100 Chemicals
Robyn Holder
June 16, 2011 as an assignment for Hawthorn University

This was a great project. Fitzgerald, in his book, *The Hundred Year Lie,* says keeping a list of the synthetic chemicals we are exposed to daily is a good step toward health – it helps us to be aware of these chemicals and assists us in making an effort to limit our exposure (2006). The chemicals we put into our body has been referred to as the "great experiment" because the Food and Drug Administration does not assess the safety of many of these products (Leonard, 2011).

I've been a diligent food label and ingredient reader for a number of years, but I never really thought about the ingredients in other products. Over the past few years, I've read about plastics and fluoride, for example, and other chemicals that are reputed to cause us harm, but never really paid attention to the ones I was using and exposed to. No more! I'm shocked to see the number of synthetic chemicals my body is exposed to on a daily basis. And, how many of them are necessary? For instance, my toothpaste contains color additives Blue 1 and Yellow 10. Why? Does toothpaste have to be colored? I immediately went to the store and purchased a natural one, free from dyes and other unnecessary ingredients.

Many of us exhibit layers of denial when confronted with the truths about the repercussions of our lifestyle choices. It is easier to dismiss the results of research, as I am currently doing, as something that won't affect us personally, or consider them a scare tactic by a "wacky environmental group," than it is to delve into the message and give it some credence. Many of us, me included, take the "ignorance is bliss" stance and hope

there is some governmental or environmental agency evaluating the chemicals we face on a daily basis (Fitzgerald, 2006). Surely they would warn us, right? Fitzgerald cautions "we cannot completely rely upon government at any level to protect us" (2006). And, as I'm experiencing, education is the best tool for good health.

My list is composed of daily-use skin and personal care products (as I seem to use more of these than anything!) and household cleaning products. Women tend to use 12 personal care products daily, while men use six. Most of these have a dozen or more chemicals in each; less than 20 percent are tested for safety (Leonard, 2011). Fitzgerald provided some of the synthetic chemicals I may be exposed to in the course of my day – those found in mattresses, carpeting, dry cleaning, and the fumes from traveling by automobile (2006). As I formulated my list, I was happy and surprised to discover that my skin care regime is composed of many good-for-you additives. Working with an esthetician, I've used these products for years. For my project, she provided me with a guide to all the products and their ingredients. I was pleasantly surprised to read the philosophy behind the products. Rather than use a product that is merely slathered on the face, my products attempt to help the skin repair and rejuvenate itself. They contain a patented formula designed to provide the skin's collagen and elastin with the "ability to fight environmental attacks and strengthen its support structures, like apple DNA, containing oligonucleotides; phyto-plancton from tropical seaweed, superoxide dismutase and free-radical sensors; mineral micro-screens and free-radical sponges" (Esthederm, 2002). While the terms "herbal," "natural" and/or "organic" have no legal definitions, I feel confident these ingredients are meant to be good for the skin, rather than toxic (Leonard, 2011).

Before eating breakfast, I had used 139 chemical ingredients! I am an excellent typist and fairly good speller. While completing my list, I had to type slowly and carefully, as many of the ingredients in my products had names that made no sense and were hard to spell, let alone pronounce! Lynn Marie Bower, in her book, *Creating a Healthy Household,* calls these "unpronounceable polysyllabic names combined with hyphenated numbers" and I found this to be quite true (2000). I also had to remove my contacts to read the ingredients – they are always printed as small as possible. Is this so we won't read them, or is the ingredient list of least importance, compared to the advertising label? I think perhaps a little of both ideas.

It is good to realize the health effects of any ingredient, natural or synthetic, depends upon several things: the substance itself, the amount used, how long it is used, and the person using it (Bower, 2000). However, Fitzgerald cautions us many chemicals in personal care products are considered "inert" and don't have to be listed, as they are protected by trade secrecy laws, so we may be exposed to even more chemicals than we know of. I found this to be true of simple household cleaning products as well. I feel it is important to note as well, "not all synthetics, at least as far as we know, are toxic to us" (Fitzgerald, 2006).

Our bodies have become so toxic from the chemicals absorbed in a lifetime, when we die, our bodies decompose at a slower rate than 30 years ago! Dr. Sherry Rogers is quoted, "we are the first generation of people to ever be exposed on a daily basis to such an unprecedented number of chemicals" (Fitzgerald, 2006).

Looking at my list, and researching the Environmental Working Group's Skin Deep Cosmetics Database, I discovered that a large majority of my product list is

considered a low or moderate hazard. However, as mentioned earlier, when you add many of these products together, they could become one big hazard. And, that is without considering the other synthetic chemicals on my list!

Several things I discovered worth noting:

- I normally opt for fragrance free products, because when my children were young, their skin was sensitive. Ironically, I was possibly putting them at greater risk. Some unscented products contain *more* synthetic fragrances rather than less, as one would think, because a masking fragrance is added to the original fragrance (Bower, 2000).
- I use baby powder as a dusting powder –it contains talc and fragrance. This product can be hazardous to the respiratory system when breathed (Bower, 2000). I use a puff-type applicator and I've always noticed a fine dust on the items in my bathroom closet where the powder is kept. Is this same fine dust lining my lungs?
- I use a canister vacuum fitted with an Endust ® micro filter vacuum bag, considered one of the more efficient bags, according to Bower (2000). This bag is designed to more effectively trap and retain small particles, and according to the manufacturer, it "traps 99 percent of dust and allergens down to 5 microns," and is efficient at trapping and retaining pollen, dust, dust mites, animal dander, mold spores and human hair. The bags have a "dust seal™" which helps prevent the escape of these particles when changing and disposing of the bag. Bower reports these bags have "filter paper exteriors and electrostatically charged media on their interiors" (Bower, 2000), which helps with their performance. So score one for me on this point!

A yoga instructor once mentioned she purchased a yoga mat cleaner from an individual who developed organic, safe-to-use cleaners, who told her “if you can’t eat it, don’t put it on your body” and promptly tasted the product he was selling! This might be a fine motto for us to live by with many of the products we use. I’m not sure I could do this with the majority of the products I am currently using, but this man’s quote provides a thinking place to start!

My list of 150 chemicals follows.

List of Chemicals Used Each Day

2-oleamido-1
3-octadecanedio
algae extract
alkyl dimethyl benzyl ammonium chlorides
alkyl dimethyl ethylbenzyl ammonium chlorides
allyl stearate
aluminum zirconium tetrachlorohydrex GLY
aminomethyl propanol
ascophyllum nodosum extract
avocado oil
beeswax
benzene
benzyl benzoate
BHT
blue 1
butane
butyl ether
butylparaben
C-12-15 alkyl benzoate
carnauba wax
cellulose gum
ceteareth-25
cetearyl alcohol
cetrimonium bromide
cetyl alcohol
chitosan PCA

chlorine
chondrus crispus (carrageenan) extract
Cl 75470/carmine
Cl 77007/ultramarines
Cl 77288/chromium oxide greens
Cl 77289/chromium hydroxide green
Cl 77492, Cl77499, Cl 77491/iron oxides
Cl 77510/ferric ferrocyanide
Cl 77891/titanium dioxides
cocamidopropyl hydroxysultaine
coumarin
crambe maritima leaf extract
cyclomethicone
cyclopentasiloxane
denatured alcohol
diazolidinyl urea
dimethicone
dimethicone copolyol phosphate
dimethyl stearamine
disteardimonium hectorite
dulse extract
dydrated slilica
ethyl ester of PVM/MA copolymer
ethylhexyl methoxycinnamate
ethylparaben
eugenol
FIL D7150/6
flavor
fluoride
formaldehyde gas
free-radical sensors
free-radical sponges
gellidiela acerosa extract
glycerin
glycol stearate
hippophae rhamnoides oil
honey extract
hyaluronic acid salt
hydrofluroocarben 152A
hydrogenated castor oil
hydrogenated honey

hypnea musciformis extract
iodopropynyl butylcarbamate
Irish moss extract
isobutane
isododecane
isopropyl palmitate
jojoba seed oil
laminaria japonica extract
lanolin wax
laurdimonium hydroxylpropyl hydrolyzed soy protein
laurdimonium hydroxylpropyl hydrolyzed wheat protein
macrocystis pyrifera extract
masking fragrance
methylparaben
mica
mineral micro-screens
mineral oil
neptune kelp extract
n-hexane
nonoxynol-12
oat beta glucen
oat kernel extract
octyl palmitate
oligonucleotides
ozokerite
palmaria palmata extract
panthenol
parabens
paraffin
PEG/PPG-17/18 dimethicone
PEG-32
PEG-40 castor oil
PEG-8
pentaerythrityl tetracaprylate/tetracaprate
petrolatum
phenoxyethanol
phyto-plancton from tropical seaweed
polyquarternium-11
polyquarternium-46
polyvinyl laurate

PPG-12
PPG-14
PPG-5-ceteth-20
PPG-75 lanolin
propylene carbonate
propylene glycol
propylparaben
PVP
PVP/VA copolymer
rice starch
Royal Jelly glycolysat
sargassum filipendula
SD alcohol 38-D
SD alcohol 40
SD alcohol 40-B
serine
sodium bicarbonate
sodium DNA
Sodium fluoride
sodium lauryl sulfate
sodium saccharin
sorbitol
stable Vitamin C derivative
stearalkonium chloride
steareth-21
stearyl alcohol
steryl alcohol
styrene
sugar esters
superoxide dismustase
synthetic wax
talc
tetrasodium edta
tocopheryl acetate
trichloroethylene
urea
Vegetable oils
vinyl butyl benzoate
vinyl chloride
VP/VA copolymer
wakame extract

water
wheat amino acids
yellow 10

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