Taking Back Our Lives

Living in greater harmony with ourselves, each other & Big Mama

by Geroge Elfie Ballis & Maia Ballis

SAFE ENVIRONMENT

We cannot find our spiritual balance without also dealing with our physical balance. We view these seemingly "separate realities" as one continuum, one infinite experience. At SunMt, we have worked to live in greater harmony with each other and the Earth. Here is some of our process.

Since the beginning industsrial cities and the concept of better living through synthetic chemistry, we have created unnatural compounds and environmental effects. *The average U.S. household contains more than 2000 synthetic chemicals*. It is human nature to ignore those problems not evident to the five senses. If it is not seen, heard, smelled, tasted, or touchable, it is soon forgotten.

In organizing this information, we are reminded of why we made many of the changes we have made and encouraged to reinforce our choices. Our changes were made over decades of reflection, discovery and rethinking many options pushed by mainstream culture. The term *"throw away"* is obsolete. There is no more "away." We have found that it is not enough just to "raise our spirits" or "raise our consciouness." We also have to lower ourselves into deep connection with Mother Earth - *Big Mama* - in order to fashion a more balanced relationship with our air, water, land, food, neighbors and our livlihood... the basic elements of the physical world which we have so altered in the last century.

Doing SunMt Medicine, we try to deal with our personal and collective spiritual/emotional pains, fears and garbage. As we begin to see how a hurtful habit in one reality is hurtful in the other reality, we begin to make connections back and forth. There are patterns we establish without much consideration, that complicate life. We have come to call this process "Blindness of Habit.".

Our good friend Chuck used to bemoan the fact that the most effective social control is *our own fear of doing something different*. It is only when we overcome this fear that we can do more liberating, more appropriate and more beautiful things in life. The following stories are of our continuing dance in all the realms of this existence.

SAFE AIR

Air quality is a good place to start since we all breathe. Indoor air pollution starts with the building materials of your home, to all the furnishings and household cleaining and maintenance products you use. These synthetic odors are increasingly used in personal care

products, drugs, and household products, plastics, industrial greases, oils and solvents, foods, etc. Their composition usually involves numerous natural and synthetic sweet-smelling constituents, more than 5,000 of which are known.

Our Opening Purification Ceremony in the SunMt Medicine includes a fire of some kind, like a candle. We are now careful to only use beeswax or soy candles and not petroleum based paraffin wax candles. Paraffin waxes are separated from crude oil during the production of light lubricating oils.

The ceremony includes or smudging, burning of an aromatic natural substance, and we looked to traditional plants. Our first smudging stick of sweetgrass was made by someone else. We then grew and used our own white sage year round. Next we went to crushing the anti bacterial, dry leaf. Now we use a fresh native CA Bay leaf, that we break into smaller pieces, crush and inhale year round. The trees grow next to the ceremonial grounds for morning Medicine, so it is very convenient.

We also use our garden lavender (anti-viral, anti-bacterial & anti-fungal) and rosemary, (stimulates adrenals, increasing energy levels and resists mental and physical fatigue) on the wood stove top to purify the indoor air in winter. Studies with brain wave frequency show that smelling lavender

increases alpha waves in the back of the head, which are associated with relaxation.

Natural Essential Oils

The natural aromas of the essential oils of botanicals have a significant impact on how we feel. Doctors have found that patients who have lost the sense of smell can experience anxiety and depression. We have the capability to distinguish 10,000 different smells which enter through the fine hairs lining the nose to the limbic system, the primitive part of the brain that controls our moods, emotions, memory and learning.

Scientific studies have also shown that essential oils contain chemical components that can exert specific effects on the mind and body. Their chemistry is complex, but has been studied for centuries. Their chemistry generally includes alcohols, esters, ketones, aldehydes, and terpenes. For example the sweet fragrance of Jasmine increases beta waves

in the front of the head, which are associated with a more alert state.

Aromatherapy uses natural volatile plant oils, including essential oils, for psychological and physical well-being. About 70% of what is applied to your skin goes directly into the bloodstream, or can be inhaled straight to the limbic system of our brain. Aromas are inhaled by an individual or used in a diffuser to treat a room. They can have properties like: *antibacterial, antiviral, stimulants, or sedatives*. When used properly, essential oils are more compatible with the body's chemistry and healing abilities than synthetics, and therefore, produce few side effects.

Essential Oil is Not Perfume

"Perfumes" or "fragrances" made from synthetic chemicals can do major harm. Perfume is ususally a complex blend

of natural and synthetic smells. Chemicals used in some perfumes are the same chemicals in cigarette smoke, but there is no regulation of the fragrance industry. We are recognizing that some people develop headaches, sinus prob-

lems, and even asthma from exposures to irritating fragrances. Realizing the potent effect of smell on the brain, marketing considerations have put fragrances in almost every cleaning, laundry, and personal-care product on the market. A few chemicals used in fragrances are known to be neurotoxic:
hexachlorophene; acetyl-ethyl-tetramethyl-tetralin; zinc-pyrid inethione;2,4,dinitro-3-methyl-6-tert-butylanisole; 1-Butanol; 2-butanol; tert-Butanol; Isobutanol; t-Butyl Toluene.

Neurotoxic properties of chemicals found in fragrances have caused testicular atrophy in lab animals as well as myelin disease. The myelin sheath protects the nerves and does not regenerate. Multiple Sclerosis, Parkinson's, Lupus, Dyslexia, Alzheimer's and Sudden Infant Death Syndrome (SIDS) are all neurological disorders. Could any of these neurological dysfunctions be caused by exposure to neurotoxic chemicals from laundry products?

Commercial essential oils are natural and have no neurotoxins like chemical fragrances do. If you get a reaction, it is from an intolerance for a specific plant. Avoid synthetic chemicals in commercial products that do not specify essential oils by choosing "fragrance free" when available.

.
See SKIN DEEP website for a database of safe cosmetics and personal care products: http://www.cosmeticsdatabase.com/index.php?nothanks=1

Indoor Air Quality At Work
Complaints related to indoor air quality have increased with the trend toward more tightly sealed buildings and energy conservation measures that recirculate building air and reduce the amount of outside air supply, creating an important workplace and home health issue. Indoor air contamination increased with the growing use of synthetic building and furnishing materials, commercial cleaning products, and modern office equipment (photocopiers, laser printers, and computers).

Indoor Air Quality At Home
The most harmful and widespread contaminant of indoor air is tobacco smoke. Tobacco was a sacred substance used in Medicine traditions. Now it has become an addictive consumer product used for recreation. *Bad medicine*.
Outher indoor pollutants can come from:
- Improperly maintained combustion appliances like gas or propane cooking stoves, furnaces, water heaters, wood stoves and fireplaces.
- Off-gassing from domestic chemicals
- Dust mites and their byproducts
- Mould spores, toxins from mould and moldy odours.
- Harmful chemicals can be released from: synthetics in fabrics, furnishings, household products, and burning petroleum based candles.

No More Barrel Incineration
Rural homeowners used to safely barrel burn household garbage, but this ancient practice has become harmful to public health as we added synthetics to our lives:
plastics, polystyrene containers, synthetic fabrics and packaging materials. Typical household trash can produce dioxin, benzene, formaldehyde, arsenic and cyanide contamination when burned, emitting highly toxic smoke to be inhaled by adjacent family members and neighbors. Dioxin is linked to developmental delays in children, immune system damage and increased risk of cancer.

Cheap Air Conditioning:
Standard air conditioning draws too much energy for our solar electric system, so we have a dc solar swamp cooler, but it is loud - sounds like a small airplane in the house - and our hottest days are often humid, which is not helped by blowing more moist air. So the unit remains inactive. We rely on opening at night and closing during the day, all the doors and windows of Sun House. Our super insulation helps moderate the extreme temperature swings.
It gets up to 103º frequently and up to 112º - 113º on occasion.

Our summer personal cooling strategy is to use plant misters. We keep a few around the house to spray a fine mist on ourselves. This makes our bodies evaporative coolers in rooms with ceiling fans. The addition of a drop or two of Lavender essential oil, helps heat stress. We sleep on the back deck where there is usually more breeze. Elf sleeps there all year round.
In the car we have used a 1 gal. unit with a long flexible

hose. The "spray rig" sits in an open cooler in the back seat (to prevent spills). The driver or passenger can easily spray self or others. This simple, inexpensive system made many summer driving hours more bearable without air conditioning below 100º. Then there is the full immersion in our cold hot tub....You almost get dry by the time you reach the house, but are refreshed and a little damp.

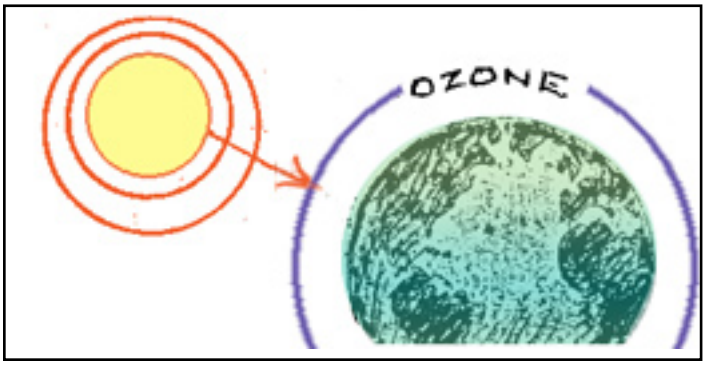
Low-tech, personal, internal cooling strategies are to drink cold water or natural beverages with cooling properties. Herbals like: *hibiscus, spearmint, elderflower, chrysanthemum, honeysuckle, borage etc*. Foods like: *lemon or lime juices, cucumber and watermelon*.

Lowering heat in your house

We protect the south side of Sun House with a summer arbor and "eyebrow" shade over second story windows.
Trees and vines help cool your home naturally when deciduous tress protect the south. Of course, superinsulated homes help too. *See our web site for more ideas on insulating window treatments and solar cooking and more:* http://www.sunmt.org/embracing.html

Ozone layer protection

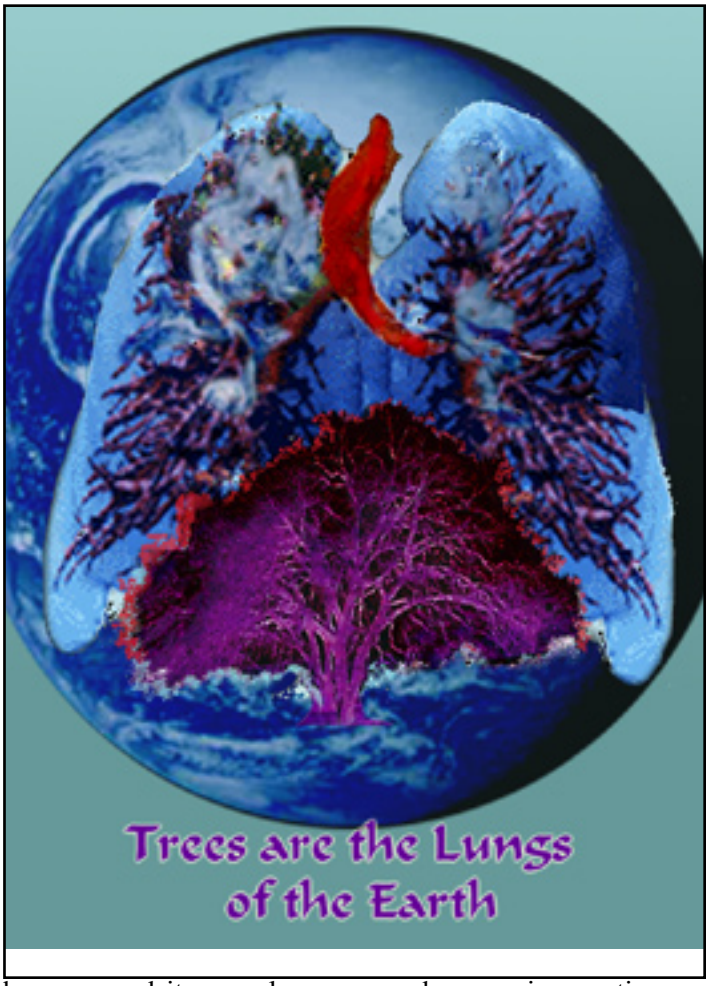
August of 1985, a NASA satellite photo revealed that a portion of the ozone layer the size of the continental United States had disappeared from the atmosphere above Antarctica. This startling information confirmed the theory of scientists that the use of CFCs were rapidly destroying the ozone layer. We designed a fact sheet that we handed out to retailers and restaurants we patronized that might be using



products with CFCs, to let them know what they were doing to our atmosphere.

Chloroflourocarbons (CFCs), are chemical agents commonly found in refrigerants, aerosol sprays, and in the manufacturing of Styrofoam and industrial solvents. One atom of the chlorine in CFC 's can destroy 100,000 molecules of ozone and lasts about 150 years.

The ozone layer is 8 miles above Earth, and about 20 miles thick. It screens out 99% of the ultraviolet rays - source of sunburns and cancer, suppression of the immune system in



humans, and it may also cause a decrease in aquatic species and endanger the basic food chain of the ocean. The chlorine which results from the breakdown of CFCs in the atmosphere combines with other "greenhouse gases" and enhances the global warming threat. The changes in the atmosphere have likely influenced temperature, precipitation, storms and sea level.

Natural processes of photosynthesis (in plants) and respiration (in plants and animals) maintain a balance of oxygen and carbon dioxide in the atmosphere. The carbon dioxide from natural process is not included in greenhouse gas inventories. The burning of fossil fuels upsets this natural equilibrium by adding a surplus of carbon dioxide into the system from sources stored underground for millions of years.

The protective ozone layer developed over thousands of years and has been at equilibrium until we introduced synthetic chemicals, CFC's into the atmosphere. However, climate also varies naturally, so determining what fraction of climate changes are due to natural variability versus human activities is challenging. Processes such as deforestation, reforestation, desertification and urbanization often contribute to changes in climate (including temperature, wind and precipitation) where they occur.

The ozone layer has not grown thinner since 1998 over most

of the world, and it appears to be recovering because of reduced emissions of ozone-depleting substances. The combined emissions of CFCs, HCFCs, and HFCs have fallen from about 33 percent of the annual carbon dioxide emissions from fossil fuel combustion around 1990 to about 10 percent around 2000. HCFC = CFC + 1 atom of hydrogen, and are industries' transitional product.*
See U.S. Environmental Protection Agency Ozone Layer depletion:
http://www.epa.gov/Ozone/strathome.html
http://epa.gov/climatechange/science/recentcc.html

Styrofoam (Polystyrene) alternatives now
Styrofoam causes pollutants when it's made and is not biodegradable. There are interim alternatives, such as waxed paper, waxed cardboard, heavier paper products. The waxed paper now available is a petroleum wax, so not a good long term solution. We can do without all styrofoam packaging of food now. But it would be better if we switched to more durable universal containers that you would buy once at any restaurant, take home to clean and carry with you for the next take out meal. There are ingenious stacking bamboo steamer designs that could be redesigned into stacking, renewable food containers. The Hmong of Fresno carry stacking layers of metal food containers that separate into 3 parts. Let's get creative?

Alternatives for air conditioning & cooling
Our 1984 Sun Frost refrigerator ran on 24 solar powered volts, and was up to 10 Xs more efficient than standard refrigerators of the same capacity at the time, but it used a coolant that is now outlawed. A ban on U.S. Freon's production and importation took effect in January 1996. New technology has found a way to recycle Freon, which can be safely removed from discarded air-conditioning and refrigeration units - unless they leak, as ours did after 23 years. Our repairman told us the new refrigerant does not work as well on old systems that accept it, and not to try. We bought a new, energy efficient AC Conserve refrigertor.

The freon ban spurred the development of less expensive alternatives for residential and commercial cooling and air-conditioning systems. For automobiles, R-134a, requires a special system that is installed in most newer-model cars. Cars with Freon systems cannot use R-134a without expensive conversions. FRIGC FR-12 is a CFC-free blend of refrigerants formulated to mimic the operating properties of Freon R-12. FRIGC is compatible with Freon R-12 systems and quickly is becoming the alternative of choice for older cars and stationary systems.

SAFE WATER
Our bodies are 90% water. We have a well which we pump once to get water to a holding tank on the high side of our property and gravity feed to the house and gardens, so we pay a direct electrical fee for pumping what we need.

Unlike urban sources that can be impacted daily by pollutants, our mountain well water is not treated with chlorine (*depressses thyroid function and easily combines with other compounds to form formaldehyde etc.)* or fluoride. We found no problems when we tested our well in 1983. Our mountain tap water may only have high calcium, but metal and plastic water pipes themselves may add lead, asbestos, copper, or PVC breakdown products to your water, all of which are toxic. Pipes may also be decayed and have holes that allow bacteria to proliferate or ground contaminants to seep into the pipes. So far, we have not used filtration.
Fresno water has agricultural chemical contaminants and most of our friends use filter systems for drinking water.

Rainwater & Graywater
We also collect rainwater, but it goes into our graywater system that goes to irrigate the garden.

Plastic Water Bottles
We have resisted using plastic for decades, but the publication of *"Our Stolen Future"* made us more aware of the xenoestrogenic (estrogen hormone mimics) bonding to and disrupting our hormone receptor sites. Polycarbonate bottles *(number 7)* may also leach bisphenol A (BPA*)* into the

water. BPA has been linked to chromosome damage and hormone disruption. The plastic bottles outgas into the water, accumulating xenoestrongens, particularly in the heat. We have recycled old pint to gallon water containers to fill empty space in our refrigerator, which increases cold mass for more efficient operation.
See Bottled Water Blues on SunMt website:
http://www.sunmt.org/bottledwaterblues.html

Limiting our exposure to these plastics that mimic estrogen seems essential. Whether we get *significant* amounts of these xenoestrogens from water bottles remains unclear. If we do, then children would be especially at risk.

Reports from the Natural Resources Defense Council (NRDC) in Washington, DC, and the World Wide Fund for Nature (WWF) in Gland, Switzerland, say no. NRDC exposed the fact that 25% of the Bottled water they tested was coming from tap water - not springs that advertising implied. Are we surprised that corporations lied to us? Even the Federal agency that regulates bottled water quality, the

FDA, says no! "Companies who market bottled water as being safer than tap water are defrauding the American public." U.S. FDA

The Bottled Water Blues *Plastic water bottles:*
• outgas estrogen mimics, xenoestrogens, into the water they hold, which upsets our hormonal balance
• pack landfills where they outgas, upsetting hormonal balances of many creatures
• boost cost of water higher than gasoline and 240 to 10,000 times higher than tap water
• are the fastest growing section of the beverage market

• deplete our oil reserves — we could carry our own more durable, non-toxic container for water.
• heat up Big Mama through plastic materials, manufacture and easy disposal.

Bottled water has become one of the largest industries in the world. Over half of all Americans drink bottled water, spending 240-10,000 times more per gallon for bottled water than they do for tap water, a trend largely fueled by the misconception that bottled water is safer or healthier than tap water. It has become a status symbol. So we try not to buy bottled water. We carry our own in stainless steel water bottles, which I fitted with insulated jackets with shoulder straps. If we need to drink water and do not have our own, we try to use public drinking fountains.

A plastic garbage island two times the size of Texas is swirling through the Pacific Ocean. Scientists have dubbed the mass of plastic bags, jugs, bottles, nets and other plastic junk the ***"Eastern Garbage Patch,"*** and its volume is growing at an alarming pace. The plastic pollution is now inevitably entering the food chain, with the most obvious casualties seabirds and other marine animals who ingest the various junk bottle caps, cigarette lighters and more, or become entangled or strangled by plastic bands and bags. The plastic causes more than 1 million seabirds, 100,000 marine mammals, and even more fish to die in the North Pacific alone every year. Disturbing as those statistics may sound, the following finding is even more chilling: When the researchers tested the ocean water, they found that it contained miniscule pieces of plastic, about six times as much plastic as plankton by weight.

Marine animals and people are ingesting plastics every day, and being exposed to a potentially deadly mix of plastic chemicals and additives, including:

Cancer-causing PFOAs
PBDEs, which cause reproductive problems
The reproductive toxins, phthalates
BPA, which disrupts the endocrine system by mimicking the female hormone estrogen

What is the result of mankind breathing, eating, drinking and absorbing all of this plastic? Obesity, declining fertility rates and other reproductive problems, cancer and more.
See: Best Life Magazine February 20, 2007
http://www.bestlifeonline.com/cms/publish/travel-leisure/Our_oceans_are_turning_into_plastic_are_we.shtml

HOME BUILDING & MAINTENANCE

SunMt Center - the Sun House, was constructed in 1983 using the most renewable, and least toxic substances we could find at the time. The design is super-insulated for energy conservation, using direct solar gain systems to assist heating, and solar electric and gas for energy.
See our web site for an extensive tour of more detailed energy conservation features: http://www.sunmt.org/embracing.html

A science professor at Fresno State had a severe asthmatic allergic reaction to the formaldehyde in the particle board and oriented strand board OSB in his new house. ***Formaldehyde:*** *a colorless gas produced by burning coal or wood, suspected as a human carcinogen. Inhalation can cause cough, swelling in throat, watery eyes, respiratory problems. Skin contact can cause skin eruptions and long term exposure can cause chemical sensitivity.*

He shared his frustration with us and we published his story in our newsletter to warn the public in the 80's. So while the idea of conserving the small pieces of wood is a good one, industry bound them with a toxin. Current studies show formaldehyde will outgas over 5 to 10 years. A quarter reduction may be reached in 38 days, and an average of 216 days to reach the 50 percent emission level. Evaporating fumes will tend to be absorbed and then re-released by large interior surfaces such as wall board and carpeting. But sensitive people, like children, may suffer from watery eyes, burning sensations in the eyes and throat, nausea, and difficulty breathing, or obscure illnesses that will never be traced to th*e "sick house."* Green Building has more options available for construction and maintenance.

HOUSEHOLD CARE

World War II ushered in the *Better living thrugh Chemistry* thinking that followed war-related research. Before that, householders used a limited number of simple substances for household care. ***Soap, vinegar, baking soda, washing soda, ammonia, borax, alcohol, cornstarch, and certain food ingredients*** were used to lift out spots and stains, deodorize, polish wood or metal, disinfect, scrub, clean pets, wash and starch clothes, plants were used to repel pests, and to perform countless other household tasks. Simple cosmetic preparations kept hair lustrous and skin supplied with the aid of ingredients such as ***eggs, oil, clay, vinegar, and herbs.***

The garden was fertilized and pests were kept down with naturally occurring substances. Weeds were pulled by hand. Even though some natural pesticides, like ***nicotine and rotenone***, were indeed toxic to humans, they were not persistent in the environment. They degrade soon after application. ***Pyrethrum,*** a pesticide derived from a variety of chrysanthemum which is nontoxic to mammals, controlled a wide spectrum of pests. Although it is still widely used, it is usually mixed with other chemicals to increase its potency.

Every purchase is a $ VOTE THAT GETS COUNTED

Buildings of the past were made with ***wood, brick, stone, glass, plaster, and cement.*** Furniture was made of solid ***wood***, oiled to keep it polished. ***Rugs or carpets were made of wool or cotton.*** Insulation was built in by making walls thick, and roofing was constructed from wood shingles or tiles of clay or stone. Walls were ***plastered.*** Windows were made to be opened, so at least in good weather there was plenty of natural ventilation.

Creating Connections

When we built SunHouse, we were conscious of wanting good energy to go into the construction, by working with people we knew. We wanted to surround ourselves with things made of natural materials, made by people we know to enrich the depth of meaning of our surroundings.

Errors of the past

Housewives did not know about the hazards,of such chemicals as arsenic, lead, and mercury which were used in certain household chores. Interior and exterior paints were often made with lead; and many American children are still living with the legacy of lead poisoning caused by eating chips of leaded paint.

Asbestos, called a miracle mineral when its fire-resistant properties were discovered, is now known to be a cancer causer that contaminates hundreds of thousands of homes, schools, and other buildings. The average household now contains over 2,000 synthetic chemicals. They are in our water, air, food, food, home, garden, body and pet care products.

When in Doubt, Leave it Out. In cases where there is no effective safe substitute for a toxic product, re-

evaluate how important the goal really is. Many toxic chemicals in the home can be eliminated simply by making thoughtful shopping choices after educating oneself about the hazards in common consumer products.

Food Grade Cleaning Products at SunMt
We use herb infused Apple Cider vinegar, Lemon juice, Baking soda and food grade oils for a wide variety of household needs: disinfecting, cleaning and wood renewal. For air purifying: Vodka or ethyl alcohol infused with herbs or natural essential oils that are disinfectant and aromatic.

In the 70's it was daunting to find non-toxic commercial products. BonAmi cleanser was one. We used Dr. Bronner's soap and tried new products as we found them. White Wizard cleaned blood spots but destroyed elasticity in underwear,. SeptiSuds washed clothes but also weakened elastic and bleached out colors. Due to increasing awareness, many effective commercial non-toxic cleanng supplies are now available. Some of our old favorites are CitriSolve, Dr. Bronner;s, Ecover, Life Tree, LifeLine & Seventh Generation. See Debre Lynn Dadd's List of over 1,000 natural products: http://www.debraslist.com/

Rather than list the rapidly changing alternative Green Products, we offer the things to avoid and why.

HAZARDOUS INGREDIENTS TO AVOID

Kitchen

Some examples are:

sodium hypochlorite *(in chlorine bleach): if mixed with ammonia, releases toxic chloramine gas. Short-term exposure may cause mild asthmatic symptoms or more serious respiratory problems;*

petroleum distillates *(in metal polishes): short-term exposure can cause temporary eye clouding; longer exposure can damage the nervous system, skin, kidneys, and eyes;*

ammonia *(in glass cleaner): eye irritant, can cause headaches and lung irritation;*

phenol and cresol (*in disinfectants): corrosive; can cause diarrhea, fainting, dizziness, and kidney and liver damage;*

nitrobenzene *(in furniture and floor polishes): can cause skin discoloration, shallow breathing, vomiting, and death; associated with cancer and birth defects;*

formaldehyde *(a preservative in many products): suspected human carcinogen; strong irritant to eyes, throat, skin, and lungs.*

Killer Non-stick Cookware

We've used stainless steel, cast iron, bamboo & glass cookware as the safest products we could find.

Corning labs developed Pyrex, a heat-resistant glass, borosilicate, capable of withstanding sudden changes in temperature, in 1915. They were changing technologies when I went shopping for Pyrex cookware, and I found that Corning added a line of Dupont "Silverstone" non-stick coatings on the bottom of their glass products.

In the 80's, we relied on Debra Lynn Dadd's research in ***"Non-toxic and Natural" magazine and then the book,*** which says that Teflon or Sliverstone scratch easily and can contaminate food with little bits of plastic during cooking. I thought it would be OK if I used only soft tools on the convenient non-stick surface.

WRONG! In the manufacturer's directions, I found a warning that non-stick coated cookware should only be preheated for 2 minutes when empty or the fumes could be fatal to pet birds and cause illness in people. There are parts of the coated surface that are left exposed during cooking, and what about the area covered by food, when heated all during cooking, so don't those fumes go into the air? Into the food?

I rushed back to the store to return the set. I explained to the cashier and her supervisor what I learned, and expressed my concern. The cashier had actually used the cookware herself and her bird had gotten sick. When she took it to the vet, she was told to get rid of all her Teflon coated cookware. She did and the bird recovered. This warning was no false alarm. Since 1984 Corning Visions cookware, combines the transparency of glass lids for easy viewing inside the cookware, with the heat-resistant qualities of ceramics on the bottom.

In studies of heated non-stick pans on conventional stovetops commissioned by the consumer watchdog organization Environmental Working Group, it only took 2-5 minutes to reach temperatures producing dangerous toxins. The coating begins to break down and release toxins into the air at only 446 degrees. At 680 degrees (3 to 5 minutes), non-stick pans release at least six toxic gasses, including two carcinogens, two global pollutants and MFA, a chemical deadly to humans at low doses. The vapors from using these pans with high heat also caused instant death to pet birds. In cases of ***"Teflon toxicosis",*** the lungs of exposed birds hemor-

rhage and fill with fluid, leading to what must be an agonizing death from suffocation. So what do these fumes do to you and your children?

Perfluorooctanic acid (PFOA) is used to make Teflon for nonstick cookware and *is linked to coatings on raincoats and take-out food containers*. PFOA is classified by the US Environmental Protection Agency (EPA) as *a persistent chemical and a "potential" carcinogen*.

Even DuPont acknowledges that the fumes can make you sick -- they call it *"polymer fume fever"* listing the symptoms as: fever between 100 and 104 degrees, chest tightness, shortness of breath, headache, cough, chills, and sore throat, based on a survey of workers who complained of the illness.

Recent findings show that 95% of Americans have detectable levels of Teflon-related chemicals in their blood, that Teflon is persistent in the environment and toxic to pet birds and laboratory animals, and that practically no human studies can verify the safety of Teflon. DuPont settled a lawsuit -- with a fine of $10.25 million -- by the Environmental Protection Agency alleging that DuPont hid health data about PFOA for twenty years.

Pyrex Glass Cookware: Shrapnel in the kitchen?
I once cracked a Pyrex sauce pan using it on an electric stove top. Pyrex is a patented tempered, heat resistant glass that I have been nervous about heating ever since.But I was surprized to hear about *explosive* Pyrex See: http://www.consumeraffairs.com/homeowners/pyrex.html

On the gas range and wood stove, I often use my stainless pots for initial cooking and use glass cookware for storage and reheating, especially when using acidic food like tomatoes or lemon flavoured soups and sauces. I use a set of dark Pyrex casseroles in the solar oven for acidic foods. I use my clay pot and black enamelled metal "graniteware"casserole pots for meats and potatoes that need more heat.
Since all the Pyrex explosion stories involve higher heat, I have not had a problem in our solar oven, where temperatures are 150º-250º maximum..

Metal Cookware Considerations
Metals have high "embodied energy" because they are a mined product from the earth, require expensive transportation and processing energy, and are not renewable. That can be offset with their durability, but there is the problem of possible nickel toxicity from stainless steel, and metal leaching from aluminum.

Pewter
Pewter began as a combination of 30% lead with tin. Lead poisoning date back to ancient Egypt from tests done on mummies and to ancient Greece. Lead poisons from slow accumulation and pewterware was not easily associated with insanity or death. Degenerate emperors Nero, Caligula and Commodus probably went mad from pewterware wine goblets.

Aluminum
Aluminum is ubiquitous in our environment. It is the third most abundant element in the earth's crust following oxygen and silicon and is found in our air, water and soil, and therefore in the plants and animals we eat. But most is excreted by the kidneys daily. We have not used fast heating, anodized aluminum cookware for many years. Researchers have found no clear clinical evidence of links to Alzheimers Disease (AD), but aluminum was a suspected causal factor when we stopped using it.

Uncoated aluminum reacts with salty or acidic foods to leach into food. You can also be exposed to aluminum when Teflon chips off a coated aluminum pan. *Tomato sauce cooked in aluminum pans was found to accumulate 3-6 mg aluminum per 100 g serving*. But most aluminum cookware manufactured today is *anodized* aluminum. *(the aluminum was dipped into a hot acid bath that changes it's molecular structure, sealing the aluminum so it will apparently not leach into food.)* Anodized aluminum would not contribute to aluminum exposure and the wide range of symptoms. See:
Web M.D:. http://www.emedicine.com/med/topic113.htm

Fluoride and aluminum synergy
The biggest source of aluminum actually comes from our municipal water supplies. ***Many municipal water supplies are treated with both aluminum sulfate and aluminum fluoride.***

If your water is fluoridated, the situation is even worse. The National Institutes of Environmental Heath Sciences (NIEHS) acknowledged that ***fluoride has been observed to have synergistic effects on the toxicity of***

aluminum. They found boiling fluoridated tap water in an aluminum pan leached almost 200 parts per million (ppm) of aluminum into the water in 10 minutes and leaching of up to 600 PPM occurred with prolonged boiling. ***Using non-fluoridated water showed almost no leaching from aluminum pans.***
Other sources of aluminum exposure include:

-According to Food and Drug Administration (FDA), a person using uncoated aluminum pans for all cooking and food storage every day would take in an estimated 3.5 milligrams of aluminum daily."
- By contrast, "one antacid tablet can contain 50 milligrams of aluminum or more, and it is not unusual for a person with an upset stomach to consume more than 1,000 milligrams, or 1 gram, of aluminum per day.
- A buffered aspirin tablet may contain about 10 to 20 milligrams of aluminum." If you use these products, look for aluminum-free antacids and plain, non-buffered aspirin.
- Table salt (which is industrial sodium chloride--use a natural salt instead)
- Baking powder (5 to 70 milligrams of sodium aluminum sulfate per teaspoon) and baked goods and packaged baking mixes containing baking powder (check your natural food store for aluminum-free baking powder and natural baking mixes and baked goods made with aluminum-free baking powder)
- Antipersirants containing aluminum chlorohydrate check your natural food store for aluminum-free deodorants
- Aluminum beverage cans
- Aluminum foil
-Anti-dandruff preparations (magnesium aluminum sili cate or aluminum lauryl sulfate)
- Feminime douches (aluminum salts)

Stainless Steel
All stainless steel has alloys containing nickel, chromium, molybdenum, carbon and various other metals. Allergies to the nickel and molybdenum in the stainless steel were suspected as a causal factor in a study showing restenosis in 50% of heart patients receiving stainless steel stents. While this study is not cooking-related, cooking with stainless-steel, increases the likelihood that metals will leach into your food. This is especially true if cookware is pitted due to extended use or storage of acidic foods. For those with nickel allergies, it's a particularly important problem.

Cast Iron
Our most valued nontoxic cookware is cast iron. The iron from this cookware is ***not bioavaiable or beneficial for ingestion***. Seasoning, or creating a protective oil surface by baking a thin coat of oil at low temperatures is easy with a solar oven in summer and wood stove or conventional oven in winter. I use my cast iron skillet covered to steam many dishes, which tends to remove the protective coating. But recoating the surface with olive oil and solar baking it is not much work.

Ceramic Clay
Fired clay pots are an ancient cookware still used today. Heavy metals in the glazes are restricted for use in the U.S., so only use culinary glazed ceramics for food cooking and service. A favorite pot is the unglazed Rommertopf. The clay pot is soaked for 20-30 minutes minimum before using it to bake, so the moisture releases into the food, making it more moist and succulent. We soak ours overnight and use it in the solar, wood stove and gas ovens. No matter the heat source, the succulence of foods is superior. Instead of plastic wrap, ceramic saucers and plates cover open bowls in the refrigerator.

Gourds, Wood & Bamboo
Gourds have been documented as used since neolithic times. Gourds were the earliest plant species domesticated by humans and were originally used by man as containers or vessels before clay or stone pottery. We use them for funnels and scoops. We have also grown the Loofah gourd; edible young. The mature gourds are

dried for their internal sponge-like structure. Woodenware plates and goblets were in use in Europe during Middle Ages. Elf uses a wooden bowl I bought from the man who made it, and a wooden cooking spoon with a shortened handle for most meals, prefering the feel of wood to metal. Elf uses a mini rubber scraper to get every last bit of food ot of his bowl.

He has converted me. His ceramic plate was made by my sister Aria. Manzanita chop sticks were made from local wood by a local craftsman. Bamboo is non-toxic, light weight, strong, grows and regrows rapidly in native habitats. Processing bamboo requires little energy. Where bamboo can be used, it is a superior choice.

Cookware safety web sites:

• Debra Lynn Dadd: http://www.dld123.com/q&a/qandatemp.php?id=Q98

• Dr.Mercola: http://www.mercola.com/products/cast-iron-cookware#footnotes

• Lead: http://www.epa.gov/history/topics/perspect/lead.htm

Utility Closet

likely toxic ingredients:

perchloroethylene *or 1-1-1 trichloroethane solvents (in spot removers and carpet cleaners): can cause liver and kidney damage if ingested; perchloroethylene is an animal carcinogen and suspected human carcinogen;*

naphthalene or paradichlorobenzene *(in mothballs): naphthalene is a suspected human carcinogen damaging to eyes, blood, liver, kidneys, skin, and the central nervous system; paradichlorobenzene can harm the central nervous system, liver, and kidneys;*

hydrochloric acid or sodium acid sulfate *in toilet bowl cleaner; either can burn the skin or cause vomiting diarrhea and stomach burns if swallowed; also can cause blindness if inadvertently splashed in the eyes;*

residues from fabric softeners, *as well as the fragrances commonly used in them, can be irritating to susceptible people;*

possible ingredients of spray starch *(aside from the starch) include formaldehyde, phenol, and pentachlorophenol; in addition, any aerosolized particle, including cornstarch, may irritate the lungs.*

Furnishings

Fabrics labeled "wrinkle-resistant" are usually treated with a formaldehyde resin: *no-iron sheets and bedding, curtains, sleep wear -- any woven fabric, but especially polyester/cotton blends, marketed as "permanent press" or "easy care."*

Modern furniture made of pressed wood products emits formaldehyde and other chemicals.

Carpeting of synthetic fibers have been treated with pesticides and fungicide. *Many office carpets emit a chemical called 4-phenylcyclohexene, an inadvertent additive to the latex backing used in more commercial and home carpets, which is thought to be one of the chemicals responsible for "sick" office buildings.*

Home Furnishings

Petroleum products are of great value in specific uses where they outperform other substances and do not directly impact the environment, but they are a non-renewable resource that should be reserved for those uses.

PVC (polyvinyl chloride) *is the most dangerous plastic around due to the cancer-causing chemicals it releases during and after the production of PVC products like toys. Blood samples of people near a PVC plant in Louisiana had 3 times the average levels of cancer-causing chemicals.*
The EU banned the use of PVC in kids' toys in '05, and some U.S. cities are following suit.
Non-PVC plastics are easier to recycle.
PVC is difficult to recycle, only about 0.1%-3% of post-consumer PVC (recycle symbol #3) is recycled.

From safe plastics, to bio-based materials, there is a growing choice of safer, healthier products that you can support. Soft flexible plastic products that are made with PVC often have a distinct odor, such as vinyl shower curtains. To see if the packaging of a product is made from PVC, look for:
- the number "3" inside or
- the letter "V" underneath the universal recycling symbol.

If you suspect that a product is made of PVC, you can ask the manufacturer directly and express your concerns. For a list of safe alternatives: http://www.besafenet.com/pvc/safe.htm

Fabrics -Paying dearly for neatness

People decorated their homes and dressed well before synthetic fibers, but we have been using more of these "easy care" hard to dispose of products with little concern for the longer term problems they create. For all their good features like being wrinkle free, more durable etc. the synthetic fabrics do not biodegrade well, cause static cling and do not allow our bodies to breathe well. Fabrics like Polyester, Acrylic, Nylon & Spandex can be replaced with cotton, canvas, silk and wool. Natural fibers have regained popularity among conscious shoppers. Scotchguarding fabrics is also a toxic proposition.

So why do we buy them? Because we have been sold "easy care" considerations while safety has not been considered in marketing. We are paying for generations of accumulated toxins.

How pure is Cotton?

Cotton is a natural product, but it is also the most chemicalized crop. The cotton (boll) fiber is not used directly for food - so it gets fungicides and herbicides. Now that harvest is mechanized, a defoliant is used to kill the leaves and make the bolls easier to machine harvest. **Agent Orange and doxin,** present as a contaminant, was the powerful defoliant used in Vietnam that caused serious illnesses in exposed military and civilians, and deformities in the next generation. Cotton is grown on about 2% of the world's currently cultivated land and uses more than 10% of the world's pesticides, including about 35 different chemicals. Cotton products that claim to be *"green" or "natural"* are still using cotton grown with chemicals. If it is organic, it will say *"Certified Organic"*. Wonderful if you can afford it.

Our cheap solution is to buy used cotton linens at a thrift store, hoping that multiple washing and wear remove most of the toxins. Hemp drop cloths can be laundered and used as sturdy bed spreads that soften with use.

Cotton*seed* IS used to make an inexpensive cooking oil. Not great nutritionally, it has an unbalanced relationship of Omega-3 to Omega -6 fatty acids. It must be refined to remove *gossypol,* a naturally occurring toxin that protects the cotton plant from insect damage. Unrefined cottonseed oil is sometimes used as a pesticide.

Cotton *gin trash (the remains after removing the cotton fibers)* is a high nitrogen product used as animal feed. We wanted to use it as compost material in the 1970's at the Pear Tree Farm, George contacted the guy who invented DBCP to see if levels would be safe for us. They did not have much data, and what they had depended on the batch... Totally unreliable. Yet there is no analysis of cottonseed oil for chemical residues that we know of. In 1995 the first genetically engineered cotton entered our food supply.
See Center of Ethics & Toxics for more related information.

Cotton is a thirsty plant that uses a lot of water; and producing the bleach and dyes for it uses energy and creates pollution. "Improved" white cotton has not only dramatically altered the culture and processing of cotton fiber. Millions of acres of mono-crop cotton, the most pesticide heavy crop, have changed the nature and health of rural communities that grow and process it. The vast quantity of material creates a major source of land, air and water pollution. The cotton textile industry itself is also a prime example of sweatshop outsourcing.

The price of "pure" white?

Most US cotton fabric is now bleached with hydrogen peroxide, which biodegrades into water & oxygen. The bleaching chemical has to be removed before the dye is applied in order to prevent reaction between the bleach and dye. The traditional method of removing the bleach is by rinsing the fabric with water a number of times, or using a mild reducing agent to neutralize the bleach. In either case, large amounts of water *(up to 5 gallons per pound of fabric)* are required for rinsing causing large volumes of wastewater.

An eco-friendly alternative for bleach neutralization was used in 1994 in Denmark for a major supplier of "Green Cotton". They use a small amount of the enzyme, Terminox Ultra, to replace a chemical agent to neutralize the bleach and decompose hydrogen peroxide to water and oxygen. So the whole rinse step is eliminated. The residues of the enzyme have no effect on textile fibers or dyestuffs.Good chemistry.

Naturally Colored Cotton

Colored cotton agriculture began around 2700 B.C. in Indo-Pakistan, Egypt and Peru. It was then common for cotton to grow in a variety of natural colors: mocha, tan, gray, and red-brown. that even intensisfy for the first 30 washings. Sally Fox took on the challenge of improving an ancient agri cultural art,

FOX FIBRE®
COLOUR·BY·NATURE

continued after next page

Natural Dyes from Food

Since a standard American household contains over 2,000 synthetic chemicals that out gas into our interiors, we try to reduce our load at every opportunity. You can use the natural colors of these foods rather than any artificial coloring in your cooking and to dye natural fibers. Most have a flavor to incorporate, but some of these may work in your recipes.

Donna Martin of Santa Fe , NM was a co-worker at the Magical Pear Tree farm in the 70's before she became a nationally recognized tapestry weaver. She used a combination of wild plants and food "garbage" to dye her wool, using both our wood stove and her solar system. The weaving above used Cactus, Grapes, Strawberry, Walnut hull, Goldenrod, Lichen & Moss.

SOLAR DYEING in the SOUTHWEST

by Donna Martin

While living and working at the farm, such a deal came my way that I couldn't pass it by. Here were all these fruits & vegetables that were not able to be marketed for one reason or another. Into my dye pot went Strawberries, grapes, cherry tomatoes and any other leftover produce I could find. But in the heat of summer who want to heat up the kitchen with a dye pot bubbling away for several hours?

USING NATURAL DYES

Anyone who has used yarn to create will probably be interested in natural dyeing, a process in which an everyday weed or food can have the limelight. Just about any plant can be gathered, boiled in water with a mordant to transform any white, beige or light gray wool yearn into a lovely color. *Silk fabric will also take natural dyes well*. The traditional way to dye yarn with plant material requires gas or electricity. That information may be found in excellent books such as:

NATURE'S COLORS, Dyes from Plants by Ida Grae
or NORTH AMERICAN DYE PLANTS or WEEDS
by Ann Bliss.

After living in the Southwest U.S. for a dozen years, my dyeing method has been modified by the climate. Solar dyeing fits in well with our hot summers. The process could not be more simple.

CAUTIONS

Even with Solar Dyeing, you need to be cautious,
1. Make sure you know the plants you are collecting for record keeping, but also because it may be toxic or poisonous. Poisonous plants may be used because solar dyeing does not cause fumes, but avoid if you have children.
2. Label all your dye equipment and store it separately. Do not use spoons, measures or pots for kitchen equipment.

THE STEPS

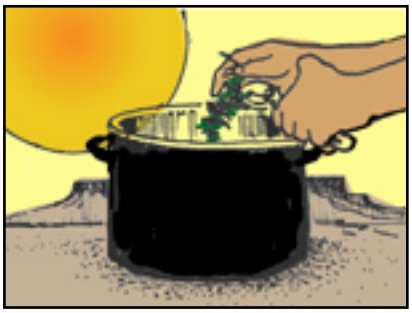
1. Gather a local plant

Collect from waste food from the wild like: Canaigre, Horehound, Mesquite, Sage.
Please remember the delicate desert ecology and pick only what you need from stands that will not be hurt by the loss. You may want to skip some plant and use a different, more abundant source for the color.

2. Process

Depending on what form the plant is in
BARKS & ROOTS: chop
TWIG & LEAVES: break into pieces
FRUITS & VEGETABLES: mash

3. Proportions
Standard proportions: 2 lbs. Plant to 1 lb. Yarn + 4 gallons Water.
The intensity of color you release into your fiber will depend on the volume of plant material you use.



4. Dyeing

Put the plant material into a covered 4 gallon black enamel, container in the sunniest part of your yard. Black will heat the beat, but you can wrap stainless steel or plastic in black fabric. You can also use reflectors to get the pot as hot as possible. *Editor: today I would recommend placing the pot in a solar Oven or dryer.*
Let this bath sit for 1-2 weeks. The odor from the rotting vegetables is a problem at this stage, and may not work for the apartment dweller. Keeping the lid on helps, but the odor of some plants cannot be held back.

5. Remove the Dye Plants

Remember that the yarn will look much darker wet. When you have the color intensity you want, remove the dye plants using a slotted spoon and compost.

continued from Fox Fibre page
and successfully bred and marketed varieties of naturally coloured cotton under the brand name ***FoxFiber ®and in*** 1989. She has had to find ways of growing our here colored cotton that do not "contaminate" the crops of white cotton growing neighbors.

Silk
This luxurious natural fiber comes from the unwound cocoon of the silk moth, which deposits 4,000 yards of thread per cocoon. But only 300 yards in the center are one thin, strong thread. The rest is used with other fiber blends. One ounce = 35.000 catepillars that will produce 135 pounds of cocoons = 15 pounds of raw silk.

Domesticated silk moths require constant care during their month life cycle and are fed with mulberry leaves to make white or cream raw silk. Wild silk moths require more time to find and harvest.

Their raw silk color is irregular, reflecting a more diverse diet, and does not take color as well; but their fiber may be more durable. Silk is a labor intensive fiber is affordable only because of very cheap labor and mechanization of processing.

Dying for color
Food grade everything is the safest. You can also dye your own organic fabrics for fun and total security. Donna Martin was a staff person at the Pear Tree farm who educated us about natural dyes. We rarely consider the toxics in the synthetic dyes we use for clothing. Anthropologists think that the earliest use of color came from stains from plants and naturally found products (clays, bird droppings & minerals). Our quest for color resulted in more toxics being used to process natural fibers (arsenic, iron, copper chrome and who knows what petrochemicals).

My maternal grandfather was a master dye maker during the chemical dye revolution; and I planned a business in silkscreening my designs for yardage in the sixties. I was happy to carry on a tradition until I learned more about modern chemical dyes.

Dyes have caused pollution for centuries and today few dyes are tested for health effects, yet many are highly toxic. This is a real monster of an issue that few people are willing to look at, but stick with me while we look at some bad news and some good news.

Commercial Do-it-yourself Dyes
Have you ever used do-it-yourself dyes? I didn't learn the first time I dyed some pants black to get more wear out of them and my husband got a rash on the lower half of his body. I forgot and tried a brown dye a few years later, and the same thing happened. Never again!

Debra Lynn Dadd says: *Direct (do-it-yourself) dyes contain highly carcinogen! dichlorbenzdene, which is very easily absorbed through skin. Symptoms: anemia, jaundice, liver and kidney damage, and even death.*

This is serious stuff! For years, I did vat dying with Procion dyes, which gave me wonderful colors, and is listed as a safe dye when handled with gloves. I always end up getting my hands into the dye. If I do it again, it will be with tongs & rubber gloves! Let the buyer/user beware.

Formaldehyde in fabrics
I was shocked out of complacency when a local fabric store manager advised me to wash all my new fabrics, not to check for shrinkage; but to reduce formaldehyde! She warned me that most cotton blends and all *"easy care"* fabrics are treated with formaldehyde resins to resist wrinkling and give them a more enduring finish, and as a fire retardant. A newly processed fabric can contain 800 - 1,000 parts per million (ppm) "free" formaldehyde levels. Simple washing can lower these to 100ppm. But small amounts continue to be released during use.

Formaldehyde is the same product used in particleboard. Suspected as a human carcinogen. Inhalation can cause cough, swelling in throat, watery eyes, respiratory problems. Skin contact can cause skin eruptions and long term exposure can cause chemical sensitivity.

Labels on easy care fabrics will not list formaldehyde, but you can assume it is there. But other products can include formaldehyde and not mention it. The worst experience we had was in our food co-op. We used a product called Heavenly Horsetail that included a long list of herbal ingredients, but it also contained formaldehyde. A woman who used it to clean the store ended up in the hospital emergency ward from an allergic reaction. Truth in advertising is an ongoing battle.

Baby Diapers
Disposable diapers contain more plastic than sanitary

napkins and both pose big waste problems. So I was thrilled to find an alternative diaper system for my daughter's first baby 18 years ago - flannel cotton with velcro closure and cotton liners. The liners are extra absorbent for night protection, and they are excellent for newborns when the whole diaper gets washed for each tiny poop. With 10 liners per set, you can wash alot of the small inserts before laundering the main diaper.

Search for Purity

Pure white from chlorine bleach = dirty environment. When this was first written in the 80's it was easier for my daughter to use cloth diapers. However I was still buying "sanitary napkins" for myself. To call these *disposable diapers for women* "sanitary" is an oxymoron because they contain one of the strongest carcinogens, Dioxin, formed during paper bleaching.

Dioxin is the name generally given to a class of super-toxic chemicals, the chlorinated dioxins and furans, formed as a by-product of the manufacture, molding, or burning of organic chemicals and plastics that contain chlorine. It is the nastiest, most toxic man-made organic chemical; its toxicity is second only to radioactive waste.

We now know that dioxin exhibits serious health effects when it reaches as little as a few parts per trillion in your body fat. Dioxin is a powerful hormone disrupting chemical. By binding to a cell's hormone receptor, it literally modifies the functioning and genetic mechanism of the cell, causing a wide range of effects, from cancer to reduced immunity to nervous system disorders to miscarriages and birth deformity.

Because it literally changes the functioning of your cells, the effects can be very obvious or very subtle. Because it changes gene functions, it can cause so-called genetic diseases to appear, and can interfere with child development.

In the last 20 years we have begun to burn household and industrial trash and medical waste in mass-burn incinerators. The result - given that we have disposable vinyl plastic all around us - has been a dramatic increase in dioxin contamination everywhere in the U.S. Dioxin, formed during burning, is carried for hundreds of miles on tiny specks of fly-ash from the incinerators. It settles on crops, which then get eaten by cows, steers, pigs, and chickens.

Dioxin contaminates lakes, streams, and the ocean. Like the pesticides such as DDT, dioxin accumulates in the fat cells of the animals, and re-appears in meat and milk. Dioxin is virtually indestructible in most environments, and is excreted by the body extremely slowly.

See more information from Jonathan Campbell, natural therapies health consultant:

http://www.cqs.com/edioxin.htm

Dioxin is in all chlorine bleached paper products.

Dioxin is in products that we use on and against the most delicate tissues of out bodies, and put in our mouths including sanitary napkins, disposable baby diapers, cigarettes, facial tissues, coffee filters, paper cups & plates, paper for xerox, computers, & letters, etc. All these products pollute downstream water, fish and eventually to us at the top of the food chain. Sanitary napkins are also irradiated.

Oxygen bleaches to the rescue¿?

Oxygen bleaches are materials that release oxygen for cleaning and bleaching of stains and dirt upon addition to water. Three types of oxygen bleaches sold in the consumer market,
1.hydrogen peroxide,
2. pure sodium percarbonate: about 13-14% oxygen
3. pure sodium perborate: about 10-15% oxygen
While hydrogen peroxide is a liquid, sodium percarbonate and sodium perborate are powders. Sodium percarbonate is used in deck, carpet, household and laundry cleaning products. Sodium perborate is also a powder and is used mostly in automatic dishwashing and laundry products as a hot water bleaching agent. While sodium perbcarbonate has the highest solubility in water, sodium perborate is more storage stable in detergent formulations.

Powdered bleaches are made by treating natural soda ash or natural borax with hydrogen peroxide. These materials can absorb the oxygen while remaining free flowing solids. Upon dissolving in water, they release the oxygen. Probably the best advantage of an oxygen bleach is that you can get rid of stubborn dirt and organic stains without having to use toxic and hazardous materials like chlorine bleach.

Hydrogen peroxide is a commonly available antiseptic, anti-bacterial agent with bleaching properties. About 50% of the world's production of hydrogen peroxide in 1994 was used for pulp- and paper-bleaching. Other bleaching applications are becoming more important as hydrogen peroxide is seen as an environmentally benign alternative to chlorine-based bleaches.

I have used hydrogen peroxide as a simple, inexpensive stain reducer, but it can eat fabrics if not diluted. There are now more oxygen bleach products. On a trip to Mexico, Elf saw empty plastic bleach and soap bottles floating in a stream near a beautiful waterfall where local people have tradition-

ally washed their clothes. Old style soap and packaging biodegraded. Our modern synthetic products, packaged in synthetics not only create toxins in manufacture and use, but also leave nasty garbage with a long life. Can we can get past perception and exchange our appearance of a clean environment for the real thing by re-educating ourselves and changing our ways?

Rural people like us, with septic and grey water systems, can't use bleach, or other strong cleaning chemicals which will destroy the biological balance in our tanks and our soil.

Unsanitary napkins

Since earliest times, women made menstrual cloths and tampons from available materials. I remember my mother used a roll of medical cotton to make hers. My generation had the commercial pad and elastic hip belt that made cut lines that showed under your clothes.

Then came the tampon, and the self-adhesive pads, and finally the light day pads ... For all the feminist consciousness raising since the 60's the majority of women I know may have loosened the Victorian perception of sexual intercourse; but the whole process of monthly bleeding is an uncomfortable, if not loathsomely dirty part of our necessary bodily functions that we want to make disappear - this may be a partial source of PMS.

This whole messy issue came up again in a recent discussion among women friends of Sun Mt. Despite trying to embrace our total femininity and the power that comes with it, many of us have secretly and openly cursed our menses and tried to make it disappear by shoving the blood back up into our bodies with tampons. It became clear that the physical act and the emotional charge behind it have had damaging effects. It occured to us that forcing all that toxin laden blood back up into our bodies, and using a plug that blocked the natural flow couldn't benefit our bodies. We do know that scented and deodorized tampons are found to produce allergic relations from inflammation to ulceration.

Toxic Shock Syndrome (TSS) caused by *Staphylococcus aureu*s bacteria, was initially linked to a particular type of high-absorbency tampon, which has since been taken off the market. Researchers suspect that certain types of tampons provided a moist, warm home where the bacteria could thrive. Infection from the vagina creates toxins which get into the blood stream causing a range of reactions - some life threatening. Although TSS usually occurs in menstruating women, it can affect anyone who has any type of staph infection, including pneumonia, abscess, skin or wound infection, a blood infection called septicemia, or a bone infection called osteomyelitis. It is a reminder to change whatever menstrual product you use on a regular schedule.

Why Choose Organic?

Organic tampon or pads made from tree-pulp (rayon) is treated with various acids to dissolve the pulp into a liquid form that can then be extruded into fiber
- do not contain chlorine bleach which creates harmful dioxins
- do not contain polypropylene as an over wrap
- do not contain conventionally grown cotton - exposed to synthetic fertilizers, herbicides, pesticides and defoliants. - *Notes compliments of Organic Essentials Inc.*

A 1989 report by a U.S. Food and Drug Administration (FDA) scientist stated, *"...the most effective risk management strategy would be to assure that tampons and menstrual pads for good measure contained no dioxin."* Companies such as International Playtex and Procter & Gamble told FDA there was dioxin in the wood pulp they used. While there has been little change in the U.S. as a result of these findings, British women sent more than 50,000 letters to Parliament, resulting in sanitary pad and diaper (but not tampon) companies switching to the use of oxygen to bleach their products.

See http://www.thegreenguide.com/doc/22/sanitary

Sea Sponges

Disadvantages to sponges: In the 70's, I used little art or cosmetic sponges that were already the perfect size for me. I would boil them before using, but they do not stay in for long and are washed continually. They came in a package of 3, which I carried in 1 baggie. Because

they were smaller at one end, I inserted the large end first. I found the sponge was best used for light flows at the beginning and end of a period because they will release fluids when squeezed (sneezing or coughing) and their small size limits holding capacity. They are best changed over a toilet, as they can be messy to remove for the same reason. I kept a second baggie to hold the used sponges to be laundered at home.

Bonnie Ferguson and Teri Dowling, sell Sea Sponges, a brochure from Medea Books, about using sea sponge menstrual products. They carefully include a disclaimer saying this is ``*not intended to recommend the use of menstrual sponges, but simply to give women the information they need to make an informed choice.*" Then they explain that silk sea sponges can be purchased at any cosmetic counter and cut down to size. The FDA banned menstrual sponges in 1981 after a U.of Iowa study reported that sand, chemical pollutants, bacteria, and fungi were found in natural sponges. ``*Since sponges are a natural, organic product, the levels of these substances can not be controlled or regulated.*'' Then I learned that some sponges can contain spicules, a bony calareous needle from the skeleton, which could damage delicate vaginal tissue, and there were possible untested ocean pollutants, so I stopped using sponges. *Like tampons, no further studies have been done to see whether the presence of these pollutants corresponds to other health problems; but unlike tampons, sponges have been pulled from the market.*

Reusable menstrual pads

I did not want anything internal, so I switched to reusable organic cotton pads. I chose a couple of products to test, but prefer the Foxfiber naturally colored tan cotton. The color does not make you feel you need to bleach the pads to get them pure. If you find yourself saying "Eeeuuuuu" at the thought of handling your own menstrual blood- t*hat's what this means* - washing out your cloths and carrying a plastic baggie for your used cloths - until we find something better.

The Curse becomes The Gift

The advantage women have over men is that their menses are a way of doing a major detox every month through their menstrual blood. That information changed my perspective on the mess of menstruation.

There is no more "away"

Conservation is the best solution to both energy and garbage demands. The concept of *"throw away"* is outmoded. When we talk about *disposable synthetic products*, and the toxic chemicals in them, they continue to contaminate the environment because their chemical structures do not break down under normal conditions. They can easily enter our food chain and us. Landfills do not have liners and do not stop pollutants from entering ground water and sensitive habitats.

In the Central Valley, agricultural chemicals are added to the chemical soup in our groundwater. Humans are at the top of the food chain, so our body's fatty tissues can accumulate large levels of harmful substances that occur in much lower levels in the environment. True - everything will break down, or biodegrade, eventually; but how fast and how easily. The word biodegradable is often misused, being applied to products that generally aren't biodegradable, like detergents and plastics. To determine the eco-toxicity of a product, we have to evaluate:

- *the basic toxicity of its ingredients,*
- *how long it takes for nature to break down the product or chemical into non-toxic components), and*
- *its tendency to accumulate in the food chain.*

Naturally occurring substances break down effficiently into simple elements by nature; these substances are biodegradable These are the products we want in our marketplace.

Bathroom / Bodycare

We have found a lovely natural soap at SunMt - Ceanothus soap. Soap Formula for a fine shampoo or soap for lingerie use 1/2 Cup fresh or dried blossoms or berries to 1 Cup water blenderized for 10-20 seconds to make a frothy lather. You will need to brush out the remaining fibers when hair or clothes are dry - but this is a small price for me.

Put freshly crushed Calif. Bay leaves in kitchen cabinets to discourage pests, or use fresh leaf crushed with a little water as a hand cleaner in the wild.

Many standard cosmetics and personal hygiene products contain hazardous substances, and/or may have been tested on animals. Examples of what to avoid:

Shampoo: cresol, formaldehyde, glycols, nitrates/nitrosamines and sulfur compounds;

Hair spray: butane propellants in hair spray (replacing carcinogenic methylene chloride), as well as formaldehyde resins;

Deodorants/Antipersperants: aerosol propellants, ammonia, formaldehyde, triclosan, aluminum chlorhydrate;

Lotions, Creams & Moisturizers: glycols, phenol, synthetic fragrance, and artificial colors.

Natural products for personal care *See SkinDeep:* http://www.cosmeticsdatabase.com/index.php?nothanks=1

Studio or Hobby Room

International light fastness standards (ASTM) labeling on art supplies now tells us about color fastness. The U.S. Comsumer Product Saftety Commission regulates art & Craft supplies under 2 laws: FHSA and LHAMA. The Art & Creative Materials Institute (ACMI) safe products have a round AP seal, while a CL seal indicates caution. Exposure to certain art materials remains a health risk. Choose safer art and hobby products, such as water-based products or those labeled as non-toxic, especially for children. Dangerous chemicals and metals include:

Lead: *in ceramic glazes, stained-glass materials,* and *many pigments;*

Cadmium *in silver solders, pigments, ceramic glazes and fluxes;*

Chromium *in paint pigments and ceramic colores;*

Manganese dioxide *in ceramic colors and some brown oil and acrylic paint pigments;*

Cobalt *in some blue oil and acrylic paint pigments;*

Formaldehyde *as a preservation in many acrylic paints and photographic products;*

Aromatic hydrocarbons *in paint and varnish removers, aerosol sprays, permanent markers, etc.;*

Chlorinated hydrocarbons *(solvents) in ink, varnish, and paint removers, rubber cement, aerosol sprays;*

Petroleum distillates *(solvents) in paint and rubber cement thinners, spray adhesives, silk-screen inks;*

Glycol ethers and acetates *in photography products, lacquer thinners, paints & aerosol sprays.*

Garage

Dangerous substances frequently present:

Paint thinner: *chlorinated aliphatic and aromatic hydrocarbons can cause liver and kidney damage;*

Specific ketones *may cause respiratory ailments;*

Gasoline: *petroleum hydrocarbons, an ingredient, motor oils, and benzene, are associated with skin and lung cancer;*

Oil-based paint: *mineral spirits are a skin, eye, nose throat, and lung irritant. High air concentrations can cause nervous system damage, unconsciousness and death;*

Wood putty*; ketones and toluene is highly toxic, may cause skin, kidney, liver, central nervous system damage; and may damage reproductive system.*

Garden Shed

Pesticides, major hazard in homes. There are about *1,400 pesticides, herbicides, and fungicides as ingredients in consumer products; and when combined with other toxic substances such as solvents, pesticides are present in more than 34,000 different product formulations.*

Integrated Pest Management (IPM), non-toxic and natural treatments for garden and household pests, give us alternative treatments. But the first questions to ask is: *Do I really need to do anything?* The garden, like life, is about balance, not erradication.

Patio

Charcoal lighter fluid *petroleum distillates*. flammable, gives a chemical taste to food, and some petroleum distillates contain the human carcinogen. benzene. ***Consider a solar oven.***

SPIRITUAL DIMENSIONS OF GARBAGE

ln a culture of unprecedented material affluence, and little direct consequence for our planned obsolescence and throw-away habits, Dancing the Sacred Spiral takes work. It is easy to form habits that reduce work, but increase waste. It takes thought to reevaluate the real costs of long term pollution and resource depletion that result. It takes focus to see where we can get back to a simpler, more centered existence. If we do one step at a time, it is less daunting.

Every year ***Californians generate 66 million tons of solid waste, of which about one third is packaging.*** This is grossly wasteful trashing of Big Mama. And our physical and spiritual relationship with her. Because landfill space is limited, retailers and manufacturers need to work together to reduce packaging waste by producing really recyclable packages from quickly biodegradable materials.

Consider how much paper and plastic we gather while shopping in the supermarket. Most of us don't put those bags in the supermarket. We don't wrap those screws in big packages. Big corporations are responseable. However, if ***we do use*** the plastic and the paper, we encourage the practice. If we didn't, they wouldn't be there. Competition for consumers makes all stores copy each other. The simple way to reduce packaging is to consume more fresh foods and buy in bulk using recycled bags and jars. Get a set of reusable shopping bags, and carry them in your car. It does take awhile to develop the habit.

We have developed the habit of bringing our own bags when we shop, but it took much longer to learn a new habit than it did to simply take the bags provided in the store. We have found it impossible to avoid plastic, so we recycle all that we can. We have no garbage pickup, because we have learned to compost or recycle almost everything. Maia recycles many jars and plastic containers using them in the shop and her art studio.

We may not even know the most innovative and successful conservation strategies until we see our behavior is a deeper spiritual issue in addition to a matter of ecological and economic concern. We repurpose our paper boxes as weed smothering mulch material in SunGarden.

Overpackaging for short term convenience
by Elfie
We consider all the "handy" bubble pack displays that hang everything from office to hardware supplies in view. A handful of screws wrapped in two handsful of cardboard and plastic is aggravating.
About half our packaging garbage is paper; half, plastic. This simple marketing display change has generated huge amounts of garbage. So, we try to shop at older hardware and supply stores that carry more things in bulk.

More innovative and successful strategies that are not even known now as we begin to remove the blinders of habit. These will begin presenting themselves only after we begin to realize in our hearts that minimizing garbage is not merely an ecological, efficiency issue, but foremost a spiritual issue.

In this process, our higher selves will be enriched and our consciousnesses raised. Big Mama will guarantee this as she sees us beginning to live in the sanctity of our ordinary reality. As she feels our sincere efforts on our spiritual way. She will also reward us by giving us the next balancing challenge we must face on the spiral of eternal life.

Reduce, Reuse, Renew- BUT Recycle? Really?
We have recycled since we discovered the concept. It was discouraging to learn that the local cardboard collection burned to the ground, and was ***NOT*** being recycled. Also most of the "recycled"glass we conscienciously disposed of was being shipped to Mexico...???
Our best defense is to reduce use of things that will need to be disposed of - a tough proposition these days.
Our Store, the storefront food co-op we helped found in Fresno, carried mostly bulk items that people measured out by weight. That customized the amount purchased while it minimized labor and packaging costs.

Upscale stores like Wild Oats and Whole Foods chains continue that practice. Our mountain food co-op is a remainder of Our Store; where we still use all volunteer labor and use our group buying power to bring natural food and household products to our mountain community.

From our experience we propose that we could:

- tax each plastic bag and container, with $ to be used for research into alternatives, as Italy has already done.

- sell hard and soft drink beverages in barrels, which store staff could fill from the shopper's own universally sized containers - purchased once and refilled for many years. Some stores do now offer customers to bring in their cups for free refills. Denmark has a nationside policy to reuse contianers.

Buying Local, Eating Slowly

The Foodies, constant search for the most *"in"* source of unusual foods got to be a caricature when the Slow Food Movement began to surface - making time to savor meals with leisurely socalizing as an antidote to our fast food culture. Good for digestion and relationships. But we had to turn an ancient cultural practice into a trend in order to try to reinstitute it.

The next step has been to shift status from imports to buying as locally as possible. This is great incentive to join a CSA and/or grow a little food for yourself.

Blindness of Habit

"Blindness of Habit." term came after on one experience that had us all shaking our heads in disbelief. We have a little wood stove where we would heat water for tea and cook soup in winter. This stove had two levels, and we were thrilled to find a little box oven that fit on the top level, and still allowed us to heat water and cook soups on the lower level. But the soup pot in front had to be removed each and every time we opened the oven door.

One of us finally realized that we could simply turn the oven to face a different direction. We did. The oven door could then open with no blockage from the pot! This made us start reflecting on other things that we had done around the house, the garden, in our lives. Things that had become routine without much conscious evaluation.

Return of the Hankie

In our attempt to minimize garbage at the source, we tried to totally eliminate facial tissues. Why waste trees and pollute the environment with bleach and dyes when you can use a handkerchief? The dictionary notes that a kerchief is a piece of cloth worn about the head or neck, and that the handkerchief is a similar piece of cloth for wiping the face, hands or nose and carried in a pocket. This old idea is still very handy. In hot weather if you wet the cloth and wrap it around your neck or put it on top of your head, it will help lower body heat.

It is always more difficult to give up a perceived "convenience" than to begin using it. We used handkerchiefs in the 60's and then as we began having guests at Sun Mt, it was impractical to not have Kleenex around. We tried the recycled paper and found it a little coarse, so why not return to cotton? I went through Kleenex withdraws as we used up our last couple of boxes. I bought a set of men's handkerchiefs, and Elf bought me some very soft bandanna cotton hankies – the kind I'll

appreciate when I have a cold. He has never stopped using his "snot rags"of the red bandanna type. I leave one or two hankies in the Kleenex boxes for easy access around the house. I still use pocket Kleenex when we are traveling and when I get sick. For a bad respiratory infection, the hankie solution is less sanitary - you really need an old fashioned spittoon that can be sterilized. So we are back to some facial tissues, which reduce the potential spread of infection. But we keep trying.

After a cold I usually have a wastebasket full of tissues. Since the pathogens do not last long without a living host, I dig a hole in the garden, pile in the old tissues, spray it with water, to reduce mass and help the decomposition process. Mixed and covered with soil - all gone.

Return of the Cloth Napkin

At the Magical Pear Tree Farm, we served monthly food exploring dinners - with cloth napkins. When we moved to SunMt, we started doing weekend events; so we switched to paper napkins thinking that laundering required too much energy.

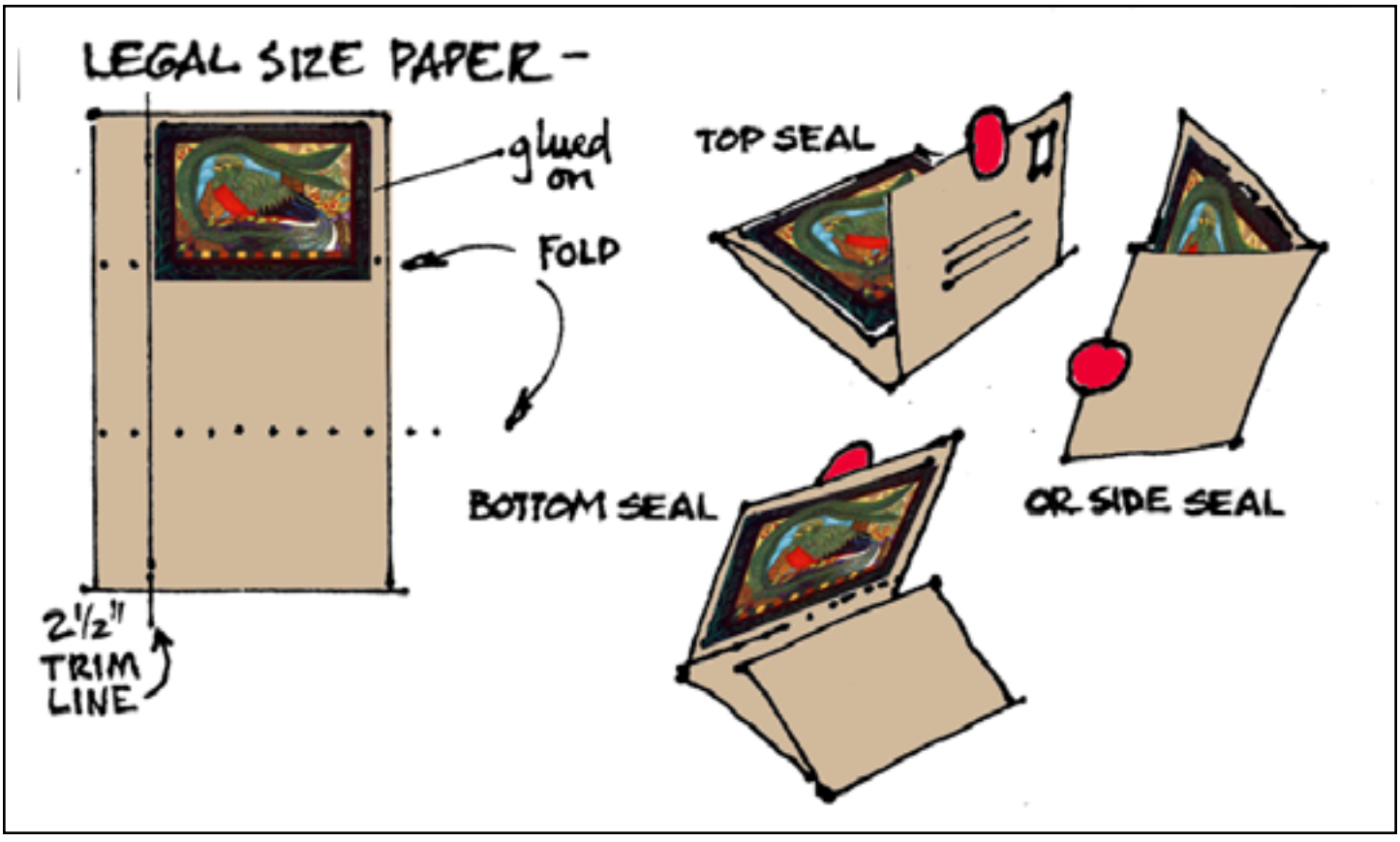
A new member named Nelda objected to the eco-excess, and that each person could have their private napkin and a unique napkin ring to use the whole weekend. This way, our cloth napkins could get thrown into the regular wash, instead of a pile of paper napkins to throw into non-existent "away." On my next trip into Fresno, I picked up a collection of zippy napkin rings. The following weekend --and each one thereafter --everyone has had their own private cloth napkin with napkin ring of their choice for all meals.

A very small healing step, indeed. But the 1ong healing dance is no more than a blooming collection of many small steps, each important to express and maintain the flow. And to continually expand our spirits and visions so we will be able to recognize the next steps.. Thanks, Nelda.

Recycle greeting cards

What to do with all the beautiful cards you get around the year, especially during holidays? We send few greeting cards, and prefer e-mail these days, but we still get more than we send. And after displaying them for a few weeks they get stored in a drawer. Finally, some go into the waste basket.

Some people make tree decorations-origami style, but that makes little difference in the garbage that's left. Well, here's another idea.




Recycle greeting cards and save trees.

By cutting off the front section of the card- -you can recycle the art part by pasting it on a self-mailer 3 fold piece of paper. Cut them down slightly to fit your paper. By using a circle sticker from office supply stores purchased by the box, you can seal it so it's easily opened. You can use recycled legal sized paper, or construction paper, or get a ream of recycled legal size paper from an office supply center.

The beauty of this method is that you can recirculate alot of good art; while saving trees. And if you use recycled paper you are saving more. If you are really ambitious, you can short-cut the recycling step by going to local printers to collect trimmings from paper that will just end up in the garbage. And this reduces the money we all spend on cards.

Working with heavy paper

To get a professional fold with heavy papers like card stock and cover stock, use a metal straight edge and lightly cut just the surface of the paper with an exacto blade or box cutter, and fold toward the uncut side.

We also save envelopes and reuse them up-side-down with the old address and postage crossed out. When sending flyer or writing a letter, we don't always use an envelope. You can fold your letter with the blank side out, address and stamp the blank side. If you're concerned about privacy or have an insert or multi-paged letter, staple or tape the loose flap and ends. Otherwise nothing is needed. (see drawing)

800 is a magic number

If you want to stop junk mail product literature and catalogs, just call their tollfree order number to get removed from their mailing list. When they get a complaint instead of an order, it is their dime and they pay attention. Now with web sites, we can find things on line that we used to have to see in printed form - big garbage reductions!

IMMODEST PROPOSALS

by Elf

In the 90's Elf made the following proposals as exercises in transformation and greater impeccability. These are not solutions. Solutions may come as we take some first steps in a spiral of action- perception - new step - newer perceptions... Toward a social contract that allows us to live a more vibrant existence in closer harmony with the universe. Action can be the most illuminating form of thinking.

1. Full public financing of all elections.

There has been no way to ensure one person - one vote with corporate financing of campaigns. Our elected officials have become the servants of those who foot the bills of increasingly costly campaigns.

The public pays indirectly in special interests profits already, why not make it official. Let us pay directly and set our officeholders free from big $$$ leashes.

1a. The next step might be to hold a lottery among those who qualify for the job. Or

1b. or a parliament system, like the Brits.

2. Public Airwaves Media. How did we ever agree to give away licenses for the public air???
free of all advertising?
Free if continuous taxing of revenues?

3. Pay-as-you-go war budgets

Any national budget is for war: past - present- future. Now we bury these expense by passing them to the

next generations. This is hardly a democratic procedure, since the future is never consulted. If we really believe in a war, we should be able in increase taxes annually to support the effort as we go.

4. Free natural, mind altering drugs & treatment at

centers everywhere in the country. Illicit drugs are shredding our social fabric with addiction, corruption and related crime. Because mind alteration is practiced world-wide by ancient and contemporary cultures, we work against the natural grain to criminalise this urge. Stopping drug use has worked no better than prohibition stopped the use of alcohol. If we unravel the balanced relationship with natural drugs, we see that synthetics and concentrated isolates both remove the context and divorce drug use from their spiritual roots. Resanctify and legalize the use of peyote, coca, marijuana & psychoactive mushrooms - and all the ancient vehicles that transport humans beyond ordinary reality. Let us "get high" as part of a sacred way of dreaming ourselves into a life-affirming, vision expanding life lived in balance.

4a. The first thing this proposal does is make natural drugs available to everyone, so the allure of the forbidden is gone.

4b. This makes drug lords and dealers irrelevant as they would have no market and would have to compete in an open market for sales.

4c. This resanctifed and legalized use of natural drugs affirms that we share a sacred life with all these plants. We can elevate them rather than attempting to erase them. Turning these plants into recreation has degraded them and the people who abuse their powers. It will be a great day when we re-teach ourselves to respect Big Mama and her creations.

5. Require manufacturers to be responsible for product from cradle to grave.

Often the perpetrators of the biggest environmental messes have escaped responsibility for clean-up one way or another. Making them demonstrate the ability when they start a business, and requiring that they clean-up as they go, would prevent the need for Superfund projects in the future. Sadly, rethinking products only happens under pressure. The ideal would be to manufacture only 100% biodegradable and 100% recyclable products.

6. Ban all throw away food service products

Throwaways now puts the responsibility for garbage predominantly on the consumer. Restaurants could all sell biodegradable, reusable food containers for those who needed them. Markets could offer dry and liquid products in bulk. Reduced packaging and brand name recognition would reduce advertising costs and possibly lower prices.

7. Allow manufacturers to make cars that go only as fast as the maximum speed limit.

Big reduction in speeding tickets and speeding accidents?

8. All junk mail may be returned at sender's expense. This requires us to rethink cheap, bulk print advertizing. Maybe stores would do better to advertise on their buildings, like they used to.

9. Give every citizen a monthly check.
If everyone got an income that would allow them to pay for basic food, housing, transportation and medical were free; you would save all the cost of the welfare bureaucracies. Just one ID would qualify every citizen.

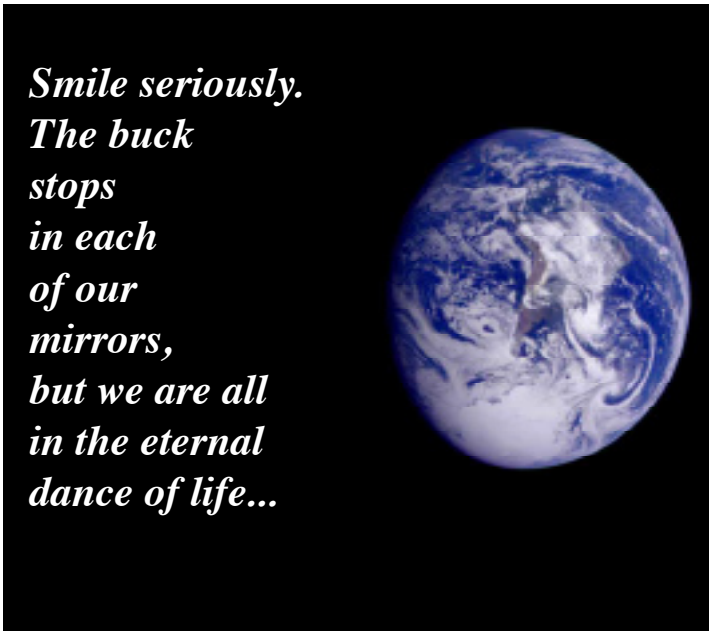
10. Abolish the minimum wage
Since combined with #9, nobody would have to work unless they wanted more income. People who were motivated to work could increase their income. Those who lived on subsistence income would put all their resources back into the community. The low paying fast food jobs might have to offer higher wages. The price of food might go up, encouraging people to fix their own food, or eat at restaurants where workers were paid better wages?

Because the hardest, dirtiest jobs would require the highest pay, you might see garbage men and farm laborers getting big bucks and more respect.

Acting as impeccably as we can may be a more effective way to change than thinking through steps that may seem to be appropriate for the moment.

100 + GREEN THINGS WE CAN DO NOW
Elf & Wo on Spiritual values as Monday Morning Guidelines. *This list was adapted from one printed in a green newspaper many years ago*. This is for those who recognize spirit in everything and want to incorporate this awareness into their lives. We can use our footsteps and $$ votes to make these changes now.

1. Find the joy in all you do.
2. Consult spirit often.
3. Take time to be still, alone in nature, wherever you can find it.
4. Respect and honor the spirit in everything, including yourself.
5. Try to be impeccable in all dealings.
6. Trust your heart to make big decisions.
7. Teach your brain to obey your heart.
8. Praise those who give quality service.
9. Challenge those who don't.
10. Sing often
11. Dance often.
12. Learn to make music of some kind.



13. Reuse 1st, Renew/repair 2nd, and Recycle 3rd
14. Reuse all paper bags and recycle Reduce or eliminate plastic bags, vrecycle if used, then recycle when they deteriorate.
15. Use cloth shopping bags, and baskets.
16. Recycling is now mandatory in most places, so comply with local programs.
17. Use cloth diapers.
18. Use real plates and cups. Avoid paper and disposable plastic dinnerware.
Avoid styrofoam - it doesn't recycle.
When eating out, order only what you will eat to prevent taking items home in styrofoam clam shells.
Tell the restaurant you would prefer paper containers, or bring your own reusable container.
19. Use washable rags instead of paper towels.
20. Use hankies rather than facial tissue.
21. Use cloth napkins, not paper napkins.
22. Use leftover food creatively, but use it.
23. Use veggie cooking water for soup stock.
24. Buy organic, and buy as direct as possible.
25. Grow your own garden or sprouts.
26. Buy food in bulk if you can, and use it.
27. Recycle unneeded items.
28. Use discarded paper for scratch paper.
29. Mend, repair, not discard or replace for fashion.
30. Buy well-made, functional clothes.
31. Try to buy bulk rather than packaged.
32. Buy goods in reusable containers.
33. Avoid highly-processed food, and buy processed food in glass containers.

34. Buy foods without additives.
35. Grow some of your own food. Integrate food plants into your organic landscape garden, or grow sprouts indoors.
36. Patronize food co-ops.
37. Patronize local farmers' markets, & community supported agriculture groups (CSA's)
38. Buy from locally owned business and choose socially-conscious and green businesses first.
39. Plant trees in your yard and town.
40. Help preserve and maintain public parks.
41. Explore and understand your bioregion.
42. Oppose roadside defoliants.
43. Use non-toxic cleaning products especially biodegradable soap - not detergents.
44. Use low flow water showerhead if water pressure allows.
45. Use low flow heads on all faucets.
46. Turn off water while brushing teeth.
47. Put water-saver in toilet tank.
48. Learn where your waste, sewage go.
49 Avoid all hazardous chemicals, and support non-toxic alternatives.
50. Shop by phone first to reduce travel time.
51. Learn to reduce your home's energy needs.
52. Start on your solar electricity system.
53 Use a solar oven if you can.
54. Use a clothes line when you can.
55. Insulate your house more if needed.
56. Be conscious of closing external doors in severe weather - hot or cold.
57. Heat with renewable energy where possible.
58. Don't burn green wood.
59. Use low energy (fluorescent and LED) lights.
60. Turn off lights when not in use.
61. Make sure wood stove burns clean.
62. Turn down hot water heater.

63. Replace standing water heater with tankless system if you need to replace it.
64. Build a solar hot water heater.
65. Lower the thermostat in winter and wear warm clothes indoors.
66. Take short showers.
67. Use gray water from house in garden.
68. Collect and store rainwater for garden use.
69. Buy energy efficient appliances.
70. Drive fuel efficient car.
71. Use rechargable batteries
72. Use windup LED flashlights.
73. Don't liiter and pick up litter when you see it.
74. Join a freecycle or barter group in your area.
75. Speak out about your values.
75. Join cultural exchanges.
77. Support liberation and Earth-healing activists.
78. Hold community potlucks.
79. Educate yourselves about our "leaders." and participate in our democratic society.
80. Back candidates with spirit.
81. Get involved in your kid's school.
82. Support your kids' dreams.
83. Organize a toy swap.
84. Teach your kids spirit.
85. Talk openly with kids, friends, everyone.
86. Understand different viewpoints.
87. Do business with laughter.
88. Don't support oppression with your purchases.
89. Donate blood.
90. Reduce stress in your life.
91. Practice preventive medicine.
92. Learn how to treat common illnesses as naturally as possible.
93. Get a second opinion of medical doctors,
94. Do your own research before accepting phameceutical drug programs.
95. Do some physical work every week.
96. Join a credit union or bank locally.
97. Learn first. aid.
87. Volunteer in local community groups
99. Practice family planning.
100. Practice safe sex.
101. Reduce or stop viewing TV, and skip most commercial TV to unhook from consumerism.
102. Eat right for your unique body.
103. Live passionately and deeply, lightly & well.
Add to this list whenever the spirit moves you.

WORLD CONSUMPTION by POPULATION

"Today's consumption is undermining the environmental resource base. It is exacerbating inequalities. And the dynamics of the consumption-poverty-inequality-environment nexus are accelerating. Trends: not redistributing from high-income to low-income consumers, not shifting from polluting to cleaner goods and production technologies, not promoting goods that empower poor producers, not shifting priority from consumption for conspicuous display to meeting basic needs. If these trends continue without change, today's problems of consumption and human development will worsen."

-Human Development Report 1998 Overview, United Nations Development Programme

1.2 billion people live on less than $1 a day in a world economy of $30 trillion a year.

Of the 4.4 bilion people in developing countries,

6% lack basic sanitation • 33% do not have clean water, • 25% lack adequate housing • 20% are not schooled to 5th grade

Only one fifth of the world's people live in industrialized countries, yet they consume more than two thirds of the planet's resources. With less than one twentith of global population, the United States accounts for about one fourth of global consumption. A child born in an industrialized country will consume and pollute more over his or her lifetime than thirty to fifty children born in developing countries? Sierra Club magazine

Data from the 1983 Survey of Consumer Finances, sponsored by the Federal Reserve Board : The wealthiest 1 % of families owned roughly 34.3% of the nation's net worth, the top 10% of families owns over 71%, and the bottom 40% of the population owns way less than 1%. In 2007 America had the widest gap between rich and poor of any industralized nation, with the top 1% having 200% increases in wealth.