



# The Apple Press

## *Caring For Tomorrow Today*

Volume XXI Number 1 / 2

January / February 2006

### About the *Apple Press*

The newsletter of Preventive Medicine Group, the private medical practice of

**James P. Frackelton, M.D.**  
**Derrick Lonsdale, M.D.**  
**Stanley M. Gardner, M.D.**  
**Nosson S. Goldfarb, M.D.**  
**Laura DeVincentis, N.D., R.Ac.**

The practice emphasizes family care, healthy eating and nutritional supplements, healthy lifestyles, anti-aging medicine, energy medicine, acupuncture and preventive medicine. This complementary and alternative medical practice also offers non-surgical therapy as an option in the treatment of cardiovascular disease.

**Published bi-monthly**

**Preventive  
Medicine Group**

30 Years of Caring For  
Tomorrow Today

**1976—2006**

## Oxidative Stress as the Root of Disease

The main issue in the causation of many diseases is what is known as oxidative stress.

The adult human body consists of between 70 and 100 trillion cells. Each cell is a unit of function with a job to do. Each cell requires energy and can be compared to a car in this regard. The cell has to take in fuel and burn it just as a car has to burn gasoline. A car has an engine and the cell has the mitochondria. As gasoline is fuel to the car, protein, fat and carbohydrates are fuel to the body. Oxygen is extracted from the air we breath and conveyed to the cell where it combines with fuel to perform the reaction in the mitochondria known as oxidation. This is the equivalent of the explosions that occur in the cylinders of a car engine. Combustion of fuel requires something to ignite it. Spark plugs do the job in a car. Certain vitamins and minerals are the equivalent of spark plugs in the body.

Burning fuel, however, is potentially dangerous. The combustion process has to be controlled or it will get out of hand and produce damage. In a car, the energy developed in the engine is passed through a series of

mechanical devices in the transmission to the wheels that move the car. The combustion process in the body, or oxidation, has to be controlled also to prevent damage.

Consider a fire burning in a fireplace. The more vigorous the fire, the more heat energy is produced. One of the obvious dangers is the formation of sparks. They can jump from the fire and ignite a carpet and even cause the house to burn down. To prevent this, we can place a wire screen around the fire to catch the sparks and quench them. The mitochondria are the equivalent of the fireplace. The "fire screen" is governed by a complex chemistry. As we exercise in any form, mental or physical, the mitochondria use more fuel and oxygen to meet the demand for more energy. Automatic adjustments go into action. As the mitochondria increase their action, they produce the equivalent of sparks which we know as free oxygen radicals. These "sparks" have to be quenched.

In review, oxygen from the air goes from the lungs to the blood, is conveyed into tissue and then in to the mitochondria of the cells. Certain vitamins and minerals enable oxygen and fuel to combine. Other vitamins



---

## Oxidative Stress as the Root of Disease (continued)

catch the free oxygen radicals as they are produced by more vigorous oxidation. The substances that cause oxidation to occur are “oxidants” and those that quench the free-radicals are “antioxidants.”

Failure to deliver oxygen to the tissues, or a failure of oxygen utilization in the cells will result in one form of oxidative stress. An obvious cause is a deficiency of the oxidants we must derive from diet. In particular, this is the B complex vitamins together with some minerals. The antioxidants consist of a huge number of chemical substances, many of which are derived from diet including vitamins C, E and selenium. A fire screen depends on many components that all work together and our antioxidant vitamins work in a team relationship that is essentially similar. None of them work alone.

The control of oxidation, reduced here to relatively simple terms, is extraordinarily complex. Oxidative stress is the term used to describe its failure. Oxidative stress can therefore be due to lack of oxidants, antioxidants or both together. The result is loss of efficiency in energy production. Our natural defense mechanisms begin to suffer and we become more likely to succumb to the stresses and strains of life.

Millions of years ago, our ancestors were surrounded by plants that furnished both the oxidants and antioxidants. All that was necessary was for them to gather and eat it. However, now that we are civilized and generate our livelihood by earning money and buy food at a store, we have developed a food industry that presents us with massive temptations that give us taste pleasures. In turn, addictive tendencies take over our diet. We ingest huge amounts of calorie producing foods that do not come

even close to our vitamin and mineral needs, in spite of so-called vitamin enrichment.

The chemistry of oxidation is governed by enzymes whose efficient actions depend on our dietary intake of vitamins and minerals. That is why some vitamins and minerals are called cofactors to the enzymes. These enzymes begin to lose their functions if there is an inadequate supply of cofactors.

As this loss of function gradually increases, the brain/body combination begins to complain and generate symptoms that can be thought of as like bells ringing in a complex system. All symptoms are sensed and interpreted in the brain. Complex communication systems have to identify where the signals are coming from in the body. Disturbances in efficient oxidation in various tissues can, in this way, give rise to symptoms. The organs that are most susceptible to oxidative stress are the brain and heart. That is why these organs give rise commonly to disease in older people. Just like our cars, we slowly wear out. We call it aging.

In order to resuscitate inefficiently functioning enzymes, one has to do at least two things. First, the offending high calorie food, most commonly but not exclusively sugar in all its various forms, must be withdrawn completely from the diet. Second, vitamins and minerals, in a concentration that is much greater than would normally be found naturally occurring in foods, must be taken in supplementary form to stimulate the corresponding enzymes back to health.

The withdrawal of the offending food substances can be referred to in the old expression of “removing the hair from the dog that bit you in the first place.” That essentially means that

the suffering victim of diet outrage cannot merely cut back on the offending food(s). They must be eliminated cold turkey until the system recovers.

We can see that the major cause of disease in Western civilization is poor diet and that oxidative stress is the major mechanism by which this is brought about. The paradox is that our stomachs are full but we are malnourished. We suffer from high calorie malnutrition. We have too much food of the wrong kind. In contrast, other parts of the world have too little food of any kind and are suffering from the classic diseases normally thought of as malnutrition.

Oxidative stress from high calorie malnutrition, resulting in loss of efficiency in the brain causes the affected individual to become more primitive in behavior. Emotional reactions can be exaggerated so that a minor insult can cause explosive anger disproportional to the insult. This explains some of the presently otherwise inexplicable behavior of thousands of children and adolescents in our society today. It has much to do with juvenile crime for we know from previous research work done in many places that dietary measures will improve this kind of behavior.

Historical evidence showed that lead poisoning was a major problem in ancient Rome and may have played a significant part in the decline and fall of that culture. The Romans themselves had no idea this was a powerful force in their gradual decay, in spite of warning by thinkers of their time. Is it possible that the modern era of high calorie malnutrition is putting us at a similar risk while we dismiss it as an absurd concept? Our society may never change, but you as an individual can. Start now!

## The Book Worm

Do you have food allergies or sensitivities? Are you avoiding gluten or casein? You need *The Allergy Self-Help Cookbook* by Marjorie Hurt Jones, R.N. There are over 350 natural food recipes free of all common food allergens including corn, gluten, sugar, wheat, eggs, milk, soy and yeast. There is an excellent description of various grains and grain substitutes along with an analysis of their cooking properties and how they are best used in recipes. Alternative sweeteners are listed along with how to modify recipes to accommodate them. Also discussed is exploring other new food ingredients, a rotation diet for management of food allergies, nutrition basics, tips for an allergy free home, eating away from home and helping allergic children. This comprehensive book includes a conversion chart and resources for foods, supplies and information. The recipes look delicious and the size and readability of the book are both user friendly. This is a good book! Ms. Hurt Jones is also the author of *Superfoods: Allergy Recipes* and *Cooking for the Health of It* as well as co-author of *The Yeast Connection Cookbook*. Read them all!

## Tip Top Tips

Bisphenol A, or BPA, is an artificial estrogen used to create the plastic polycarbonate. It is used in resins to line some metal cans, in the manufacture of dental sealants, and commonly, in hard plastic drinking glasses, some microwavable food containers and plastic baby bottles. It is a chemical used to make plastic water bottles. It can easily leach out into water. It is a very toxic hormone disruptor.

Look at the bottom of plastic water bottles and plasticware. Look for a triangle with a number. If it is number 1, it is made for one time use only. After that, the plastic degrades and toxins leach. The number 7 in the triangle indicates a BPA plastic that will leach dangerous hormone disrupting chemicals under *all* conditions. The 1's leach the most when exposed to heat. Numbers 2, 4, and 5 are the safer more stable forms of plastic, although they are harder to find.

BPA has been linked with reproductive tract alteration, decreased immunity, increased prostate cancer, changes in the biochemistry of the brain and behavioral changes.

## The Wise Old Apple

**Real notices found in various church bulletins:**

**The peacemaking meeting scheduled for today has been cancelled due to conflict.**

**Next Thursday there will be tryouts for the choir. They need all the help they can get.**

**Barbara remains in the hospital and needs blood for more transfusions. She is also having trouble sleeping and requests tapes of Pastor Jack's sermons.**

**The pastor would appreciate it if the ladies of the congregation would lend him their electric girdles for the pancake breakfast next Sunday.**

**To quote Albert Einstein, "Before God we are all equally wise and equally foolish."**

## The Recipe Corner

### VEGETABLE STUFFED MUSHROOMS

|   |                             |                                   |
|---|-----------------------------|-----------------------------------|
| 24 large or 12 extra large mushrooms, stems removed |                             |                                   |
| 2 tsp. olive oil                                    | 1 onion, finely chopped     | 3 cloves garlic, minced           |
| 1 carrot, finely chopped                            | 1/2 c. chicken broth        | 1 red bell pepper, finely chopped |
| 1/2 t. dried oregano                                | 3 T. grated Parmesan cheese | 2 tbs. chopped parsley            |

Preheat oven to 400 degrees. In a pot of boiling water, cook mushroom caps for 2 minutes to blanch. Drain on paper towels. In a skillet, heat oil over medium heat. Add onion and garlic; saute for 5 minutes. Add carrot and pepper. Cook for 4 minutes or until vegetables very soft. Remove from heat; stir in Parmesan and parsley. Spoon mixture in to mushroom caps. Place on baking sheet and bake for 10 minutes or until hot.

*New research finds mushrooms from button to shiitake are the top source for ergothioneine, an antioxidant that may reduce heart disease risk!*



## Free Lectures Free Lectures Free Lectures

### “Alternatives to Traditional Medicine”

Stanley Gardner, M.D. 6:30 p.m. Thursday, February 2, 2006

### “New Concepts in Cancer Prevention & Therapy”

James P. Frackelton, M.D. and Nosson Goldfarb, M.D. 6:30 p.m. Tuesday, February 21, 2006

### “Natural Hormone Replacement for Women”

Nosson Goldfarb, M.D. 6:30 p.m. Tuesday, March 21, 2006

### “Smoking Cessation with Acupuncture”

Laura DeVincentis, N.D., R.Ac. 6:30 p.m. Tuesday, April 25, 2006

All lectures will be held at The Point Five Office Building Lower Level Auditorium  
24601 Center Ridge Road in Westlake.

**Call (440) 835-0104 for reservations**

*On occasion, lectures may be rescheduled due to weather or emergency. All advance registrants will be notified in such event.*

## Question and Answer

**I see pomegranates and am hesitant to purchase them because I don't know what to do with them. Also, is pomegranate juice good?**

One of the oldest cultivated fruits, pomegranates were one of the first five domesticated crops along with olives, grapes, figs and dates. They have a role in fable, folklore and scripture and have been considered to be a symbol of immortality, fertility and abundance. Fresh pomegranates are available from September to January. Look for fruit that is round, plump and blemish-free. The bigger the fruit the better. A good, blemish-free pomegranate will keep in the refrigerator uncut for several weeks. If you cut a large one in half and use only a portion, cover the flat

cut surface with plastic wrap and place the fruit cut surface down on a plate. You will create a seal that will prevent oxidation and can store the cut fruit a couple of days in the refrigerator.

Packed inside a pomegranate are hundreds of ruby-red arils — sweet, tart, gem-like juice sacs bursting with flavor. To cut a fresh pomegranate, cut off the “crown” or protrusion end then cut the pomegranate into sections. Putting the sections into a bowl of water, roll out the arils with your fingers. Discard everything else. Strain out the water. Doing this in water protects you and your hands from red juice that can stain. You can also cut the fruit on a large plate with a knife but protect against squirts. Eat the succulent arils as is, whole, seeds and all. They add garnish appeal and are great in vegetable or fruit salads. (A true pomegranate lover has been known to cut a pomegranate in segments and bite into it eating it over the

sink. Normally done alone and not wearing one's best clothes!)

Pomegranate juice, available year around, is an antioxidant goldmine. Just one glass of pomegranate juice has the same polyphenol content as two glasses of red wine, four glasses of cranberry juice or 10 cups of green tea. It's also an excellent source of vitamin C, potassium and calcium. A study published recently in the *Proceedings of the National Academy of Sciences* found that pomegranate juice may help prevent fatty deposits from forming on artery walls, while another study conducted at the University of California at Los Angeles suggests that it may help prevent prostate cancer. Scientists continue to explore the fruit's potential role in preventing cancer and dementia, reducing the risk of cardiovascular disease and lower LDL cholesterol and blood pressure. Other research has been supportive in these areas as well.

For further information and recipes, visit [pomwonderful.com](http://pomwonderful.com).