

The Juice Lady's

BIG BOOK of JUICES & Green Smoothies

Cherie Calbom, MS, CN



more than

400

simple, delicious recipes!

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& Green
Smoothies

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THE JUICE LADY'S BIG BOOK OF JUICES AND GREEN SMOOTHIES by Cherie Calbom

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CONTENTS

[Introduction](#)



[1 All About Juicing](#)



[2 Simple Juice Recipes](#)



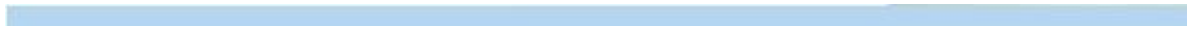
[3 Gourmet and Exotic Juice Blends](#)



[4 Green Juice Recipes](#)



[5 Yummy Fruit Juice Blends](#)



[6 Old Favorites](#)



[7 Juice Remedies and Rejuvenators](#)



8 Green Smoothies

Appendix A

[The Juice Lady's Big Book of Juices and Green Smoothies Shopping Guide](#)

Appendix B

[The Juice Lady's Big Book of Juices and Green Smoothies Resource Guide](#)

Notes

INTRODUCTION

MORE AND MORE celebrities, athletes, and people of all ages and walks of life are turning to juicing and green smoothies to lose weight and to improve their overall health. Why? Because they have found that juicing is changing their lives—giving them more energy, better sleep, stronger immune systems, brighter skin, and a younger appearance. It's even helping their bodies heal from a variety of ailments. Below is a testimony I received recently from someone who has read my books and come to me for counseling.

It's been about a month since you last spoke with me. You may not remember me because you talk with so many people. But I will never forget you. I told you about the more than fifty pounds of fluid I had retained. Using both natural and medical prescriptions, I had not been able to get rid of that fluid. I have also not been absorbing my food. You told me not to worry about my diet because I already had a healthy one but to add a green juice drink with every meal. About three weeks before I spoke with you I started drinking pure cranberry juice every day, and that was helping with the fluid. Over the three weeks I lost fifteen pounds, but I would bounce back and forth with my weight. When I added the green juice drinks, it put my body in high gear. I have lost thirty pounds. The water weight is literally just falling off of me.

You have no idea how much better I am feeling. I have energy and can physically work. I have not had energy or felt good since my last baby was born twenty-five years ago. I have not been able to push my body to work for the last five years. Now I am splitting firewood and stacking it. I shoveled rock for our drainage system in our yard. I can clean my own house again. Yesterday I cleaned house and stacked two cords of firewood. If you haven't stacked firewood, let me tell you, that's a lot of wood. And I can walk again. For the last two years I have been fighting just to walk up and down my short driveway, feeling totally exhausted and in pain afterward. Now I am easily walking a mile and have energy to burn. I feel great and have no pain when I'm finished. And my fibromyalgia pain is almost gone.

For the last five years I have been fighting to stay alive. Now for the first time in years I feel *alive*. I am no longer on Lasix and have cut back most of my nutritional supplements. I was taking over \$500 worth of supplements a month, and it was bankrupting us. Last year my doctor told me to apply for disability because my body was dying. I could no longer function. The naturopathic physician I used to work for told me that my husband and I needed to accept the fact that my body was dying. He told us to purchase better health insurance and prepare for the worst. I wish he could see me now.

Long story short, Cherie, I am so grateful to you for taking the time to talk with me. I know you probably hear stories like mine all the time, but for me it's new and life saving. Thanks for pointing me to the path of life. You have been one of God's blessings and a lifesaver in the most literal sense of the word.

I hope her story encourages you to juice every day. With more than four hundred delicious recipes *The Big Book of Juices and Green Smoothies* can help you change your life, just as juicing has changed the lives of thousands of people who have adopted this plan for themselves—people just like

me. My life changed years ago when I discovered the healing, vitality-producing power of fresh made juices and raw and whole foods.

Sick, Tired, and Completely Toxic

I sat by the window in my father's home in Colorado staring at the snow-topped mountains in the distance, imagining that people were enjoying the hiking trails; perhaps someone was climbing the mountain that day. It was early June and a beautiful, sunny Colorado day.

I wished I had the strength to just walk around the block. But I was too sick and tired—I could barely walk around the house. I had been sick for a couple of years and just kept getting worse. “Would I ever be well again?” I wondered.

I had to quit my job when I turned thirty. I had chronic fatigue syndrome and fibromyalgia that made me so sick I couldn't work. I felt as though I had a flu that just wouldn't go away. I was lethargic and constantly feverish with swollen glands. I was also in nonstop pain. My body ached as though I'd been bounced around in a washing machine.

I had moved back to my father's home in Colorado to try and recover, but not one doctor could tell me what I should do to improve my health. So I browsed around some health food stores, talked with employees, and read a few books. I decided that everything I'd been doing was tearing down my health rather than healing my body. When I read about juicing and whole foods, it made sense. So I bought a juicer and designed a program I could follow.

I began my health program with a five-day vegetable juice fast. On the fifth day my body expelled a tumor the size of a golf ball. I was totally surprised that in five days this amazing result could take place. I never did have the tumor tested because I was too taken back and overwhelmed by the event; it just flushed it away.

I then continued to juice every day and ate a nearly perfect diet of live and whole foods for three months. There were ups and downs throughout. On some days I felt encouraged that I was making some progress, but on other days I felt worse. Those days made me wonder if good health was an elusive dream. I didn't realize I was experiencing detox reactions—no one had told me about them. My body was very toxic, and my body was cleansing away all the stuff that had made me sick.

But one morning I woke up around 8:00 a.m., which was early for me, without an alarm sounding off. I felt like someone had given me a new body in the night. I had so much energy I actually wanted to exercise. What had happened? This new feeling of good health and vitality had just appeared with the morning sun. Actually, my body had been healing all along; it just had not manifested fully until that day. I felt such a wonderful sense of being alive! I looked and felt completely renewed.

With my juicer in tow and a new lifestyle fully embraced, I returned to Southern California and met my friends a couple weeks later to finish writing my first book. For nearly a year it was “ten steps forward” with great health and more energy and stamina than I'd ever remembered. Then all of a sudden I took a giant step back.

The Night I'll Never Forget

The Fourth of July was a beautiful day like so many others in Southern California. I celebrated the holiday with friends at a backyard barbecue. That evening we put on jackets to insulate against the cool evening air and watched fireworks light up the night sky. I returned just before midnight to the house I was sitting for vacationing friends, who lived in a lovely neighborhood not far from some

my family members. After such a full day I was in bed shortly after I arrived at the house.

I woke up shivering some time later wondering why it was so cold.

I rolled over to see the clock. It was 3:00 a.m. That's when I noticed that the door was open to the backyard. "How did that happen?" I thought as I was about to get up to close and lock the door. That's when I saw him. Crouched in the shadows of the corner of the room was a shirtless young man in shorts. I blinked twice, trying to deny what I was seeing.

Instead of running out the open door, he leaped off the floor and ran toward me. He pulled a pipe from his shorts and began beating me repeatedly over the head and yelling, "Now you are dead!" I fought, or I should say, I tried to defend myself and grab the pipe. Finally it flew out of his hand. That's when he choked me to unconsciousness. I felt all life leaving my body. In those last few seconds I knew I was dying. "This is it, the end of my life," I thought. I felt sad for the people who loved me. Then I felt my spirit leave. It felt as though it just popped out of my body and floated upward. Suddenly everything was peaceful and still. I sensed I was traveling through black space at what seemed like the speed of light. I saw what looked like lights twinkling in the distance.

But all of a sudden I was back in my body, outside the house, clinging to a fence at the end of the dog run. I don't know how I got there. I screamed for help with all the energy I had. It was my third scream that took all my strength. I felt it would be my last breath. Each time I screamed, I passed out and landed on the cement. I then had to pull myself up again. But this time a neighbor heard me and sent her husband to help. Before long I was on my way to the hospital.

Lying on a cold gurney at 4:30 a.m., chilled to the bone, in and out of consciousness, I tried to assess my injuries, which was virtually impossible. When I looked at my right hand, I almost passed out again. My ring finger was hanging on by a small piece of skin. My hand was split open, and I could see deep inside. The next thing I knew I was being wheeled off to surgery. Later I learned that I had suffered serious injuries to my head, neck, back, and right hand, with multiple head wounds and part of my scalp torn from my head. I also incurred numerous cracked teeth, which led to several root canals and crowns months later.

My right hand sustained the most severe injuries. Two of my knuckles were crushed to mere bone fragments and had to be held together with three metal pins. Several months after the attack I still couldn't use my hand. The cast I wore, which had bands holding up the ring finger that had almost been torn from my hand and various odd-shaped molded parts, looked like something from a sciencefiction movie. I felt and looked worse than hopeless. The top of my head was shaved, and my eyes were totally red and swollen. I had a gash on my face, a weird-looking right hand, terrorizing fear, and barely enough energy to get dressed in the morning.

I was an emotional wreck. I couldn't sleep at night—not even a minute. It was torturous. I was staying with a cousin and his family, so there was no need to worry about safety from a practical point of view, but that made no difference to me emotionally. I'd lie in bed all night and stare at the ceiling or the bedroom door. I had five lights that I kept on all night. I'd try to read, but my eyes would sting. I could sleep only for a little while during the day.

But the worst part was the pain in my soul that nearly took my breath away. All the emotional pain of the attack joined with the pain and trauma of my past to create an emotional tsunami. My past had been riddled with loss, trauma, and anxiety. My brother died when I was two. My mother died of cancer when I was six. I couldn't remember much about her death—the memories seemed blocked. But my cousin said I fainted at her funeral. That told me a lot.

I lived for the next three years with my maternal grandparents and father. But Grandpa John, the

love of my life, died when I was nine. That loss was very hard. Four years later my father was involved in a very tragic situation that would take far too long to discuss here, but to sum it up—it was horrific. He was no longer in my daily life. I felt terrified about my future. My grandmother was eighty-six. I had no idea how much longer she would live. The next year I moved to Oregon to live with an aunt and uncle until I graduated from high school.

As you can probably imagine, wrapped in my soul was a huge amount of anguish and pain—it felt like gaping holes in my heart. It took every ounce of my will, faith, and trust in God; deep spiritual work; alternative medical help; extra vitamins and minerals; vegetable juicing; emotional release; healing prayer; and numerous detox programs to heal physically, mentally, and emotionally. I met a nutritionally minded physician who had healed his own slow-mending broken bones with lots of vitamin-mineral IVs. He gave me similar IVs. Juicing, cleansing, nutritional supplements, a near-perfect diet, prayer, and physical therapy helped my bones and other injuries heal.

After following this regimen for about six months, what my hand surgeon said would be impossible became real. My hand was fully restored and fully functional. He had told me I'd never use my right hand again, and that it wasn't even possible to implant plastic knuckles because of its poor condition. But my knuckles did indeed re-form primarily through prayer, and my hand function returned. A day came when the surgeon told me I was completely healed, and though he admitted he didn't believe in miracles, he said, "You're the closest thing I've seen to one."

It was a miracle! I had a useful right hand again, and my career in writing was not over as I thought it would be. In the end it seemed my inner wounds were the most severe and the hardest to heal. Nevertheless, they mended too. I experienced healing from the painful memories and trauma of the attack and the wounds from the past through prayer, laying-on of hands, and deep emotional healing work.

I call them the *kitchen angels*—the ladies who prayed for me around their kitchen tables week after week until my soul was restored. It seemed I cried endless buckets of tears that had been pent up in my soul. It all needed release. Forgiveness and letting go came in stages and was an integral part of my total healing. I had to be honest about what I really felt and be willing to face the pain and toxic emotions confined inside, and then let them go. Finally, one day after a long, long journey—I felt free. A time came when I could celebrate the Fourth of July without fear.

A New Beginning

When I look back to that first day in the hospital after many hours of surgery, it's amazing to me that I made it. My hand was resting in a sling hanging above my head. It was wrapped with so much stuff it looked like George Foreman's boxing glove. My face had a big cut running down the left side, and my eyes were red—very little whites. A maintenance man came into my room for a repair and did a double take. He asked if I'd been hit by a truck! He was serious. I felt like I had. As I lay there alone with tears streaming down my face, I asked God if He could bring something good out of this horror. I needed something to hang on to.

My prayer was answered. Eventually I knew my purpose was to love people to life through my writing, juicing, and nutritional information—to help them find their way to health and healing. If I could recover from all that had happened to me, they could too. No matter what anyone faced, there was hope.

Juice Recipes for Health and Healing

In the pages that follow, you'll discover a wide variety of juices for every possible need and occasion. I have basic juice recipes for those who are getting started and want something simple. There are also yummy fruit juice recipes for those with picky palates who want the sweet taste of fruit. Green juices are my favorite and offer the most nutrition; you'll find a big selection of green juice recipes to choose from.

Check out the chapter on juice remedies and rejuvenators for juice combos that address what ails you. And I think you'll really like the gourmet juice chapter that has a lot of unique combinations and delicious drinks. There's also the green smoothie chapter with one hundred smoothie recipes and green combinations. And I also included my old favorites from *The Juice Lady's Turbo Diet* and *The Juice Lady's Living Foods Revolution*. Have fun trying some new and unusual combinations. There's a lot to choose from with more than four hundred recipes.

And if you're struggling with your health, there is hope for you, no matter what health challenge you face. Never, ever give up. There's a purpose for your life, just as there was for mine. You need to be healthy and strong to complete your purpose. To that end, *The Juice Lady's Big Book of Juices and Green Smoothies* can help you live your life to the fullest. My hope is that this book of delicious recipes will truly inspire you to juice each and every day and that you will experience firsthand the healing, rejuvenating power of fresh juice and green smoothies.

ALL ABOUT JUICING

WHETHER YOU ARE just getting started juicing or you've been juicing a long time, you probably have a few questions about this subject. In this chapter I answer most of the questions I am frequently asked about juicing and juice nutrition. I also share guidelines for choosing a good juicer. And I answer some frequently asked questions about making juice, such as which fruits and vegetables should be peeled first and which seeds can be juiced. I also give you plenty of tips to make juicing easy and fun.

How many times have you eaten a meal and not long after felt tired, lethargic, or spacey? Obviously based on your body's reaction, that was not a good food choice. Yet how often do we keep eating the same things over and over again, even though they don't help us feel better, more energized, or more alert? If you want good health, eat foods that love you back. Fresh juices, especially fresh vegetable juices, will love you back all the time by giving you energy, vitality, and better mental performance.

I hope to inspire you to make juicing a daily habit. It can change your life, just as it changed Marie's. Here's her story:

Last year I took a huge leap of faith and opened my own business—a running store. I have been a runner for thirty years, and for the past eleven of those years I have been a running coach and manager of a running store. I experienced many early mornings lying wide-awake in bed wondering what I was doing. I was twenty pounds heavier than when I started my running career and had a bad back—not a good combination when you're a marathon-training coach. My physical condition did not help the stress level I was experiencing trying to get a new business off the ground. I was at a breaking point and didn't even know it.

I mentioned to some friends that I wasn't feeling well. That was all it took. Along came my angels—although at first I did not see them as such. Two friends whom I respect asked me to do a ten-day juice cleanse with them. Um, that would be a *no*. First, I really like my glass of wine at night, and cooking is my way of relaxing. I like my lattes in the morning, and on it went. My list of excuses was rather long—there were a lot of “reasons” I was not interested. I ended by telling them that these kinds of things never work. Being the quiet angels they are, they didn't push or try to talk to me into it. But the next morning I arrived at work to find *The Juice Lady's Turbo Diet* book by Cherie Calbom sitting on my desk. I pushed it aside. I had way too much to do. But for some reason, that night I put it in my bag. Was there an unseen angel at work?

When I awoke at 2:00 a.m. unable to fall back to sleep, I wanted something to read. And there it was—*The Juice Lady's Turbo Diet*. I read that book until the sun came up. Everything Cherie talked about resonated. Believe me when I say I have tried everything. I have done everything from no carbs (not a good plan for endurance athletes) to the eating plan I was on at the time, which was living on energy bars during the day and coming home at night and throwing all the good nutrition advice I gave my runners out the window as I ate everything in sight because I was starving.

Everything Cherie explained, I started to understand, such as when your body does not process your food properly, it is unable to utilize the nutrients properly. Instead of your food acting as fuel, what you eat turns into fat. And the body needs to be cleansed periodically or the toxins keep you from losing the fat. The light bulb went on! I realized my organs were not processing very well the food I was eating.

I was now intrigued. I wanted to eliminate the foods Cherie suggested in the Turbo Diet and follow her diet plan of juicing and eating clean. I was determined to eliminate dairy, gluten, and animal protein to see if I felt a difference. I did a three-day cleanse and was on *fire!* I was losing weight, and my energy level was increasing.

Then I watched *Fat, Sick and Nearly Dead*, and the one who said, “I would never do a ten-day juice cleanse,” was so excited to do a ten-day cleanse I rushed out and bought Cherie’s book *Juicing, Fasting and Detoxing for Life*. I bought a better juicer and tons of produce. Game on.

I was so excited to see how my body would feel and even more intrigued by the emotional detoxing Cherie’s book said might take place. Everything she described in the juicing, fasting, detox book was true. I lost all my cravings. I wasn’t hungry. After day three on her program I completely stopped thinking about food. At the end of one month, with a three-day cleanse, clean eating, and a ten-day juice feast (I like calling it that more than fast), I was twelve pounds lighter. (To date, I’ve lost twenty pounds.) And better yet, I was back to my happy and energetic self.

People coming into the store have noticed the changes—my skin is brighter and, of course, I’m leaner. And people say I look younger. My juice revolution was on. If I could do this, anyone could. I was on a mission with all my newfound energy

Why Is Juice So Effective in Changing Lives?

Every time you pour a glass of juice, picture a big vitamin-mineral cocktail with a wealth of nutrients that promote vitality. The veggies are broken down into an easily absorbable form that your body can use—right away. This food doesn’t have to go through a big process of breaking everything down. So it goes to work in your body to give you energy and renew you right down to your cells. It also spares your organs all the work it takes to digest food, and that equates to more energy. It detoxifies your body as well because it’s rich in antioxidants, so that lightens your load, and the body doesn’t have to work so hard to deal with all the toxic stuff.

The Nutritional Components of Fresh Juice

In addition to water and easily absorbed protein and carbohydrates, juice also provides essential fatty acids, vitamins, minerals, enzymes, biophotons, and phytonutrients. And researchers are continuing to explore how the nutrients found in juice help the body heal and shed unwanted pounds. The next time you make a glass of fresh juice, this is what you’ll be drinking:

Protein

When you think of protein sources, does juice ever come to mind? Probably not, but surprisingly it does offer more than you might think. We use protein to form muscles, ligaments, tendons, hair, nails, and skin. Protein is needed to create enzymes, which direct chemical reactions, and hormones, which guide bodily functions. Fruits and vegetables contain lower quantities of protein than animal foods.

such as muscle meats and dairy products. Therefore they are thought of as poor protein sources. But juices are concentrated forms of vegetables and fruit and so provide easily absorbed amino acids, the building blocks that make up protein. For example, 16 ounces of carrot juice (2 to 3 pounds of carrot) provides about 5 grams of protein (the equivalent of about one chicken wing or 2 ounces of tofu). Vegetable protein is not complete protein, so it does not provide all the amino acids your body needs. In addition to lots of dark leafy greens, you'll want to eat other protein sources, such as sprouts, legumes (beans, lentils, and split peas), nuts, seeds, and whole grains. If you're not vegan, you can add eggs and free-range, grass-fed muscle meats such as chicken, turkey, lamb, and beef along with wild-caught fish.

Carbohydrates

Vegetable and fruit juices contain carbohydrates. Carbs provide fuel for the body, which uses it for movement, heat production, and chemical reactions. The chemical bonds of carbohydrates lock in the energy a plant takes up from the sun, and this energy is released when the body burns plant food for fuel. There are three categories of carbs: simple (sugars), complex (starches and fiber), and fiber. Choose more complex carbohydrates than simple carbs in your diet. There are more simple sugars in fruit juice than vegetable juice, which is why you should juice more vegetables and in most cases drink no more than 4 ounces of fruit juice a day. Both insoluble and soluble fibers are found in whole fruits and vegetables, and both types are needed for good health. Who said juice doesn't have fiber? Juice has the soluble form—pectin and gums, which are excellent for the digestive tract. Soluble fiber also helps to lower blood cholesterol levels, stabilize blood sugar, and improve good bowel bacteria.

Essential fatty acids

There is very little fat in fruit and vegetable juices, but the fats juice does contain are essential for your health. The essential fatty acids (EFAs)—linoleic and alpha-linolenic acids in particular—found in fresh juice function as components of nerve cells, cellular membranes, and hormonelike substances called prostaglandins. They are also required for energy production.

Vitamins

Fresh juice is loaded with vitamins. Vitamins take part, along with minerals and enzymes, in chemical reactions. For example, vitamin C participates in the production of collagen, one of the major types of protein found in the body. Fresh juices are excellent sources of water-soluble vitamins such as C; many of the B vitamins and some fat-soluble vitamins such as vitamin E; the carotenes, known as provitamin A (they are converted to vitamin A as needed by the body); and vitamin K. They also come packaged with cofactors, such as vitamin C with bioflavonoids. The cofactors and vitamins help each other be more effective.

Minerals

Fresh juice is loaded with minerals. There are about two dozen minerals that your body needs to function well. Minerals, along with vitamins, are components of enzymes. They make up part of bones, teeth, and blood tissue, and they help maintain normal cellular function. The major minerals include calcium, chloride, magnesium, phosphorus, potassium, sodium, and sulfur. Trace minerals are those needed in very small amounts, which include boron, chromium, cobalt, copper, fluoride, manganese, nickel, selenium, vanadium, and zinc. Minerals occur in inorganic forms in the soil, and

plants incorporate them into their tissues. As a part of this process, the minerals are combined with organic molecules into easily absorbable forms, which make plant food an excellent dietary source of minerals. Juicing is believed to provide even better mineral absorption than whole vegetables because the process of juicing liberates minerals into a highly absorbable, easily digestible form.

Enzymes

Fresh juices are chock-full of enzymes—those “living” molecules that work with vitamins and minerals to speed up reactions necessary for vital functions in the body. Without enzymes we would not have life in our cells. Enzymes are prevalent in raw foods, but heat such as cooking and pasteurization destroys them. All juices that are bottled, even if kept in store refrigerators, have to be pasteurized. Heat temperatures for pasteurization are required to be far above the limit of what would preserve the enzymes and vitamins.

When you eat and drink enzyme-rich foods, these little proteins help break down food in the digestive tract, thereby sparing the pancreas, small intestine, gallbladder, and stomach—the body’s enzyme producers—from overwork. This sparing action is known as the “law of adaptive secretion of digestive enzymes.” According to this law, when a portion of the food you eat is digested by enzymes present in the food, the body will secrete less of its own enzymes. This allows the body’s energy to be shifted from digestion to other functions such as repair and rejuvenation. Fresh juices require very little energy expenditure to digest, and that is one reason people who start consistently drinking fresh juice often report that they feel better and more energized right away.

Phytochemicals

Plants contain substances that protect them from disease, injury, and pollution. These substances are known as phytochemicals. *Phyto* means “plant,” and *chemical* in this context means “nutrient.” There are tens of thousands of phytochemicals in the foods we eat. For example, the average tomato may contain up to ten thousand different types of phytochemicals, the most famous being lycopene. Phytochemicals give plants their color, odor, and flavor. Unlike vitamins and enzymes, they are heat-stable and can withstand cooking. Researchers have found that people who eat the most fruits and vegetables, which are the best sources of phytochemicals, have the lowest incidence of cancer and other diseases. Drinking vegetable juices gives you these vital substances in a concentrated form.

Biophotons

There’s one more substance, more difficult to measure than the others, that’s present in raw foods. It’s being studied scientifically in tubes and is named biophotons. It’s light energy that the plants absorb from the sun, and it is found in the living cells of raw foods such as fruits and vegetables. Photons have been shown to emit coherent light energy when uniquely photographed (using Kirlian photography). This light energy is believed to have many benefits when consumed; one in particular is thought to aid cellular communication. Biophotons feed the mitochondria of the cells, which produce ATP—our body’s energy fuel. Biophotons are also believed to contribute to our energy, vitality, and feeling of vibrancy and well-being.

Frequently Asked Questions

Now that you know why juice is so effective for good health, you may have some questions about

juicing. Below I will address some of the questions I am most commonly asked about juicing.

Why juice? Why not just eat the fruits and vegetables?

Though I always tell people to eat their vegetables and fruit, there are at least three reasons juice is important and should also be included in the diet. First, we can juice far more produce than we would probably eat in a day. It takes a long time to chew raw veggies. Chewing is a very good thing. I highly encourage it. However, we have only so much time for chewing raw foods. One day I timed how long it would take for me to eat five medium-size carrots. (That's what I often juice along with cucumber, lemon, ginger root, beet, kale, and celery.) It was about fifty minutes of chewing. Not only do I not have that kind of time every day, my jaw was so tired afterward that I could hardly move it.

LIGHT AFFECTS NUTRIENTS



Do you select your produce from the front of a display, or do you reach to the back, hoping you'll find the ones that are freshest and least picked over? If you think the hidden produce is the best, a new study may convince you to choose your fruits and veggies differently. Scientists from the US Department of Agriculture (USDA) recommend that consumers select their produce from those receiving the greatest light—usually the ones found at the front or top of the display. For example, researchers found that spinach exposed to continuous light during storage was more nutritionally dense than spinach that was continually in the dark. The scientists said light affects the leaves' photosynthetic system, which resulted in an increase in vitamins C, E, K, and folate.¹

Secondly, we can juice parts of the plant we would not normally eat, such as stems, leaves, and seeds. I juice things I know I would rarely or never eat, such as beet stems and leaves, celery leaves, the white pithy part of the lemon with the seeds, asparagus stems, broccoli stems, the base of cauliflower, kohlrabi leaves, radish leaves, and ribs of kale.

Thirdly, juice is broken down so it spares digestion. It is estimated that juice is at work in the system in about twenty to thirty minutes after it is consumed. When we have ailments, juice is therapy for that very reason. When the body has to work hard to break down veggies, for example, it can spend a lot of energy on the digestive process. Juicing does the work for you. So when you drink a glass of fresh juice, all those life-giving nutrients can go to work right away to heal and repair your body, giving you energy for its work of rejuvenation.

Don't we need the fiber that's lost in juicing?

It's true that we need to eat whole vegetables, fruit, sprouts, legumes, and whole grains for fiber. We drink juice for the extra nutrients; it's better than any vitamin pill. And for weight loss I recommend vegetable juices for appetite control. I also recommend juice as therapy. I cover more than fifty different ailments in my book *The Juice Lady's Guide to Juicing for Health* that can be improved with juice therapy, diet, and nutrients. Whole fruits and vegetables have insoluble and soluble fiber. Both types of fiber are very important for colon health. It's true that the insoluble fiber is lost when you juice. However, soluble fiber is present in juice in the form of gums and pectins. Soluble fiber is excellent for the digestive tract. It also helps to lower blood cholesterol, stabilize blood sugar, and improve good bowel bacteria. Don't worry about the fiber that is lost when you juice. Think about all the extra nutrition you are getting. Fresh juice is one of the best vitamin-mineral cocktails you could drink. You may not need as many nutritional supplements when you juice, so that could save you money in the long run. Drink your juice as a smart addition to your high-fiber diet.

Are a lot of nutrients lost with the fiber?

In the past some groups have thought that a significant amount of nutrients remained in the fiber after juicing, but that theory has been disproved. The US Department of Agriculture analyzed twelve fruits and found that 90 percent of the antioxidant nutrients they measured was in the juice rather than the fiber.² This makes fresh juice a great supplement in the diet.

Is fresh juice better than commercially processed juice?

Fresh juice is "live food" with a full complement of vitamins, minerals, phytochemicals, and enzymes. It also contains biophotons that revitalize the body. You feel better when you drink fresh juice! In contrast, commercially processed canned, bottled, frozen, or packaged juices have been pasteurized, which means the juice has been heated and many of the vitamins and enzymes have been killed or removed. And the light energy is virtually gone. If you look at a Kirlian photograph of a cooked vegetable or a pasteurized glass of juice, you'll see very little "light" or no light emanating from them. This means the juice will have a longer shelf life, but it won't give your body life. Making your own juice also allows you to use a wider variety of vegetables and fruit you might not otherwise eat, such as kale, beets with leaves and stems, lemon with the white part, stems, seeds, and chunks of ginger root. Some of my recipes include Jerusalem artichokes, jicama, green cabbage, celery leaves, asparagus stems, broccoli stems, kale, and parsley. These sweet, crisp tubers and healthy greens are not found in most processed juices.

How long can fresh juice be stored?

The sooner you drink fresh juice after you make it, the more nutrients you'll get. However, you can store juice and not lose too many nutrients by keeping it cold in an insulated container or covered in the refrigerator. You can also freeze it. Many busy moms are choosing to make a large batch of juice on the weekends and freeze it in individual containers.

On a personal note, when I had chronic fatigue syndrome, I would juice in the afternoons when I had the most energy and store the juice covered in the refrigerator and drink it for the next twenty-four hours until I juiced my next batch. I got well doing that.

How much produce is needed to make a glass of juice?

People often ask me if it takes a basket of produce to make a glass of juice. Actually, if you're using a good juicer, it takes a surprisingly small amount. For example, the following items yield about one 8-ounce glass of juice: five to seven large carrots or one large cucumber. The following each yield about 4 ounces of juice: one large apple, three to four large (13-inch) ribs of celery, or one large orange. The key is to get a good juicer that yields a dry pulp. I've used juicers, even expensive models that ejected very wet pulp. When I ran the pulp through the juicer again, I got more juice and the pulp was still wet. If the rotation speed (RPM) is too high or the juicer is not efficient in other ways, you will waste a lot of produce.

Will juicing cost a lot of money?

If you were to crunch the numbers, you would find that the cost of a glass of juice is less than a latte. With three or four carrots, half a lemon, a chunk of ginger root, two ribs of celery, three or four green leaves, and half a cucumber, you will probably spend two dollars to three and a half dollars, depending on the season, the area of the country you live in, and the store where you purchase your produce. But wait—there are also hidden savings. You may not need as many vitamin supplements. What's that worth? And you'll probably need far fewer over-the-counter medications such as painkillers; sleeping aids; antacids; and cold, cough, and flu medications. That's a whopping savings! And then there's time not lost from work. What happens when you run out of sick days? Or if you're self-employed, you've missed out on income each day you're sick. With the immune-building, disease-fighting properties of fresh juice, you should stay well all year long.

HOW TO CHOOSE THE RIGHT JUICER

Choosing the right juicer can make the difference between juicing daily and never juicing again, so it's important to get one that works for your lifestyle. I'm often asked if a blender can be used instead of a juicer, and unfortunately you can't use a blender to make juice, no matter how high-powered or expensive it is. A juicer separates the liquid from the pulp (insoluble fiber). A blender liquefies everything that is placed in it; it doesn't separate the insoluble fiber from the juice. If you think it might be a good idea to have carrot, beet, parsley, and celery pulp in your juice for added fiber, I can tell you from experience that it tastes like juicy mush. For the best juice, which is juice you'll enjoy and drink every day, you need a juicer. These are the features you should look for:



- Choose a machine with *adequate horsepower* (hp). I recommend a juicer with 0.3 to 1 hp. Weak-motored machines with low horsepower ratings must run at extremely high RPM (revolutions per minute). However, a machine's RPM does not accurately reflect its ability to perform effectively, because RPM is calculated when the juicer is running idle, not while it is juicing. When you feed produce into a low-power machine, the RPM will be reduced dramatically, and sometimes the juicer will come to a full stop. I have "killed" some machines on the first carrot I juiced.
- Make sure the juicer is *efficient at extracting juice*. I've used a number of juicers that wasted a lot of produce because there was a lot of juice left in the pulp. You should not be able to squeeze a lot of juice out of the pulp. Some machines have an RPM that is too high, and the pulp comes out very wet. I've had people tell me they were spending a lot of money on produce and getting only a small amount of juice, which should not be the case. It often turned out that they were wasting a lot of produce because of an inefficient juicer.
- Look for a machine that has electronic circuitry that sustains blade speed during juicing.
- The juicer *should be able to juice all types of produce*. Make sure the machine can juice tough, hard vegetables, such as carrots and beets, as well as delicate greens, such as parsley, lettuce, and herbs. Make sure it doesn't need a special citrus attachment. For wheatgrass juice, you'll need a wheatgrass juicer or a juicer that presses the juice, such as a single auger or twin gear machine, also known as a masticating juicer. Be aware that the machines that juice wheatgrass along with other vegetables and fruit take more time to use. Some are more time consuming to clean as well.
- Look for a *large feed tube* if you don't have a lot of time to devote to juicing. Cutting your produce into small pieces before juicing does take time. A large feed tube will allow you to juice more quickly. Be aware that the masticating style juicers have small openings at the top, so you will need to spend a little more time preparing your produce.
- Look for a juicer with *only a few parts to clean*. The more parts a juicer has, and the more complicated the parts are to wash, the longer it will take to clean up and the more time it will take to put it back together. That makes it less likely you will use your machine daily. Also make sure the parts are dishwasher-safe. It's very easy to just rinse the parts and let them air dry. It really helps to spray the blade basket if you have a separate faucet sprayer. This can blow out fiber particles very quickly. Then take a soft-bristle dish brush and brush both sides quickly under running water. I clean the lid, blade basket, and juice bowl in this manner in less

than a minute.

Two Types of Juicers: Centrifugal and Masticating

The centrifugal, or centrifuge, juicers typically have an upright design. Food is pushed into a rapidly spinning mesh blade basket with sharp teeth. The teeth shred the produce into a pulp, and the centrifugal motion pulls the juice out of the pulp and through the mesh filter, where it is funneled out of the juicer via a spigot and the pulp is ejected into a catcher. Centrifugal juicers will not juice wheatgrass. Another drawback is that the juice will not last as long as juice made with a masticating type of juicer because more oxygen is incorporated into the juice. There is also some indication that there are fewer nutrients in juice from centrifugal devices due to the extracting process of the juicer.

The masticating type of juicer produces juice with either a single auger or twin gear. Pieces of fruits and vegetables are fed into the top of the tube and are crushed and squeezed. Juice drains out of the underside, while the pulp is pushed out at the end of the tube. Because of the slower crushing and squeezing action, masticating juicers can process wheatgrass and will juice leafy greens a little better than a centrifugal juicer. The juice these devices produce will last much longer than juice made in a centrifugal juicer, and there is indication that more nutrients are preserved. The drawbacks are that they take longer to make juice because they are slower, and produce has to be cut in smaller pieces because they do not come with wide mouths.

Which one is the best type of juicer? The one you will use every day.

The Basics of Juicing

Juicing is a very simple process. Simple as the procedure is, though, it helps to keep a few guidelines in mind to obtain the best results.

- *Wash all produce before juicing.* Fruit and vegetable washes are available at many grocery and health food stores. Or you can use hydrogen peroxide and then rinse. Cut away all moldy, bruised, or damaged areas of the produce.
- *Always peel oranges, tangerines, tangelos, and grapefruit* before juicing, because the skins of the citrus fruit contain volatile oils that can cause digestive problems such as stomachaches. Lemon and lime peels can be juiced, if organic, but they do add a distinct flavor that is not one of my favorites for most recipes. I usually peel them. Leave as much of the white pithy part on the citrus fruit as possible, though, since it contains the most vitamin C and bioflavonoids. Bioflavonoids work with vitamin C; they need each other to create the best uptake for your immune cells. Always peel mangoes and papayas since their skins contain an irritant that is harmful when eaten in quantity.

I also recommend that you peel all produce that is not labeled organic even though the large concentration of nutrients is in and next to the skin. For example, nonorganic cucumbers are often waxed, trapping the pesticides. You don't want the wax or pesticides in your juice. The peels and skins of sprayed fruits and vegetables contain the largest concentration of pesticides.

- *Remove pits, stones, and hard seeds* from fruits such as peaches, plums, apricots, cherries, and mangoes. Softer seeds from cucumbers, oranges, lemons, limes, watermelons, cantaloupes, grape

papaya, and apples can be juiced without a problem. Because of their chemical composition, large quantities of apple seeds should not be juiced for young children under the age of two, but they should not cause problems for older children and adults.

- *The stems and leaves of most produce can be juiced.* Beet stems and leaves, strawberry caps, celery leaves, radish leaves, and small grape stems are all fine to juice, and they offer nutrients. Discard larger grape stems, as they can dull the juicer blade. Also remove carrot tops and rhubarb greens because they contain toxic substances. Cut off the ends of carrots since this is the part that molds first.
- *Cut fruits and vegetables into sections or chunks that will fit into your juicer's feed tube.* You'll learn from experience what can be added whole and what size chunks work best for your machine. If you have a large feed tube, you won't have to cut up a lot of produce.
- *Some fruits and vegetables don't juice well.* Most produce contains a lot of water, which is ideal for juicing. The vegetables and fruits that contain less water, such as bananas and avocados, will not juice well. They can be used in smoothies and cold soups by first juicing other produce, then pouring the juice into a blender and adding the avocado, for example, to make a raw soup or green smoothie. Mangoes and papayas will juice but make a thicker juice.
- *Drink your juice as soon as you can after it's made.* If you can't drink the juice right away, store it in an insulated container such as a thermos or another airtight, opaque container and in the refrigerator if possible. You can store juice for up to twenty-four hours. Light, heat, and air will destroy nutrients quickly. Be aware that the longer juice sits before you drink it, the more nutrients are lost. You can also freeze the juice.

If juice turns brown, it has oxidized and lost a large amount of its nutritional value; it is not good to drink it at this point as it may be spoiled. When I was very sick with chronic fatigue syndrome I had only enough energy to juice once a day. I would store some of the juice for up to twenty-four hours. I got well doing that, so I know the juice had plenty of nutrients even in the stored amount. Melon and cabbage juice do not store well; drink them soon after they've been juiced.

WASTE NOT, WANT NOT



Start saving parts of vegetables to juice that you would normally toss, such as the stems of broccoli, the base of cauliflower, the tough stems of asparagus, radish leaves, kohlrabi leaves, cilantro stems, parsley stems, spinach stems, kale ribs, and any other juicable part I may have overlooked. Add these parts to various juice recipes. If you add them in limited quantity, you won't even know they are there. This is great economy and good for your

health. Save your veggie pulp and add it to soups. One of our friends puts veggie pulp in soups and finds it a great addition, as long as she doesn't add too much. Use no more than 2 cups per soup recipe. Save veggie pulp to feed chickens. It gives their eggs bright yellow yolks. You can also compost it for rich garden soil.

And don't forget your pets. I cut off the ends of carrots before juicing, which our Schnauzer, Annie, loves. I also give her some carrot fiber, which she gobbles up.

Look for Organic Produce

The popularity of organic foods has increased dramatically in recent years and continues to grow in popularity. Sales of organic foods reach into the billions of dollars each year and continue to increase annually. It appears that an ever-growing number of people want to avoid the billion pounds or more of pesticides and herbicides sprayed onto or added to crop soil yearly.³ That's for good reason! It is estimated that only about 2 percent of this amount actually fights insects and weeds while the rest is absorbed into the plants and diffused into our air, soil, and water.⁴ This pesticide residue poses long-term health risks, such as cancer, Parkinson's disease, and birth defects,⁵ as well as immediate health risks from acute intoxication, including vomiting, diarrhea, blurred vision, tremors, convulsions, and nerve damage.

If pesticides and herbicides do not (as we're told) pose a health risk, then why, when compared with the cancer rates of the general public, is there a greater incidence of cancer, particularly lymphoma, leukemia, and cancer of the brain, skin, stomach, and prostate among crop workers and farmers and their families?⁶

I'm often asked if organic produce is more nutritious than conventionally grown produce. Studies have shown that it is. According to results from a \$25 million study into organic food, the largest of its kind to date, organic produce completely outshines conventional produce in nutritional content. A four-year, European Union-funded study found that organic fruits and vegetables contain up to 40 percent more antioxidants. They have higher levels of beneficial minerals such as iron and zinc. Milk from organic herds contained up to 90 percent more antioxidants. The researchers obtained these results after growing fruits and vegetables and raising cattle on adjacent organic and nonorganic sites. The report also found that eating organic foods can even help to increase the nutrient intake of people who don't eat the recommended number of servings of fruits and vegetables a day.⁷

Additionally, a 2001 study completed as part of a doctoral dissertation at Johns Hopkins University looked at forty-one different studies involving field trials, greenhouse pot experiments, market basket surveys, and surveys of farmers. The most studied nutrients across those surveys included calcium, copper, iron, magnesium, manganese, phosphorus, potassium, sodium, zinc, beta-carotene, and vitamin C. Many studies also looked at nitrates. According to the study there was significantly more vitamin C (27 percent), iron (21 percent), magnesium (29 percent), and phosphorus (13 percent) in the organic produce than in the conventionally grown vegetables. There were also 15 percent fewer nitrates in the organic vegetables. The vegetables that had the biggest increases in nutrients between organic and conventional production were lettuce, spinach, carrots, potatoes, and cabbage.⁸ Coupled with the fact that organic produce has less chemical residue, and you can see that buying organically grown food is well worth the effort and the additional cost.

When choosing organically grown foods, look for labels that are marked "certified organic." The

means the produce has been cultivated according to strict uniform standards that are verified by independent state or private organizations. Certification includes inspection of farms and processing facilities, detailed record keeping, and pesticide testing of soil and water to ensure that growers and handlers are meeting government standards. You may occasionally see a label that says “transitionally organic.” This means the produce was grown on a farm that recently converted or is in the process of converting from chemical sprays and fertilizer to organic farming.

You may not be able to afford to purchase everything organic. When that’s the case, choose wisely. According to the Environmental Working Group, commercially farmed fruits and vegetables vary in their levels of pesticide residue. Some vegetables, such as broccoli, asparagus, and onions, as well as foods with thicker peels, such as avocados, bananas, and lemons, have relatively low levels of pesticides compared to other fruits and vegetables.⁹

TWO MUST-BUY ORGANIC FOODS



Potatoes are a staple of the American diet. One survey found they account for 30 percent of our overall vegetable consumption. A simple switch to organic potatoes has the potential to have a big impact because commercially farmed potatoes are some of the most pesticide-contaminated vegetables. A 2006 USDA test found that 81 percent of potatoes tested still contained pesticides after being washed and peeled. Also, the potato has one of the highest pesticide contents of forty-three fruits and vegetables tested, according to the Environmental Working Group.¹⁰

Apples are the second most commonly eaten fresh fruit after bananas, and they are the second most popular fruit juice after orange juice. But apples are also one of the most pesticide-contaminated fruits. The good news is that organic apples are easy to find and readily available in most grocery stores.

Be aware that some vegetables and fruit contain large amounts of pesticide. Each year the Environmental Working Group releases its list of the “Dirty Dozen” fruits and vegetables, which rates fruits and vegetables from worst to best. Eating the least-contaminated vegetables and fruits as found on the “Clean Fifteen” list will expose a person to the least pesticides. You can check it out online at www.ewg.org.

When the organic vegetables or fruit that you want are not available, ask your grocer to get them. You can also look for small-operation farmers in your area and check out farmers markets. Many small farms can’t afford to use as many chemicals in farming as large commercial farms use. Another

AVOID THE “DIRTY DOZEN”



If you can't afford to purchase all organic produce, you can still avoid the worst pesticide-sprayed produce. The nonprofit research organization Environmental Working Group reports periodically on health risks posed by pesticides in produce. This group says you can cut your pesticide exposure by almost 90 percent simply by avoiding the top twelve conventionally grown fruits and vegetables that have been found to be the most contaminated. Studies have shown that eating the twelve most contaminated fruits and vegetables will on average expose a person to about fourteen pesticides per day. Eating the twelve least contaminated vegetables and fruit will expose a person to less than two pesticides per day.¹¹

The most current “Dirty Dozen” at the time of this writing is below, ranked in order from the worst to the least contaminated. This year the Environmental Working Group expanded the list to highlight two crops that did not meet the traditional criteria but were commonly contaminated with organophosphate pesticides, highly toxic insecticides that are harmful to the nervous system. Though they have been largely removed from agriculture, these insecticides still show up on some food crops.¹² The “Dirty Dozen” list changes each year, so to get the current ratings, visit www.ewg.org.

1. Apples
 2. Celery
 3. Sweet bell peppers
 4. Peaches
 5. Strawberries
 6. Nectarines (imported)
 7. Grapes (including raisins and wine)
 8. Spinach
 9. Lettuce
 10. Cucumbers
 11. Blueberries (domestic)
 12. Potatoes
- Plus: Green beans and kale/collard greens

Is Irradiated Food Harmful?

Food irradiation exposes food to ionizing radiation in order to destroy microorganisms, bacteria, viruses, or insects that might be present in the food. Stay away from irradiated fruits and vegetables as much as possible. Some food producers use gamma-ray radiation to kill pests, bacteria, and germs in stored food and to increase the food's shelf life. Dr. George Tritsch of Roswell Park Memorial Institute, New York State Department of Health, says he is opposed to consuming irradiated food "because of the abundant and convincing evidence in scientific literature that the condensation products of the free radicals formed during irradiation produce statistically significant increases in carcinogenesis, mutagenesis, and cardiovascular disease in animals and man." There is also reported destruction of vitamins and other nutrients.¹³ This practice destroys phytochemicals, biophotons, and enzymes, and it generates harmful by-products such as free radicals (which are toxic and can damage cells) and harmful chemicals known as radiolytic products, which include thalidomide.¹⁴

Irradiation of fruits and vegetables may pose an even greater problem than irradiation of other foods due to the large quantities of water found in produce, which allows for greater free-radical production. The answer to food-borne illnesses is not irradiation but stopping the overuse of pesticides, transforming overcrowded factory farm animal lots to humane farms, and ensuring more sanitary conditions in growing produce and food-processing plants.

THE ENVIRONMENTAL WORKING GROUP'S "CLEAN FIFTEEN"¹⁵



These fruits and vegetables are the least contaminated by pesticides.

1. Onions

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