

# *Stress, Acid and Survival*

## *The Toll of Nutritional, Physical and Mental Stress*

**Stress-** A change in the environment that prompts a response. Any one thing you do affects ALL of you. All functions of your body are directly or indirectly related. ALL mental and physical activities stress the body. Stress is anything that causes your body to change the way it's functioning right now. Exhaustion from constant stress causes the body's systems and organs to shut down.

Physical Stress- (outside the body) exercise, accidents, wounds, confrontations with others, etc. Physical stress ends when the stress goes away.

Mental Stress- (inside the body) mental interpretation of the world and your place in it. Worry, anxiety, fear, guilt, jealousy etc. Since there is nothing directly to confront there is usually no closure.

Nutritional Stress- (short or long-term) What you eat and drink. Generally high protein, high sugar acidic diet.

**Acid-** The physical consequence of all stress.

**Survival-** The body makes the perfect survival response every time. It responds to all stimuli, doesn't think, plan for the future or judge. It doesn't care if you are hurting or happy. It survives. If you don't like the response, change the stimulus.

Health or disease is the cumulative effect of physiological responses.

The choices you make determine your level of health, happiness and success.

**You can never be separated from your choices.**

**Nutrition-** may create a climate for undue stress.

- The body is alkaline by design and acid by function
- Working cells produce acid which is eliminated easily through respiration.
- Consumed acid pollutes the system and is not easily eliminated
- Fruits and Vegetables have minerals that neutralize strong acid from meats & grains
- Eating the same way day after day means the body responds over and over the same way eventually exhausting organs, systems and stored minerals leading to a variety of disease.
- Balance
- Health, happiness and success are a byproduct of good personal decisions.

## Measuring Stress – Acid

**pH-** potential of Hydrogen (whether Hydrogen ions are gathered or given off)

		Human	Equine		
		6.8-7.4	7.4-7.9		
Acid	0		7	7.35-7.45	14
(Bleach)	2		(blood pH)		Alkaline
	(Stomach Acid-HCL)				(Ammonia)

-Both ends are equally caustic. 7 is neutral

-The scale is exponential (6 is 10x as acid as 7, and 5 is 100x).

-2 Stomach Acid-hydrochloric acid

-6.8- 7.4 Human optimum

-7.35 Human blood carrying carbon dioxide by-product

-7.45 Human blood cleaned carrying no by-product

-Blood pH has only a margin of 0.5 thus the body will pull all resources to maintain it.

-7.9-7.4 Equine optimum

-Acid, a byproduct of animal/grain protein must be processed through the digestive tract, ultimately through the kidneys thus pH measure is generally via urine.

**-Acidosis- increased hydrogen ion concentration.**

## The Buffering System

Bicarbonate buffer system- works with sodium (not salt), can raise pH only to 6.1 and requires sodium reserves to be sacrificed. Your supply of good useable sodium depends on how much acid producing foods you eat and how long you've been eating that much. Sodium reserves are depleted as a result of eating acid foods requiring this first line defense.

Phosphate buffer system- works with potassium *intracellularly* and raises the pH to 6.8.

Protein buffer system- handles 75% of buffering and will raise pH to the optimum 6.8 – 7.4 level  
\*remember protein can do both, acidify or neutralize. It can change the position of it's atom to either attract or repel Hydrogen ions. PH-the potential of Hydrogen, the ability of a substance to gather or get rid of Hydrogen ions.

## Protein- How much to do we really need?

Protein is the building block of cells and is lost everyday. We can use between 20-40gm/day.  
Gm=.3215oz

Protein is energizing and stimulating but the acid throws the body into a survival mode sapping the energy level to fight off the attack. Thus eating more protein to reach that same energy level creates a vicious cycle.

An Example; Your lunch hamburger, 3 oz	21 grams
Bun	3
Tomato	trace
Lettuce	trace
10 french fries	2
slice of cheese	<u>6</u>
	32 gms.

Add Breakfast of	Egg	6
	Toast	<u>3</u>
		40

What's for dinner? SALAD

- The purpose of holding down protein is to keep the internal environment happy and out of the survival mode.
- We can tolerate 40gm as long as there are enough fruits and vegetables to help handle the acidic residue(ash).
- Eat..... 70-75% Alkaline (Fruits & Veggies)  
25-30% Acid (animal protein & grains)
- Human beings are omnivores intended to eat animal protein in *appropriate* amounts
- Consider this;
  - It takes 8-10 glasses of water to neutralize one cup of coffee (and that's not Starbucks!)
  - It takes 32 glasses of water for a can of Coke.

## The Consequences?

The bicarbonate buffering system is first defense pulling off of our "limited" sodium (sodium salts) reserve.

- Sodium is the principally charged element in extracellular fluid.
- All of sodium's functions are geared toward immediate survival.
- Some of sodium's functions are "essential". No other compound can replace it.
- Sodium salts are important in serum, blood, lymph and maintain balance between calcium and potassium to maintain normal heart action and pressure in cells and fluids.
- Sodium guards against excessive loss of water from tissues.
- Sodium comes from vegetables.
- When sodium is constantly sacrificed to neutralize excess protein it pulls sodium and other neutralizing minerals from less important tasks (healing wounds, building bones).**

## **Pancreas**

- secretes enzymes that along with the bicarbonate work to neutralize HCL from stomach
  - Enzymes are complex proteins produced by living cells that cause chemical changes in other substances without changing themselves. They help digest the food that brought them.
  - Work in a highly acidic environment.
  - Are killed in the pasteurization process.
- secretes insulin a hormone that makes minerals/calories available to cells
  - constant production of insulin to address carbohydrates (grains, sugar) causes the pancreas to shut down, type II diabetes, IR (insulin resistant).

\*

## **Table Salt vs. Sodium**

Table salt is sodium chloride

Sodium that our bodies use has been processed through plants, “organic sodium”.

Table salt mimics sodium so closely that the body keeps it even though it cannot use it effecting pressure balance of cells.

For every teaspoon of salt consumed (2,000mg) significant amounts of calcium is lost, problematic if calcium is already being siphoned from bones to neutralize high-protein acid. So you think more milk???

## **Milk and Calcium**

Calcium from pasteurized cow’s milk is not a substitute for organic milk and drinking more won’t increase calcium reserves. It will only compound the problem.

- Milk leaves an alkaline residue but has an acidic effect! Because...
- Milk has phosphorus. We need phosphorus as a source of energy in muscle contraction and converting food to energy but phosphorus is acidic.
- Mother’s milk has phosphorus but it doesn’t acidify the body because it also has calcium in a 2 to 1 ratio (cal to phos).
- Cow’s milk has 1.25 cal to 1 phos.
- Mother’s milk has 1.1mg protein
- Cow’s milk has 3.25mg protein

The more milk you drink the more protein and acid your body must deal with and the more **calcium you lose!** Keep your protein to not more than 40gms per day and avoid pasteurized cow’s milk. It will do your body good!

\*

## **Fruits & Vegetables**

- Are minimal stress, easy response and have slightly neutral pH
- Easily digested.
- Contribute more than they use.
- Are major contributor to acid-*neutralizing* effort
- Carry vitamins, mineral, amino acids and cellulose (fiber, roughage) to remove debris and toxins.
- Acid from fruit is “natural” and easily broken down and eliminated via the lungs.
- Fruit on an already acidic maxed-out system can be problematic.
- Minerals from fruits and vegetables are better because they are of plant origin and bio-available.
- Plants produce vitamins though they don’t use any!
- Plants also have protein made up of amino acids both essential (those the body must consume because they aren’t produced) and non-essential (those the body does produce but won’t have to source elsewhere). “Complete protein foods” contain all the essential acids the body needs. “Incomplete protein foods” do not contain all.
- Fruits have few amino acids but are high in vitamins and minerals.
- Most vegetables have essential amino acids.

## **Grain**

- Grain is an acid producing plant.
- It is a foreign substance to virtually all mammals and should be consumed in very limited quantity.
- To the good, grain has essential amino acids and a few non-essentials.
- whole wheat (not processed and then “enriched” whole wheat) offers all known essential amino acids.
- grain is more neutralizing than meat but not enough to do the whole job.
- Vegetarians often experience acidosis from grain.
- Grains have acidic components called phytates which limit our ability to digest iron, calcium and other necessary minerals.
- Grain is number one cause of Leaky Gut Syndrome from which a variety of other health conditions arise including auto-immune diseases, rheumatoid arthritis and lupus.

## **Wild, Natural Grass Fed or Free Range Animal Protein**

**It cannot be stressed enough that grass fed beef, in particular, is a *pH neutral* protein source. Not until the animal is fed grain does it become an acidic food with the attendant upside down omega balance.**

**Include it in your diet but only within the protein guidelines stated. Protein is protein regardless the source.**

## Signals of Omega 3 deficiency (fundamental in nervous system)

Memory Loss	Excess ear wax
ADHD	Rashes/psoriasis
Depression	Arthritis
Dry skin	<b>Inflammation</b>
Heel calluses	

## Signals of Acidosis

Constipation	Irritability
Diarrhea	Morning Stiffness
Lack of appetite	Ammonia smelling urine

\*Urine smelling of ammonia is a signal of the body's nearly exhausted effort to neutralize acid. Physiological ammonia has a pH of 9.5. When the fluid in the kidneys are too acid they produce alkaline ammonia to neutralize it. This happens only after neutralizing minerals from the bicarb buffering system are spent. This emergency back-up system can send urine pH to a burning 8.5. Even nursing babies can have ammonia smelling diapers signaling the excessive protein in their mother's diets. Don't ignore this signal!!!

\*Cranberry juice you say? Cranberry juice stays acid throughout the system acidifying the ammonia the body has dumped and providing relief!

## Symptoms of Acidosis(Inflammation)

Arthritis and other joint disorders	Diverticulitis/diverticulosis
Rheumatoid arthritis	Osteoporosis
Ulcers	Hypertension
Leaky Gut Syndrome	Muscle wasting
Cancer	Bone deterioration
Coronary Artery Disease	Kidney stones
Heartburn	Atherosclerosis
Candida & other fungals	Intestinal problems
Parasite challenges	All 'itis' diagnosis (a list far too long to list here)
Crohn's disease	

### **If the body must adapt to handle excess acid from high protein foods two things happen;**

1. The availability of alkaline minerals from alkaline reserves are gradually reduced.
2. Back up systems designed for emergency service only must work in high gear constantly

### Resulting in;

1. Some internal functions are shortchanged as neutralizing minerals are scavenged.
2. Internal emergency organs and systems are pushed beyond their capabilities and become exhausted.

## Alkaline Foods

Almonds  
Apples  
Apricots  
Avocados  
Bananas  
Beans, dried  
Beet greens  
Beets  
Blackberries  
Broccoli  
Brussell Sprouts  
Cabbage  
Carrots  
Cauliflower  
Celery  
Chard leaves  
Cherries, sour  
Cucumbers  
Dates, dried  
Figs, dried  
Grapefruit  
Grapes  
Green beans  
Green peas  
Lemons  
Lettuce  
Lima Beans, dried  
Lima Beans, green  
Limes  
Milk, goat  
Millet  
Molasses  
Mushrooms  
Muskmelons  
Onions  
Oranges  
Parsnips  
Peaches  
Pears  
Pineapple  
Potatoes, sweet & white  
Radishes  
Raisins  
Raspberries  
Rhubarb  
Sauerkraut  
Soy beans, green  
Spinach, raw  
Strawberries  
Tangerines  
Tomatoes  
Watercress  
Watermelon

## Acid Foods

Bacon  
Barley grain  
Beef  
Blueberries  
Bran, wheat  
Bread, whole wheat  
Butter  
Carob  
Cheese  
Chicken  
Cod  
Corn  
Corned Beef  
Crackers, soda  
Cranberries  
Currants  
Eggs  
Flour, white  
Flour, whole wheat  
Haddock  
Honey  
Lamb  
Lentils, dried  
Lobster  
Milk, cow's  
Macaroni  
Oatmeal  
Oysters  
Peanut Butter  
Peanuts  
Peas, dried  
Pike  
Plums  
Pork  
Prunes  
Rice, brown & white  
Salmon  
Sardines  
Shrimp  
Spaghetti  
Squash, winter  
Sunflower seeds  
Turkey  
Veal  
Walnuts  
Wheat germ  
Yogurt

soda  
coffee  
alcohol  
herbicides  
pesticides  
tobacco  
aspirin & all drugs  
OTC or Rx  
MSG  
food additives  
artificial sweeteners

### Neutral Residue Foods with Acidifying effect

Corn oil  
Corn Syrup  
Olive Oil  
Refined Sugar

## **Physical Stress**

Physical stress can come in varieties too numerous to discuss. Obviously, the environmental challenges we have are better tolerated by some individuals than others. Generally physical stressors are the factors we face beyond what nature intended. Cramped living conditions, electromagnetic influences, high stress jobs, inappropriate exercise, long work weeks and toxins. The body's survival response is a constant adrenalin rush creating, once again, an acidic internal environment! The good news is that these issues can frequently be managed and when they are the stress is relieved.

The human body genetically has not changed since Paleolithic times some 20,000 years ago. It is not hard to imagine the vast difference in lifestyle and the consequence our body's today struggle with compared to that of our ancestors. Until the industrial revolution mankind managed pretty well. Since then, however, progress has taken monumental leaps leaving the body to manage as best it can in a world of chemicals. What we don't often think about because they are generally unseen and symptoms frequently gradual are toxins. Toxins are everywhere. Not only the obvious power plants and car emissions but in cleaning products, soaps, fertilizers, pesticides, scented candles, even deodorants, facial creams, lotions and make-up (estimated at 5lb/yr). We are living in a virtual sea of toxins.

## **Toxins**

Toxins are anything that do not agree with us. In general, the body cannot identify the molecular compound. It may have some apparent good intent as in pharmaceuticals but in the end the body doesn't know what to do with it.

Here are some eye opening facts;

- According to the EPA 70,000 chemicals are used in the US, 65,000 are potentially hazardous
- Of the 4 billion pounds of toxic chemicals released into the environment each year 72 million pounds are carcinogens.
- Since the 1800's 80,000 new chemicals have been introduced
- An EPA study of cadaver and surgery tissue from 1970-1989 found the 5 most toxic substances in 100% of the samples and 9 more in 91-98%
- A Michigan study shows DDT in 70% of 4 years olds (of American birth & descent).  
\*\*\*DDT was outlawed in 1972!
- Recent umbilical cord samples revealed 287 toxic chemicals, 217 toxic specifically to the brain and nervous system
- Many of these chemicals are stored in fat tissue making animal products concentrated sources. 100% are contaminated with DDT, 93% of processed cheese, hot dogs, bologna, turkey & ice cream.



## **Toxins and Metabolism**

Toxins are stored primarily in body fat. We can't lose weight because the body's survival mechanism needs the excess fat to store toxins. When we do burn off fat, the toxins come out and if they aren't eliminated properly cause additional problems. The net effect on the body is the same as outlined previously with inflammation from excessively high protein diets, an acidic internal environment. Now, however, we have added toxins that love and thrive in the environment. Cancer is probably the most obvious opportunist. Cancer thrives in an acidic environment and the sugar and grains we eat are it's favorite meal!

Further toxins complicate weight loss by impairing the liver and thyroid and by damaging mitochondria. Our liver and kidneys finally fail. The liver is so basic to health that unless it's function can be improved many cannot experience significant or lasting improvement even on a nutritional or holistic healing program.

Symptoms of a suppressed liver are; depression, anxiety, anger, especially suppressed anger. Keep that in mind when you watch the evening news! And you'll note they read much like symptoms of acidosis or deficient omega 3's.

More alarming than our cancer rate is the recent increase in ADD, ADHD, autism, dementia, Parkinson's and Alzheimer's (expected to increase some 30% over the next few years). The medical community has now accepted toxins as the primary factor in Parkinson's and we know that detoxing youngsters relieves ADD and ADHD behaviors. Few of these conditions were significant in the population even 30 years ago.

### Indications of toxins

Acne  
Allergies  
Arthritis  
Bad breath, body odor, foot odor  
Bloating  
Depression  
Headaches  
Insomnia  
Lower back pain  
Constipation

Avoid those toxins that you can and consider a plan to detox or cleanse to remove those you can't. *Toxins can be the seed of disease that when planted in the acidic environment created by diet grow into significant cancers and other disease.*

## **Mental Stress- the Trump of all Trumps**

Virtually all medical and nutritional specialists recognize that mental stress will nullify even the most appropriate diet and cleanest lifestyle. Mental/emotional anguish instantly acidifies the body.

Death, divorce, job loss, moving are a few of the more obvious and generally recognized stressors. Roger DeHaan, DVM in his book, "We Don't Die, We Kill Ourselves. Our Foods are Killing US!" states that, "in the human cancer family financial stress has been documented as major causes of cancer. Three prominent stresses are recognized within 6-12 months prior to the diagnosis of an aggressive cancer: divorce, a death in the family or a major financial set back."

Beyond these major event stressors it behooves us to consider those that we exist in every day. We chuckle at the dysfunctional family but we shouldn't. Living with the stress of an unhappy relationship, a blended family, care giving an elderly parent or sick child, worrying about losing a job or navigating in the politics of most corporate environments are extraordinary. Add long days, complicated commutes, little sleep, overactive kids and you have yet another level of stress. Any and all take a toll on our health by creating an acidic environment in our bodies just like poor nutrition and toxins. Is it any wonder rates of significant illness are skyrocketing?

Stress has been the topic of many books and studies over the past 20 years. Considering stress is essential in the prevention and treatment of disease. There are many programs, therapies and techniques to address stress and the topic is complex. Keeping in mind how stress affects our bodies and managing or eliminating the stresses we can is as important as eating an appropriate diet and avoiding toxins.

One good thought....The only thing worse than eating that 14oz steak, warm bread with butter, wine or cocktails and crème brule is.....worrying about it.

**Today's ill health may be the result of the body surviving to exhaustion.**

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