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How's Your PH?

Crisis in Americans!

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How this pH booklet started!..

How's your pH? a friend asked. I have a swimming pool, but I quickly realized he was asking about my body's pH. Hmm? I had no idea. More to the point, what the heck was he talking about?

He reminded me, 'If you don't take care of your pool, and let the pH go bad, chlorine cannot do it's job and algae will soon appear.' Then he added, 'The same thing can happen in your body. It's just basic chemistry, so that shouldn't be a surprise.'

Without optimum pH conditions in my body (or yours), a 'cess pool' could be flourishing inside!

That I did understand and my pH awareness began! I quickly found out that pH levels affect most of the biochemical processes in the body and indeed... it IS basic chemistry.

What is surprising is how much acid residue the typical American diet causes and the vast range of health

problems that result... even more surprising is how little awareness there is on the subject.

How serious can pH - be?

Who cares?

Nutrients fueling our cells, oxygen giving life, DNA regenerating cells and all other life sustaining functions depend on a series of complex biochemical processes, which can only occur optimally in specific Many things can change the pH conditions within our

body, and you should care, because 'bad pH' is slowly altering how we function, mutating our tissue...and diminishing the quality of life of an entire nation, as life expectancy in the US. is slipping relative to most advanced countries!

U.S. drops to 28th in life expectancy!

What! 28th! American's are becoming increasingly aware that something is not quite right as health problems soar in this country. Most of us assume these conditions exist everywhere, many do. However, for the most part, the severity and rate of increase of these health issues is greater here. The statistics show that the U.S.'s general state of health is slipping, relatively speaking.

The World Health Organization (WHO) keeps tabs on life expectancy for all countries. This list is from it's World Health Report 2001 and represents what it terms Health

Adjusted Life Expectancy (HALE), which reflects the years of relatively 'poor health and active living' and factors out the last years of life accompanied by poor health and extreme disability. The U.S. ranks below almost every advanced country.

1. Japan	73.8
2. Switzerland	72.1
3. San Marino	72.0
4. Andorra	71.8
5. Monaco	71.7
6. Australia	71.4
7. Sweden	71.4
8. Iceland	71.2
9. Italy	71.2
10. Greece	71.0
11. New Zealand	70.8
12. France	70.7
13. Spain	70.6
14. Norway	70.5
15. Malta	70.4
16. Austria	70.3
17. Canada	70.0
18. Israel	69.9
19. U.K.	69.9
20. Luxembourg	69.8
21. Netherlands	69.7
22. Denmark	69.5
23. Belgium	69.4
24. Germany	69.4
25. Ireland	69.3
26. Finland	68.8
27. Singapore	67.8
28. U.S.A.	67.2
29. Slovenia	66.9
30. Cyprus	66.3

"Basically, you die earlier and spend more time disabled if you're an American rather than a member of most other advanced countries."

That is from Christopher Murray, M.D., Ph.D., Director of WHO's Global Programme on Evidence for Health Policy, he further states...

"The position of the United States is one of the major surprises of the

new rating system (HALE)."

Reality check, Soaring health issues...

- ◆ Esophageal Cancer, extremely rare 30 years ago, is now the 4th most common cancer killer among men in the U.S., increasing 350% in the last three decades.
- ◆ Diabetes is approaching epidemic status as nearly 19 million Americans suffer the disease, with more than half between the ages of 20 and 60. At current rates these numbers will double in the next 10 years. One in four overweight children now have early signs of Type II Diabetes, glucose intolerance. Diabetes is now the 6th leading cause of death in the U.S.
- ◆ Mental Disorders...20 American adults suffer depression. 10 years ago researchers made alarming // projections of the number of new cases of Alzheimer's, recently they increased those projections by 300%. Did we ever hear of ADD in the 60's?
- ◆ 44 million, 21%, American adults are obese up 74% in 10 years. School age obesity has tripled since 1980. Obesity in women has nearly doubled in the past two decades. These trends are especially disturbing since obesity is linked to diabetes, heart disease and some cancers. Things may get a lot worse before they get better.

We're not winning The War on Cancer or Heart Disease either, as they are responsible for 8 of every 10 deaths. There are so many new forms of cancer, it's becoming just a matter of time' and the only thing that might save you from cancer is heart disease 'gets you first!'

This list could go on and on. How many more new forms of disease, mental disorders or 'whatever' will come out of nowhere? How many will afflict us in near epidemic numbers?

The facts are quite clear... something is wrong! And logic tells us, it's something all of us are doing,

D40: How's Your PH?

something in our lifestyle.

"... your choice of diet can influence your long-term health prospects more than any other action you might take..."

Dr. C. Everett Koop, former US Surgeon General Surgeon General's Report 1988

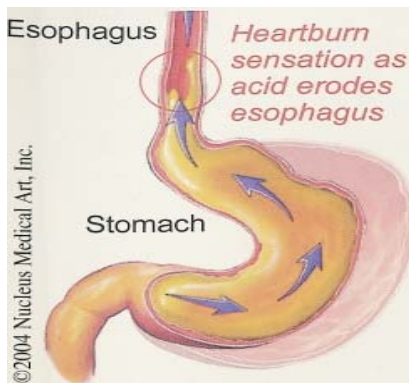
Dr. Koop voiced hope that his report (when it appeared in 1988) would have the impact of the 1964 Surgeon General's report on the hazards of smoking. He noted [at that time], 'this new report is based on far more scientific data than the tobacco report.'

Current government statistics show...

- ◆ 64% of American adults are overweight
- ◆ 300,000 die prematurely each year as a result.

Obesity has been linked to heart disease, diabetes, arthritis, gall bladder disease, hypertension, colorectal and prostate cancer in men, and endometrial, cervical, ovarian and breast cancer in women.

Gastric Reflux



Poor food quality is the real issue... About 20 years after the report on the hazards of smoking, we became aware that second hand smoke causes cancer as well. Similarly, about 20 years after the 1988 report, we're understanding more about our dietary choices. The problem is not just saturated fats and too many complex carbs. It's becoming quite clear that excessive acidic residue results from our typical foods, which enhances the process of storing fat and so much more!

We've been counting calories and avoiding fat for a long time with little impact. Americans eat too much poor quality food - fast foods, processed foods and nutrient depleted foods. No longer do we eat foods chock full of the minerals, nutrients and enzymes from which we evolved and without them 'business as usual', rather biochemistry as usual, is a thing of the past.



The typical American diet wreaks havoc on the pH conditions in your body... as your body compensates, havoc is wreaked on your tissues... and your health!

What 'errant' pH can do...

A good example of acid pH showing up where it's not supposed to be is stomach acid (very corrosive) backflowing into your esophagus. Immediately we feel the painful heartburn as the acid 'burns' unprotected tissue. Your stomach has a protective lining, otherwise your stomach and you would be long gone! Your esophagus has no such protection, as stomach acid was never meant to come in contact with it.

Chronic heartburn officially dubbed Gastro-Esophageal Reflux Disease (GERD) can lead to much more serious conditions. With prolonged exposure, the acid erodes the tissue of the esophagus - scarring it - or worse, mutating the genetic material of the cells.

Cancer - of the Esophagus is up 350% in the last 20 years!

DNA contains the genetic instructions for a series of delicate chemical reactions which create new cells.

Mix in a little acid and viola' - mutation is likely again, that's just basic chemistry. Cell mutations can grow into tumors... which can be cancerous, apparently in epidemic numbers.

All of our tissues have "pH issues"

The burning sensation of acid reflux gives us an immediate warning that something is wrong. Poor quality, nutrient deficient food contributes to out of balance, mildly acidic conditions throughout the body without the obvious red flag of heartburn. Instead, these corrosive acidic conditions are left unchecked to fester and wreak havoc on our inner world 24/7 with little or no warning.

As we wake up to these realities, we see that there are many warnings. We just haven't been clued into them yet.

Rest assured, keep reading and you will be!

pH basics...

Other than blood pH, the importance of pH in the body is not widely understood. There seems to be even less awareness, if that's possible, of how foods affect pH. It's time to get informed and get your pH right.

pH defined... pH is short for 'potential for hydrogen' and refers to the intensity of acid or alkaline materials in a substance. pH is measured on a scale extending from 1 (extremely acidic) to 14 (extremely alkaline), 7.0 being neutral.

Algae, pH, chlorine and sparkling pool water provide an easy understanding of a critical pH issue. Algae are found just about anywhere on earth, especially in water, and need light to photosynthesize and grow. Swimming pools are no different, so we add chlorine to the water to prevent algae over-growth.

Chlorine functions optimally in a pH environment of 7.2 to 7.8 - slightly alkaline. It becomes unstable, evaporating quickly, in a pH environment below 7.2 - more acidic; and weakens, becoming ineffective, when pH is above 7.8 - more alkaline. Outside this critical pH range chlorine becomes useless,

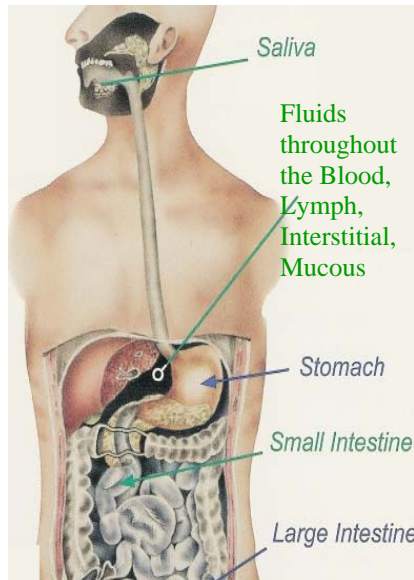
which is a key point of pH you need to remember.

If pH conditions change, chemical properties can change!

Body pH is more complex as the body is a chemical factory that transforms raw materials - air, food and water - into the millions of distinct compounds (there are over 300,000 proteins alone!) and processes that fuel the body and sustain life. The basic Laws of pH remain unchanged regardless of the complexity... alter the pH and you change the outcome... basic chemistry... only now, instead of a swimming pool, we're talking about changing your body's functions and processes.

pH environments exist in the body as follows... in fluids blood, lymph, interstitial, mucous, saliva and urine... in the digestive tract - the stomach, small intestine and colon (large intestine) and in all tissue including the material inside our cells.

pH of fluids and tissues in general needs to be slightly alkaline which



is a much more 'mild' environment. This allows the transport of compounds without the possible transformations acid pH could cause. Blood transports oxygen and nutrients throughout the body and must maintain a very mild, yet critical pH of 7.365. It's the one pH measurement of the body that is closely monitored; it is included in all blood tests. Unfortunately, it's the only pH

factor we watch routinely.

pH in the digestive tract varies from acidic in the stomach to alkaline in the small intestine, and back to acidic in the colon. Stomach acid is the strongest acid pH in the body as it needs to break down whatever comes along. The 22 to 27 feet of small intestine is mildly alkaline for slower processing, allowing time for nutrient absorption into the bloodstream. The colon environment changes slightly to mildly acidic, finishing the process and preparing what's left for elimination.

Probiotics, found in the intestines, are the 'friendly bacteria' that aid in digestion and are essential for life. They help control transit time for maximum nutrient absorption. Note the use of the term friendly bacteria, which means the opposite might exist. And you guessed it... bad pH can lead to unfriendly bacteria.

Microform is a term for all of the organisms that live within us. Acidophilus is one form of friendly bacteria most of us are familiar with as it's added to some milk products and widely available in supplement form. Microforms show up inside us as yeast, fungus, bacteria and mold. Other familiar examples include Candida, which in the gastro-intestinal tract and with the right pH conditions is beneficial and essential for life, and nail fungus which is not essential at all and needless to say, unattractive.

pH balance is a natural process... it is how we evolved. The systems and processes in our bodies work together to keep everything humming along in perfect harmony... until we screw it up!

And one sure fire way we mess up nature's pH plan is by eating foods nearly devoid of essential nutrients and loaded with preservatives, sweeteners and saturated fats. This starts a spiraling, cascading series of deteriorating chemical processes with obvious results... obesity and many other health problems.

Starting the spiral.. one way this happens is when hard to digest food enters the stomach and excess acid is secreted. This acid-laden mess enters the small intestine which must be alkaline or the probiotics

get upset (change form) and become unfriendly bacteria. To compensate, the pancreas releases alkalizing substances... a neat little system as long as the body has enough of these important alkalizing minerals; calcium, magnesium, sodium and potassium. Over time, without mineral rich foods, the body depletes its reserves and acidity begins to build up.

Microforms flourish in acid pH, like algae in pool water. These organisms must 'eat' to survive. Lucky for them, they're floating in a sea of nutrients meant for us! Gobble, gobble... the microforms flourish, depriving our tissues and creating waste... more acid residue.

Eventually, with inadequate nutrient supply good tissue begins to deteriorate. This can happen anywhere at random. When the once supple tissues of the intestinal wall and blood vessels are starved they can become brittle with small cracks. Microforms, friend or foe, can ooze into the blood and camp out anywhere in the body.

Now there's more potential for acid residue everywhere. In our blood, acidity "reacts" with alkaline materials by contact, in effect neutralizing. This process leaches vital minerals from the most readily available tissue, such as bones, vital organs,

cium deficient bones, what could that lead to? (Hmm', indeed!

It gets worse! These unfriendly bacteria love sugar, it's like a fertilizer. They ferment sugar into alcohol - a chemical process that's meant to happen in breweries, not us. And just what our liver doesn't need, more toxins (alcohol) to deal with. Hmm... has sugar consumption been on the rise? And we just thought it added inches... oops!

Over time, numerous colonies of microforms could be flourishing inside, continually robbing us of nutrients and creating waste - mycotoxins and exo-toxins. This overload of acid residue depletes alkalizing mineral reserves everywhere setting the stage for ...

an unimaginable onslaught of biochemical malfunctions... without the red flag of heartburn. This biological chaos slowly 'rots' and degenerates our tissue... 24 / 7/365 !

the ACID mess, indeed a Crisis in Americans...

Are you wondering if YOU are a little acidic? ...perhaps too acidic? Here's a clue: if you consume typical American foods and beverages you are adding a heavy dose of acid forming substances to your inner world. Another clue: the longer you've done that,

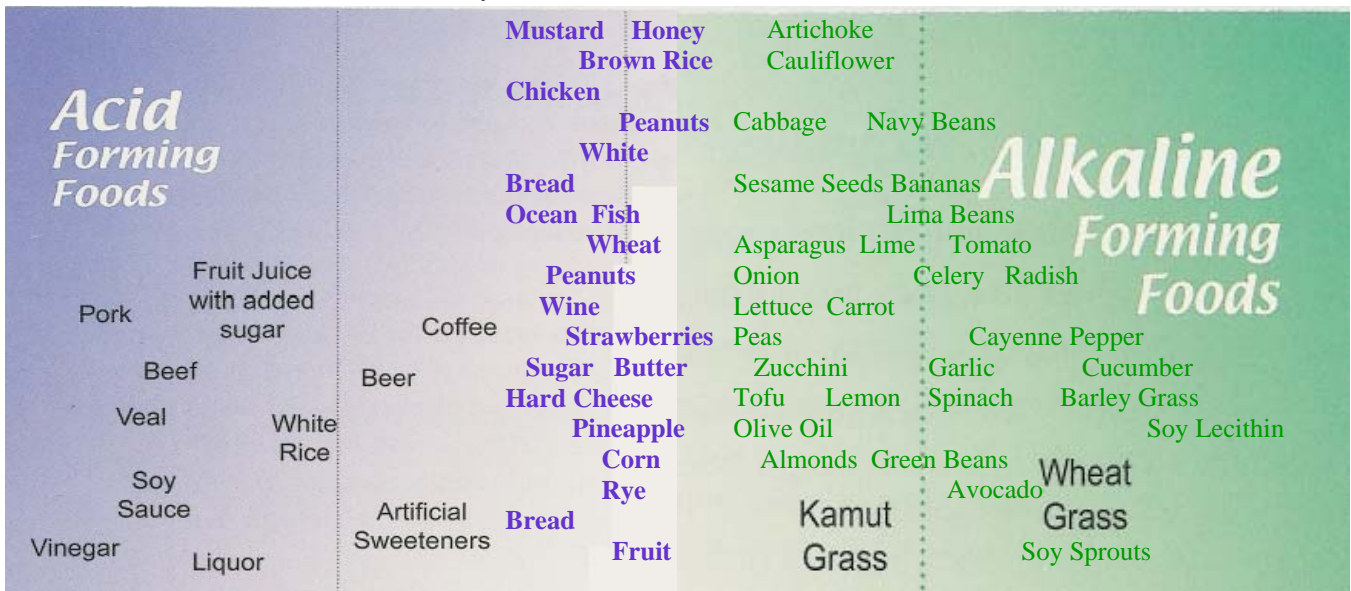
Over time, numerous colonies of flourishing microforms continually rob us of nutrients and create waste - mycotoxins and exotoxins - that the body attempts to rid itself of by depleting resources meant for sustaining a healthy vibrant life. And again... this over load of acid residue everywhere sets the stage for an...

unimaginable onslaught of biochemical malfunctions... without the red flag of heartburn, but slowly rotting and mutating our tissue.

Yikes! Let's look at a few ways these malfunctions manifest.

Obesity... When vital organs are exposed to excess acid, fat cells are created to remove the acid resulting in stored fat. Sugar consumption, among other questionable lifestyle choices, contributes greatly to excess weight gain. Microforms flourish on sugar and create mycotoxins which are sent to the liver for detoxification. The liver, overworked, cannot efficiently metabolize sugars and fats, leaving even more goodies for the growing microforms.

Diabetes and Hypoglycemia... Mycotoxins, the end result of a chronically acidic environment, place an undue work load on organs that metabolize sugars. Alloxan, a mycotoxin, destroys pancreas cells where digestive enzymes and insulin



nerves or any tissue able to neutralize. Then that tissue is deficient in alkaline materials, and becomes a little more acidic... and by now you know what that means. Hmm, cal-

it's more likely you have excess acid and microform overgrowth. Any more questions?

Acid residue piles up as we age

are produced. Inadequate insulin leads to hypoglycemia. Liver toxification alters glucose production which contributes to diabetes.

Fatigue.. Microfoms ferment sugars

needed for energy and create another mycotoxin, acetaldehyde. This toxin is quite talented, able to screw up enzyme and hormone production, destroy neuro-transmitters and bind to the walls of red blood cells. This is nothing short of biological chaos leading to myriad health problems such as reduced stamina, confusion and low energy. Then, the liver converts this mycotoxin into alcohol... oh brother!

Mental health and mood disorders... Nerve and brain function are particularly dependent on specific enzymes. Without them depression, anxiety, confusion, mood swings, lack of focus, ADD and many more mental disorders can develop. Mycotoxins interfere with production of these enzymes.

Allergies, sickness and the immune system... Pollen, mold and ragweed (toxins), when breathed, will get the sinuses running. All toxins stress the immune system. Excess mycotoxins are constant, not the sporadic nature of what's in the air at a given time. So, the immune system is overworked 24/7.

Ever wonder during a flu epidemic, vaccinations aside, why only some people actually get the flu? It is the belief of some medical experts the answer lies in the degree of acidity in the body, as it compromises immune functions and creates a more favorable environment for Invaders' to flourish.

Our bodies are designed to maintain ideal pH conditions throughout... for a lifetime. Where does this acid mess come from?

Acid and Alkaline forming properties of foods...

The illustration above shows the relative acid and alkaline forming properties of many foods and beverages. This concept is not new, but it is not very well known in America. For instance, citrus fruits like limes and lemons have a very strong acid pH right off the tree. However, inside the body, after digestion, they have a mild alkalizing affect.

Foods leaving acid or alkaline residue has been understood in Japan for a long time, where we find the longest life expectancies. Coincidence?

Our intended diet, natural foods, did a great job of providing the body exactly what it needed. This makes sense as it is how we evolved, indeed, as nature intended. Today's typical diet is not what Mother Nature had in mind.

We've changed our foods with reckless abandon... Americans began serving up processed foods some 60 years ago. Frozen deserts, fried foods, taste enhancers, you name it - there's no end to the barrage of new treats to please our palettes.

Our crops are not at all what they used to be, altered to where Mother Nature wouldn't even recognize them. They are no longer full of the myriad essential trace minerals our life sustaining processes depend on. Instead they've been bombarded with toxic pesticides and have had limited fertilization. Since 1980, high tech has altered the genetic code (GMO) of many crops to make them grow faster, bigger, more plump and with brighter color. They've even genetically engineered these crops to be pest resistant. Hmm... bugs won't eat it! But we do:

The problem is crystal clear... Anything we put into our mouth and swallow winds up being digested. This results in useful compounds and what's left over is waste. Unfortunately for us... too much of our diet is acid forming - creating excess acid residue. Worse yet, the forming foods less of their balancing alkaline minerals compared to decades ago.

Little did we know... this onslaught of processed, chemically preserved, genetically compromised, poly-crapalized mess of goodies was so acid forming and could in such a short time...

Wreck so much havoc on millions of years of evolutionary design.

Heredity misconceptions

One of the more unfortunate myths widely accepted as fact is that many of these health problems are genetic. Sure, genes can be a factor, but in much different ways than we're lead to believe. Very rarely is anyone born with a genetic certainty of any malady. In fact, most of us are born with a very high genetic probability of long, vibrant health... we simply screw it up!

When the media reports a genetic discovery we only get the highlights. Phrases like 'the gene that controls obesity' and 'the fat gene' emerge. Those with a family history of obesity come to the mistaken conclusion that they have the 'fat gene' and are destined to be obese. The more likely 'heredity' connection is the family lifestyle... eating habits in particular... that parents 'pass on' to their children.

The rest of the story... There are a set of genes, not just one, that instruct how hormones, enzymes and a host of other digestive and metabolic compounds are created. Many things lack of nutrients, toxins or bad pH - can alter these multiple sets of instructions. Whatever malfunction occurs, it has a 'genetic source'... 'the fat gene'. See how easy it is to wrap up a complex subject with a cute phrase or term?

Are we close to a gene therapy for all our ills? Scientists are still unraveling the mysteries of the genome. The C,G,A and T's you see strung out in DNA illustrations are abbreviations for nucleotides. Groups of nucleotides in varying numbers make up our genes, of which we think there are about 35,000. We don't know the exact number yet. Outside the gene regions are 'vast deserts' of genetic code. Some experts believe there are still thousands of genes hidden away, while others marvel, It (the vast desert of code) must be there for a reason.'

Perhaps someday scientists will discover 'gene therapies' for many of our ills. When is the question, and more importantly, do you want to wait? Here's another perspective; if genes create a health problem for you - you more than likely created a chemistry problem for your genes. Learn to prevent those chemistry problems before they manifest...

...and that's something you can do now!

So, let's fix that chemistry!

Fortunately, the human body is very resilient, able to cope with acid residue for a long time. While it does build up, we can get rid of it, though that's easier said than done. Once you've cleaned up your insides, you can have a healthier, more vital life.

Here's how to start.

Know your pH It's easy to test your own pH. Litmus paper and a urine sample does the trick. Your first visit to the bathroom, before you eat or drink anything is the best time. You check your engine oil, watch your fuel gauge... your body is more important, so start monitoring your pH by testing it routinely. (see resources next page)

Eat more alkaline foods! A diet rich in alkaline forming foods will help greatly. Details of foods, recipes and lifestyle changes can be found in many books on this subject.

Personal care Skin pores allow the body to get rid of toxins. Many of the personal care items, like soaps and lotions, actually leave clogging residue on the skin. Be sure to use cleansers that are pH balanced and made without animal fats. (see resources next page)

pH Neutralizers

There are a variety of supplements and solutions that aid neutralizers and lifestyle changes in neutralizing acid conditions in your body. Your body must detoxify and rid itself of built up acid residue. Without these aids, this can be a long process leaving acid conditions lingering longer than they might otherwise. With the aid of neutralizers, ideal pH conditions are restored faster.

Parting thoughts...

So many topics... not enough space... and one topic that almost escaped this work is High Fructose Corn Syrup (HFCS).

High fructose diets (relative to glucose) have also been implicated in the development of adult-onset diabetes. Fructose, especially when combined with other sugars, reduces stores of chromium, a mineral essential for maintaining balanced insulin levels, according to Richard Anderson, Ph.D., lead scientist at the Human Nutrition Research Center in Beltsville, Maryland

HFCS is a sweetener made from corn - simple and innocent sounding. In 1970 annual per capita consumption was a half pound. Now, on average, each American eats 63

pounds of HFCS. It's in everything - sodas, baked goods, cereals, fruit juices, pasta, beer - you name it. It's even the number one ingredient in a 'protein' food bar.

Proponents for the corn-sugar industry say, the body, sugar is sugar, your body doesn't know the difference.' Others are not so sure. Natural sugar is made up of both fructose and glucose, in equal amounts, which is what the body expects. HFCS is altered, containing a higher percentage of fructose, which our digestive processes mishandle.

In the amounts we are consuming this stuff, we are essentially putting ourselves on a high fructose diet. Children are consuming HFCS in alarming fashion. Their 63 pound serving is much more significant given their smaller sizes compared to adults. They're still growing and developing.., on what? Your health is YOUR responsibility! Who's responsible for our children's health?

Get informed, eat right and neutralize!

Resources

pH neutralizers, pH test strips and more information...

There's much to know about this fascinating health issue. And so much to gain! For starters, contact the person, organization or outlet that provided this booklet.

U.S. drops to 28th in life expectancy!

World Health Organization reports...

"Basically, you die earlier and spend more time disabled if you're an American rather than a member of most other advanced countries."

Health problems are soaring in the U.S. despite our medical marvels.

No longer just 'old age' issues as children and young adults join the rank of statistics.

Have we overlooked something? Just as issues of second hand smoke arose decades later... now, we're learning that beyond the fat and carb calories, most processed foods are leaving acid residue in our bodies.

Acid pH can do a lot more harm than second hand smoke! It's been happening for decades as well, and

is another...

CRISIS IN AMERICANS!

How's Your pH?

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Medical Disclaimer - The information in this publication is not intended nor offered as a diagnosis of or cure for any human malady. When any health issue arises the reader should seek the advice of a competent health professional or medical doctor.