THE WATERS OF LIFE

Be Sure To Take Care Of Your Kidneys

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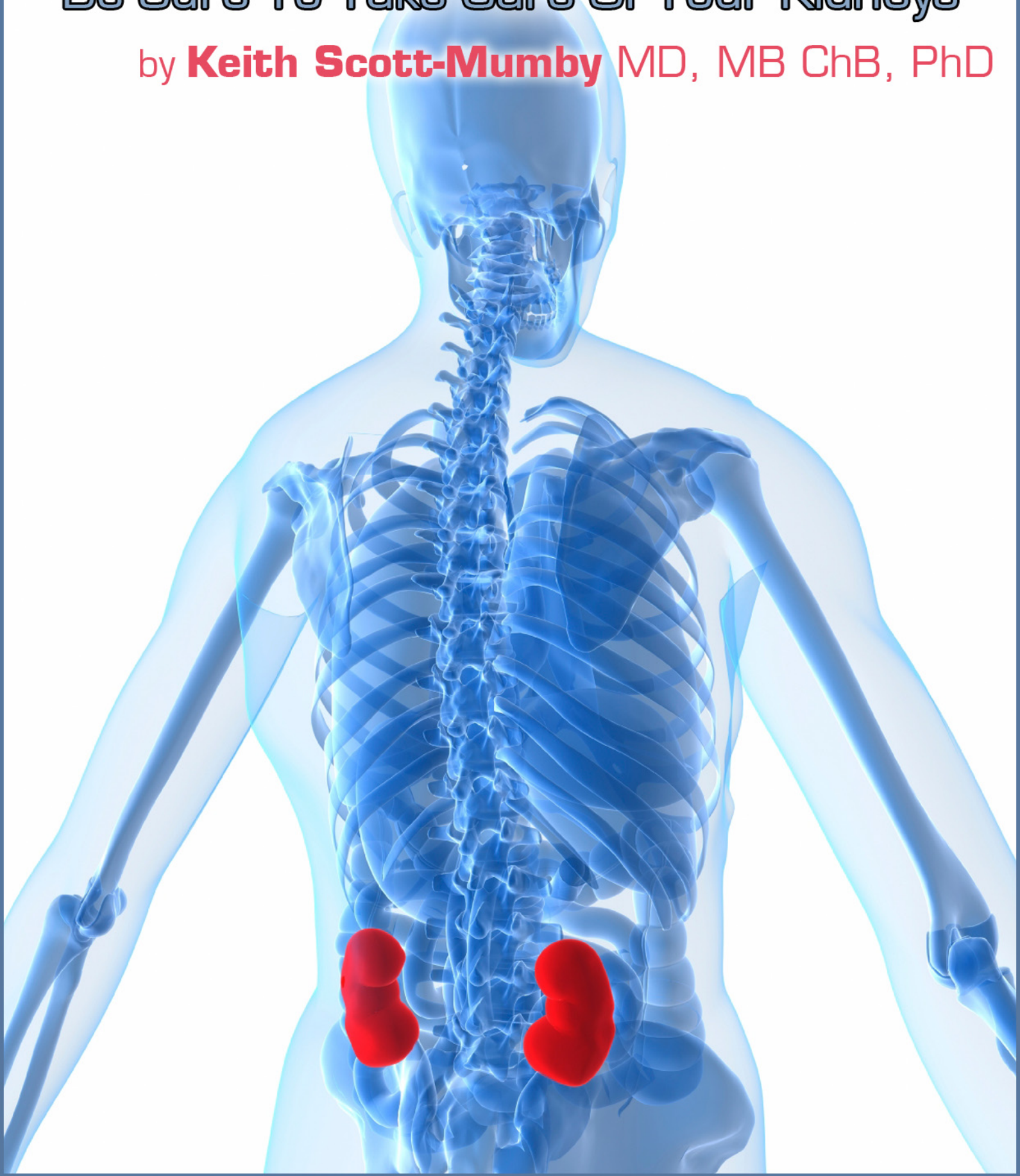

Announcement!

Beware: according to the Journal of the American Society of Nephrology. 2005;16:180–188], 1 in every 25 people over the age of 20 years have physiological evidence of moderate or severe chronic kidney disease.

I thought that would get your attention. Unless you KNOW for SURE you are in the 24 lucky ones, and will never move to the other group, read on!

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Introduction

Avoiding Transplant Kidneys!

Everyone knows you should look after your heart and lungs if you want to live well and live long. Folks know the importance of preserving brain power and being able to remain human, active, alert and fully functioning mentally, if we want to steer clear of dreadful dementias.

We have to exercise; we have to keep a good weight; we need to suppress inflammation in our bodies; get good nourishment.

Sex is good too, so we need to look after our fun tackle.

If you read my ebook "Love Your Liver", you'll know how important it is to look after that major detox organ.

But kidneys? You kidding? Who cares about kidneys?

Well, you should. You can do everything right, by the book, and still die young, because your kidneys packed up. Even in this day and age of dialysis, you need money—big money—to go on living via a dialysis machine.

> In 2004, there were 61,960 patients on the waiting lists for kidney transplant.

Transplant? Forget it. The waiting list is years long and you'll only jump it by buying black market kidneys from an executed criminal in China; or some dirt bag found in the desert; or a young kid who was murdered by the Russian mafia, just to supply kidneys at a premium price to those who are desperate.

Selling kidneys has become an issue because kidney transplantation is so remarkably successful. The five-year survival for recipients of kidneys from living donors is 90.5%. Recipients of kidneys from deceased donors do almost as well, with a five-year survival rate of 82.5%.

Patients on dialysis have a much worse prognosis, with an average life expectancy only half that for transplant patients.

Kidneys are by far the most needed organs for transplants. In 2004, there were 88,165 patients on the waiting lists for all types of organ transplants, and 61,960 of these were waiting for kidneys. In the same year, there were only 16,002 kidneys transplanted in the United States, 58% from deceased donors and 42% from living donors.

The number of people who need transplants has been steadily increasing, but the number of donations has remained fairly constant. This book might do a lot to lower the incidence of patients requiring new kidneys. Take heed!

Sad story

Then there was the 2009 case of a New York man who wants the kidney back he donated to his wife, because she allegedly cheated on him and they are now divorcing.

In public statements, the man seems genuinely devastated at both her alleged infidelity as well as the fact that she did this to him after he gave her one of his kidneys to save her life. He wants people to know the risks in donating a kidney, and he's right, there are very real and serious risks. He shakes his head in disbelief at how she could cheat on him after he did this for her; that he did this for love and risked it all.

He now counters that he either wants his kidney back - or it's worth - 1.5 million dollars.

I hope he calms down and feels less pain because of the woman. There seems little prospect (or point) in getting back a kidney.

Black Market Kidneys

Oh yes, there's a black market allright. There always will be, while ever demand outstrips supply.

In the USA, under 1984 federal law, it is illegal for anyone to knowingly buy or sell organs for transplant. The practice is illegal just about everywhere else in the world, too.

Thousands of people die annually while waiting for a replacement kidney. As a result, there is a thriving black market for kidneys around the world.

Only last year (July 2009) Levy Izhak Rosenbaum of Brooklyn was indicted for brokering the sale of black-market kidneys. He bought organs from vulnerable people from Israel for $10,000 and sold them to desperate patients in the United States for as much as $160,000.

As part of the scheme, the organ donors were brought from Israel to the US, where they underwent surgery to remove the kidneys. Prosecutors in the Rosenbaum case did not identify which hospitals in the U.S. received the donors and their kidneys.

"The allegations about an organ trafficking ring in the United States are appalling," said John Davis, CEO of the National Kidney Foundation. He's pretty naïve then.

Dr. Francis Delmonico, a Harvard professor, transplant surgeon and board member of the National Kidney Foundation's Board of Directors, said similar trafficking is going on elsewhere around the world. According to Delmonico, an estimated 10 per cent of kidney transplants — 5,000 to 6,000 each year — are done illegally. Hot spots are Pakistan, the Philippines and China, where it is believed organs are obtained from executed prisoners.

In 2003 and 2004, 17 people were arrested in Brazil and South Africa on suspicion of participating in an international human organ trafficking organization. Investigators said Brazilians who passed a medical checkup were flown to South Africa, where their kidneys were extracted.

A few transplant surgeons support changing the law to allow a system of regulated compensation to increase the pool of donor kidneys. Well, they would I suppose. They claim it would reduce the need for black market organs. It certainly wouldn't do their business any harm

[SOURCE: CBS news: July 27, 2009 8:15 AM DOI: Sep 6/2010]

This is about desperation, which is why I am telling you at all. No kidneys = bad news. You wouldn't want to go there, would you?

Well, listen up. It's time for some kidney sense.

What Do Kidneys Do?

Kidneys are just about the most unsung, unloved, undervalued organs in our bodies. We react to piss as if it were filth, instead of a good thing. Without our kidneys in good shape we wouldn't last a week!

> Our kidneys filter and process 3-4 liters of blood approximately every 5 minutes

Our kidneys have about 2 million nephrons (little filter units) that filter and process 3-4 liters of blood approximately every 5 minutes, 24 hours a day, 7 days a week. The rate of blood flow through the kidneys is about 20% of the total blood pumped by the heart each minute. (Anatomical Chart Company 2002®, Lippincott Williams & Wilkins)

The kidneys get rid of the by-products of the breakdown of protein. These include ammonia and urea, which are toxic. They also excrete some bacterial toxins, hydrogen, electrolytes, heat, and carbon dioxide.

Apart from excreting waste, the kidneys are key players in regulating the body's acid-alkali balance and, very important, in balancing and retaining fluid levels in the tissues. Kidneys also release hormones that regulate blood pressure, produce an active form of vitamin D (calcitrol) that promotes strong, healthy bones

and they control the production of red blood cells, through a hormone called erythropoietin, aka. hematopoietin or hemopoietin.

The kidneys are also involved in producing glucose when the body is fasting or starving.

Water is reabsorbed by parts of the kidneys to make sure we don't lose too much fluid. Hormones are the main deciders in how much water is reabsorbed. When we are over-hydrated (or drink alcohol), the main hormones involved are suppressed to make sure we get rid of some of the excess water. And when we are dehydrated, more are produced so we reabsorb more water.

I should point out, that urine was blood plasma only minutes before. It's quite sterile and has simply had its composition tweaked, so that the good substances were re-absorbed and the unwanted waste concentrated, to make it more efficient. You can drink urine if you want; some people do! But it rather defeats Nature's process of getting rid of toxic waste.

What Can Go Wrong?

A lot. There are many disease processes to take out your kidneys. We have lost some great people over the years to kidney damage. Here are some sufferers and most were fatal:

- C. S. Lewis, author of the popular Narnia series of novels.
- The very first Blonde Bombshell, Jean Harlow, died of kidney failure, age 26.
- Stephen Spielberg. Has had a nephrectomy but won't say why.
- Wolfgang Amadeus Mozart. The cause of his death is not certain, but some believe he died of kidney failure.
- Chester A. Arthur, 21st US President. Suffered from a fatal kidney disease.
- James Michener, author. Died of kidney failure at age 90 after years of dialysis.
- Erma Bombeck, columnist. Had a long history of kidney disease and died from complications of a kidney transplant in 1996.
- Oscar Peterson, jazz pianist
- Barry White, Grammy award-winning singer. Suffered from kidney disease and died of a stroke.
- Alice Hathaway Lee Roosevelt, first wife of President Theodore Roosevelt
- Albert Ellis, writer, psychiatrist
- Norman Mailer, writer (he had plenty of money, so be warned)

- And last but not least His Holiness Pope John Paul II, died April 2005 of protracted ill-health, including kidney failure, age 84.

Kidney Statistics

An estimated 3.83 percent of adults in the US aged 20 or older (7.7 million adults) have physiological moderate or severe evidence of chronic kidney disease [Journal of the American Society of Nephrology. 2005;16:180–188]. That's approximately 1 in every 25 people.

As I said in my "Speed Bumps" (on the way to aging) book: kidney failure is in the top 10 causes of death in the US. The pattern is the same in other Western countries. Incidentally, it does NOT fall in the top 10 for Eskimos and American Native Indians.

Researchers predict that in the US the prevalence of kidney failure ("end-stage renal disease" as they call it or ESRD) will rise over 60% from 2005 to 2020. The change will have important ramifications for the delivery of healthcare to this population, according to Dr. David T. Gilbertson, from the US Renal Data System in Minneapolis.

> Kidney failure is in the top 10 causes of death in the US.

Based on data available through 2005, researchers estimate that the 485,000 figure is predicted to swell to 680,000 in 2015 and to 785,000 in 2020. Dr. Gilbertson presented his team's findings in November 2007 at the annual meeting of the American Society of Nephrology in San Francisco.

The baby boomers are the problem. Despite advances in kidney disease management and improved chances for the individual, the population incidence is set to soar over the next 2 decades. You and I will still be alive (if you do what I tell you), so we are especially at risk.

The findings are worrying because they suggest that there may not be enough health care providers to care for this population sub-set in the future, according to Gilbertson. He talks in terms of more kidney transplants, and more home-based therapy options such as peritoneal dialysis and more home hemodialysis.

Well, you and I know the real answer is to teach people how to take care of their health, so they don't fall into this or any other disaster scenario but stay well till their last day on Earth.

Hidden Kidney Disease

The problem is, like liver, people with kidney disease often don't know anything is wrong until it is too late.

Now a new study has pinpointed once again the risk of hidden kidney disease. Research has shown that a lot of individuals with prediabetes and undiagnosed diabetes, millions may have chronic kidney disease and not know it.

In the study, researchers looked at a sample of about 8,200 people included in the National Health and Nutrition Examination Survey and found that 42% of those with undiagnosed diabetes had chronic kidney disease. This actually compares with the 40% rate in people with diagnosed diabetes.

Only a small percentage of people with undiagnosed diabetes and chronic kidney disease knew that they had kidney disease, said study author Laura C. Plantinga, of the University of California, San Francisco.

Among those with prediabetes, nearly 18% of people had chronic undiagnosed kidney disease.

The rate of chronic kidney disease among people who do not have diabetes or prediabetes was about 11%, they noted. That means the risk in this study group rose by almost four-fold.

[SOURCE: American Society of Nephrology, news release, March 25, 2010]

Kidney Failure

Chronic kidney disease (CKD) is a condition in which the kidneys gradually lose their function over a period of months to years. CKD is not a single disease, but rather a condition which can be an end-stage complication of a number of other diseases (such as diabetes or hypertension).

CKD is divided into stages, depending on the level of function. Kidney function is measured by the glomerular filtration rate (GFR). For a normal-sized person, a normal GFR should be 90 ml/minute or better (higher filtration result is better, if you reflect for a moment on this).

The stages of kidney disease are defined as follows:

Stage 1: Normal GFR, but with signs of kidney disease based on imaging studies and/or the presence of protein in the urine.

Stage 2: GFR 60-90 ml/min.

Stage 3: GFR 30-60 ml/min.

Stage 4: GFR 15-30 ml/min.

Stage 5: GFR <15 ml/min.

At stage 5, people are generally considered to be in need of (or very close to being in need of) dialysis or kidney transplantation in order to sustain life.

What Causes Kidney Failure?

I found a list of over 200 causes of kidney failure at www.wrongdiagnosis.com

There is little value in repeating such a list.

Basically there is acute (sudden) kidney failure, due to things like toxic shock syndrome, heart attack, hemorrhage and bacterial infection.

Then chronic causes, such as chronic nephritis (glomerulonephritis), polycystic kidney disease (PKD), stones and hypertension.

Other causes are relatively rare but contributory toxic overload factors are not, as we shall see.

Hypertension is the commonest (25%) and most curable precursor disease to kidney damage. You know, of course, that high blood pressure damages the heart (the pump) but you may not be so aware it puts great pressure elsewhere in the system (the cocks and drains, so to speak).

In fact this is one of those vicious circles, because kidney damage from almost any cause releases a compound called angiotensin, which raises blood pressure. That causes more kidney damage, higher blood pressure, more angiotensin release and so the cycle goes on.

Diabetes (either type I or II) may result in kidney damage after a number of years, especially if blood sugar is not well-controlled. Usually by the time a person develops diabetic kidney disease, they have had diabetes for at least 10 years, and the diabetes has often affected other organs, such as the eyes, blood vessels, and distal nerves (especially of the feet). Research shows that a one percent-point drop in the A1C blood test—a measure of blood-sugar control—can cut the risk of kidney disease and other complications by up to about 40 percent.

Chronic glomerular disease comes next. This means microscopic inflammatory attacks from things like streptococcal antibodies or auto-antibodies, as in systemic lupus.

Other causes include cancer, vasculitis, hepatitis B, hepatitis C, IgA nephropathy (which is especially common in southeast Asia) and focal segmental glomerulosclerosis (which is especially common among young and middle-aged African Americans).

Polycystic kidney disease (PKD) you will hear mentioned a lot. It is not a disease of neglect but rather a genetic disorder. It is inherited as an autosomal dominant disorder, meaning that either a mother or a father can pass it on, and about half of their offspring will inherit the gene that causes the disease. Babies with PKD

are born with normal kidneys, but over the next 40-50 years, their kidneys are gradually replaced with fluid-filled cysts, causing them to deteriorate in function.

Another major cause of kidney damage is urinary tract obstruction. Anything that blocks the flow of urine from the kidneys down the ureters, into the bladder, and out of the bladder through the urethra can cause urine to back up within the kidneys and cause temporary and/or permanent damage.

A common cause of obstruction is an enlarged prostate gland, which prevents urine from flowing freely out of the bladder. Other causes of obstruction include kidney stones, which can block one or both ureters, and tumors.

Anorexia nervosa. When extreme, anorexia can lead to organ failure and death. The kidneys may be affected, leading to renal failure. It is not then reversible when the patient (usually a young woman) is persuaded to resume normal eating.

Toxins

Ironically, the kidneys exist to excrete toxins; that's their job. But unlike the liver, the kidneys cannot DE-toxify (or biotransform substances, as it is called). That leaves them liable to be hit. So toxic metals, such as chromium, cadmium, arsenic and mercury passing through the kidneys hurts them. Same with toxic organic chemicals.

Many medicinal drugs are toxic to the kidneys, especially chemo drugs. Zocor has also been linked to rhabdomyolysis, kidney damage, and kidney failure in patients taking 80 mg. compared to 10 mg., 20 mg., and 40mg. doses.

> The humble paracetomol tablet is a deadly threat to the kidneys

Remember also the humble paracetomol tablet is a deadly threat to the kidneys and many people have died of kidney failure through abusing OTC headache pills.

OTC analgesics rarely present a problem for most people if they are taken according to the recommended dosage. However, some conditions such as chronic kidney disease or taking OTC analgesics for a long time or in combination with other analgesics make OTC analgesics dangerous. According to the NIDDK (1998), analgesics such as aspirin, ibuprofen, acetaminophen, and naproxen have been attributed to incidence of acute kidney failure in persons with lupus erythematosus or chronic renal conditions; persons of advanced age; or persons who have had a recent binge of alcohol consumption.

Some cases involved a single dose or no more than 10 days of analgesic use! Painkillers that combine two or more analgesics (e.g., aspirin and acetaminophen together) with caffeine or codeine are more likely to cause kidney damage. These

mixtures are often sold in powder form. Single analgesics (e.g., aspirin alone) have been found to be less likely to cause kidney damage.

Kidney Failure From Pharmaceutical Counterfeits

There have been thousands of deaths from kidney failure due to diethylene glycol (DEG) poisoning. The story is the usual one of homicidal greed. DEG is cheaper and easier to produce than pharmaceutical-grade glycerine and unscrupulous manufacturers may substitute one for the other. They taste pretty much the same.

Diethylene glycol is chemically related to ethylene glycol, which is commonly used as an antifreeze. It is a highly toxic industrial solvent that has been found in various medications including antibiotics, fever syrups and cough expectorants. It is especially dangerous to children, who may die from severe kidney failure and respiratory paralysis.

After DEG is ingested, it is likely converted by the liver into toxic compounds that lead to a sudden and total shut down of the kidneys, severe acidity in the blood, inflammation of the liver and neurological dysfunction, including paralysis.

There have been a number of mass DEG poisonings around the world but the most famous case in the US involved contamination of an antibiotic elixir (sulfanilamide) in 1937. This led to the deaths of over 100 Americans and ultimately to the creation of the U.S. Food and Drug Administration (FDA).

The most recent case occurred in Panama in 2006 and involved cough syrup being made from counterfeit glycerine. The source of the counterfeit glycerin was identified and ultimately traced to China.

Because most victims die quickly, treatment regimens for DEG poisoning have not been really developed in humans. However, because of the similarities between it and ethylene glycol poisoning, similar treatment approaches are recommended. This includes hemodialysis (to remove the DEG and toxins), bicarbonate (to treat the low blood acidity), intravenous fluids and diuretics (to support the blood pressure and flush out the kidneys), and drugs to prevent the conversion of DEG to its toxic forms.

Just pray it never happens unknowingly to you or your family and on no account buy or use medications from China!

[Bogdanich, Walt and Hooker, Jake. “From China to Panama, a Trail of Poisoned Medicine.” New York Times, May 6, 2007.]

Nephrotic Syndrome

Nephrotic syndrome is a nonspecific disorder in which the kidneys are damaged, causing them to leak large amounts of protein (at least 3.5 grams per day per 1.73m2 body surface area). There is no blood, which distinguishes this from a similarly named condition: nephritic syndrome.

There may be disordered lipids in the blood and hypoalbuminemia (lowered blood proteins) because of the leakage. Odemea is one of the obvious physical signs; also known as anasarca or the old name of dropsy. Lipiduria (lipids in urine) can also occur, but is not essential for diagnosis of nephrotic syndrome.

So-called "minimal change disease" is the most common cause of nephrotic syndrome in children. It is also seen in adults. The cause is unknown, but the disease may occur after:

- Allergic reactions
- Recent immunizations
- Viral infection

Nephrotic syndrome can also occur as a result of infection (such as strep throat, hepatitis, or mononucleosis), use of certain drugs, cancer, genetic disorders, immune disorders, or diseases that affect multiple body systems including diabetes, systemic lupus erythematosus, systemic lupus erythematosus (SLE), multiple myeloma and amyloidosis.

It can accompany other kidney disorders with fierce sounding names.

Nephrotic syndrome can affect all age groups. In children, it is most common from age 2 to 6. This disorder occurs slightly more often in males than females.

This is a disease which I want to feature especially in the section on alternative treatments. We'll leave it till then.

Inflammatory Cytokines

Destructive cell-signaling chemicals called inflammatory cytokines contribute to degenerative, inflammatory, and autoimmune diseases (Van der Meide et al. 1996; Licinio et al. 1999). This may be a mechanism underlying kidney failure and many other diseases (congestive heart failure, anemia, rheumatoid arthritis, fibrinogen formation, fibrosis, diabetes, asthma, lupus, psoriasis).

People who have multiple degenerative disorders often exhibit excess levels of pro-inflammatory markers in their blood. In kidney failure, inflammatory cytokines restrict circulation and damage nephrons (the filtering units of the kidneys).

For those who have degenerative diseases, particularly multiple ones, cytokine profile and C-reactive protein blood tests are highly recommended. The main ones to check are:

1. C-rteukin-1b (IL-1b)

If one or more of these is raised, you must tackle inflammation vigorously. Dietary changes are needed, to remove inflammatory foods. Chemical overload needs to be reduced. Take lashings of omega-3 fatty acids.

I would take homeopathic complexes, such as Solidago compositum or populous compositum (from HEEL), before I would try an anti-inflammatory drug.

Symptoms

Tell Me What Symptoms To Look Out For!

Urinary Habit

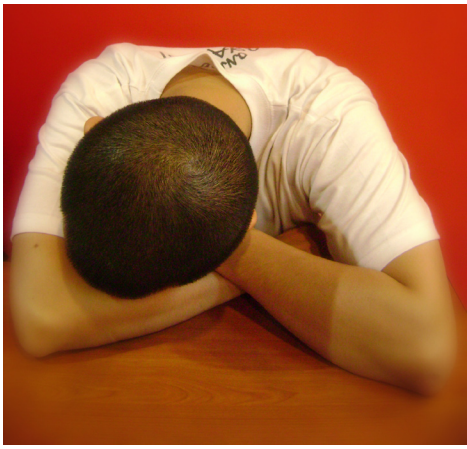
Not surprisingly, changes in urinary habit may be significant. Changes in amount, color, and frequency of urination could all be signs of malfunction. It may be foamy (protein) or offensively smelly.

Back Or Side Pain

Because of the location of the kidneys, people may experience pain in the back or on the side of the affected kidney. The pain is much higher up than most people realize: the kidneys are under your ribs at the back, not in the flank or loin.

Swellings

Kidneys that are failing don't have less ability to remove excess water, which can cause fluid to build up in your body. What you experience is swellings of the legs, ankles, feet, face, and/or hands swelling. Puffy eyes with swollen bags below them may also be a sign of kidney impairment.



Fatigue

Tiredness is a symptom of many diseases, of course, including nephritis. It can also denote anemia and the kidneys are intimately involved in red cell production, through a hormone called erythropoietin.

Skin Rash and/or Itching

When the body can no longer excrete toxins, it has to find somewhere to dump them, to render them less harmful. The skin if often a site for depositing toxins and rashes may be the visible result. Itching can occur even without a visible rash.

Metallic Taste in Your Mouth and Ammonia Breath

This is more serious and denotes a worsening grade of kidney disease.

Uremia is a condition that occurs when waste builds up in the blood. This can cause bad breath and can alter the taste of food. Many people will also stop eating meat because of the distorted taste and will lose weight due to no desire to eat.

Nausea and Vomiting

Again, not a specific symptom. But coupled with the previous symptoms, this can be a sign of bad kidney disease. Urea, which is a build up, causes the nausea.

Shortness of Breath

A shortness of breath and difficulty breathing can be directly related to kidney disease in two ways:

> First, all the extra fluid that builds up in your system can collect in or around your lungs making it difficult to breath.
>
> Secondly, as in #3, kidney disease can cause anemia, which is a shortage of oxygen carrying red blood cells, and this lack of oxygen can leave your body starved and short of breath.

Symptoms of advanced kidney failure:

Once matters have progressed to loss of appetite, nausea, vomiting, fatigue, sleepiness, itching, twitching, a metallic taste in the mouth, swellings of the limbs and shortness of breath, there is far advanced chronic kidney disease (CKD).

The patient will soon need dialysis. The stage we call End Stage Renal Disease (ESRD) has been reached.

Understanding End Stage Renal Disease (ESRD)

Although careful management of CKD may delay its progression, kidney disease may eventually progress to the point where either dialysis or transplantation, is required. The stage at which the kidneys fail so that they can no longer sustain life unaided is known as "end stage renal disease," or ESRD. ESRD is growing at a rate of 4-8% per year in the United States.

When I was at med school, ESRD was known as "uremia", meaning high urea in the blood serum. Urea is the main breakdown product of protein metabolism. It is related to ammonia and very toxic.

It may progress to the stage of "uremic frost" The classic skin finding in persons with uremia is uremic frost, which is a fine residue thought to consist of excreted urea left on the skin after evaporation of water. The skin may have a velvety appearance and feel, particularly in patients who are pigmented. Patients who are uremic also may have a sallow coloration of the skin due to urochrome, the pigment that gives urine its color.

At its worst stage, shortly before death, the patient is deranged, trembling, stuporose and finally slips into a terminal coma. It is not nice.

The kidneys have reached the stage of needing help when:

- BUN increases from its normal value of less than 20 mg/dL (7.1 mmol/L) to more than 70-80 (29 mmol/L).
- Creatinine increases from its normal of less than 1.0 mg/dL (88 mg/L) to more than 7 (619 mg/L).
- eGFR falls to less than 15 ml/1.73 m2.

Malnutrition usually occurs as renal failure progresses and is manifested by anorexia, weight loss, loss of muscle mass, low cholesterol levels, low BUN levels in the setting of an elevated creatinine level, low serum transferrin levels, and hypoalbuminemia.

Once the serum albumin (a protein) starts to fall, the prognosis becomes very grave.

In general, the aim of managing a patient with CKD is to arrange to start dialysis as renal function declines (as measured by the lab tests above) but before the patient develops the symptoms of ESRD, or "uremia." Otherwise it's leaving matters till too late.

Dialysis

Dialysis is a process by which blood is passed through a machine which artificially filters it and removes waste products and excess fluid is removed from the body. There are two types of dialysis: hemodialysis (discussed here) and periotoneal dialysis.

In hemodialysis, the patient's blood is circulated continuously through a machine that contains a "dialyzer," which is a special type of filter containing thousands of tiny capillaries (hollow fibers) that allow wastes and fluid to be filtered and removed. The procedure generally takes 3-5 hours and is performed three times weekly.

> This procedure is done **4-5 times a day**, 7 days a week.

Peritoneal dialysis involves instilling 2 to 3 liters (quarts) of fluid at a time into the person's abdominal (or "peritoneal") cavity through a flexible plastic catheter that is implanted in the abdominal wall. The fluid is allowed to remain in the abdominal cavity for a period of hours, gradually absorbing waste products and toxins from the body; it is then drained out and replaced with fresh fluid.

This procedure of fluid exchange is performed by the patient, and is done 4-5 times a day, 7 days a week. It's tough. The procedure involves careful use of sterile technique and constant monitoring of blood pressure, fluid volumes, and weights, so many patients are not able to perform this type of dialysis.

Transplant

The only other option, once the kidneys are wrecked, is a transplant. There is no point in going into the technicalities of this procedure. Just follow the advice in this book, keep away from doctors, and you are unlikely to ever need it.

Kidney Cancer

OK, this is a fairly rare beast (2% of all cancers), we'll not dwell on it. Bladder cancer I shalln't touch at all. Kidney and bladder cancers occur in a ratio of about 1:2.

While bladder cancer deaths are falling (probably due to less smoking), kidney cancer deaths are on the rise.

Kidney cancer occurs in two forms, one adult and one childhood.

Childhood Kidney Cancer

This type of cancer is known as a nephroblastoma or Wilm's tumor, after the German doctor Max Wilms (1867-1918), who first wrote about it in 1899

> Kidney cancer deaths are on the rise.

It has an excellent prognosis. In fact, most children with Wilms' tumor will survive the disease. Recovery rates are usually over 90% and even for the metastasized form (stage IV and V), survival can exceed 80%, over 5 years.

Unfortunately, Wilms' tumors often go unnoticed in the early stages. The tumors are usually discovered only after they've grown to a fairly large size or after they've spread to other organs (metastasized).

If you feel a lump or swelling in your child's abdomen or if your child experiences any of the above-mentioned symptoms, immediately schedule an appointment with a pediatrician.

Adult Kidney Cancer

This is much more lethal than a Wilm's. There are several types:

Renal cell carcinoma (RCC), also known as renal cell cancer or renal cell adeno-carcinoma, is by far the most common type of kidney cancer. It accounts for about 9 out of 10 kidney cancers.

Although RCC usually grows as a single mass (tumor) within a kidney, sometimes there are 2 or more tumors in one kidney or even tumors in both kidneys at the same time.

Some of these cancers are noticed only after they have become quite large, but most are found before they metastasize (spread) to distant organs in the body. Often they are found on CT scans or ultrasounds that are being done for concerns other than kidney cancer.

Like most cancers, RCC is hard to treat once it has spread.

Much less common are the transitional cell carcinoma (5- 10%) and renal sarcoma (less than 1%).

Treatment

Treatment, as you would expect, relies heavily of nephrectomy, that is removal of the affected kidneys.

This is backed up by radiation therapy or chemo, as deemed appropriate.

Diagnosis of Kidney Disease

The Traditional Chamber Pot

I'm just old enough to remember chamber pots or "piss pots". They were a great boon in the days before central heating and when the toilet was often outside, in the freezing night air.

It was very convenient to be able to pee or defecate into the pot and then throw out the waste in the morning, once properly dressed.

But there was another boon we are missing today. Peeing into the pot gave the person a particularly frank view of their own excreta. It was easy to see any visual changes in urine or smell it (often a significant sign of disease).

Sometimes the passing of a kidney stone would announce itself with a "ping" as it hit the porcelain.

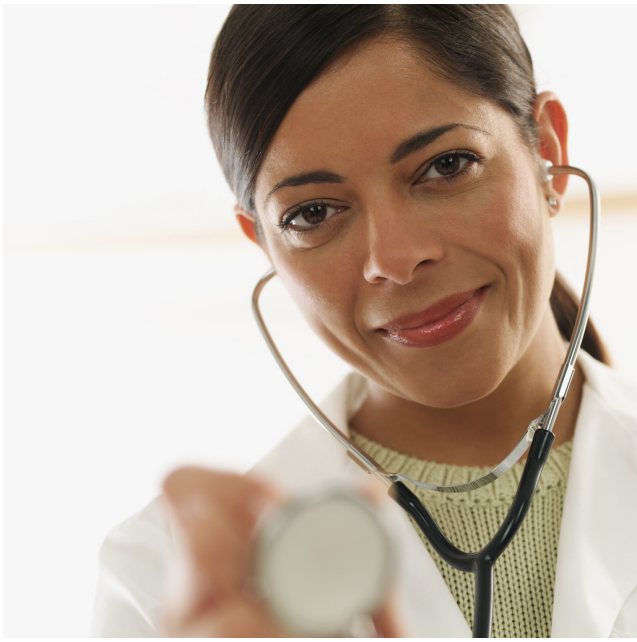
Blood is easily seen against the white background. Silent (painless) blood in the urine is a particularly sinister symptom, usually indicative of kidney cancer.

In ancient Rome, peering into the chamber pot fell not only within the domain of medical diagnosis, but soon became entertainment as well. The art of uromancy -- the study of urine for purposes of divination -- appeared during this time. Like their medical counterparts, uromancers swirled, studied and even tasted people's urine in the hopes of providing them with a peek into their future.

By the Middle Ages, the Catholic Church had emerged as the most powerful force in Europe. From the sixth century until the Renaissance, the Church limited physicians' options considerably. With doctors prohibited from touching certain parts of patients or even seeing patients unclothed, bodily fluids that could be passed discretely from behind a screen soon became the sole method of diagnosis, especially for women.

Purple urine! The urine of Britain's "Mad" King George III (1738-1820) was apparently a royal purple in colour. Today we would recognize red-purple or blue urine as a sign of hereditary porphyrria.

At The Doctor's Office



Uroscopy (inspection of the urine) is still done by many doctors. It can give valuable clues.

More likely today that would include looking at the urine under a microscope, to check for blood cells and protein casts, and testing with chemical reagent strips for protein, glucose etc.

More specific tests showing kidney dysfunction may be one as part of an annual physical exam, a preoperative evaluation, or a school, employment, or insurance physical. Unexpected results may be found.

Abnormal blood tests of kidney function

A routine panel of blood tests (which is often done either as part of an annual physical, or in preparation for surgery) includes a BUN (blood urea nitrogen) and a creatinine. These two substances are normal metabolic waste products that are excreted by the kidneys. In kidney disease, they are not excreted as well as they should be, so the amounts in the blood rise and can be detected on routine blood tests. This is often the very first indication of kidney disease, and is often noted at a time well before any symptoms or other abnormalities become evident.

High blood pressure

Although this is a very common finding, particularly as people become older, it can also be the first sign of kidney disease. As I already stated, high blood pressure can also itself be a cause of kidney disease.

Edema or swelling

Swellings of the feet, lower legs, hands, and sometimes of the face, round the eyes (bags). This is a sign of fluid buildup that can occur in several conditions, most commonly in heart failure. However, it often is the first sign of lowered kidney performance.

Symptoms of a urinary tract infection

If repeated often, urinary infections can be a pointer to pathology, such as PKD or other malformations. Basically, anything which causes increased bladder pressure will lead to back pressure on the kidneys and this results in damage.

It's not so much the repeated infections that do the damage; these are just the warnings!

How good are your kidneys?

What we want to know is how efficiently your kidneys are filtering. The benchmark test is crude, cheap and easy. It's called creatinine clearance. Typical creatinine clearance for healthy adults is 80 - 120 ml / min.

The traditional way of measuring it was taking a blood sample and 24 hours of urine collection. But since its publication in 1976 we use a simple formula called the Cockroft-Gault equation. Basically, it's 140 minus your age, multiplied by your weight in kilograms; then take the serum creatinine level, multiply it by 72 and divide that into the first answer.

For those of you who like it algebraically, it's: 140 - age x weight/serum creatinine x 72.

That's for males. Women are supposed to multiply the final result by 0.85. I have never understood why this arbitrary adjustment needs to be applied; it implies womens' kidneys are somehow inferior. That reminds me of the "adjustment" downwards of all womens' IQ which was fashionable years ago. What was the rationale of that?

The C-G equation is a rough and ready test and becomes unreliable in children.

You can Google for on-line CCl calculators. I found over 6,000. Here's one with nice graphics.

http://www.clinicalculator.com/english/nephrology/cockroft/cc.htm

Tests For Kidneys Explained

Several types of tests are used to diagnose and evaluate different types of kidney disease:

- Kidney function is determined using urine and blood tests.
- Imaging tests (x-ray, scans) are a relatively painless and low-risk way of providing useful information about kidney structure.
- Kidney biopsy is a procedure for sampling a small portion of kidney tissue.

Urine Tests

These are just an extension of the simple uroscopy tests at the doctor's office.

The most familiar is the **urine dipstick:** A small flat plastic stick containing a row of several chemically-treated paper squares is dipped into a urine sample. The squares then turn different colors. By comparing the stick with a color chart, the physician can tell whether or not the urine contains various substances, such as protein, blood, glucose (testing for diabetes), and white blood cells (testing for infection).

Centrifuge: Urine is poured into a test tube and spun in a centrifuge, and the sediment that goes to the bottom can then be examined under a microscope. The findings in the urine sediment can be very helpful in diagnosing kidney disease, and can be considered a kind of "poor man's kidney biopsy." Useful findings in the urine sediment may include: white blood cells (suggesting infection), red blood cells (leaky, inflamed or damaged nephron units), bacteria, yeast, crystals (especially useful in people with kidney stones), and renal tubular cells (indicating damage to various parts of the kidney).

Protein: In many types of kidney disease, the tiny glomerular filters are damaged and become abnormally leaky. This allows proteins to spill into the urine. Urinary protein determination is measured as the actual number of milligrams or grams of protein in a sample. The test result is reported as a ratio of protein to creatinine. A urine protein/creatinine ratio greater than 100 mg protein per gram of creatinine is abnormal. A ratio greater than 3000 usually indicates serious damage to the glomerular filters of the kidneys.

Microalbumin determination: If only a very tiny amount of protein is present in the urine, it may not be detectable by standard tests (such as urine protein determination). In these cases, a "spot urine microalbumin/creatinine ratio" may be ordered. A ratio of greater than 30 micrograms of albumin per gram of creatinine indicates that a tiny amount of protein (albumin) is present. This can be the very earliest sign of kidney disease, particularly in diabetics.

Nitrite: A positive nitrite test indicates that bacteria may be present in significant numbers in urine. Gram negative rods such as E. coli are more likely to give a positive test.

Leukocyte Esterase: A positive leukocyte esterase test results from the presence of white blood cells either as whole cells or as lysed cells. Pyuria can be detected even if the urine sample contains damaged or lysed WBC's. A negative leukocyte esterase test means that an infection is unlikely and that, without additional evidence of urinary tract infection, microscopic exam and/or urine culture need not be done to rule out significant bacteriuria.

Blood Tests

The simplest way to monitor kidney function is to obtain blood tests for BUN (blood urea nitrogen) and creatinine. These two substances are normal metabolic waste products that are excreted by the kidneys. Urea is a byproduct of protein breakdown, and creatinine is a byproduct of normal muscle functioning.

In kidney disease, these substances (as well as numerous others) are not excreted normally, so levels rise in the body. This causes an increase in blood levels of urea and creatinine, which can be easily detected.

While there is a "normal range" for serum creatinine (approximately 0.7-1.2 mg/dL; 62-106 •M/L), it is important to note that an individual person's "normal" serum creatinine depends on their personal muscle mass and their level of activity. Thus the normal serum creatinine for a young, very muscular man could be as high as 1.5 mg/dL (132 •M/L), while for an elderly, very small woman it might be as low as 0.5 mg/dL (44 •M/L). A more accurate measure of kidney function is the GFR, or glomerular filtration rate.

See next section.

Glomerular Filtration rate

The glomerulus is just the kidney filtering unit. The GFR (glomerular filtration rate) just measures how well it is working.

If the kidneys are injured by chronic kidney disease, the GFR gradually declines, and the amount of remaining kidney function can be estimated by measuring or calculating the GFR. The normal value for GFR in a normal-sized person is 100-150 ml/min.

Currently the two most common methods for determining GFR are creatinine clearance and MDRD equation.

> **Creatinine clearance** - Creatinine clearance requires collection of a 24-hour urine; the patient must save all the urine that they produce for a 24-

hour period. A blood sample is drawn at some point during the 24-hour period, and creatinine clearance, which is an estimate of GFR, can then be calculated.

A simpler method for estimating creatinine clearance is based upon a formula that includes a person's age, gender, weight, and serum creatinine level, but does not require the collection of a 24-hour urine. This formula (the Cockcroft-Gault formula) can be found at several websites.

eGFR (estimated GFR) determined by the MDRD equation - This equation, developed as part of a study called the Modification of Diet in Renal Disease (MDRD) Study, can estimate GFR with surprising accuracy, based on a person's age, gender, ethnicity, and blood serum creatinine level. The GFR (known as "eGFR" when determined by this equation) is the basis for classifying CKD into 5 stages as described below. The formula for the MDRD equation can be found at several web sites, including: The Nephron Information Center MDRD GFR Calculator - (with SI Units) and the National Institutes of Health GFR MDRD Calculators for Adults.

Imaging Tests

Various imaging tests can provide useful information about the kidneys with little or no discomfort and minimal risk to the patient.

Ultrasound - Ultrasound uses sound waves to bounce off structures in the body and give images, in the same way as sonar is used by submarines to map the ocean floor, or as sound waves are used by flying bats. This procedure is good for determining the size of the kidneys and for detecting cysts (round fluid-filled pockets that are common in older people and usually of no significance), solid masses that may be benign or malignant tumors, and kidney stones. Ultrasound can also help to estimate the amount of scarring in a kidney, and can detect whether there is a blockage to urine flow anywhere in the kidney, the ureters, or the bladder.

IVP (intravenous pyelogram) - IVP uses traditional x-rays to produce pictures of the kidneys, ureters, and bladder. A contrast dye is injected into a vein, circulates through the bloodstream, and is processed and excreted by the kidneys. This technique produces two-dimensional black-and-white images and can provide fairly-detailed information about the size and shape of the kidneys, as well as the presence of kidney stones and sometimes cysts or tumors. However, if kidney function is reduced this method is not so good because the kidneys will not process the dye as well and will not show up well in the pictures. The dye itself is also a risk to those with impaired renal function. Allergic reactions to the dye can also be a problem.

CAT (Computed Axial Tomography) scan - CAT scan uses x-rays to produce pictures in crosswise slices. Like an ultrasound exam, a CAT scan

can detect kidney stones, blockage, cysts, and solid masses. Generally, a CAT scan involves the entire abdomen, so that each organ - not just the kidneys - can be seen; even spinal vertebrae and layers of the abdominal wall can be examined using this technique. The problem with CAT scans they don't normally tell you is the very high dose of radiation. Convenient but definitely NOT safe.

MRI (Magnetic Resonance Imaging) scan - MRI scan exposes the body to a strong magnetic field and creates images based on the molecular composition of different organs and tissues. The amount of fine detail in the pictures is greater than with either the ultrasound or CAT scan. However, the procedure, since it involves exposing the patient to a strong magnetic field, cannot be used in those who have metal devices in their bodies (such as pacemakers or defibrillators). The procedure may also be somewhat difficult for patients to undergo, since the patient must lie still in a dark, enclosed tunnel and must not be upset by banging noises made by the machinery. MRI scans are sometimes done with a special type of dye (administered by IV) called gadolinium: this dye is not used in patients with moderately- to severely-reduced renal function because of a risk of adverse effects particularly in a condition called "nephrogenic systemic fibrosis".

Kidney Biopsy

This is a last ditch procedure.

A biopsy is generally performed using ultrasound or CAT scan to localize the kidney. Either the right or the left kidney is biopsied; it is not necessary to biopsy both. A local anesthetic is used and a small incision (approximately ¼" long) is made. A special needle is inserted into the kidney. The needle is spring-loaded so that when a button is pushed, the device automatically punches out a small piece of kidney, about the width of a No. 2 pencil lead, and approximately ½" long. Following the biopsy, the patient is asked to lie still for 4-6 hours and is closely observed for any signs of kidney bleeding.

The biopsy specimens are frozen, sliced, stained, and studied by a variety of microscopic methods. It usually takes one to two weeks for the processing to be completed and for a diagnosis of the kidney disease to be made.

Treatment For Kidney Health

Conventional Medical Treatments

Although medicines cannot reverse chronic kidney disease, they are often used to help treat symptoms and complications and to slow further kidney damage.

Medicines to treat high blood pressure

From 80% to 90% of people who have chronic kidney disease have problems with high blood pressure at some time during their disease. Medicines to lower blood pressure (antihypertensives) are used to keep blood pressure in a safe range and slow the progression of kidney damage that is caused by high blood pressure.

The target is to keep your blood pressure below normal, say 130/80. The type of blood pressure medicine used is thought to be less important than how well the medicine lowers blood pressure.

ACE inhibitors and ARBs are especially good choices because of their proven ability to protect the kidneys.

Common blood pressure medicines include:

- Angiotensin-converting enzyme (ACE) inhibitors, such as Lisinopril. ACE inhibitors decrease blood pressure by opening (dilating) blood vessels. ACE inhibitors slow damage to the kidneys caused by diabetes and other kidney diseases.
- Angiotensin II receptor blockers. These medicines block the action of a hormone that causes blood vessels to narrow. As a result, blood vessels relax and open, reducing blood pressure.
- Diuretics. Diuretics help remove extra sodium and fluid from the body, decreasing the volume of circulating blood and lowering blood pressure.
- Beta-blockers. Beta-blockers decrease blood pressure by decreasing heart rate and cardiac output. They also relax blood vessels.
- Calcium channel blockers. Calcium channel blockers dilate blood vessels by relaxing the muscles in the vessel walls. This makes it easier for blood to flow

through the vessels and helps lower blood pressure.

- Vasodilators. Vasodilators relax the smooth muscle of blood vessels, which opens (dilates) the blood vessels.
- Direct renin inhibitors block the enzyme renin from starting a process that helps regulate blood pressure. As a result, blood vessels relax and widen, making it easier for blood to flow through the vessels, which lowers blood pressure.

Don't forget: the fastest way to get your blood pressure down is a food elimination diet. It works 99% of the time. You then have to re-introduce foods, one at a time, challenge testing with a sphygmomanometer. Whichever foods send up your blood pressure, just avoid them.

Full instructions on how to do this are in my book Diet Wise.

http://www.dietwisebook.com

Other drugs may be used to treat complications of chronic kidney disease:

- Erythropoietin (rhEPO) therapy and iron replacement therapy for anemia. Anemia occurs during chronic kidney disease, because as kidney function declines, the kidneys produce too little erythropoietin, which is needed to make new red blood cells.
- Medicines for electrolyte imbalances. Specific medicines are sometimes needed to treat imbalances of electrolytes, such as high potassium, high phosphate, and low calcium levels.
- Diuretics to treat fluid buildup caused by chronic kidney disease.
- ACE inhibitors and angiotensin II receptor blockers for heart failure. Regular blood tests are required to make sure that these medicines do not raise potassium levels (hyperkalemia) or make kidney function worse. For more information, see the topic Heart Failure.
- Both erythropoietin (rhEPO) therapy and iron replacement therapy may also be used during dialysis to treat anemia, which often develops in advanced chronic kidney disease.
- Erythropoietin (rhEPO) stimulates the production of new red blood cells and may decrease the need for blood transfusions. This therapy may also be started before dialysis is needed, when anemia is severe and causing symptoms.
- Iron therapy can help increase levels of iron in the body when rhEPO therapy alone is not effective.
- Vitamin D is also needed, to keep bones strong and healthy, despite poor calcium metabolism.

Let's just reprise some key points in the conventional treatment for kidney failure.

There are two basic approaches, neither of which are attractive. The failed kidneys are either replaced by a good kidney from a donor (living or dead). Or an artificial dialysis machine is used as a substitute kidney, which ties the patient to a weekly routine for life.

By 2004 there were over 17,000 kidney transplants annually and over 335,000 dialysis patients in this country alone.

These drastic and invasive techniques can only be described as disaster management and have no curative results, but do extend survival.

How much better to look after your kidneys in the first place!

What should you do to look after your kidneys?

First, a caution with the usual advice, which is to drink lots of water. This is a myth. Whereas you can drink too little water, you can also drink too much. Some individuals retain water and it drives up their blood pressure if they imbibe too much. Raised blood pressure is the last thing your kidneys need!

For an estimate of how much you should drink, halve your body weight and drink that in ounces of water. So, if you are 150 lbs., drink 75 oz. of water every day. That's a maximum. You can exchange part of this amount with fresh squeezed juices from organic fruits and vegetables.

> Drink daily **halve your body weight** and drink that in ounces of water.

Quality of water is probably more important than quantity. Drink pure or filtered water, not distilled. A process called depuration gradually leeches out the toxins, through time. For advice on water quality, see page 52.

Cleanse your kidneys once a month by making watermelon seed tea. Pour one pint of boiling water over 1 tbsps. of crushed watermelon seeds and steep for 5 minutes. Strain the seeds and drink. Drink the tea once a day for 3 days. You can also use horsetail tea. See the section on herbs for kidney health.

Don't smoke (yet another reason). Cadmium in tobacco is very toxic to the kidneys.

Do not go in for massive "detox" programs if you are loaded. This includes sweeping mercury extractions. The trouble with misguided detoxes is

that the process mobilizes toxins which had been static. The sudden burden on the liver and kidneys can have disastrous effects.

You must deal with someone knowledgeable to do it properly and safely. Stay away from enthusiastic and untrained amateurs, who seem to go in for the stupid reasoning that "I did it and it worked, therefore it's right for everybody else around" (or anybody silly enough to pay dollars).

The Universal Health Rule

Yet again, I find myself quoting my own master dictum, phrased for this context: **all good health measures are good kidney health measures.**

Lose excess weight. In one recent study, overweight people who had kidney disease suffered organ failure two to five times faster than individuals with a normal weight.

Get lots of physical exercise to help reduce stress naturally, improve kidney function and maintain overall health. Both physical activity and sweating can help your kidneys to eliminate toxins and wastes.

Eating right, a good balance of carbs, protein and fats, is right for everyone. Take additional detox supplements, so your liver can actively eliminate most toxins, before they hit the kidneys.

De-toxification

Your liver is the perfect twin for your kidneys. If you have led anything but the purest life (or lived on another planet), you will be in heavy toxic overload. We all are. It's vital you grasp that. Here are just some examples:

Category	Examples
Metals, and metalloids	arsenic, cadmium, lead, mercury, nickel, tin, etc
Inorganics (other)	asbestos, carbon monoxide, hydrogen sulfide
Hydrocarbons - aliphatic	propane, butane, pentane, hexane
Aliphatic alcohols, ketones, ethers, aldehydes and acids	ethyl alcohol (ethanol), acetone, diethyl ether, formaldehyde, acetic acid
Hydrocarbons - aromatic	benzene, toluene, xylene, naphthalene
Phenols	phenol, pentachlorophenol
Chlorinated volatile organic compounds	perchlorethylene (tetrachloroethene), trichloroethylene (trichloroethene), vinyl chloride
Chlorinated non volatile organic compounds	chlorinated dioxins and dibenzofurans, polychlorinated biphenyls, pesticides such as chlordane and DDT
Miscellaneous organic compounds	acrylonitrile, benzidine, aniline, di-isocyanates, organophosphates

The liver runs certain de-toxification programs (better called "biotransformation", as I explained in "Love Your Liver", the companion eBook to this one). These take toxic chemicals and alter them, to become water-soluble, de-natured and able to be excreted by the kidneys.

The trouble is that biotransformation does not always result in a less toxic compound. It's all so complex, the liver sometimes produced an even more toxic metabolite. This is not intentional; but what is Mother Nature to do, in the face of all these man-made chemicals? She does her best but increased toxicity is sometimes the end result.

There is one saving factor, which is that as biotransformation proceeds, if it results in a more toxic compound, it will poison out the system and stop further transformations! But not a good way to go, I'm sure you will agree.

One example of increased toxicity through biotransformation is the production of acetaledehyde when alcohol is metabolized. The enzyme alcohol dehydrogenase turns pure ethanol (relatively harmless), into acetaldehyde (toxic and carcinogenic).

The trouble is that these enhanced toxins have to go to the kidney, which suffers damage as a result.

It is important therefore that we give our livers every possible assistance and one of the biggest helping-hands we can offer is glutathione. There is no point in taking glutathione orally (one or two manufacturers of liposomal glutathione are coming forward with claims).

What we do is take precursors instead:

Alpha lipoic acid	200 mg
N-acetyl-cysteine	500 mg
s-adenosyl methionine (sAME)	20 mg
Glutamine	50 mg
Glutamic acid	100 mg

You don't need to take ALL these, of course! If you can, get your reduced glutathione levels measured in the lab. Then you have got clear data.

I'm not one for recommnding Immunocal (an MLM product claimed to raise glutathione), even though it's in the US physician's PDR, but you may remember me last year recommending MaxGXL (also an MLM product). It's probably the best, based on its science credibility.

I don't do either MLM program.

Heavy Metals, Intestinal Metal Detox

You need to get rid of toxic heavy metals too. That's the dangerous part and you need to do it properly. Sudden mobilization of mercury, cadmium etc will INCREASE toxic levels in the blood, unless you are careful. That can affect the brain, heart, lungs, liver and kidneys.

I recommend the intestinal metal detox program from. It was developed by young boffin Christopher Shade and all the science behind his development impresses me. It will protect you from harm rather than put you in danger.

I have done the program.

There is no point in describing the detailed protocol. Go to the website and look it up.

http://www.quicksilverscientific.com/

You had better take what I am saying seriously now. I have seen people laid low, even put into a stretcher, by trying to do misguided and mis-managed detox programs for heavy metals (same reason you should follow very strict protocols for removing dental mercury).

So-Called Kidney Diets

The trouble with published research on "kidney-friendly" diets is that it all relates to damaged kidneys. Once the kidney malfunctions, there are certain foods that cannot be processed efficiently, notably protein, which breaks down to urea.

But I cannot see that implies in any way that such foods are bad for healthy kidneys. Repeatedly I see howling articles, claiming that high protein diets are bad for the kidneys.

Well, remember that Eskimos and native Indians have far less kidney disease than us, yet traditionally eat a very high fat, high protein diet. The fact is there is no scientific evidence whatever that high protein diets are bad for you, if your kidneys are undamaged and perform properly.

Once kidney disease is established, the rules change.

You may need to limit the amount of sodium in your diet. This is because high blood pressure, kidney disease and sodium are often related. Learning to read labels can help you make lower sodium choices. Sodium is found in many foods, but is especially high in the following:

- table salt and foods with added salt such as snack foods, soups and processed cheese
- some canned foods, prepared foods and "fast foods"
- foods pickled in brine such as pickles, olives and sauerkraut
- smoked and cured foods such as ham, bacon and luncheon meats

Your kidneys may not remove phosphorus efficiently. Excess in the blood may cause you to lose calcium and leech it from bones. Phosphorus is found in many foods but is especially high in the following foods:

- dairy products such as milk, cheese, pudding, yogurt and ice cream
- dried beans and peas such as kidney beans, split peas and lentils
- nuts and peanut butter
- beverages such as cocoa, beer and cola soft drinks

To limit the amount of protein (you need some for tissue building and repairs remember), reduce foods from animal sources such as poultry, meat, seafood, eggs, milk, cheese and other dairy products. To a lesser extent, beware of sources such as breads, cereals, other starches and grains.

Remember your omega-3s, to reduce inflammation.

Kidney Stones

Not Rare!

OK, you knew this was coming. We have to cover it.

First: pray you never get a kidney stone. It's the most agonizing pain known to man or woman (much worse than labor pains, women tell me). It is not even blocked by morphine; the narcotic just makes you too stupid to care. But pain-free is a better life, trust me!

Kidney stones can form when urine contains too much of certain substances. These substances can create small crystals that become stones. Kidney stones are more common in middle age and are usually caused by excessive concentrations of substances such as oxalic acid, uric acid, or cystine in the urine. Hyperparathyroidism, cystinuria, and hyperoxaluria are rare, inherited metabolic disorders that can cause kidney stones.

Kidney stones are far from rare—about 1 in every 272.

The biggest risk factor for kidney stones is dehydration.

Kidney stones are not a product of modern life. Scientists have found evidence of kidney stones in a 7,000-year-old Egyptian mummy! (hot climate, notice)

Kidney stones may not produce symptoms until they begin to move down the tubes (ureters) through which urine empties into the bladder. When this happens, the stones can block the flow of urine out of the kidneys. This causes swelling of the kidney or kidneys, causing severe pain.

Kidney stones are far from rare—about 1 in every 272. That's 1,000,000 per year or about 1 per minute in the USA alone. Put another way, an estimated 10 percent of people in the United States will have a kidney stone at some point in their lives. Males have almost three times the incidence as females. (Source: excerpt from Kidney Stones in Adults: NIDDK).

Medical Intervention

Many kidney stones pass from the body on their own with no medical help. However, more complex procedures are required to assist stones that cannot be passed or to remove stones that are growing larger. Either lithotripsy (shattering the stones) or surgical removal of the stone is used when a kidney stone is firmly lodged in the ureters, bladder, or urethra.

In the past, problem kidney stones represented a significant health concern because the only way to remove them was invasive surgery with a high risk of postoperative infection. It is now possible for urologists to avoid surgery except as a last resort or when there is no other alternative. Newer methods to remove kidney stones include using ureteroscopy, tunnel surgery, extracorporeal shock wave lithotripsy (ESWL), and percutaneous lithotripsy. All of these methods break the stone into smaller pieces so that the stone can be removed or passed through the urinary tract.

My own dear father made medical history decades ago. He was a hemophilic (doesn't affect me and my kids). In mid life he had a major problem with a kidney stone and he needed surgery; it was a big deal, as you can imagine, for someone suffering from a disease which prevents blood clotting.

So he had an abdominal operation, with a 12" incision, under the umbrella of newly released Factor VIII, and survived. He was written up and he's in the medical literature!

The bad news: if you get one kidney stone, you are very likely to get others in the future. In fact, 50% of people treated for a kidney stone will have a recurrence within 10 years.

Types of Stones

There are several different types of kidney stones. The exact cause depends on the type of stone.

- Calcium stones are most common. They occur more often in men than in women, and usually appear between ages 20 - 30. They are likely to come back. Calcium can combine with several substances, such as oxalate (the most common substance), phosphate, or carbonate to form the stone. Oxalate is present in certain foods. Diseases of the small intestine increase the risk of forming calcium oxalate stones.
- Cystine stones can form in people who have cystinuria. This is an inherited disorder which runs in families and affects both men and women.
- Struvite stones are mostly found in women who have a urinary tract infection. These stones can grow very large and can block the kidney, ureter, or bladder.
- Uric acid stones are more common in men than in women. They can occur with gout or chemotherapy.

Other substances also can form stones.

A **staghorn calculus** (stone) is a peculiar object: the stone grows large and fills the branches of the kidney parts draining into the collecting bowl (the kidney

pelvis). Its branches resemble a stag's horns. Such a large stone is permanent and will often destroy the kidney, due to blockage of the flow. Surgery is required before things get this far. Trouble is, the patient may not know he or she has one!

Try To Dissolve The Stone Or Float It Out In water

Water is your best friend when you have a kidney stone. One of my mentors, Dr. Patrick Kingsley had a stone and he treated himself simply by putting up an IV line and running in lots of fluid. His kidneys washed out the excess fluid and that took the stone with it, relatively painlessly (me? I'd be lying on my back howling, very likely).

You can't do an IV, of course. But you can drink a lot. With luck, the flood of urine will push the stone before it.

By lots of fluid, I'm talking quantities like 2 – 4 pints in an hour (but not every hour; water can be toxic too!)

Dil Barnett's Jump And Bump

No, this is not a dance for exotic show girls! Dil Barnett has come up with a reasonable suggestion for something that, logically, ought to work. He says it does.

Basically, it means jumping or bouncing to dislodge your kidney stone and make it drop to the bladder. The weight of the urine collected above the stone can be significant and amount to a small hammer hitting on the stone!

It's a flush…

Before deciding to follow this procedure on your next stone, check with your doctor. If you and your doctor decide that this "exercise" is appropriate for you, start with a practice dry run through the procedure to make sure that there are no surprises. Also, memorize all steps and make sure you understand the rationale for each step.

Step One

At the very onset of what you perceive to be ureter stone pain, start drinking lukewarm water. Drink as much as you comfortably can, as quickly as you can, at least one or two pints in the first 10 minutes. If you think you might become nauseous, have a good supply of fast-acting anti-emetic suppositories on hand and place one rectally prior to drinking the lukewarm water. Put on a sturdy pair of shoes. You should know ahead of time what hard surface area, such as carport or patio, you will use. (Your neighbors don't necessarily need to see this "exercise".)

After about 25 - 30 minutes from the time you began to drink the lukewarm water, you are ready for step number two. Remember: you may experience some increase in pain during the 25 - 30 minutes of prep period; however, this should be assurance that you have developed a nice, heavy, liquid tool of urine that will quickly (within 15 - 25 minutes) move your stone to the bladder. In fact, if you do not experience some small increase in pain, it could mean that a small stone (3-4 mm or less) is involved, creating only partial obstruction. This results in a small, lightweight, liquid tool, in which case it could take as much as 40 – 50 minutes to move the stone to the bladder.

Step Two

Just jump up and down! Jump vertically, at least an inch or two, and land as stiffly as possible, with the ankles, knees, and hips "locked." Make it jar your body. Immediately repeat the jump, so you do it in pairs.

Wait about 5 minutes and do another pair of jumps.

Wait about 5 minutes and do another pair of jumps.

Wait about 5 minutes and do another pair of jumps.

Continue this pattern for about 45 – 50 minutes, or until complete cessation of pain, whichever comes first.

It may help to empty the bladder after a few jumps. There is a good reason for keeping the bladder nearly empty during the procedure, says Dil. The literature clearly shows that there is less resistance by the bladder to the transfer of urine from the ureter to the bladder when the bladder is empty than when it is full, or partially full. Therefore, we can assume that this might also be true for a stone. It makes sense that a stone will go into the bladder more easily when the bladder is empty, or nearly empty, than when it is full or partially full.

Procedure For The Bump Method

The bump is the same idea but instead of just jumping, you bang your backside down sharp on something hard, to shake the pelvis.

A toilet seat should be ideal for most individuals, as a bumping site. A chair arm or a low wall would work too.

Men, just be careful of your genitals. You don't want to bump down on your testicles. It could be more painful than the stone!

Back up to the toilet seat (or other hard flat surface) as if to sit down, but instead of sitting completely down, stop for a second or two suspended 4 to 6 inches from the seat, then free-fall the 4 to 6 inches to the seat with a thud, immediately rise to the previous position, hesitate a second or two, and free fall the 4 to 6 inches again.

Wait about 5 minutes and repeat the pair of bumps.

Wait about 5 minutes and repeat the pair of bumps.

Wait about 5 minutes and repeat the pair of bumps.

Continue this pattern for about 45 – 50 minutes, or until complete cessation of pain, whichever comes first. And don't forget to empty the bladder about every 10 minutes.

Dil claims he found other stone sufferers on line, told them of his success, and encourage those with simple, uncomplicated cases to try the method. He found many such individuals at Kidney Stones Support Group Kidney-Stones-Subscribe@yahoogroups.com

Of the approximately 15 that used the method and followed directions as outlined in this site, all reported success!

Those positive responses can be studied by checking the following message numbers on the Kidney-Stones group in Yahoo Groups: 3503, 3541, 3554, 3561, 3564, 3566, 3569, 3657, 3790, 4075, 4172, 5813, 7117, 8486, 8487, and 8488.

Remember, even if successful, it will take several minutes for the pain to completely subside after the basic cause of pain, the dilated ureter, has been deflated. Be prepared for the pain to return possibly 30 to 60 minutes later, as the ureter slowly re-inflates with urine above the obstruction.

In his July 2005 update, Dil added this, based on feedback from thousands of visitors:

The "bump" method, with the body bent severely forward from the hip-joints, is reported to be much more consistently effective than the "jump" method. This should also be true if the procedure for immediate pain relief only is desired. The "bump" method is reported to have better all-around results.

The most dramatic success of the method seems to depend on the Great Natural Elasticity of the ureter.

Drink only about 1-2 pints of water: larger amounts might make the procedure more painful and require more time to complete.

Very important: start the 25-30 minute water "prep" when you think you might be having an attack; do not wait!!

Do not let the pain level go beyond about 4-5 (on a 1-10 point scale) even if you have to start the "bump sequence" before the 25-30 minute "prep" time has expired. Pain at the 4-5 level suggests a considerable accumulation of urine above the lodged stone.

The most dramatic success of the method seems to depend on the Great Natural Elasticity of the ureter. If much of this elasticity has been lost to scarring from instrumentations and other procedures of conventional medical treatment this natural method may not be as dramatically effective.

More at: http://www. jumpandbump.com

Preventing Recurrence

The following nutritional recommendations may help to prevent stone formation or recurrence:

Eat a whole foods diet that contains leafy green vegetables, fruits, vegetables, whole grains, legumes, and fish and poultry in small portions. Include foods that have a high ratio of magnesium to calcium such as brown rice, bananas, oats, barley, and soy, and that are high in fiber such as oat bran, psyllium seed husk, and flaxseed meal.

Drink a minimum of 50% of body weight in ounces of water daily (e.g., a 150 lb person would drink 75 oz of water). Proper hydration helps prevent the urine from becoming concentrated with crystals, which can lead to stone formation; and reduces the risk for urinary tract infections, which may lessen the risk for struvite stones.

Check the color of your urine as a guide: dark or bright yellow urine indicates highly concentrated urine; pale or colorless urine indicates dilute urine.

Avoid sugar and honey, alcohol, antacids, excessive protein, dairy products (especially milk), salt, carbonated beverages, caffeine, and refined white flour products such as pasta, white bread, and baked goods.

Debunking The Calcium Myth

In 1997, a research division of a healthcare provider conducted a double-blind study with a group of 64 patients who had a history of renal calculi to determine if potassium/magnesium citrate would prevent the recurrent formation of calcium oxalate kidney stones (Ettinger et al. 1997). The patients were given 42 mEq (milliequivalent) potassium, 21 mEq magnesium, and 63 mEq citrate or a placebo daily for 3 years. New renal calculi formed in 63.6% of patients receiving the placebo. However, patients receiving the potassium/magnesium citrate protocol presented with 12.9% recurrent renal calculi. Ettinger et al. (1997) concluded that "potassium/magnesium citrate effectively prevents recurrent calcium oxalate stones, and this treatment given for up to 3 years reduces risk of recurrence by 85%."

> those nurses who consumed diets that were higher in calcium were at lower risk for kidney stones!

Contrary to what was considered to be "common sense" thinking in the past, two major studies have shown that calcium should not be reduced for patients with a history of kidney stones (Takei 1998; Williams 2001). It was originally postulated that patients with a history of renal calculi should limit their intake of calcium. In fact, current recommendations from the National Institutes of Health published on their Web site still continue to call for calcium-restricted diets, by avoiding foods such as apples, beets, parsley, broccoli, spinach, and pineapples.

The problem is, such dietary changes also affect the alkali and pH of the body and make it more likely a stone will precipitate. Newer findings offer scientific evidence that uncombined intestinal oxalic acid is the real culprit for calcium oxalate kidney stones and NOT excess calcium (Ohgitani 2000). Calcium is just along for the ride.

Harvard researchers studied nearly 92,000 nurses over a period of 12 years to determine the relationship between calcium intake and the occurrence of renal calculi (the well-known Harvard Nurses' Health Study). **The conclusion of this massive study was that those nurses who consumed diets that were higher in calcium were at lower risk for kidney stones!**

Supplements

Mist. Pot. Cit. That's what I used to write on prescriptions years ago; it soothes cystitis. It was considered old-fashioned for decades. Now we realize that we were right all along. Potassium citrate mixture is good against stones and you can buy it cheaply all over the Web. Dose: 1500 mg daily (three 5 ml teaspoons). Don't overdo it. It's acidic.

Magnesium citrate – 500 mg daily. It may help reduce existing stones and has been shown to significantly reduce the risk of a recurrence.

Calcium - the Harvard Nurses' Health Study showed clearly that calcium supplementation was beneficial at preventing stones, whatever the NIH site says. But it must be taken with food and in small dosages: less than 400 mg at a time.

Vitamin B-6–Take 25 mg daily. A B-6 deficiency increases urinary oxalate, which may lead to kidney stones.

A study conducted in South Africa found that "mineral water containing calcium and magnesium deserves to be considered as a possible therapeutic or prophylactic agent in calcium oxalate kidney stone disease". A French mineral water containing calcium (202 ppm) and magnesium (36 ppm) was selected as the delivery method and it statistically benefitted nine risk factors for stones.

Herbs For Kidney Health

As in many branches of medicine, herbs (used skillfully) have a lot to offer. Herbs have been used for inflammations, bladder infections, stones and other urinary ills.

Herbal remedies for the kidney have three main actions:

- As a diuretic - causing an increased flow of urine. This is dilute and therefore somewhat soothing.
- As an anti-septic, eliminating infective organisms
- As a cleanser, increasing the removal of waste.

The following herbs have different, but all beneficial, effects on the kidney and urinary system. Some are very nutritious, some help reduce inflammation and promote healing of the urinary tract, whilst others are antibacterial, antiseptic, and increase the removal of waste products specifically. Most have a diuretic effect.

Equisetum(horsetail)

If milk thistle is the number one herb for livers, then horsetail is the number one for kidneys. Horsetail is used in cystitis, prostatitis, prostatic enlargement, incontinence, edema with menopause or arthritis, and urethritis. It helps prevent damage to the ureters, bladder, and urethra, and the prostate.

There are over 20 species of horsetail. The species most commonly used medicinally is field horsetail (Equisetum arvense). E. arvense grows up to 1.5 ft (0.5 m) in corn fields and wet meadows. Wood horsetail (E. sylvaticum) grows in copses and on hedgebanks, usually to a height of 1-2 ft (0.3-0.6 m).

River horsetail (E. maximum) is the largest of the European species of horsetail. Found in bogs, ditches, and on banks of rivers and ponds, E. maximum grows to a height of 3-6 ft (1-2 m).

Other names for horsetail include shave-grass, bottle-brush, and paddock-pipes.

Horsetail contains silicon, potassium, aluminum, manganese, saponins, phytosterols, phenolic acids, caffeic acids, alkaloids, and tannins. Fifteen types of bioflavonoids are also present, which are believed to be responsible for horsetail's strong diuretic (kidney flushing) action.

The North American native peoples used horsetail to treat a number of kidney and bladder ailments. The Cherokee used horsetail to aid the kidneys. Chippewa natives made a decoction out of horsetail stems and used it to treat painful or difficult urination. The Okanagan-Colville and Potowatami peoples made a horsetail infusion as a diuretic to aid kidney function.

In fact, throughout the world, horsetail is recognized for its kidney and bladder healing properties.

Horsetail tea.

To make a tea, 1 cup of boiling water can be poured over 2 tsp of dried horsetail and steeped for 15 minutes. Up to 4 cups of the cold tea can be drunk daily for bladder or kidney ailments.

However, there is a downside: Long-term use or high doses of horsetail have caused irreversible kidney damage due to too much silica. It is best to follow dosage guidelines from a knowledgeable herbalist and not to improvise.

Pregnant or nursing women and people with severe kidney or liver disease should consult their health practitioner before using horsetail. People with high blood pressure or heart problems should not take horsetail. Horsetail contains low levels of nicotine and may not be safe for young children.

I don’t recommend taking the tincture for more than a few days or the tea for more than a few weeks. Otherwise you are thinking like an allopath!

Couch grass

Couch grass is a kidney stone herb, a diuretic and the mucilage helps soothe an inflamed and irritated urinary tract. It also helps heal the urinary tract.

Couch grass increases the amount of urine by the osmotic process. It is also used in cystitis, prostatitis, nephritis, calculus (stones) or gravel, urethritis, and benign prostatic hypertrophy.

Also offers pain relief and inflammation that are normally associated with infection and urinating frequently.

Uva Ursi (Barberry)

Uva ursi is a urinary antiseptic, and an astringent herb. It has an antibacterial effect on the kidney, that is effective against e. coli, proteus, klebsiella, staphyloccocus, and pseudomonas. The antibacterial effect is at its strongest 3 to 4 hours after taking the herb, as some of the active constituents are converted in

the kidneys to activate the antiseptic effect.

Uva ursi is used in cystitis, urethritis, prostatitis and dysuria. But it is best not used in kidney diseases, or if the infection has progressed up the urinary tract.

Parsley

Parsley is an excellent diuretic and as such it is used for edema and urinary stones. It is believed to increase the elimination of waste products like urea, and other acidic metabolites, and thus used for gout and arthritis. Parsley should not be used in pregnancy, nor is it recommended in painful menstrual periods. It is fine for nursing mothers, however, and is believed to encourage milk production. Fresh parsley is very nutritious.

Nettle

Nettle has been proven to increase the elimination of the waste product, uric acid. It is a diuretic, and has been found successful in managing the symptoms of benign prostatic hypertrophy, particularly in combination with saw palmetto.

Nettle has an antibacterial effect, and has been found to be effective against staphylococci and other bacteria. It is useful in arthritis and rheumatic problems because it helps get rid of metabolic wastes. It is also used in chronic cystitis.

Nettle has an **antibacterial effect,** and has been found to be effective against staphylococci and other bacteria.

Nettle is also a highly nutritious plant, with vitamins and minerals including chlorophyll and beta carotene, vitamins A, B2, C and E, calcium, potassium, and iron.

Corn Silk

Corn silk has a lot of vitamin K and potassium. It is used for acute or chronic inflammation of the urinary tract, cystitis, prostatitis, night time urination, and urethritis. Corn silk is not a well studied herb, but it is a diuretic. In China, it is used for edema. It also has antiseptic properties, and is soothing to the urinary tract.

Buchu

A diuretic and natural remedy to help flush out toxins with antiseptic properties to fight infections and inflammation. When combined with other kidney diuretics has a good effect. Helps to dislodge gravel and small kidney stones.

Dandelion

Excellent for cleansing the kidney and works as a diuretic agent to help flush out toxins without the loss of potassium. Reduces kidney inflammation and infection. It prevents kidney stone formation and may be the solution for small kidney stone removal.

Cleavers

This kidney stone herb has diuretic properties and helps flush out toxins and gravel. Excellent as a kidney cleanse and also aids lymph and immune system health.

Homeopathic Mixtures

If you are unlucky enough to have a kidney disease, you might like to consider complex homeopathy remedies.

HEEL, the German homeopathic pharmacy, produces two mixtures I have had great results with: Populus compositum and Solidago compositum.

Solidago compositum, is my number one for kidney disease and has 25 ingredients, mainly herbal, but including some heavy duty homeopathics we call nosodes. These are actual disease tissues, diluted homeopathically, including Coxsackie B, mercury solubilis and pyogenic nosode (pus tissue). To balance that there are healthy urinary tissues—pig bladder, ureter and kidney pelvis, also at homeopathic dilutions. Plus a lot of the stuff in Populus comp.

Populous tremuloides (Aspen) is mainly a bladder remedy. But there are 22 other great kidney curative substances in Populus compositum too, all at homeopathic potencies! These include:

1. Solidago (goldenrod), recognized for nephritis and nephrosis, albuminuria, cystitis and bladder complaints
2. Apis mellifica (honey bee sting), good for albuminuria and nephritis
3. Ononis spinosa (rest harrow), for nephrosis and a diuretic

4. Berberis vulgaris, kidney drainage
5. Cantharis (Spanish fly), vicious at full strength but a good homeopathic for urinary tract inflammation.
6. Terebinthina larcina (turpentine), good for nephritis, stones and blood in the urine
7. and of course horsetail, Uva Ursi and parsley, as aforementioned.

You can buy both these formulas on-line at www.Acu-Market.com. In the UK I recommend my friend Roger Wilson at www.biopathica.com - I have no financial relationship with any suppliers.

Don't forget to take what we call a "drainage remedy". That's to eliminate toxins effectively, so the treatment doesn't cause a symptom disturbance. The obvious one is Berberis-hommacord, good for liver and kidney drainage. The mixture contains Berberis vulgaris (barberry) at 4X, 10X, 30X, 200X; Colocynthis (bitter apple) 4X, 10X, 30X, 200X; and Veratrum album (white hellebore) 5X, 10X, 30X, 200X.

My Own Allergy Work

Even I hardly believe the miracles we did!

Back in the 80s a few of us, world-leaders, started looking at nephritis and so-called nephrotic syndrome in a different way. Nephrotic syndrome is often an aftermath of bacterial attack, especially childhood throat infections with Strep B. Even mold and viral attacks can do it. There are immune complexes. It has all the hallmarks of an autoimmune process.

Nephrotic syndrome isn't a disease but a collection of symptoms, especially protein in the urine, low blood proteins (due to wastage), water retention and general debility. When severe the fluid retention can cause puffy eyes, abdominal swellings and difficulty breathing.

> Food allergy was not a prime cause but was a contributory overload factor

Nobody had ever thought of tackling it as an allergy process. But we tested these kids and found repeatedly that getting them off high risk foods and cleaning up chemical overload led to the syndrome disappearing, often for good.

Some of the recoveries were very dramatic and confounded the hospital docs, who had never heard of alternative medicine (even to this day!)

Sometimes non-food substances were implicated, such as molds or environmental chemicals. All of these or their metabolites, ultimately, are excreted by the kidneys. So these important organs are very much in harm's way.

That's not to say that the cause of nephrotic syndrome is food and other allergies. But it is a body load effect. If the patient is taken off immune stressors—and foods are the main immune stressors I know—then recovery was possible through the body's own natural healing process.

As with many diseases, I developed the view that food allergy was not a prime cause but was a contributory overload factor. Any means of lowering the body load is valid medicine. Avoiding bandit foods is the simplest way there is to lower body load and reduce pressure on the immune system.

Always remember that.

Drink Only Quality Water

OK, I called this book "The Waters Of Life" (actually from a favorite novel by French writer Marcel Pagnol). Let's wrap up by looking at the subject of water. This is crucial to a healthy life and the nurture of your kidneys. When I say drink plenty I mean, of course, good clean water.

Spring water is not good clean water. It's better than chemicalized stuff from the tap. But it contains large amounts of organic matter: dead organisms, mold, rotted vegetable matter etc. People can be allergic to spring water!

You need filtered water. Let me explain water filters briefly:

There are 3 basic types: carbon filters, reverse osmosis filters and distillation units.

Carbon Filters

These are the cheapest filters, easy to install and use. To be effective, they need to be "activated" carbon (very finely divided, more surface area).

The simplest is a jug with a carbon filter plug, sitting on your counter top. Better units are plumbed in line with the tap water of the kitchen or, better still, with its own separate faucet, so good, clean water is always literally "on tap". Use is to fill kettles for tea and coffee; wash and cook your vegetables in water from this faucet only.

Carbon filters remove the most important organic pollutants, such as the dangerous estrogen-like compounds found in our water supply. Minerals are not removed. That means healthful ions, like calcium and magnesium are preserved. It also means that poisonous ions, such as cadmium, lead and mercury are NOT removed.

Carbon filters do not remove Cryptosporidia and Gardia parasites. You need an extra ceramic unit, specially designed for that purpose (1 micron pores), to be sure of filtering these dangerous organisms.

Carbon filters may be susceptible to mould attack if left unused over extended periods. It is important to realize that a filter gathers the 'garbage' in your tap water, and the organic component of this garbage is quite capable of rotting. If

the taste of the water suddenly changes after an extended period of non-use, such as your annual vacation, change the filter.

Note also that carbon filters reduce in efficiency the longer they are in use. For this reason regular filter replacement is essential.

Distillation Units

I don't recommend water distillation units. There are countless myths circulated, without any scientific validity, that distilled water is "pure" and therefore healthy.

Only a dummy would believe that. We need important minerals that are present in our water supply. Without them our body cannot function properly and, according to writers like Joel Wallach, we die young (remember that "Dead Doctors Don't Lie" tape?). Without the minerals the kidneys cannot do their job well. Acid-alkali balance is affected because of the acidic nature of purified water.

According to the U.S. Environmental Protection Agency, "Distilled water, being essentially mineral-free, is very aggressive, in that it tends to dissolve substances with which it is in contact. Notably, carbon dioxide from the air is rapidly absorbed, making the water acidic and even more aggressive. Many metals are dissolved by distilled water."

Reverse-Osmosis Filters

These are by far the best units to use. Water is cleansed of all impurities, including lead and other heavy metals, chlorine, fluoride, chemical contaminants, pesticides, pathogens, bacteria, virus, and even radioactive materials.

RO, also known as ultra-filtration, was originally developed with US government funding for seawater de-salination. It is the process by which water molecules are forced through a 0.0001 micron semi-permeable membrane by water pressure. Long sheets of the membrane are ingeniously sandwiched together and rolled up around a hollow central tube in a spiral fashion. This rolled-up configuration is commonly referred to as a spiral wound membrane or module. They are available in different sizes for processing different quantities of water.

On the downside, reverse-osmosis filters work slowly. You need to store filtered water, ready for use. The reservoirs may be bulky and take up a lot of space on the countertop. Many of the reservoirs are plastic and this is unhealthy, due to leeching of plasticizers. Stainless steel containers are better.

Don't Waste Money On Water Ionizers

These are a scam. All water is ionized naturally. The term is nothing more than sales fiction, meaningless to chemists.

Pure water (that is, water containing no dissolved ions) would be too unconductive to undergo significant electrolysis claimed for "water ionizer" devices.

Water "ionizers" cannot remove anything from the water; to ionize means simply to gain or lose an electron and carry a resulting electric charge. The amount and type of minerals that are present in the water before ionization is the same after ionization. That includes fluoride, for example.

> Water "ionizers" **cannot** remove anything from the water.

Nuff said…

The Alkaline Water Myth

People often ask me "Should I drink alkaline water?" I usually reply "If you want to stress your kidneys, sure!"

See, our kidneys are the principle organs for balancing acid and alkali in our bodies (maintaining a stable pH, if you want to be technical). The kidney buffers changes in our body fluids, so that we stay around 6.8 – 7.2. Higher than that (alkaline) is unhealthy, as is lower (more acid). But remember, different parts of the body vary in pH at different times.

If you drink really alkaline fluids or eat only alkaline foods, your kidneys simply have to work hard to get the balance back to normal. We cannot live with a pH that is far from balance. You need to be clear about that.

Alkaline is NOT good. Balance is good!

That's why I don't recommend alkalized water.

Most city tap water in the U.S and other countries is alkalized to raise the pH to about 8.5 on average. This is because low pH water tends to dissolve things like concrete drain pipes and copper piping, while high pH tends to form deposits which actually thickens and blocks the same pipes.

Kansas City Tap Water has a pH of 11-12 giving it high alkalinity. People are no healthier in Kansas City!

As with all MLM products, with Kangen water, you need to view the science very skeptically:

> Pure water can never be alkaline or acidic, nor can it be made so by

electrolysis. Alkaline water must contain metallic ions of some kind — most commonly, sodium, calcium or magnesium.

The idea that one must consume alkaline water to neutralize the effects of acidic foods is ridiculous; we get rid of excess acid by exhaling carbon dioxide and with urine of lower pH. It's all taken care of.

If you do drink alkaline water, its alkalinity is quickly removed by the highly acidic gastric fluid in the stomach.

Uptake of water occurs mainly in the intestine, not in the stomach. But when stomach contents enter the intestine, they are neutralized and made alkaline by the pancreatic secretions — so all the water you drink eventually becomes alkaline anyway.

"Ionized"/alkaline water is sometimes falsely claimed to be an anti-oxidant. It is actually an oxidizing agent, as can be seen by its ability to decolorize iodine

Don't be fooled by the usual quotation of Otto Warburg's work. He showed that oxygen lack is a contributor to cancer. That leads to acidity. But acidity is NOT the cause of cancer. It's a myth you see all over the Web, promoted by people who are trying to promote their fraudulent wares.

Summing Up

You need to take good care of your kidneys. Re-growing kidneys from stem cells is still a long way off. Transplants, except for a lucky few, are a gruesome and not totally successful option

If you enjoy good general health, there is no reason your kidneys should become threatened. But if you have the slightest reason to be suspicious (eg. swollen bags under the eyes or urine smelling like a horse's stable), get some tests.

Your doctor can co-operate with simple lab work. Just take a specimen and get it tested with Clinistix® or similar for protein, glucose, blood etc.

A simple blood test will tell you your creatinine levels and you can use the Cockcroft-Gault equation I gave you above to work out your own creatinine clearance rate or go on line, as I suggested and use an interactive calculator.

Real symptoms, such as persistent loin pain, shift in urination habit, darkly discolored urine or signs of blood demand a more serious approach. So do the signs of ESRD, if they appear. That's up to your own health care provider.

Follow the supplement steps I listed on page 45 if you have, or have ever had, a kidney stone. The risk of recurrence is high!

Meantime, take an active interest in the health of your kidneys. Drink horsetail tea or watermelon seed tea from time to time.

Drink plenty but don't overload. I don't like all that 8 glasses a day stuff. Forget it. Just drink until your urine is clear—the color of water. If it is yellow, then drink more. That's all I do.

For long-term health and survival, you should do a guarded heavy metal de-tox. We all should, in fact. Just do it right and you won't poison your kidneys in the act.

Remember, as I said, that all good health measures are good for the kidney: exercize, sensible weight, nutritional formulas and a good, fresh, wholesome diet.