PART

Laying It All Out

In the Beginning

I thought I lived a fairly clean lifestyle. I didn't use pesticides in my yard, tried to choose organic foods, stayed away from overly processed products and didn't smoke. What I *thought* was the whole shebang of avoiding toxins. But, like most people, I had my faults. I still used conventional cosmetics and some body and hair care products and I relied on the good old power of caustic cleaners. Since I lived a pretty focused life of trying to lower my carbon footprint, I thought that, by reducing my petroleum usage and generally choosing natural products, I was in the clear.

I firmly believed that if a product were sold on the shelves in the store, that product was safe to use unless it stated otherwise. Some of them may not have been the most environmentally friendly to use but they were safe. The FDA says so, doesn't it? And I was more than happy to put my faith in government agencies and turn a blind eye to the real story just to keep believing that those plastics in my mascara and the preservatives in my shampoo were innocuous and I could have silky hair and glowing skin in spite of what the ingredient labels did and did not tell me.

It wasn't until I received a review copy of the book *Slow Death by Rubber Duck: The Secret Danger of Everyday Things* for my environmental blog, *The Crunchy Chicken*, that I started to think otherwise. In the circle of individuals who were blogging on

environmental topics, there was always a subset that focused on toxins in products. I figured that was their bailiwick, not mine. I was more concerned with reducing waste, energy usage and the strain on the environment from personal carbon footprints. The closest I got to dealing with the topic on my blog was really in relation to issues with agriculture and its incumbent petroleum-based fertilizer and pesticide use. But that didn't matter to me personally because I didn't choose products produced by conventional agriculture. Or did it? Were the health problems my family faced a result of environmental toxins, bad genetics or both?

Double whammy

Since I started writing my blog and really focusing on environmental issues, two very personal things had happened. The first was that my son, Henry, was diagnosed with Asperger's syndrome, a mild form of autism. The second was that my husband, Hank, was diagnosed with multiple myeloma, an incurable, extremely life-shortening form of leukemia. Both were diagnosed the same week in September 2007. I still haven't recovered from it all but, then again, neither have they.

During the last six months of Henry's preschool year, in 2007, I would be filled with dread every time the phone rang. I was convinced that it was his preschool calling to tell me, yet again, that Henry had hit, kicked or, God forbid, bit another child. His school environment was more staid than the average preschool given that it was a Montessori school and a fairly rigid one at that. But it was far too stimulating for my son and, when it got overwhelming or when kids got too close or too much in his face, he lashed out.

His physical reactions always appeared to be unprovoked and I knew some of the other boys would goad him on since he was easily manipulated. But in the end he was the one hurting the other kids in spite of whatever they were doing to get him into trouble. I lived under the daily stress of not only getting a bad report, but also of the school telling me it was the last straw, that Henry could no longer be a student there and then what would I do? I had a

full-time job and finding a new preschool in an area where there was a year's waiting list for most places was nearly impossible. Fortunately for us, Henry's preschool was able to deal with his behavior, calling in a specialist from the public school they worked with to come in and observe him in the classroom and make suggestions for how to better deal with and, ultimately, prevent his outbursts.

My son's diagnosis wasn't exactly a shock as I had suspected since he was a baby that he was showing signs of autism. His hyper-focus on what he was working on, the inability to carry on a two-sided conversation, his not seeing the world from any perspective other than his own and various sensory issues were early clues. On one hand, it was good to have a diagnosis to some degree, but on the other it was daunting to know that he faced a lifetime of struggle in understanding others and having to learn things that come naturally to most people.

Specialists refer to Asperger's as high-functioning autism but it is still disabling when you lack social skills and the ability to moderate your emotions. And then there are all the so-called "comorbid" issues that tend to accompany the diagnosis: anxiety disorder, sensory processing disorder, obsessive-compulsive disorder (OCD) and attention deficit hyperactivity disorder (ADHD). These are the daily issues that made life difficult for him and, in turn, the rest of our family. His behavior and comfort level over the next few years became increasingly disruptive and this, combined with his inability to manage his anxiety and OCD, had us turning to medication for help.

I'd be lying if I said that I never thought that somehow it was my fault that my son had autism. Was it something that happened during my pregnancy? Was I too anxious and it elevated my cortisol levels and made him more susceptible to this? I had avoided the more commonly known toxin issue at the time (phthalates and nail polish), but those toxins affected reproductive organs and not brain development. Were all those Rh-immune globulin shots I received during my pregnancy, used to prevent Rh incompatibility and chock-full of mercury, part of the cause? Or was a genetic

predisposition to being on the autistic range triggered by some environmental factor the reason for his neurological problems?

We have a history of autistic-like behaviors in my side of the family—tic disorders, anxiety issues, lack of social skills, they run the gamut. But why was Henry more severely affected than the rest of us? Was he at a distinct disadvantage by being born at a time when we are all bearing a fairly heavy body burden of toxins?

The bones of an 85-year-old

"I just want to prepare you that one of the tests we are looking at is for cancer." These words shocked me out of my diatribe about what the cause of my husband's back pain might be. I had just spent the last few minutes on my cell phone while driving to the hospital where Hank had just been admitted, explaining to our doctor what I thought was the reason why my 38-year-old husband wasn't able to walk. Why he was in such unbearable pain.

In retrospect, it was wishful thinking that something simple like piriformis syndrome (tight muscles in the legs that can pull on your lower back) would be the reason for Hank's slow decline over the past several months. The lab work ultimately indicated there was something much more serious going on. I would fully come to realize and accept in the week that followed, as he came close to death in the ICU of Swedish Hospital, that cancer was eating my husband and partner of 18 years from the inside of his bones.

Unlike Henry's diagnosis, my husband's diagnosis was an absolute, breathtaking shock. His physical problems had started months earlier when he noticed his running times were slowing. Here was a man who exercised religiously and, frankly, was the healthiest person I had ever met, but I just figured he was getting older. And it was hard to commiserate with his "slow" run times of 9 minutes per mile when, even at my fittest, I rarely saw the underbelly of 10. Over the ensuing months, he started developing back pain. Again, I chalked it up to old age. My family has chronic back pain issues so it just seemed like he was finally catching up. It wasn't until his back pain started becoming more debilitating

and he could barely walk that an MRI was ordered. But nothing looked out of the ordinary.

When Hank was referred to a rheumatologist and full lab tests were ordered we were alarmed, but by then we just wanted to find out what the problem was. Unfortunately, before we even got any answers, my husband's back pain became so bad that, one morning before work, he couldn't move and I took him to the emergency room. Actually, I had to call a medical transport to take him to the hospital because the slightest movement caused excruciating pain. He later told me it was a good thing I wasn't in the room when they moved him because the pain was so intense. I didn't tell him that I was waiting in the living room with my fingers plugging my ears because I couldn't bear to hear him screaming.

In the ER they couldn't resolve his pain regardless of the amount of narcotics he was given and they admitted him to the hospital. After a number of tests, the definitive one involving a bone marrow biopsy, Hank was diagnosed with multiple myeloma, a cancer of the plasma cells in the bone marrow. It is extremely uncommon in 38-year-old men and, by the time Hank was diagnosed, his disease was so advanced that 94% of his bone marrow plasma cells were cancerous and his bones were as brittle as an 85-year-old's.

To fast-forward through all the gruesome cancer treatments, after a month in the hospital, followed by aggressive chemotherapy, tandem stem cell transplants and more hospital stays, three years later Hank was doing well. He was back on chemotherapy but able to work full-time and, most importantly, he had beaten the three-year death sentence they initially gave him. Based on the staging of his disease and the type of cancer, the average lifespan of a patient in his situation, with treatment, is three years.

The question that kept me up at night was why would an otherwise completely healthy young individual be stricken with an uncommon form of cancer generally only seen in people over the age of 65? More alarmingly, the incidence of this cancer was trending downward, age-wise, and doctors were diagnosing more

and more young men with this disease. And it was being seen more particularly in firefighters as well as those who helped in the World Trade Center cleanup. Exposure to environmental toxins has been suspected in both cases. Again, I'd be lying if I said I hadn't racked my brains trying to figure out what genetic factors coupled with environmental exposure could have led to such a horrible outcome. I had (and still have) my suspicions, but we'll never know for sure.

Trying to make sense of it all

Armed with this history of family disease and troubled by the increased rates of both conditions, I was further appalled at what I was reading as I was going through *Slow Death by Rubber Duck*. The authors of the book had set up an experiment to see if they could increase the levels of toxins in their bodies, otherwise known as their toxin body burden, by locking themselves away for a few days and using common products and eating commonplace foods. These products were high in toxins such as phthalates (a plasticizer common in PVC and other materials) and parabens (used as preservatives) as well as foods that were high in mercury and packaged in bisphenol-A (BPA) or cooked in Teflon. The laundry list of chemicals and their associated health implications were truly frightening and I wondered how much I had been affected by this same chemical soup.

I was intrigued by the blood and urine tests they underwent to see the before and after effects of their experiment and started thinking about not just what kind of impact these toxins had on me but also, if the authors of this book could increase their body burden so dramatically in a few days, what kind of measurable reduction could be made over a few months' time with a dramatic decrease in exposure to these chemicals? And that is how this book and project were born.

The Non-Toxic Avenger

The mission to lower my own personal body burden of toxins began with my getting tested for a wide array of toxins, both those

under my control by my own product usage and exposure and those that are considered background exposure (that is, those toxins that exist in the environment [air, water and soil] and that I have little control over). Once the initial testing was complete, I systematically removed every single possible toxin source from my environment that I could reasonably remove, engaged in a "detox" under the care of a doctor and, at the end, got retested to see what, if any, impact I had made on my original body burden levels.

> *We absorb so many synthetic chemicals during an average lifetime that, according to some reports, when we die our bodies decompose more slowly today than if we had died just three decades ago.*
>
> Randall Fitzgerald, *The Hundred-Year Lie*

Going into this project I was fully aware that I might not test high in some toxins given my aversion to chemicals. However, I could have been stuffed with more toxins than I thought. I was also aware that there were some toxins I had less control over (in regards to exposure) and that those that are stored in body fat are harder to remove than others. That's where the detox at the end of the project came into play.

Lab testing

When I initially started thinking of doing this project, I researched which labs other authors and toxicologists were using for body burden testing and contacted them directly to see how to order the tests. It turned out to be much more onerous than I expected.

Through a personal contact (Dr. Steven Gilbert, a friend of my brother and who just happens to be a toxicologist), I was connected with Erika Schreder, a staff scientist at Washington Toxics Coalition who led the Toxic-Free Legacy Coalition's Pollution in People study[1] and was a participant in the Environmental Working Group's Human Toxome Project.

Since the Toxic-Free Legacy Coalition had done a series of body burden testing on Washington State residents and most of the tests were similar to the ones I was interested in getting done, Erika was a great resource. One issue that she brought up

in conversation was the quality of testing and detection levels depending on the lab used. It wasn't something that I would have thought of initially, so going with well-regarded laboratories for analysis would be key in trusting the results of my lab tests.

Another issue Erika mentioned was regarding the difficulty of a single individual, rather than a research institution or a medical facility, gaining access to some of these laboratories and their tests. Apparently, other journalists who were trying to get body burden testing had been refused by one of the larger labs. So, getting access to certain tests could potentially prove to be a problem. After our conversation, I was initially resigned to not getting all the tests done that I wanted.

I'll go into much more detail about the toxins I was targeting in short order, but just to introduce them, the ones I was interested in getting tested for were: phthalates, parabens, polybrominated diphenyl ether flame retardants (PBDEs), heavy metals (mercury, lead, arsenic), perfluorinated compounds (nonstick chemicals), pesticides, persistent toxic chemicals (like dichlorodiphenyltrichloroethane [DDT] and polychlorinated biphenyls [PCBs]), bisphenol A (BPA) and triclosan (an antibacterial).

One of the major laboratories I ended up using was Metametrix Clinical Labs, which offered a series of Environmental Toxicities Lab Panels (the panels are really just a grouping of similar toxins all done at the same time). More importantly, the lab panel information and patient information were easily accessible on their website. After contacting Metametrix, I was informed that I would need to work with a local healthcare provider in Seattle to arrange the blood draws and the provider would send the samples to the lab. From the list of providers they sent, I chose a doctor from Bastyr University, a well-regarded alternative medical school and clinic in Seattle.

Deciding on the tests

Ready with the list of Metametrix tests I was interested in undergoing, I met with Dr. John Hibbs, a specialist in environmental

medicine and an expert in detoxification at Bastyr. I initially thought that he would merely be arranging the specific panels offered by Metametrix, but he was interested in helping me find the labs and tests for all the toxins I was interested in testing, not just the ones offered by Metametrix.

We discussed alternative methods of toxicity testing that blood, urine and hair tests couldn't detect since several of the toxins that I wanted to test for are stored in body fat and don't show up as easily in the more basic tests. Dr. Hibbs mentioned some toxicity testing research that had been done using fat biopsies, which generally aren't done because they are invasive and expensive and leave scarring. But if I wanted to really know what the levels of insecticides (like DDT) and heavy metals (like mercury) were, fat biopsy testing would be far more definitive than blood and urine testing.

Dr. Hibbs and I also talked about therapies for detoxification that I could undergo as I moved further into the project. No decision was made about what exactly I would do, but I was given some handouts describing diet, exercise, supplements and sweat therapy that I could undertake to assist in ridding my body of the toxins that get stored in body fat and other tissues. All of this seemed reasonable until I got home and read the detox regimen in detail. I was in for a few surprises.

At this initial meeting we left it that his team would research which tests they could arrange and how much they would cost, including options for fat biopsies. Based on that information, I would choose the final test selection. Since full body burden testing can cost upward of $10,000, I wanted to make sure that I didn't go too crazy with selecting too many tests because I would be doing follow-up testing later. And I wanted to stay on an expenses budget of less than $5,000 during the project.

As if disfiguring fat biopsies weren't enough, right after this meeting I had an email conversation with a good friend of mine who publicly goes by the name Greenpa and writes the blog *Little Blog in the Big Woods*. He's been living off the grid for more than

30 years, and has all but a hair's breadth of a PhD in biology. He was suggesting that another definitive test would be breast milk testing since fat-soluble toxins are excreted in breast milk. Since I was no longer lactating (my kids being seven and eight at the time), but knowing that I'm game for pretty much anything, he suggested that I try prolactin therapy to reinstate lactation to rid myself of toxins as well as do some testing.

The approach sounded more like a study in lactation and how many toxins show up in the fore versus hind milk (basically, the fore milk is high in carbs and the hind milk is high in lipids, aka fats). In any case, in spite of its potential relevance and my own curiosity about how many toxins I was feeding my children as babies, I wasn't interested in pumping myself with hormones to test that theory. I figured it was best to leave it to the researchers and women who are lactating naturally to solve that puzzle.

Not getting ahead of myself

One of the problems with doing the research for this book and not getting started with the actual testing and project right away was the fact that it was nearly impossible to read all the data on the potential health consequences of the toxins and not want to stop using these chemicals immediately. My initial reaction was to go through all my cabinets and closets and toss out everything containing any of the chemicals I was focusing on. The research was that scary. But I also didn't want to skew the lab tests by going into them already precleaned. That would defeat the purpose of the two sets of tests.

Since I was already using a number of nasty chemicals, in spite of the "naturalness" trumpeted on the packaging, I resolved to continue using them until I got my body burden tested. On one hand it was kind of a relief to throw caution to the wind and continue using and consuming products that I knew were potentially harmful to me all in the name of "research." It felt somewhat decadent to drink Diet Coke in a plastic bottle. But on the other hand, I knew some products had enough potential health consequences that I couldn't wait to stop using them.

I must admit that, even before I got this project in gear, I tossed almost all of my kids' bathroom products (except toothpaste) that contained suspicious chemicals and replaced them with completely non-toxic ones. And my husband was banned from using anything even remotely toxic or carcinogenic. Since he already had cancer, he didn't need any more exposure from additional toxins. I especially worried about some of the skin and hair care products he was using and I got those out of the house as soon as I could find a replacement.

I felt comfortable going ahead and removing the toxins my family was exposed to while continuing to use these products myself. I wanted to maintain, in a sense, a "real-life" exposure and to have test results representative of someone who mostly chooses low-risk, natural or organic products. In the meantime, it drove me a tad crazy because I saw all these toxic products around me that I wanted to get rid of, but couldn't just yet.

One more thing

Before getting too far along in this, I should mention my own health problems that may have been affected by environmental toxins. At the time of starting this project, I was a fairly healthy 40-year-old and generally didn't have any complaints except for the occasional migraine. My skin burned relatively easily and I had a high propensity for getting freckles and moles. I used to always joke that I'd be the first person between my husband and me to have health issues, either from skin cancer or a stroke (since individuals who have the kind of migraines I have—that is, with aura—are at a much higher risk of having a stroke). The fact that I was still going strong, relatively speaking, wasn't what I expected. I expected I would be the one with the health problems and my husband would be the healthy one. So far, though, I was wrong.

However, about two weeks before I first met with Dr. Hibbs, I began experiencing some unusual symptoms that hadn't really abated by our meeting. Pretty much overnight, I started having numbness, tingling and, sometimes, burning in my hands, arms, legs and feet. This is generally called peripheral neuropathy and

the only reason I know this is because peripheral neuropathy is one of the side-effects of the chemo drugs and immune suppressants my husband is on. It wasn't particularly painful, but it was annoying and, in my case, unnerving (pardon the pun) since I didn't know what was causing it.

Add to that the fact that I am highly prone to being a hypochondriac. Since my husband was diagnosed with cancer I've gotten a little better about it, but over the years I have convinced myself on numerous occasions that I had some major health problem or other. The simplest thing always escalated, in my mind, to brain cancer or imminent death. For example, a few months after my son was born and I was on maternity leave, I was absolutely convinced I was going blind. If I looked at the rug just so, I couldn't see what I thought was a large section in my visual field.

I tend to be more sensitive about my vision strictly because, right before I get a migraine, I get what's called visual aura. It's hard to describe, but basically it's like you are looking through a kaleidoscope. Everything is jumbled up and colors are swirling around; you can't see faces and you can't read and, generally, I find it to be more annoying than the migraine pain itself. So I have always hyper-focused on what my vision is doing since it's the first sign I'm getting a migraine. Or having a stroke or developing a brain tumor, of course.

Back then, I spent a whole week testing my vision as I sat there during those many hours of nursing sessions, putting my hand up to my eyes, testing what I could and couldn't see. I was all but convinced I had some sort of brain tumor pushing on my optical nerve and causing my blindness. I finally decided to look it up online. Well, it turned out I was just hyper-focusing on my blind spots. Everyone has them—they're where the optic nerve goes into the back of your eye and, for a small spot in your field of vision, you can't see. Some people are able to see them more than others and, I suspect, if you spend days practicing like I was, you get pretty good at it. I think when I finally told my husband what was going on he thought I was off my rocker. But then again, he's

also a hypochondriac. Not a good trait to have when you have cancer.

Anyway, this particular time with the numbness and tingling was no different. I tried to stuff down my fears of the ever-looming brain tumor and decided that maybe something like multiple sclerosis was a better choice this time around. The symptoms were certainly more appropriate. Or how about something rheumatic? Unfortunately, the symptoms didn't match and I wasn't really fatigued, so that ruled out a host of other scary things. I initially figured it was from a pinched nerve or something since I had been doing a lot of outdoor work involving heavy lifting the few days prior, but the fact that I was experiencing the symptoms in all of my extremities pointed to something else.

A metabolic problem was what my family doctor initially suspected when I went in to see her after experiencing the symptoms for over a week. She did a basic neurological exam and ran blood tests, suspecting that I was B12 deficient, which causes the same symptoms. But all my blood work came back normal—iron, thyroid, blood count—everything was fine. My Vitamin D was very low and my B12 was in the low-normal range, so I started taking supplements.

The extra B12 seemed to help, or so I thought, but then the symptoms came back. In fact, they were intermittent. Some days I didn't notice any symptoms and other days they were really distracting. I finally made the connection one morning when I was about to apply some sunscreen. It was a new one that I had just started using. In fact, I had just started using it around the same time my symptoms started. Not wanting to jump on some new crackpot theory about the origins of my problems, since I was previously convinced it was the B12 issue, I decided to stop using this sunscreen and see if the neuropathy went away.

Thinking back, the worst episodes were right after I had used a lot of sunscreen, either because I was working outside in the yard (the weekend before all this started) or after we had gone to an outdoor pool, when I really slathered it on. The following day

would bring the worst symptoms I had. And since I didn't use that particular sunscreen every day, due to our cloudy summers in Seattle, that might explain why some days I didn't have any symptoms and other days I did.

At this point, it was just a theory, but I decided to do some research on chemical reactions, nerve issues and sunscreen ingredients. I didn't find anything definitive linking the two, but I did find some information on multiple chemical sensitivities and symptoms. A lot of the symptoms that I have are always attributed to low blood sugar, and migraines mimic the symptoms of multiple chemical sensitivities. I never really made any connection between the two and, since there are so many possible contributing factors that cause these symptoms, it could have just been absolute coincidence. But, that said, I am very sensitive to fragrances and will get migraines if exposed to overly scented products.

During medical consultations, the concept that chemical exposure may have contributed in some way to a patient's problem doesn't even enter the doctor's head.

Physician and toxins expert Paula Baillie-Hamilton, *The Hundred-Year Lie*

As another example, the week my numbness and tingling symptoms first started my brother-in-law came to visit for his high school reunion. He brought with him his arsenal of scented body products. He prides himself on smelling good and has quite the display of colognes in his home bathroom. His shower at home is also fully stocked with drugstore scented shampoos and body washes and the like, which, to me, are very sickly and sweet-smelling. I find them very irritating. The day he arrived, I could smell his soaps and whatnot wafting upstairs from the basement bathroom he was using. Between that and his cologne, and probably other factors, I got a migraine. Fortunately it was short-lived, but I couldn't help thinking, when I was lying in bed with my eyes closed, watching the kaleidoscope swirls, that the trigger must have been all that fragrance.

Looking back, my fragrance theory makes sense but, since I'm of the mind to want to have more proof than mere coincidence and

conjecture, I wanted to really see if I did have chemical sensitivities, particularly in relation to the sunscreen I was using. So I stopped using the sunscreen and waited to see if I continued experiencing the symptoms. If they didn't go away, the next step was to get an MRI of my head. Which, as my dad was joking, would most likely turn up nothing. Or so I hoped.

Where did the bad stuff go?

As I was waiting to schedule the body burden tests, I began working on other parts of the project which included identifying some of the easier things to eliminate. But that raised the question of what I would do with all the stuff I deemed to be toxic. Should I throw it out, flush it, dump it down the drain, recycle it or donate it?

If a product (like a body lotion) was partially used and I could salvage the packaging for recycling, I would go ahead and recycle it. I didn't want to pour chemical products down the drain and unleash it on the waterways to cause mutant fish, algal blooms or worse. I suspected each product would require an independent decision on how I would dispose of it.

As for clothing, jewelry or other consumer goods that were still usable, I planned on donating them to local donation centers like Value Village, Goodwill or the Salvation Army. I hated thinking that my once coveted items were being donated at the potential health expense of someone else, but it wasn't like I was donating nuclear waste to unwitting consumers.

The argument for donating potentially hazardous products (that didn't qualify for hazardous waste disposal) was the same for getting rid of environmentally unfriendly products. Some environmentalists recommend getting rid of partially used products for free on Craigslist or Freecycle, but I think sharing personal care products is potentially a hazard in itself. Others feel that by donating the product you are passing the problem onto someone else. However, I'd argue that the individual buying or taking the donated product would have purchased something similar anyway,

and in the end, you are removing it from the waste stream and reducing the demand.

While I wanted to prevent throwing out as much as possible, I also needed to get rid of a number of items from pretty much every avenue of my life and the bulk of them would be donated or sold on Craigslist. I could see the ad: "Potentially hazardous contaminated children's plastic toys. Mint. Retail $25. Yours for only $5. Lead poisoning included."

Lab test snafus

As I initially suspected, I had a tough time gaining access to one of the labs that does the BPA, triclosan, flame retardants and a couple of the other toxin tests I was interested in getting. Since I was working with physicians to get the testing done, this lab assumed that I was doing the tests for medical diagnostic purposes rather than for research. They claimed they were unable to do any testing for medical purposes because they were not CLIA (that is, Clinical Laboratory Improvement Amendments) certified. This certification is a U.S. Department of Health and Human Services regulation over clinical laboratories.[2]

Bastyr could have pursued setting up something with this lab, but since I was the only patient doing the test for nonmedical purposes, it wouldn't really be worth their time. And furthermore, there was still the issue of the lab not running tests for a single individual. From conversations I had with other people, I had the impression that setting up the test at the lab is expensive for only one sample. For a group of people getting tested (as for a research program with multiple samples) it made sense, but not for an individual.

Because of this, I ended up narrowing down the list of toxin tests that I would get done and started working out the pricing. Fortunately it ended up being a lot cheaper than I had originally thought. As mentioned before, a full body burden testing can cost upward of $10,000. Since I was not getting tested for the full range of toxins and was focusing only on specific ones, the costs were

less. In addition, during this last go-round on tests, we decided that blood and 24-hour urine samples were sufficient for the heavy metal toxicity testing and so we skipped the hair tests.

My budget for the first set of tests was $2,500 and, because I was restricted from getting tested for at least four types of toxins, I ended up coming in way below that. The good news was that this freed my budget up to spend money on others things in the project itself rather than spending all of my budgeted money on testing.

What's so bad about a little lead?

By now, one might wonder what all the fuss is with the chemicals I had targeted in the testing as well as the other ones I was determined to avoid during the project, even if I wasn't getting tested for them. Most of them are carcinogenic (meaning they can cause cancer), disrupt hormones in some fashion or cause long-term health issues like diabetes, heart disease or worse. There are thousands of different chemicals in the products most of us use daily and there are few standards for testing their safety.

Chemicals like BPA can cause abnormal development of the brain, behavioral changes and a predisposition to cancer, diabetes and heart disease. Teflon and other nonstick-type chemicals (these include water- and stain-resistant coatings and the linings of a lot of food packaging like chip bags and candy bar wrappers) are likely human carcinogens. These nonstick toxins (generally referred to as PFC or PFOA, which I'll go into later) are associated with low sperm counts—which isn't an issue for me—and animal studies have shown they can alter the development of mammary tissue—which does concern me, outside of the cancer risk.

Flame retardants, which are in more consumer products and clothing than one can imagine, are linked to cancer, thyroid hormone disruption and a lower IQ. Formaldehyde, which is just as pervasive, can cause respiratory cancer, leukemia and asthma. Lead can cause brain, kidney and heart damage in kids and adults, lower a child's IQ and shorten his or her attention span, and increase

hyperactivity and aggressive behavior. Some of those issues we already have in our household.

Phthalates (found in fragrances and plastics) lower testosterone levels, which is a problem in both males and females. Exposure during development has been linked to malformations of the male reproductive tract (that nail polish issue again) as well as testicular cancer. It can also contribute to obesity, reduced fertility and behavior changes.

While PCBs and DDT were banned decades ago, they persist in the environment and show up in our bodies via the food we eat. Kids with greater exposure to PCBs have lower birth weights and slower growth including brain development. It's considered a human carcinogen as well. DDT, another carcinogen, is harmful to the nervous system, potentially causing lasting neurological and cognitive problems. Since it's also an estrogen mimic (it acts like estrogen in the body), it can cause hormone disruption.

These are just a few of the chemicals I focused on while going through five months of lifestyle avoidance where I eliminated or limited our exposure to these toxins. Since most of them were linked to cancer, neurological problems, hormonal disruption and behavioral issues, they were also more of a concern for my family than the average family. I hoped that by eliminating them we would see a reduction in symptoms: behavioral improvements for my son and cancer reduction for my husband. With less of a toxic load triggering these issues, I hoped that our bodies would recover faster and our immune systems would be better primed to deal with the underlying problems we already had rather than trying to fight off something new. It was a long shot, but a worthy effort I wanted to undertake nonetheless.