to the kidney filtering system. Spilling of protein, albumin, amino acids, and sugar in the urine are sometimes found with uranium excess. The primary symptom of chronic, low-dose natural uranium body burden is chronic fatigue. Higher doses or radioactive forms can cause tissue changes, including cancer.

For more information on illness problems associated with body burdens of heavy metals, get and read the informative book, Toxic Metal Syndrome, by Drs. H. Richard Casdorph and Morton Walker, available at fine booksellers and health food stores.

Appendix 5

A PATCHWORK OF DIETARY CONFUSION

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No area of medical advice is as much a hodgepodge as that of proper eating. The "egg and grapefruit diet" competes with the "nothing but meat" diet, which is nudging aside the "meat and potatoes" diet, and so on.

Some simple guidelines can be offered, which would generally apply to most adults at risk with – or suffering from – heart and blood vessel diseases. The "best" diet is one low in simple sugars (table sugar, confectioner's sugar) and fat, especially overcooked fat such as fried, grilled, and char-broiled, foods. Contrary to what you have heard in many articles and advertisements (and from your doctors), margarine and vegetable shortening, including many vegetable oils that have not been "cold-processed," probably increase the progression of atherosclerosis (blocking deposits in your arteries). Butter, used moderately, and even coconut oil ("cocoa butter") probably provide reasonable alternatives.

Your diet should be based on large amounts of fresh, whole, raw vegetables – organically-grown where available, otherwise with the fewest pesticides and other chemicals. A wide selection of colors is best (red, orange, yellow, green, and so on), so you get the best selection of "natural" food substances for you body. Vegetables are best steamed or otherwise lightly cooked, with the mineral-rich juices used for flavoring or soup stock. The "crunchy C's" – carrots, cauliflower, celery, broccoli, and similar vegetables – are tasty snacks and leafy vegetables (especially spinach and cabbage) should be eaten daily. Onions and garlic have long been known to promote health. Incidentally, many people think of corn, rice, and potatoes as "vegetables" – these are high starch products and should be eaten in moderation, not as daily vegetables. (Starches are simply "sugars holding hands," quickly processed by your body into energy or stored as fat.)

Whole grains should be used rather than processed, "enriched," or "polished" ones. Eggs are reasonable in moderation – "egg-substitutes" might actually be hazardous to your health. Carefully-trimmed or lean meats – including fowl, uncontaminated fish, and game meats -- are valuable protein sources. Some adults limit their protein intake far too much. A simple test of your "protein status" is to take a packet of KNOX gelatin twice daily for 2 months – if your nails and hair seem stronger and healthier, you likely have been "short" of protein in your diet. Remember that your heart is a muscle, made of protein – just like your other muscles and all your other

organs. Yogurt is a good food (and protein source) for many people, as are cheeses and even cottage cheese. Generally speaking, milk itself should be avoided after childhood or adolescence and milk products should be eaten in moderation.

Honey, used sparingly, is a good sweetener if needed. Other choices include "Stevia" and "Dr. Bronner's Barleymalt Sweetner," both available at health food stores and some pharmacies. Aspartame (in the "blue packets") – also known as the brand name "Equal" – should be avoided ..... read the labels on any "low-sugar" and "low-fat" products and processed foods! Fruits and nuts (unless restricted because of special needs) are generally good, again in moderation.

Fresh foods are the key to healthier living. Food additives (preservatives, emulsifiers, stabilizers, and whatnot) should be avoided and minimized whenever possible. Remember to read the labels on all food products that come in something other than "God's wrapper." The healthier foods are found around the walls of your supermarket. When you begin walking down the aisles for more than just paper goods and household supplies, you are entering "the danger zone." Preserved, processed, purified, sweetened, and otherwise altered foods – such as in cans, jars, and plastic packages – represent a major change in our food supply since 1950. Remember when only soup and Spam came in cans?

The best "drink" for your body is lots of fresh, purified, wholesome water. Coffee, tea, and other drinks with caffeine should be avoided or certainly minimized. "Soda" pops help to create a number of health problems and should be avoided. A small amount of alcohol might help to reduce heart attack risk – but frequent or larger amounts of alcohol increase all causes of death.

The watchword in food choices is "moderation." Sugar and sugary/starchy foods are clearly the culprit in many human ailments, especially heart and blood vessel diseases. Those who eat more fresh, whole, raw vegetables – especially selecting from a wide variety – tend to be much healthier overall, delaying the onset or reducing the severity of many common (and deadly) diseases.

Appendix 6

YOU ARE WHAT YOU ..... *TAKE!*

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IMPORTANT NOTE: The following pages give "lots of details." If you already know that vitamins and minerals and other body "pieces" are critical for good health, these pages will help you see just why. If you (or your physician) are skeptical about "that nutritional mumbo-jumbo," these pages will prove to you that there ISN'T any "mumbo-jumbo" but rather proven medical science. Scientific truths describe how our bodies live "in the real world," according to natural laws. You might break the speed limit law and not get caught, but if you break a law of nature, you'll get caught every time. Even if you don't believe this statement, don't tempt the law of gravity by stepping off a 3-story balcony. Remember this: even those who don't know about or who don't believe in the natural laws of nutrition are still governed by them – and in their ignorance, they most certainly will suffer.

Patients wanting help with degenerative diseases – including heart and blood vessel problems – sometimes are surprised that vitamins, minerals, and other dietary factors can be prescribed to assist with their health recovery. Often they have heard that "you don't need extra vitamins if you just eat a good diet." Unfortunately, studies by the U. S. Department of Agriculture have shown significant nutritional deficiencies in a large portion of Americans who take no extra "vitamins."

Many physicians simply have not studied and are not familiar with the proven actions of various nutritional supplements in aiding heart and blood vessel function. Accordingly, when they claim that "there's no evidence that vitamins can help," all they are admitting is that they do not KNOW of the published evidence. Why would this be so? Because nutritional medicine is a specialized topic in the larger specialty field of "complementary" or "integrative" medicine. Only a specialist is expected to have a detailed knowledge of these beneficial nutritional effects, many of which have been documented for a dozen or more years.

A variety of nutritional supplements have been investigated in some detail to see their effects on heart and blood vessel function – and on reducing risk factors for future illness such as heart attacks, strokes, and gangrene. Some of them are reviewed here, with reference to their documentation in the medical research literature. If you have a specific interest in any topic, you can ask your doctor to have a computer search done and to order copies of articles from a university medical library. At the Texas Medical Center, the Jones Medical Library information and reference desk telephone number is 713-799-7161 or 799-7162.

Antioxidants have an increasing usefulness, since "free radical" ("rusting") chemistry has been shown to play a major role in heart artery disease and in congestive heart failure, as documented by Dr. J. Murray and colleagues in the American Journal of Cardiology in 1990. Vitamin C (ascorbic acid) can make platelets less "sticky," reducing the chance for the sudden plugging of blood vessels that causes heart attacks, strokes, and gangrene. It can also lower the level of lipoprotein(a) (known as Lp(a)), a high level of which carries a 10 times greater risk for heart disease than an elevated LDL cholesterol level.

Further, vitamin C can "chelate" and remove excess iron, another risk factor for heart disease. These findings on vitamin C are not new by any means -- they were published by Dr. J. Ramirez and coworkers in1980, in the American Journal of Clinical Nutrition. A lower intake of vitamin C may be associated with high blood pressure, as reported by Dr. D. A. McCarron and associates in the journal Science in 1984; also lower blood levels may be associated with higher top (systolic) and bottom (diastolic) blood pressures, as reviewed by Dr. J Moran and colleagues in the journal Clinical Research in 1991 and by Dr. D. L. Trout in the American Journal of Clinical Nutrition in 1991.

Low blood levels of vitamin C appear to be related to an increased risk for heart and blood vessel diseases, as reported by Dr. E. S. K. Choi and coworkers in the American Journal of Clinical Nutrition in 1990. Similarly, low blood levels of vitamin C appear associated with a higher risk of angina heart pains, as described by Dr. R. A. Riemersma and associates in the journal Lancet in 1991. Further, higher blood levels of vitamin C appear directly correlated with higher blood levels of HDL ("heart-protective" or "good") cholesterol, as published in the journal Clinical Research by Dr. C. Esk and coworkers in 1990 and by Dr. J. Hallfrisch and associates in 1991.

Another major antioxidant, vitamin E (tocopherol), has been shown in low doses (but more than the minimum recommended by the government) to reduce the heart attack rate in women by 46% and in men by 27%. In higher doses (which should be taken under close medical supervision), it makes platelets less "sticky," reducing the chance for sudden plugging of blood vessels. These protective effects were reviewed by Drs. M. Stampfer and E. B. Rimm and associates in the New England Journal of Medicine in 1993.

A lower death rate from heart disease has been found in people with higher blood levels of vitamin E, as described by Dr. K. F. Gey and colleagues in the American Journal of Clinical Nutrition in 1991. Dr. R. A. Riemersma and associates reported in 1991 in the journal Lancet that higher blood levels of vitamin E appear to reduce the risk of angina heart pains. Animal studies reported by Dr. A. M.

Freedman and coworkers showed that vitamin E helps to protect against heart damage caused by magnesium deficiency (a deficiency which is fairly common in Americans), as reported in 1990 in the journal Biochemical and Biophysical Research Communications. Rabbit studies that mimicked heart attacks showed that pretreatment with vitamin E dramatically reduced the area of heart damage, as described by Drs. R. A. Axford-Gatley and G. J. Wilson in 1991 in the journal Cardiovascular Research.

Beta-carotene is another helpful antioxidant vitamin, related to vitamin A. Higher blood levels have been found to reduce the risk of angina heart pains, as reported in the journal Lancet in 1991 by Dr. R. A. Riemersma and coworkers. Supplementation with beta-carotene appeared, over several years of follow-up, to offer a 54% reduction in major heart and blood vessel "events" (blockages leading to heart attacks, strokes, and gangrene), according to Dr. J. Michael Gaziano of Harvard, presenting to the American Heart Association and reported in the Medical World News in 1991.

Vitamins in the B-complex can be helpful as well. Folic acid can reduce elevated levels of the amino acid homocysteine, which may be key in starting hardening of the arteries. Homocysteine is an independent risk factor found in about 30% of patients suffering with heart disease, as described by D. L. E. Brattstrom and coworkers in 1985 in the journal Metabolism and in 1988 in the Scandinavian Journal of Clinical Laboratory Investigation. Similar findings were confirmed by Dr. R. Clarke in the New England Journal of Medicine in 1991. In men with elevated homocysteine levels, suboptimal levels of folic acid were found in 56%, suboptimal levels of vitamin B6 (pyridoxine) in 59%, and suboptimal levels of vitamin B12 (cobalamin) in 25%. Deficiencies of vitamin B6, vitamin B12, and folic acid might be an important cause of hardening of the arteries. The interconnectedness of these three vitamins underscores the importance of having a broad-spectrum multiple vitamin/mineral supplement as the foundation of any nutritional program.

Vitamin B6 also reduces blood clotting activity, as reported in the British journal Lancet in 1981. Further, many people report that it has a "diuretic" action, helping to remove excess body fluid such as found with high blood pressure or congestive heart failure. Monkey studies reported by Drs. J. F. Rinehart and L. D. Greenberg showed that a diet deficient in vitamin B6 results in blockages in blood vessels that are widely distributed in all vessels of all sizes, as published in the American Journal of Pathology in 1949 and in the American Journal of Clinical Nutrition in 1956.

Vitamin B5 (pantethine) also helps to reduce platelet "stickiness" and can help lower elevated blood cholesterol levels, as described by Dr. D. Prisco and others in

1984 in the journal Current Therapeutic Research.

Niacin (also known as a form of vitamin B3) helps to lower elevated blood cholesterol, as reported by Dr. J. M. Hoeg and coworkers in the journal Circulation in 1984. Supplementation with niacin also may reduce the risk of having a heart attack and of dying from one, as published in the European Journal of Clinical Pharmacology in 1991 by Drs. K. Berge and P. Canner. Dr. L. A. Carlson reported a pronounced lowering of blood levels of lipoprotein Lp(a) (an independent cholesterol risk factor for heart disease) in patients with high blood fats in the Journal of Internal Medicine in 1989. Further, low-dose niacin may increase HDL ("heart-protective" or "good") cholesterol levels, as described in the Archives of Internal Medicine in 1988 by Dr. M. H. Luria.

Certain minerals appear critical to maintaining good health. For instance, when selenium levels are lower than normal, the risks for heart disease and stroke increase, as described by Dr. J. Virtamo and colleagues in the American Journal of Epidemiology in 1985. Heart muscle changes have been documented in humans with severe selenium deficiency by Dr. G. Lockitch and associates in the American Journal of Clinical Nutrition in 1990 and by Drs. P. J. Collipp and S. Y. Chen in the New England Journal of Medicine in 1981.

Dr. J. T. Salonen and colleagues reported a study of 722 Finnish men in which higher blood levels of selenium were associated with lower blood pressures – and those with the lowest levels of selenium had marked elevations of blood pressure, as published in the American Journal of Clinical Nutrition in 1988. In 1991, they reported in the British Medical Journal that men with lower blood selenium levels showed more thickening and hardening changes in their arteries. Supplementation with selenium showed reduced platelet "stickiness," as described by Dr. N. W. Stead and coworkers in the American Journal of Clinical Nutrition and by Dr. R. Schiavon and associates in the journal Thrombosis Research in 1984.

Magnesium in adequate dosages may reduce heart rhythm disturbances, angina heart pains, the risk of sudden death, and even elevated blood pressure. These findings were summarized in the journal Circulation in 1981 by Dr. J. Manthey. Magnesium deficiency is associated with an increased risk of heart artery disease, of sudden death due to heart disease, of heart attacks, and of rapid heart rhythms, as reported by Dr. M. Shattock and coworkers in the Journal of the American College of Nutrition in 1987 and confirmed in the proceedings of a symposium edited by Dr. D. P. Lauler and published in the American Journal of Cardiology in 1989. Supplementation with magnesium may prevent calcium hardening of the blood vessels and the development of blood vessel blockage disease, as reviewed by Drs. M. S. Seelig and H. A. Heggtveit in the American Journal of Clinical

Nutrition in 1974.

Heart muscle changes produced by magnesium deficiency resemble those found in excessive alcohol intake, which decreases muscle magnesium, as reported by Drs. G. E. Burch and T. D. Giles in the American Heart Journal in 1977. Certain serious heart rhythm disturbances have shown marked improvement – in patients who did not show low blood levels of magnesium – by "treatment" with magnesium, as described by Dr. D. M. Roden in the American Journal of Cardiology in 1989. Patients whose severely low magnesium levels were not treated by supplements required much higher dosages of medication (digitalis or "Lanoxin") to control their heart rhythm disturbances, as reported in the American Journal of Cardiology in 1986 by Dr. C. DeCarli and coworkers. When magnesium is low, the ability of the heart muscle to hold onto potassium – which it critically needs – is reduced, as described in the journal Medicine in 1969 by Dr. M. E. Shils.

Further, supplementation with magnesium may reduce total cholesterol levels, raise HDL ("heart-protective" or "good") cholesterol levels, as reported by Dr. W. H. Davis and coworkers in the journal Current Therapy Research in 1984. Test tube studies suggest that added magnesium reduces platelet "stickiness," reducing the risk of sudden blockage in narrowing blood vessels, as would occur with heart attacks, strokes, and gangrene.

The mineral chromium is known to assist with blood sugar management. Further, it has been shown to help lower blood cholesterol and to increase the levels of HDL (so-called "good") cholesterol, as reported by Dr. M. Simonoff and coworkers in the journal Biological Trace Elements Research in 1984. They also noted that chromium deficiency appears to be a risk factor increasing the incidence of heart and blood vessel diseases. This finding was confirmed in heart disease patients by Dr. H. A. Newman and colleagues in the journal Clinical Chemistry in 1978 and in autopsies on heart attack victims by Dr. H. A. Schroeder and associates in the Journal of Chronic Disease in 1970. Rabbit studies by Dr. A. S. Abraham and coworkers in 1982 suggested that chromium supplementation could slow the development of hardening of the arteries and, indeed, may result in reversal of artery blockage by plaque, as published in the journal Atherosclerosis.

As of 1986, when Drs. D. A. McCarron and C. D. Morris authored a review in the Federation Proceedings, at least 10 published reports showed that a higher intake of calcium was associated with lower blood pressures. In fact, Dr. McCarron identified a lower intake of calcium as the most consistent nutritional finding associated with higher blood pressure in the United States, as he reported in the journal Science in 1984 and the in the journal Hypertension in 1985. Dr. W. K. Harlan and coworkers reported similar findings from the first National Health and

Nutrition Examination Survey, reporting on results involving 10,372 adults in the American Journal of Epidemiology in 1984. Dr. H. J. Henry and associates offered the same conclusions in reviewing the literature in 1985 for an article in the Journal of the American Dietetics Association.

When present in lower than normal levels – because of the action of "fluid pills" ("water pills" or diuretics) or other reasons – potassium can increase serious heart rhythm disturbances, especially after recent heart attack. This important role was reviewed by Dr. J. Nordrehaug and colleagues in 1985 in the journal Circulation.

Manganese is often considered in its role of helping to build strong connective tissue (the ligament and tendon "rubber bands" that hold the body frame together). However, it also can help reduce elevated blood pressure and reduce angina heart pains, earning the description as the "poor man's calcium channel blocker." These findings were noted in 1983 in the journal Biochemical Pharmacology by Dr. M. Salaices and coworkers.

Another factor important in connective tissue is chondroitin sulfate, which is not a mineral but a "glycosaminoglycan," or a "fancy" sugar product. It has been shown to help reduce cholesterol levels and to help reduce blood clotting activity, as reported by Dr. K. Nakazawa and associates in the Journal of Internal Medicine Research in 1978. In patients with known heart disease, supplementation with chondroitin sulfate dramatically reduced heart attacks and heart-related deaths, as reported in 1973 by Drs. K. Izuka and K. Murata in the journal Experientia and by Drs. L. M. Morrison and L. Enrick in the journal Angiology.

Many people have heard of Coenzyme Q10, which is a critical part of the energy production pathway inside your cells. This has been shown to reduce angina heart pains and to improve heart function, as described by Dr. T. Kamikawa and colleagues in the American Journal of Cardiology in 1985. In patients with heart muscle changes, very low blood levels of Co-Q10 were reported by Drs. P. H. Langsjoen and K. Folkers in the American Journal of Cardiology in 1990, and very low blood AND heart muscle levels were found by Dr. K. Folkers and associates, as reported in the Proceedings of the National Academy of Sciences (USA) in 1985. These doctors also reported significant improvements in heart function and clinical status in patients with heart muscle changes who were given supplementation with Co-Q10, as they reported in two citations in the Proceedings of the National Academy of Sciences (USA) in 1985 and in Drugs in Experimental Clinical Research in 1985. Similar findings were described by Dr. N. Awata and associates in 1980, in the book Biomedical and Clinical Aspects of Coenzyme Q, volume 2.

Dr. T. Yamagami and coworkers found that 39% of patients with high blood

pressure were deficient in Co-Q10, as reported in Research Communications in Chemistry, Pathology, and Pharmacology in 1975. Supplementation with Co-Q10 reduced both top (systolic) and bottom (diastolic) blood pressure levels in patients with high blood pressure, as published in 1990 in the journal Current Therapy Research.

Co-Q10 is aided by a "cousin" to the B-complex, called L-carnitine (sometimes called Vitamin B-T). Carnitine has been shown to increase the amount of exercise able to be done before angina heart pains occur, as found in a large study reported by Dr. A. Cherchi and associates in 1985 in the International Journal of Clinical Pharmacology, Therapeutics, and Toxicology. Heart muscle changes related to carnitine deficiency have been described in the New England Journal of Medicine by Dr. M. E. Tripp and coworkers in 1982.

A sulfur-containing amino acid, taurine, appears to help heart function. It can help reduce rhythm disturbances, can slow the worsening of blood vessel blockage by plaque, and help to lower blood pressure. These beneficial effects were described by Dr. T. Fujita and coworkers in 1987 in the journal Circulation. Much like magnesium, taurine appears to stabilize heart muscle cells by keeping their needed potassium changes in a more normal range, as noted by Dr. E. L. Chazov and associates in 1974 in the journal Circulation Research.

Fatty acids also play an important role in heart and blood vessel health. Omega-3 fatty acids – as found in fish oils and available as "Max-EPA" – have several ways by which they help, including reducing blood fats and platelet "stickiness." These findings are described by Dr. D. Kromhout and associates in the New England Journal of Medicine in 1985. Omega-6 fatty acids – found in plant oils, such as those from evening primrose, borage, and black currant – similarly can help to reduce blood fats and platelet "stickiness," as reported in the journal Lancet in 1987 by Dr. D. A. Wood and colleagues.

Other "plant products" have been shown to be of exceptional value in the non-drug management of heart and blood vessel diseases. For instance, garlic appears to reduce cholesterol levels, help remove plaque that is blocking blood vessels, help reduce "sticky" platelets, and help lower blood pressure. These actions are described by Dr. A. K. Bordia and associates in the journal Atherosclerosis in 1977.

Bromelain, derived from pineapples, might help reduce angina heart pains, help remove plaque that is blocking blood vessels, and help reduce platelet "stickiness," as reported in the journal Empirica by Dr. H. A. Nieper in 1978.

Pycnogenol, also known as "catechin" and available from "grape pips" is one of the bioflavonoids. It helps to protect against breakdown of the "collagen structure" in the walls of the blood vessels, as described by Dr. J. M. Tixier and colleagues in 1984 in the journal Biochemical Pharmacology.

Gingko biloba has been promoted to aid circulation and brain function. Dr. U. Bauer reported in 1984 in the German journal Arzneim-Forsch that gingko could help symptoms of reduced blood flow. Similarly, the herb valerian can help to open the heart arteries and help to reduce heart rhythm disturbances, as shown by Dr. V. Petkov, publishing in 1979 in the American Journal of Chinese Medicine. By the same token, Hawthorne berry can help to improve heart muscle function, to open the heart arteries, and to reduce blood pressure. These actions were described by Dr. O. Thastrup and coworkers in the journal Acta Pharmacology and Toxicology in 1983.

Though not often thought of as a "nutrient" or "supplement," oxygen is the most critical element in human nutrition. You can live for about 7 weeks without food, about 7 days without water, but only for about 4 minutes without oxygen. The explanation is quite simple: when you extract the energy found in sugars and fats, you create the need to dispose of carbon atoms and hydrogen atoms. Oxygen is the "dumping ground," allowing you to make "carbon dioxide" – to breathe off through your lungs – and water (2 hydrogens tagged to 1 oxygen) – to eliminate through your kidneys.

For the past 3 years, we have been conducting informal "research" at LIFE CENTER HOUSTON**, studying oxygen levels in our patients. We know that they are breathing – but we've been looking at how efficiently they are able to move oxygen into their blood and out to their organs (including their heart). Our results have been surprisingly successful: we've found many patients whose low oxygen levels would have shortened their lives measurably. Instead, we've been able to add oxygen to their treatment programs and dramatically enhance both the level of their improvements and the speed with which they have achieved them.**

Our research has made dramatic inroads into many degenerative diseases, and now we have identified specific treatment programs that often enhance the effectiveness of our other treatment programs.

More recently, we have investigated – with startling success – the interrelationships between oxygen utilization and thyroid hormone dysfunctions. Indeed, we have evidence that many people do NOT have thyroid "disease." Instead, we can demonstrate that they have thyroid dysfunctions ("out of tune" or "out of adjustment" inefficiencies) that impair significantly the function of other body

systems ..... especially those involved in healing and repair. Almost monthly, we're making advances in our understanding of these cellular process involved in detoxification, repair, and normal function. Although none of us will live "forever," our "anti-aging"/"longevity" programs are based on helping to prevent, delay the onset, or even reverse and repair the effects of degenerative diseases for perhaps dozens of years. Life long health, after all, should be the goal of health care.

Appendix 7

MOVIN' RIGHT ALONG

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Many people are motivated to try an exercise program, to help improve their general health and heart and blood vessel function. But a large percentage simply "give up" after a few days or weeks. The problem often seems to be trying too much too fast.

The purpose of exercise is to provide activity to "use" your body parts (including your heart) in an enjoyable way, getting maximum benefit with lowest risk and greatest pleasure. Your "reasonable" program should be easy to do and just challenging enough to increase your flexibility, strength, and endurance. Walking is, of course, one of the best exercises available.

Plan for 20 to 30 minutes of honest exercise, done 4 or 5 times weekly. Start your program slowly, gradually building on a good foundation of stretching and gentle warming-up. If you find that you can exercise only for 3 or 4 minutes at first, do so for a week. Then do your 3 or 4 minutes *twice* daily for another week or so. Then begin each week to add 10 or 15 seconds to each exercise period. In the course of a month, you'll add about a minute to each session. Over a year, you'll have added 12 minutes or so – perhaps even more, if you can do so comfortably. You will soon – and steadily – have achieved your goal of reasonable and valuable exercise, without much "effort" on your part. The alternative is to sit in front of your TV set, *wishing* you were doing something to help your heart health!

Incidentally, treadmills and stationary bicycles are fine for exercise – and you *can* watch TV at the same time. Health clubs memberships are great ..... if you actually go to the club. A personal trainer can help guide your program wisely. Walking, gentle jogging, biking, skating, dancing, stair climbing – these all are great activities for getting your pulse in the 100 to 120 range for 20+ minutes at a time. Incidentally, walking on the golf course is effort but *not* exercise!

Cardiac Rehabilitation is a specialized program, under the direction of a cardiologist, for people who have heart disease. Anyone doing "rehab" should seriously consider doing chelation therapy as well ..... for their heart's sake.

Appendix 8

GETTING A HANDLE ON YOUR LIFE

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How you handle stressful situations in life will measurably affect your physical health and wellbeing. A zillion "techniques" exist to help you, and hundreds of new books with "new, improved" approaches are published each year. People have described all sorts of things that have worked for them. We've settled on two that are incredibly simple, totally free, and easy for everyone to do. Add to this basic program as you wish – but rely on these, if you find them helpful.

The first technique is ..... "take a break." Whatever you're doing, if you feel "stressed," take a 5 or 10 minute break. Do something *else* that you want to do (or something you need to do, like putting clothes in the washer or rearranging a bookshelf). An even better variation is this: "Take a walk!" Get up, put on comfortable shoes, and walk for 5 or 10 or more minutes. When you do, look UP rather than down. Study the trees, listen for birds, daydream with the clouds.

Our second technique is to use the Proverbs to help center your life today. Rather than a "Zoloft" or "Prozac" deficiency, you might find your "stress" problems represent a failed purpose. The remedy can be quite simple. Get a pack of 3x5 lined index cards. Each day, turn to the Proverbs in your Bible. Start anywhere you wish, read forward or go back, browsing casually as you wish. When you find a verse, a lesson that crystallizes an idea that really "says something" to you – that's what you're looking for. On a 3x5 card, write the DATE, the VERSE NUMBER, and the 4 or 5 LINES that have the "kernel" of the message for you.

Refer to your verse at least 4 times that day: before breakfast, lunch, supper, bedtime. *And* any other time when life seems stressful or brings taxing challenges. The next day, select another verse, write it on another card. Now you have TWO verses to read each time. By the end of the week, you'll have several verses to read each time on Saturday and Sunday, to study in detail for your life. Start over each Monday. By the end of the month, you'll have 30 messages from God, directly and personally appropriate for you. These will help center your thoughts and focus your efforts, easily and powerfully reducing your stress level.

Appendix 9

WHY WOULD ANYONE COME TO HOUSTON FOR CARE?

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A brief perspective by Amy McMurrough of McMurrough and Associates, Austin

Dr. Trowbridge asked me about reprinting the "biography" that I wrote for his recent book, DO WHAT YOU WANT TO DO. Instead, I volunteered to prepare something far more personal, based on hundreds of phone discussions I have had with his patients, doing surveys for his various writing projects. I was curious to find that many people find their way to him from hundreds of miles away – indeed, his office has hosted patients from 6 continents (only Antarctica is "missing"). I wanted to know why they often drove by or flew over the offices of other doctors who provide similar treatments for the degenerative disease conditions he treats so well. The answers at first surprised me – but knowing his background as I do, they really aren't surprising at all.

Houston has long had a reputation for delivering some of the finest medical care in the world. Sheiks and shahs, presidents and premiers have flown to the Texas Medical Center for high-technology care not available in their own countries. The career of Dr. Jimmy Howell, the Baylor cardiovascular surgeon featured in "THE RUMBLE IN HUMBLE" program, is an example of why Houston deserves this fine reputation. Further, getting to Houston is fairly easy, along major Interstates (10 and 45), a major US Hiway (59), major Texas highways – and of course, George Bush Intercontinental Airport is a hub for regional, continental, and overseas traffic.

But these reasons don't get to the central question I wanted answered: why do patients have such loyalty that they find and stay with Dr. Trowbridge, despite the inconveniences and expenses of time and distance? One key theme is that he and his staff listen – and they care to help solve problems. One patient said, "I'm tired of doctors who are all mouth and no ears!" And his patients appreciate his efforts to explain their problems (and their treatments) "in plain English," with commonsense and practical ideas. Perhaps the several books he has authored – including the million-plus copy bestseller, The Yeast Syndrome – have been "good practice" in this regard. Maybe, too, his experience in 1990, hosting a nationally syndicated radio show, "Finally Feeling Better!" with Dr. John Trowbridge, really sets him apart.

Another theme that I heard repeatedly was that patients wanted an "expert" who knew more than he *needed* to know to take care of them. *I* knew that he attended Stanford University as a National Merit Scholar – that he received his medical doctorate from Case Western Reserve University – that his training including a term at the National Institutes of Health near Washington, D. C., general surgery internship studies in San Francisco and part of a urological surgery residency at the Health Sciences Center of the University of Texas/Houston (in the Texas Medical Center) -- and that his training included graduate studies in nutrition through the Medical Research Institute of the Florida Institute of Technology in Melbourne, earning him a Diplomate in Preventive Medicine in 1985. But what *they* were referring to was the thoroughness with which he conducted their initial evaluation (including putting the entire discussion "on tape"), the many forms that he insisted they complete for his review, the books and materials that he required them to read so that he could answer *their* questions.

Repeatedly his patients told me they felt assured by his attention to detail, that he is clearly watching over their care. I suspect that these are some of the reasons that he is program chair for the twice yearly Advanced Training Seminar in Heavy Metal Toxicology (chelation therapy), sponsored by the Great Lakes College of Clinical Medicine (GLCCM). He also serves as GLCCM's representative on the 6-member Protocol Council of the American Board of Chelation Therapy (ABCT). Since 1985, Dr. Trowbridge has been board-certified as a chelation specialist by ABCT. And since 1988, he has been a member of the GLCCM Institutional Review Board, reviewing research protocols submitted from around the world.

The patients I interviewed also shared their respect for his leadership presence, his willingness to take responsibility to do a job differently and do it well. Many of them don't realize that his professional colleagues have recognized these traits as well, electing him president of GLCCM in 1994. He also served as a director and officer of the American College of Advancement in Medicine (ACAM) from 1984 through 1991. In 1989, he served as chairman of the Board of Directors of the National Health Federation (NHF). Since 1991, he has been a founding director of the American Preventive Medical Association. In 1997, he was named to the Board of Directors of the Institute for Health Freedom, based in Washington, D. C. He's one of 4 dozen physicians, worldwide, to meet the qualifications to be named as a Fellow of the American College of Advancement in Medicine. These are, I'm sure, some of the reasons why he has been honored in over 2 dozen volumes of Who's Who, including Who's Who in America and Who's Who in the World.

Some of Dr. Trowbridge's patients told me that they enjoy coming to a physician who is well known, who is respected for the contributions he has made over several years to the field of "complementary" medicine. Most of them didn't have a specific

item in mind – but then again, they don't know the details of his background as I do. Some editors *have* recognized his achievements – he is one of few physicians interviewed for a short article published in Stanford, the magazine of his alma mater. On a lighter side, he was even interviewed for his views on "oxygen bars" in the July 1997 issue of PLAYBOY magazine (Farrah Fawcett's 50th birthday issue). He has personally written several dozen articles for newspapers, magazines, and journals in the health field over the past 17 years.

On a personal note, I have grown to respect his willingness to declare the limits of his own knowledge. When he knows something, he knows it; when he knows he doesn't know something, he honestly announces it and finds the answers or finds someone who does. In this regard, I'm excited to hear about the new Medical and Scientific Advisory Board he is instituting for LIFE CENTER HOUSTON. **By establishing this board, he is inviting closer professional relationships with friends and colleagues around the world, leaders in the science of "complementary medicine" that he has long trusted and from whom he has learned much.**

Having worked with Dr. Trowbridge for almost 6 years, certainly *I'm* impressed with his plans for the future, especially with the continuing changes he has been making for over 3 years, enhancing the safety and effectiveness of his chelation treatment program. But what thrills me is to find so many of his patients who insist that traveling to Humble, even when they fly or drive hundreds of miles and pass by the offices of other "alternative" physicians. He appreciates their confidence, and they value his care and caring. What a pleasure, in this era of HMO's and "primary care providers" and all the worrisome changes in medicine, to find patients and a physician who are winning with and for each other.

ADDENDUM: A new "book-on-tape," titled *LIVING WELL PAST 50:* Rejuvenate Your Heart and Arteries, was released in January of 1998, featuring 3 hours of patient interviews and "plain English" explanations of treatment options for older adults and those who want to grow older with better health. His LIFE CENTER HOUSTON **medical office is conveniently located near the George Bush Intercontinental Airport in Humble, Texas, a Houston suburb.**

Appendix 10

HEART SURGERY . . .
AND ALL THAT *JAZZ!*

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HEART SURGERY . . .

DR. JIMMY HOWELL has been at Baylor for over 40 years, first as an honors student then as a bright surgeon-in-training – and from 1991 through 1996, as director of the training program for young surgeons specializing in vascular surgery. A full professor of surgery at Baylor since 1975, he is a board-certified specialist in surgery, in thoracic (chest) surgery, and general vascular (blood vessel) surgery. A senior attending surgeon at Houston's Methodist Hospital, Dr. Howell has contributed to the many "firsts" that have catapulted the Texas Medical Center to the pinnacle of heart and blood vessel surgery on this planet. And for the past 18 years, he has operated on many dozens of patients referred by Dr. Trowbridge for needed heart bypass surgery and other blood vessel operations. Dr. Howell most certainly can present an "insider's point of view" on the past, present, and future of heart and blood vessel surgery. To schedule an appointment as a patient, or to arrange a second opinion on your care, call his office in the Texas Medical Center: 713-790-4573.

AND ALL THAT *JAZZ!*

CALVIN OWENS started "life" as a young trumpeter in Houston – and became such a pro that he served two tenures as B. B. King's musical director. In Owen's first year with B. B. King – 1953 – the band performed 341 one-nighters while living on the bus – for $140 a week! "In Houston, I was always known as a jazz musician. I couldn't get a gig as a blues musician. But I was raised in a blues environment. But I don't like sad blues. It's got to be hot and poppin'." Living in Belgium for the past 12 years, Owens has recorded two excellent albums for European labels, True Blue and That's Your Boody. He's now working on recording the Big Blue Sound of his new Houston blues orchestra. We take great pride in having Calvin Owens and His Orchestra join us for THE RUMBLE IN HUMBLE, offering gentle jazz for listening and dancing, preceding our feature program at the Humble Civic Center.

Appendix 11

LIFE CENTER HOUSTON and www.healthCHOICESnow.com

The name LIFE CENTER HOUSTON **is far from coincidental.** LIFE **is your choice, healthy and robust, vibrant and active.** HOUSTON **is, most certainly, our geographical location, in the great land mass of the Texas Republic. And our commitment is to be the** CENTER**, the Source-Point, from which even more new ideas and technology spread out to encircle the planet.** LIFE CENTER HOUSTON **has a basic ideal, fostering a commitment to education — just the same way that** SPACE CENTER HOUSTON **is the educational arm of** NASA**'s Johnson Space Center here in Houston.**

"Houston, we've got a problem." Those electrifying words shot across space from Apollo 13 ..... and all the world stood by while the team of Houston engineers and specialists solved each problem encountered in bringing our astronauts home safely. LIFE CENTER HOUSTON **will continue and even expand our practice tradition of finding solutions for the many lingering healthcare problems that patients have brought us through the years.**

Our new WorldWideWebsite — *www.healthCHOICESnow.com* — will be a resource for millions of people. MOONWALKERS **— members of another of our planetary projects — will be key players in our Health Crusade, informing their friends and family of choices available in their explorations for better health.**

HEALTH RECOVERY UNIT

Many people come to us desperate in the fear that their life is slipping away. Some have been told by specialists in other fields of medicine that "there is nothing else that can be done." In our way of looking at illness, failure is not an option that we're willing to entertain. Certainly no physician can promise success. And no one can guarantee any result. But — like the team in Houston's Mission Control and their engineers and assistants who simply HAD to find a way to bring home a crippled spaceship — we see our job as FINDING a way to help you if one can be discovered.

We have a special interest in helping people with "chronic degenerative diseases" — heart and blood vessel problems, stroke, decreased memory, leg pains and ulcers,

cold feet, high blood pressure, high cholesterol, diabetes, rheumatoid arthritis and other "connective tissue" disorders, "chronic fatigue syndrome," and other illnesses for which conventional medical care has failed to provide enough relief or improvement.

Our goal is to recover as much of your normal function as possible. Our tools are a very thorough history, elegant tests to probe for where your problems might lie, and a treatment plan based on the latest technology to correct function problems and to add "layers of protection" from predictable future harm. Think of your body as your personal spacesuit, which is vital for your survival in a hostile environment ..... planet earth. We're looking for whatever toxins, infections, injuries, and deficiencies might cripple the function of your spacesuit. If you were an astronaut, every walk in space would challenge your survival and you would depend on your spacesuit for life itself. You are literally "wearing your body" as you travel through life — and you depend on it for survival and comfort on this planet. Shouldn't you take better care of it?

PAIN RELIEF UNIT

We help many people who are suffering with chronic pain. This isn't a "pain management" approach. We seek to identify and treat injuries to strong support tissues around bones, where stretching and tearing allows for joints to "wobble." Over months or years, "wobbling" grinds away at joints. Arthritis changes — stiffness, pain, swelling, limitation of movement — often result. Drug side effects can be severe and complicate matters dramatically. Our Reconstructive Therapy treatment program helps many of the painful complaints that people offer about whiplash neck pains, headaches, middle and low back pains, shoulder and knee pains, and other joint discomforts. This advanced technology can improve your strength and function and often relieve much of the pain. And "RT" works without daily drugs and without surgery.

LIFE ... LONG ... HEALTH UNIT

Now you can enjoy the benefits of our exciting "anti-aging"/"longevity" program!

Despite all our boasting of medical advances in the last 50 years, lifespan is still limited by degenerative diseases – heart attacks, strokes, cancers, lung and liver disorders – that resist treatment. *Most* of the medical costs spent in a person's lifetime are devoted to heroic efforts in the very last few months of life. And these unsuccessful and expensive consultations, medications, operations, and other "interventions" often seem to prolong suffering and death rather than to prolong life and restore health.

In an era where chemistry, physics, and biology have "explained" so many mysteries of the world, we have come to expect our physicians to solve our problems, no matter how desperate. President Richard Nixon's *lost* "war on cancer" showed that a technological and hopeful society can pour billions of dollars into medical research without affecting suffering or survival to any real degree.

In stark contrast, good "health" appears to occur almost effortlessly for many children, who grow and play and develop normally without medications or operations. When these children become adults, their usual doctors make the *false* assumption that eventual recovery from illness or injury will also occur almost effortlessly. Instead of being "proactive" or "preventive" in their approach, usual doctors fail their prime responsibility to their patients. For example, the usual medical advice given after surgery is reported to be "Do what you're able, eat pretty much like you have been before, you don't need any vitamin pills, and you'll do just fine." *Nothing* could be further from the truth.

"But the answers for my problem *must* be *somewhere* ....."

Patients delude themselves into believing that somewhere someone has figured out what to do to rescue them from an increasingly desperate situation. With thousands of medical journals published each year, surely someone "understands" what has gone wrong and just exactly how it should be "fixed." The 20,000+ medications available today can be grouped loosely into about 20 major categories. When patients finally sense that life is slipping beyond their grasp, they fail to understand that their *real* problems *don't* fall within any of these categories.

Specialists treat *organs* – but *your health* depends only on *your cells*.

Medications and operations are aimed at "organs gone wrong." Indeed, modern diagnoses are based on problems at the organ-level: "heart failure," "liver failure," kidney failure," and so on. But the functions of your body depend entirely and exclusively on the functions carried out in every single one of the 10,000-trillion cells that make up your organs and tissues.

As cells begin to malfunction, slowly and steadily you are developing diseases. Often many years will pass before your organs are affected enough for you to "notice" a problem (symptom) and finally come in for medical evaluation. Thus, "usual medical care" always has, as its starting point, a symptom (complaint) that "needs to be treated" ..... by drugs and surgery. As symptoms slip into crises that threaten your comfort and survival, these deteriorating organ problems "need to be treated" ..... by more drugs and more surgery. Finally, modern specialists have nothing left to offer but potent drugs to control your suffering while you steadily worsen ..... and finally die.

At *no* point does your physician "consult" or "call in" a specialist on how your cells actually work to maintain or restore health. At *no* point does your physician measure body functions that directly affect how efficiently your cells can repair themselves. At *no* point does your physician provide treatments that have been scientifically shown to reverse degenerations of cell function and restore more normal balances. At *no* point does your physician take responsibility for failing to understand and assist the body to repair itself, cell by cell, organ by organ, to restore better function and health.

Along the course of your life, several opportunities arise for you to live longer, become healthier, feel more energetic, and create more fulfilling experiences. Almost without exception, we miss these opportunities and let our future health slip away. Unfortunately, our usual doctors fail to meet our needs – and unthinkingly lead us along the path to more suffering and an earlier death. Until your very last days, you still can improve your health. But why wait?

When people begin to realize that they have developed serious illnesses – ones that could severely limit their activities or even lead to suffering and death – they turn to "specialists" who share the very same biases as their family physicians. More drugs and more surgery are the result. Slowly at first and then more quickly and more surely, they worsen and add even more drugs and more operations. At every step of the way, they trust that their physicians have taken into account *all* of the scientific medical information that would be relevant for their care. Yet no one takes responsibility for *not* knowing how cells slip from health into decreasing function, dragging you into further suffering and finally severe crises.

As a human birthright, we are given the miraculous gift of a self-repairing body. Then we trade it for a "bowl of porridge" called drugs and operations, chemotherapy poisons and radiation burns. And no one pauses to wonder whether we have turned our back on the *only* lifesaving chance we have ..... restoring health by helping each and every cell to recover, to repair, to rejuvenate.

Now is the time to reach out for better health .....

Regardless of how many opportunities you have missed, "advanced" treatments based on solid discoveries of science has something to offer you – especially if you still can "get up and get around."

Why? Because those few of us in our advanced practices have seen the many miracles of patients once again becoming more whole, more youthful, more energetic, more alive.

We have learned to use special advanced tests and special advanced treatments that are ignored and deplored by "usual" physicians ..... the very same doctors who helplessly (even zealously) watch their patients suffer and die.

Are you ready for some truly personalized *health* care? Are you someone who is willing to search for the answers to *your* puzzle for life long health? **Then our latest programs have been designed especially for you!**

Appendix 12

MY PERSONAL PLEDGE TO PROVIDE

QUALITY HEALTH CARE

I believe you deserve my extra commitment for you to feel confident in your choice to seek care here. Effective health care is based upon reliable scientific and medical principles. This means looking for effective ways to identify, understand, and efficiently treat the underlying problems causing your discomforts and diseases. I depend on your cooperation with an appropriate history and physical examination, needed laboratory tests and x-rays, and other evaluations to determine the conditions for which we should offer treatment.

I will select and outline for you combined conventional and complementary treatment plans. My first concern in all aspects of your care is always for your safety — then for a program based on clinical experience and scientific rationale, logically and reasonably expected to produce the favorable outcome you are seeking. My emphasis will be on lower risks and higher benefits — keeping in mind the ease with which you can follow and afford the program. My staff and I will describe your options and recommend reading materials. I will gladly refer you for any second opinion needed. We want you and your family to have all the information you desire and need, to make an informed choice in your care.

We encourage you to learn and choose basic lifestyle changes to help your improvements even faster and better. We will schedule appropriate testing to monitor your progress and follow-up visits to adapt the treatment plan as your condition changes. We welcome your questions and want to resolve any concerns you might have at any time. We pledge to adapt your care around any essential treatments advised by your family physician and other specialists.

I voluntarily pledge to participate in no less than 30 hours of study each year, in formal continuing education programs in the special areas of care that we provide here, to stay informed on the latest scientific foundations of our special medical practice.

John Parks Trowbridge M. D., FACAM
Chief Medical Consultant, LIFE CENTER HOUSTON

FINDING THE TRUE ANSWERS FOR YOURSELF ..... FOR LIFE

See for yourself how remarkable changes with chelation therapy might be possible for you, too, by calling to arrange a visit to LIFE CENTER HOUSTON**. You'll want to ask a few questions of the nurses -- maybe even meet the doctor. But spend most of your time with the patients here. Talk with them, get your <u>real</u> questions answered, like: "How has chelation helped you?" "Do you really have more energy?" "Has chelation helped relieve any pains?" "Do you sleep better?" "Can you walk farther? Garden easier? Travel and play more? Enjoy your grandchildren more?" "What other benefits have you gotten from your choice to have chelation therapy?" "Do you honestly believe that chelation treatments could really help me, too?"**

Many patients feel more assured under the care of a physician who has undergone advanced training and whose expertise and experience has been certified by the passing of specialty examinations conducted by the American Board of Chelation Therapy. This examining board was formed in 1983 and its specialists are located around the world. Rest assured that your treatment program at LIFE CENTER HOUSTON **is planned and monitored by a board-certified specialist, our Chief Medical Consultant.**

You have now learned about one of the most remarkable modern treatments that might help you recover you health for many more years. Please choose to share this book with your husband or wife, with your family and friends ..... with anyone you know who hopes to live a fuller life, who hopes to avoid surgery, who hopes to have more energy and to feel better. No matter what they have been told, no matter their calendar age, if they still have hope for a brighter tomorrow, chelation therapy might be the answer they've been looking for ..... for the rest of their life!

After all, isn't it time for you to get out of your pain and back into your life? To enjoy a brighter future filled with more energy, enthusiasm, and the activities you enjoy – walking, gardening, traveling, socializing, playing – learn how you could start chelation therapy treatments right away. Don't waste another day of your life waiting to see what else might happen with your health.

To schedule your office consultation and start receiving highly specialized, very personalized health care, contact

LIFE CENTER HOUSTON

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