



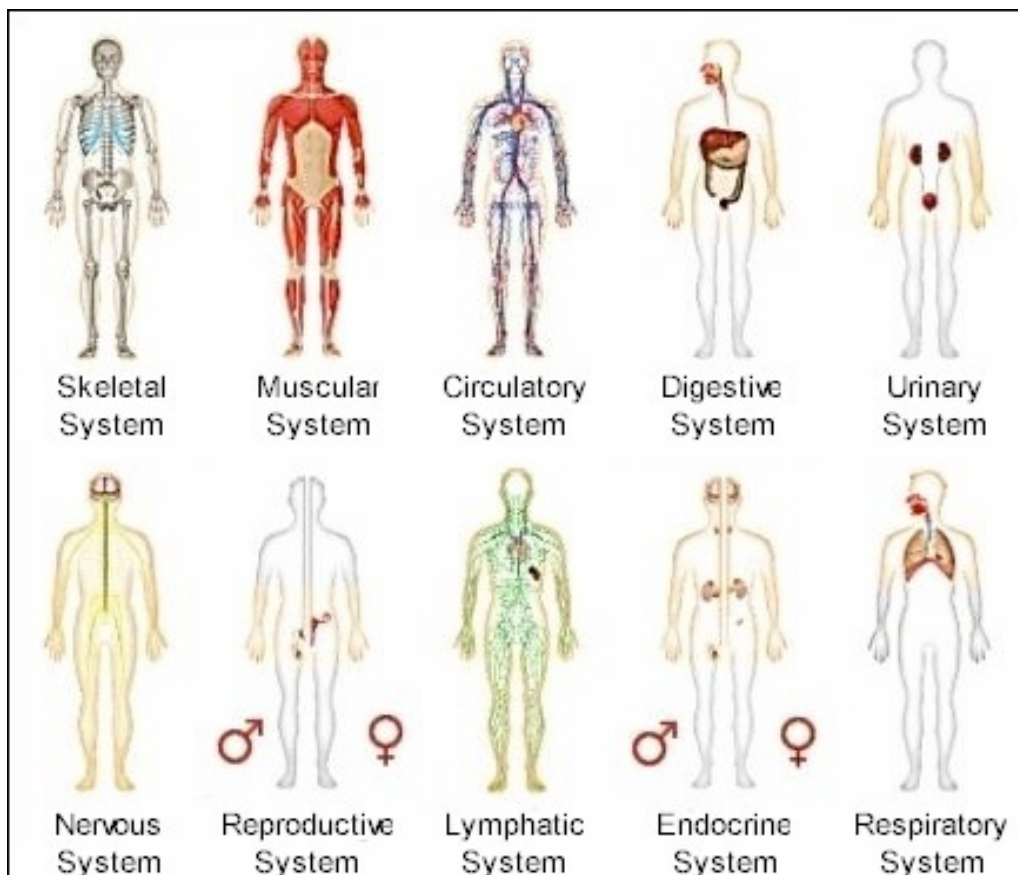
INSIDE OUT POSTURING

Yoga is an internal practice. Yoga works more on the inside than the outside, this is one of the reasons it is a very misunderstood practice. Our minds get ahold of the physical side of the practice -- since this is the most tangible, we then turn the practice into grunt work or into musculo-skeletal exercise only. Although the muscles and bones are important to keep healthy, yoga works much deeper on all the systems of the body. This is why we do some of the "funky" things we do, like stick our heel in our gut, catch our big toes, and jump back . . .

When you take your practice inside and do your practice from the inside out -- working with your organs, your nervous system, your endocrine system, and most importantly your breathing system and patterns of your attention or consciousness, you get the inner experience. This is much deeper and satisfying, you are not limited to what your muscles and bones can or can't do.

With this topic I would like us to learn about our inner bodies -- our organs and their functions for starters. Many of us think of our body as 5 limbs -- 2 arms, 2 legs, and a torso -- but the yoga goes deeper, within our torso we need movement

10 systems of the Body



A balanced yoga practice works on each system of the body:

Skeletal and muscular system with Sun Salutes and all postures.

Circulatory system with all postures, especially inversions.

Digestive system - Poses such as Navasana are done to improve digestion by strengthening abdominals to help food move through the body.

Urinary System - all poses where we roll on our back are done for the urinary system and the ureter channel -- the channel that goes from the kidneys to the bladder.

Nervous system - back bending and second series cleanses the nervous system

Reproductive System - Mari B&D for women and Janu B for men

Lymphatic system - stimulated by paschimattanasana and bandhas to move lymph in gut and all poses

Endocrine system - inversions and rest pose

Respiratory System - breathing exercises, pranayam, vinyasas and sun salutes



to keep the organs functioning properly, we need to bend and twist our torso and move our ribs in many different ways to keep blood circulating . . . bringing in fresh nutrients and removing waste. We will use yoga postures to learn about our inner body and organs, which organs are affected by which postures, where those organs are and what they do.

By educating ourselves we can practice smarter -- with intelligence. In this way we will not be tempted to push our bodies into someone else's definition of form, thus reducing our risk of injury and increasing the benefits of yoga. Also, once you understand how a body part works, you can help to maintain it so that it remains healthy. Knowledge is empowering.

The power of your Mind

Before we go further, I want to address those of you who feel you are limited by tightness, injury, or pain and maybe feel like not able to “do” a yoga posture, or not “good at it”. We touched on this last week, when I spoke about what you are creating in your back mind thoughts.

Firstly, it is also comforting to know that it is not just the asana or yoga postures that detoxifies the body and heals the nervous system - it is the heat, the sequencing, the breathing, the bandhas, the vinyasas, the sun salutes . . . the sweating, the stretching, the rearranging and realigning, and the creating space in your body for the organs to function optimally.

Secondly, through biofeedback we now know what the yogis said about ‘where your thoughts go energy flows’ is true. When you think about a certain organ in your body, you increase not only blood flow to that area but lymphatic and neural flow, etc. as well.

Your mind is a powerful tool! It can lead us down wrong paths -- or it can enhance anything we are trying to accomplish. Energy or consciousness effects matter. There are many studies and articles showing proof that we can harness the power of our mind, studies have shown that when you put your mind into what you are doing it is more effective.

Rumination aka re-hatching

Taking this a step further; in your practice—or even just during your day, if you are worrying about something at work or even a personal situation you are sending your “energy” aka healing blood flow out of your body to some circumstance that is most likely out of your control. Keep your energy in your body! Remember when I was talking about the abacus and we only have so much energy available to us on any given day. Learning which postures work where in your body and sending your energy there, is another tool to use your energy to heal and nourish your body and mind during your practices.

Mind flow

And this “mind flow” also effects our muscular system; I found a study done on mind only exercises for the muscular system <http://www.ncbi.nlm.nih.gov/pubmed/14998709>. In this study they tested elbow flexion and pinky abduction with what they called “mental contractions” -- Only doing the exercises in the mind without any physical exercise being done; they tested the same exercises being done with real weights, and of course had a control group. The results . . . the “mental



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contraction" group had a 35% increase in muscle strength, the group who used real weights had a 53% increase in strength, and the control group stayed the same -- simply focusing and imagining doing the exercise increased muscle strength! This study concluded "The mental training employed by this study enhances the cortical output signal, which drives the muscles to a higher activation level and increases strength."

And now we also know it is the body sending more blood flow to the muscle just by employing our brains instead of employing our muscles.

I did some research on using the power of your mind, here is what I found:

To use your mind power, you have to know how to employ it -- the best way to do that is to know what it is you want to do and to think it often;

☯ The thoughts you think most often are more likely to happen

☯ If you put your mental energy into the same thoughts day after day they become stronger -- and eventually affect your attitude and behavior.

☯ Not every thought turns into reality, a thought not only has to be repeated but believed to carry power.

☯ Doubts, fears and worries tend to destroy what you build with the power of your mind. It is helpful to clear your mind of negative thoughts and doubts.

Your daily practice is a good place to put your thoughts into the healing of your inner body, in this way every day when you practice you are using the power of your mind to keep your body healthy. For those of you who can not press your heel into your liver . . . you can use the power of your mind and receive benefits.

Which brings me to another topic I want to discuss before we get into our insides . . .

"Hierarchy of Protection"

If you have a tightness, it is not always a tightness in the muscles, tendons, or ligaments -- in fact many times it is the body protecting an organ or nerve, or disc, etc. For example; In back therapy, individuals with a bulging disc in their spine experience tightness in the muscles -- the surrounding muscles contract to stabilize the spine from moving in a way to further damage the disc. This protection also happens around our organs and nerves, in people who live a sedentary lifestyle and have poor posture, the organs prolapse and slip out of their place -- thereby losing the protection of the rib cage. Same with many tightnesses in our neck, shoulders, or other places -- for example my own right shoulder experiences a tightness that does not feel like it is tissue tightness, but rather the muscles contracting to protect a nerve -- to push through this tightness would not be wise -- in fact it would be damaging.

How then to heal these areas? First you have the power of your mind . . . In addition we can also use the understanding of prana movement, to create space to allow blood flow and healing to occur:

Prana, which refers to the energy in our body that keeps us alive, when translated literally means **"moving always"**.



Every single little area of our body needs movement of some type to keep the cells healthy, such as blood flow, lymph flow, cellular fluids, waste products, etc. Where movement does not occur in our body, disease sets in; much in the same way as the heart if it loses blood flow we get a heart attack, and your brain if it loses blood flow you have a stroke. Tense in your neck and upper back all day? This reduces blood flow and you get a mini “muscle attack” in your trapezius muscle ... or wearing tight shoes or running long distances? You get a mini “toe attack” in the form of a bunion ...

During your practice breathe space into the sore areas, opening them up to allow blood flow.

Rest pose at the end of your practice is a nice place to do that. To allow movement to an area that is being protected, during rest pose put your mind into that area, envision it relaxing and expanding to allow blood flow. You can even lightly massage or hold the area as you breathe deeply, sending the healing power of your breath to the area. During your practice do not push into this tight area -- create space in the area with your breath, try re-aligning yourself slightly differently to enhance blood flow.

The body will then effortlessly and naturally relax and allow movement, flexibility, and healing to occur, despite your best efforts ;) . . . strained hamstrings and/or sprained tendons or ligaments from your practice are signs that you are pushing too much -- and its time to practice smarter.

A word on scar tissue

Scar tissue sometimes forms to protect a joint or injury, and other times a lack of blood flow causes this painful, fibrous tissue to build up (the muscles response to not having adequate blood flow due to a sedentary lifestyle, injury or spasm, is to lay down a protective tissue that does not use blood -- scar tissue). In some cases scar tissue protects an injured joint from movement while it heals, but as healing occurs it is important to remove the scar tissue to allow blood flow. The most effective therapies break down scar tissue and reinstate blood flow.

- ॐ The poses and movement -- especially a full range of movement will help to break down scar tissue
- ॐ Assists can help to break through scar tissue, however hard assists are counterproductive.
- ॐ Massage will also break up scar tissue as will other alternative techniques like rolfing and foam rollers.

The Purpose of all this research . . . it is interesting and reassuring to see the yogic texts backed by science, not that I need to believe the science to believe the yogic texts, I can feel the goodness in my body. But even with all the research and tests to back up why we do this crazy practice there is still an element of magic. Just like acupuncture . . . science can not explain fully why it works (other than stimulating the immune system) but admits there is proven benefit from acupuncture . . . There are many energetics going on the body that we just cannot explain. So enjoy that fact, enjoy the science, and believe in magic ;)



A word on Detoxification



We need to detox everyday, a big part of primary series and forward bending postures is to support the liver and kidneys (and the lymphatics, and respiratory system, and the colon ...) in helping our body rid itself of the daily toxins we are exposed to — and even just the act of making energy in our body makes “toxins” or free radicals that need to be eliminated (burning fat as fuel instead of sugar will create less of those toxins, btw).

When we use a hormone in our body it does not just go away, there are left over metabolites that need to be detoxed even from our own hormones.

Toxin Exposures are higher than ever!

And then there are what is becoming much bigger issues ... and our dwindling populations of bees and insects and wild life animals are all showing you what is happening slowly inside your body. We are killing everything with roundup and other herbicides and pesticides, with fracking, with chemicals — household chemicals, yard chemicals, plastic chemicals — really the list now goes on and on with over 85,000 chemicals approved for use in the USA and many of them have only been minimally tested for short periods of time. AND GET THIS ... They were never tested mixed with other chemicals! Which creates very different reactions and happens all the time in real life use. Scary. Those chemicals are mixed together everyday in us, think of a salad with vegetables from all over the world all sprayed with different chemicals — guess what, no one knows if those chemicals are safe when mixed together, yet they are FDA approved. Insanity.

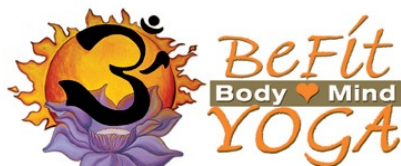
Manmade Chemicals are more prevalent than they ever have been in our history. We are all literally like the test mice that are subject to all our scientific tests — chemicals are being used without adequate testing — WE ARE THEIR TEST SUBJECTS ... we are not faring well looking at our rates of cancer and auto-immune diseases; first they doubled, then they tripled, now they are quadrupling.

Autoimmune disease is described as an immune dysfunction or as the immune system attacking the body. In reality it's not attacking your own body, what it's attacking is misshapen, or changed, or damaged human cells that our body does not recognize as us because chemicals have mutated those cells.

A lot of the diseases — and suffering that are occurring these days isn't because there's something genetically wrong with folks. It's because the environmental signals have changed the shape of our own cells, the behavior of our own cells; which in turn confuses the immune system. What is damaging our cells so the body can not even recognize them? Manufactured chemicals.

We are the detox-ers for the chemical industry as well as their test subjects. These chemicals need detoxed from the environment; as they pass from our foods and environmental exposures to our body, we stress our liver and kidneys — among other body systems — detoxing; we are also like the trees and the plants having to deal with toxic burden and clean it up through our body. I guess its only fair.

The poor animals and insects are more exposed than we are — at least we can filter our drinking water, they cannot.



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Since 1970 the World Wildlife Federation has noted at 57% decrease in all wildlife — both land and sea!

Yes that's less than half of the fireflies, fish, butterflies and bees, birds — our pollinators ... they are dwindling! More than half of every animal has died off . . . What do you think is killing off the animals?

Fat Americans?

Don't blame all the growing waistlines in the world to overeating ... Do you know our body will store fat to tuck these harmful chemicals away in where they do less damage? Some of the chemicals are so harmful our body does not even want to be exposed to it so our body will store it in our bones and fat! Yes FAT, your body will make fat to store toxins tucked away, isolating them from the rest of your body.

ॐ When you start to lose fat these toxins get into your blood stream where you have to detox them and you don't feel good — which many times interferes with the process of trying to lose weight.

Maybe a sign of American's growing waist lines is not only due to our SAD (Standard American Diet) food problems but also the isolated storage of chemicals in fat tissue. Maybe the chemical companies should be paying us rent!

Since WWII we have approved 85,000 chemicals — that's a lot of toxic substances. About 3000 of these are manufactured in high volume. The American Academy of Pediatrics article showed us that in the year 2010 we had imported or produced 74 billion pounds of chemicals in the U.S. per day!! When you do the math, that's 250 pounds per person per day of chemicals. We've drastically increased the production and distribution of synthetic chemical compounds on planet Earth.

<https://www.epa.gov/tsca-inventory/about-tsca-chemical-substance-inventory>

Chemicals companies do NOT have to prove that chemical is harmful before it gets released

— we are the ones who have to mount the complaints after years of suffering or many deaths occur from the chemicals. What typically happens is smart chemists will develop a new product, see that it has useful properties, put it into consumer goods, and then the chemical gets disseminated into the marketplace where it gets used. Typically (according to history) 10, 15, or 20 years later (or more) we realize the chemical is quite harmful and has caused much suffering of our population.

<http://www.greenmedinfo.com/article/endocrine-disrupting-chemicals-contribute-development-type-2-diabetes-mellitus>

All these products and all these chemicals are innocent until proven guilty. We are all test experiments for the chemical industry. We are also their detox-ers ... and worse yet we pay for the tainted products we use while we dispose of their chemicals for them.

What we do know is that exposure to synthetic environmental toxins is widespread, increasing and lifelong at this point.

ॐ **Lifestyle, diet and nutraceuticals can enhance detoxification to prevent disease and restore health, more on this coming right up!**



Below are just a few reasons as to why you want to avoid sources of chemicals and how badly outdated our systems are — motivation to act!

Our testing base for chemicals is based on an antiquated NOEL based risk assessment for synthetic chemicals — this system needs to be updated:

NOEL = No Observable Effect Level, basically a chemical is put in a petri dish with some cells . . . when the cells die then it was too much of a particular chemical and the recommended dosage is calculated from there. The testing does not look at mixing chemicals for testing or how quickly one is able to detox them or fluctuating levels of tolerance.

ॐ It is based on short term observations only!

ॐ Tests only one chemical at a time (like you will only ever be exposed to one at a time!)

- o The body burden of these toxins act synergistically to cause physiological dysfunction — this means when several toxins are mixed in our body at the same time they react differently than one at a time and have a higher likelihood of causing harm and leading to chronic illness.

- * Combining chemicals does make them more dangerous. There was an assessment by the National Food Institute at the Technical University of Denmark found that even small amounts of chemicals can amplify each other's adverse effects when combined. As reported by the Institute:
- * "A recently completed, four-year research project on cocktail effects in foods... has established that when two or more chemicals appear together, they often have an additive effects. This means ... small amounts of chemicals when present together can have significant negative effects. [National Food Institute March 19, 2015](#)
- * Research published in the journal Carcinogenesis also found that chemicals deemed "safe" on their own can cause cancer when combined, even at low doses, with researchers noting, "Our analysis suggests that the cumulative effects of individual (non-carcinogenic) chemicals acting on different pathways, and a variety of related systems, organs, tissues and cells could plausibly conspire to produce carcinogenic synergies." [Carcinogenesis 2015 Jun;36 Suppl 1:S254-96](#)
- * We would agree that chemicals need to be tested with each other before they are released as safe; however the U.S. National Toxicology Program data suggests testing the interactions between just 25 chemicals for 13 weeks would require 33 million experiments and cost \$3 trillion.
- * Jonathan Latham, Ph.D., co-founder and executive director of the Bioscience Resource Project, pointed out that even if such experiments were possible, it's likely that no chemical would be deemed truly "safe."
 - * [Independent Science News May 16, 2016](#)
 - * <http://www.greenmedinfo.com/article/study-suggests-cumulative-effects-individual-non-carcinogenic-chemicals-acting>

ॐ Assumes linear dose-effects of toxins (ex. more = more harm)

- o Smaller amounts of chemicals are more harmful than large exposures. The body will recognize large amounts and mount some protection. Small amounts go untreated by the body and build up over time in the tissues where they lead to chronic diseases.

Toxicology

- The study of poisons or the adverse effects of chemical and physical agents on living organisms
- Historically, toxicology has been concerned with the amount of a poisonous substance that would be lethal (LD50), not subtle or long-term effects on health.





- ॐ Assumes everyone has similar sensitivity, metabolism and elimination of the chemicals. While the human body can metabolize chemicals, in certain doses (specific for a given chemical), the problem is that the exposure is often greater than the amount that can be readily metabolized and the chemical accumulates in the body until a noticeable reaction presents itself.
- o Everyone is different in how they metabolize and excrete these toxins. Some people do it efficiently and some will struggle keeping their toxic burden higher leading to more health problems.
 - o Ignore when there are windows of vulnerability (for ex. puberty, gestation, infants, etc.)

Did you catch the part — If we could test the effects of chemical cocktails — like we are all being currently exposed to — no chemical would be deemed safe.

What are our organs of detox?

- #1 our LIVER
- #2 Kidneys
- #3 Our Respiratory system
- #4 Lymphatic system
- #5 Colon
- #6 Skin

Yoga — specifically primary series addresses all of these. I want to talk about our Liver
The liver and spleen get quite a lot of attention in the Ashtanga practice, as especially the liver serves many major functions in the body.

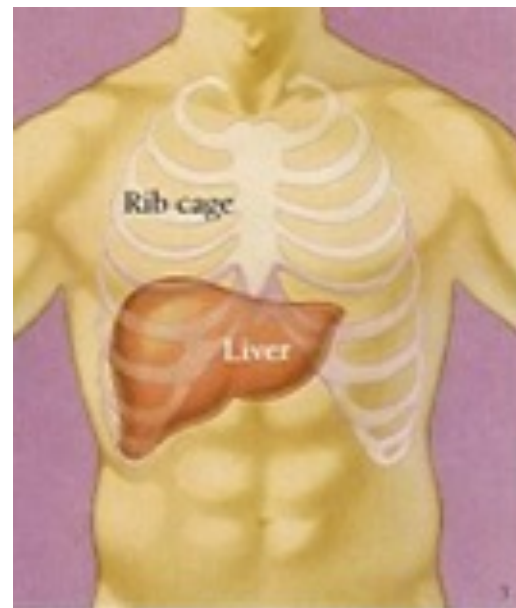
The LIVER

The liver is amazing! It is the only organ that can regenerate itself. You can lose up to 75% of your liver and it will still grow back to full function and size.

Interesting to note; Remember Prometheus?

Greek myth of Prometheus -- Prometheus is a [Titan](#) and [trickster](#) figure who is credited with [theft of fire](#) for human use, an act that enabled progress and civilization. He is known for his intelligence, and as a champion of humanity. (Prometheus means "Fore Thinker").

The punishment of Prometheus as a consequence of the theft: [Zeus](#), king of the [Olympian gods](#), sentenced the Titan to eternal torment for his transgression. The immortal Prometheus was bound to a rock, where each day an [eagle](#), the emblem of Zeus, was sent to feed on his [liver](#), which would then grow back to be eaten again the next day. In some stories, Prometheus is freed at last by the [hero Heracles \(Hercules\)](#).



The liver is the largest and one of the most complex organs in the body. The liver performs over 500 vital functions! Some of the most important include:

- ☯ The liver's main job is to filter the blood coming from the digestive tract (stomach and intestines) before passing it to the rest of the body, detoxifying chemicals, pesticides, metabolizing drugs — meaning the liver has to detoxify everything we put into our mouths. Now that's a big job!
- ☯ It also controls the management of bile and its diversion to the intestines which helps carry away waste products and toxins from the liver.
- ☯ Controlling digestion and metabolism, helping our body metabolize and utilize sugars, fats, and proteins.
- ☯ Aids in blood coagulation.

It is one of the major filtering and detoxifying organs in the body.

Our liver is bombarded more than it has ever been — not only with pesticide laden foods, heavy metals, pollution, fake foods, household cleaning products, with fragrance chemicals being some of the worst.

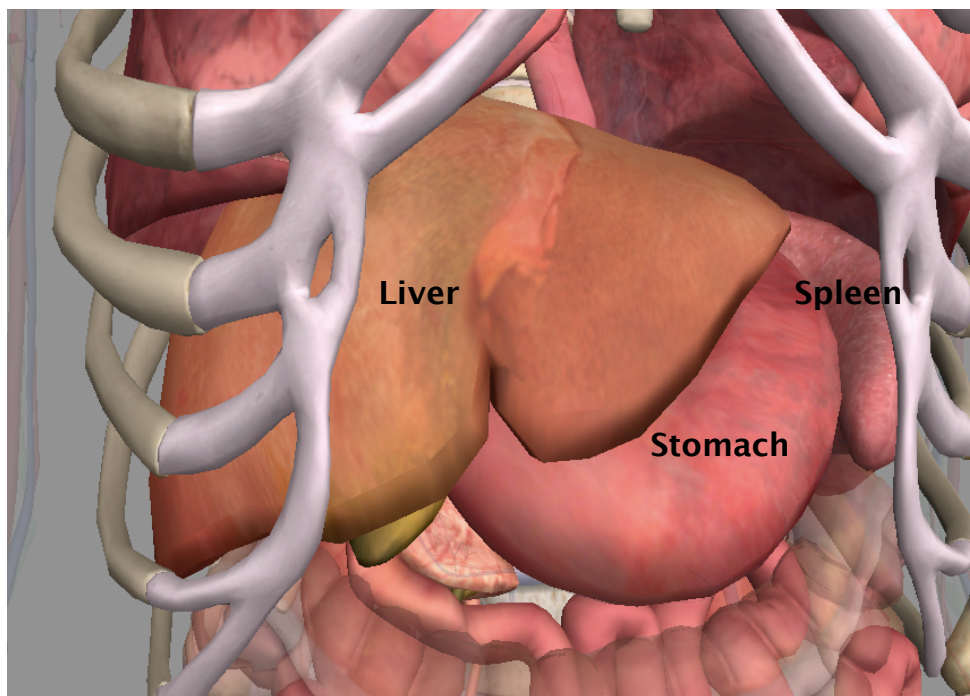
We need to learn to take care of our liver! Most of us don't even think about it until you have an issue such as gall stones or fatty liver disease, etc. We need to take care of our liver everyday just like we take care of our skin!

I say often, don't put anything on your skin unless you can eat it . . . What you put on your skin can end up in your body just the same as putting something in your mouth.

Our skin is excellent at providing a protective envelope to protect us from the environment, however, what can get through your pores gets directly into our bloodstream. What enters your mouth gets filtered by the liver, what enters your skin does not.

The liver is a very large 2-lobed organ that sits on the right side of your belly, beneath the diaphragm above your stomach, sitting mostly under your rib cage. All forward bending postures (and many

back bending postures) help to cleanse the liver. Specifically when we forward bend with our leg in lotus position it puts a little more pressure on the liver helping it to cleanse deeper.



In the liver cleansing postures, as you put your left foot in lotus and forward bend, aim your heel above your navel, just to the left of your right ribs. I find in the standing version, ardha baddha padmottanasana, I can feel my heel tuck up under my ribs pressing even deeper into my liver than many of the other seated postures.

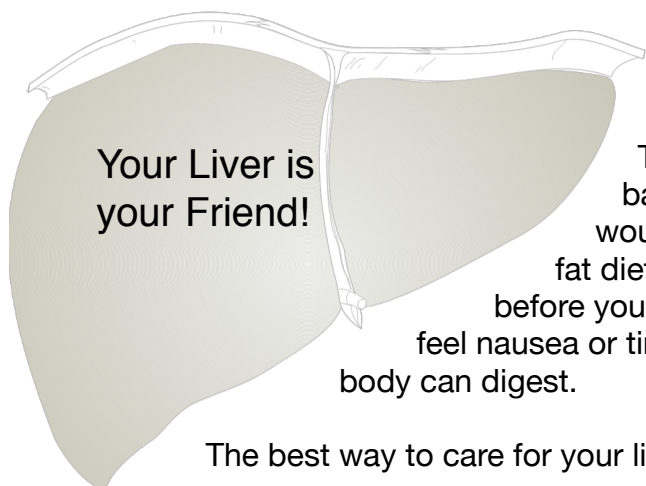


And another IMPORTANT factor concerning your liver: DIET!

Since the liver is the organ responsible for removing toxins from the food we eat; the cleaner you eat, the healthier your liver! Not only this fact but our livers are also being a little more challenged with all this hype about Ketogenic and Paleo diets. High protein and high fat meals make the liver work harder — for some of us, this is not a problem - for others it is. If you feel nausea or sleepy after a meal this is a sign your body is having a hard time digesting something ... examine your meal!

Most of us are aware now of the dangers of soda and processed foods — these are actually much harder on your liver than alcohol! High fructose corn syrup (HFCS) has to go to the liver to be metabolized before it can be used by the body, whereas glucose can get directly into a cell without being metabolized by the liver.

Fatty liver and liver diseases are even in adolescents now, this is because of all the High Fructose Corn Syrup (HFCS) we were eating before we became aware how this cheap food industry food was so detrimental to our body.



Liver and the fat you eat.

Your Liver has to metabolize fat, that is not an easy job so be careful with the super high fat keto type diets.

To support the function of your liver start with a more balanced approach in your P/F/C ratio — if you think you would do well on a higher protein diet like paleo or a higher fat diet like keto then experiment with these to see how you feel before you adopt one of these diets as your long term diet. If you feel nausea or tired after a meal, it's a sign you ate more fat than your body can digest.

The best way to care for your liver is feed it what it needs to do its job:

- ☯ Dandelion tea is a liver lover. So is milk thistle — eat your weeds :)
- ☯ Eat Cabbage foods. Cabbage foods provide us with glutathione, a major detoxer. When you eat cabbage food you detox through your urine much better reducing your chemical load and disease risk
- ☯ Lemon Water - a liver stimulant which encourages the liver to digest toxins.
- ☯ [Pitta Pacifying diet](#)
- ☯ [Fermented foods](#) — those little bugs help us detox plastics and herbicides and pharmaceuticals. Though be careful, some people are sensitive to histamines and don't do well on fermented foods.
- ☯ Aloe vera gel, internally and externally
- ☯ Herbal Teas!
 - o *Turmeric Tea & black pepper, sometimes I add in other powerhouse foods like black seeds, seaweed, and echinacea, ... or any combination of the above.*
 - o *Nettle tea*
 - o *Milk Thistle*



o Dandelion tea or Dandy Tea

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Foods that can help us strengthen and support the liver:

- ☯ Bitter greens like kale and spring mixes
- ☯ collard greens
- ☯ beet greens
- ☯ dandelion greens
- ☯ Green vegetables and herbs high in chlorophyll, like cilantro and spirulina
- ☯ Beets
- ☯ Carrots
- ☯ Apples
- ☯ Organic sesame oil, olive oil, and avocado oil can help to rejuvenate the liver — if your liver functions well and can digest fat well.

Here are some simple tips to AVOID exposures. This is a form of preventative medicine:

Three things you can do right now to detox or avoid exposures:

1. Avoid exposures ... Making your [own toiletries](#) and [household cleaning products](#) is a good and easy start — and probably cheaper than purchasing toxic supplies! **Most common areas of chemical exposures to try to avoid:**

- ☯ Pharmaceuticals - believe it or not, these are very hard on your liver. Many pharmaceutical drugs are detoxed by your liver because they are poison in the body. Tylenol is especially hard on the liver, please consider this before you take the liberally as many people do.
- ☯ Industrial chemicals which lead to air pollution and water pollution. Speak with your pocketbook! The best way to get the attention of most companies is to avoid buying from them if they pollute our air and water ways. Sadly their bottom line will make them take action quicker than the health of our planet.
- ☯ Food preparation byproducts — from herbicides and pesticides all the way through the manufacturing process of foods. Again speak with your dollar! Buy organic! And avoid all processed foods, these are very hard on your health.
- ☯ Personal care products. Sadly many people actually get mercury and lead from cosmetics! Specifically eye make ups and lip sticks, but other cosmetics like foundation may have heavy metals in it as well. Yes you read that right, very toxic known substances that manufacturers put in make up that gets absorbed in your skin. Try making a few of your own toiletries, just start with deodorant or toothpaste and grow from there.
- ☯ Heavy Metals (lead, mercury, etc.) - These could be airborne, in food and/or cosmetics. An air filter for your bedroom is a nice place to keep the air clean. — And of course fish is

7 TOXINS TO LOOK OUT FOR IN PERSONAL CARE PRODUCTS

- Heavy metals
- Mineral oil
- Oxybenzone
- Parabens
- Phenols
- Sodium lauryl sulfates (SLS)
- Triclosan



Infographic from Dr. Deanna Minnich
www.deannaminnich.com



a concern so you need to choose the low mercury fish like sardines, anchovies, salmon and shellfish. And dentist offices ... find a mercury free dentist, just walking into a dentist office is a mercury exposure.

- ॐ Electro-Magnetic fields (turn off wi-fi at night)
- ॐ Stress and emotional trauma (internal chemicals) You are already on the path to knowing how to take control of stress when it arises :)

2. Drink Water! Half your body weight in ounces each day. This will help your kidneys detox chemicals. Or a quick no math option: fill 2 one quart mason jars with water and drink them each day. Drink half of one when you wake up, one full quart during your work day, and the final half quart in the evening.
3. Exercise, sweat, and get sun exposure ... And love your liver! These are all ways your body detoxes.

We don't have to live in a chemical environment! One of our biggest chemical exposures is in toiletries, and they are easy to avoid with a few home made recipes. It is easy to make your own toiletries; and learning and using Essential oils make it fun and pleasant.

<http://www.befitbodymind.org/learn-and-thrive/home-made-toiletries/>

Why do some people retain more toxins than others or are more sensitive? **Total toxic load minus ability to bio-transform and excrete toxins due to:**

- ॐ Poor elimination. We have to take out the trash. If you don't go to the bathroom at least one time per day (preferably 2-3x is even better), then you need to pay attention to this and figure out what you need to do. A good first step is to try increasing water and fiber intake.
- ॐ Genetic predisposition to not detoxing well. You can find this out from genetic testing. If you are positive for a genetic snip that predisposes you to being a poor detoxer there are steps you can take to mitigate this. My favorite company is DNA Life.
- ॐ Chronic inflammation — which could be from any of the following factors — and maybe if you catch these factors early enough they will not lead to chronic inflammation:
 - ॐ Intestinal dysbiosis
 - ॐ Nutrient deficiencies
 - o High sugar diets, low in nutrients and protein
 - ॐ **Oxidative stress!** What exactly is oxidative stress? Oxidative stress is inflammation creation. Examples are; high sugar diets, fried foods, natural and artificial radiation, toxins in air, food and water; and miscellaneous sources of oxidizing activity, such as car exhaust, pollution, chemical perfumes used in dryer sheets, etc.
 - o 1:1 hand combat! - Anti-oxidants from foods will combat these free radicals. Anti-oxidants vs. free radicals = your level of oxidative stress.
 - o You want more anti-oxidants than free

Example of oxidative stress





radicals. If it is the other way around you will age sooner (signs of this first show in your skin) and have higher risk of all diseases.

- o Studies showing the harmful effects of frying meat are countered by adding a slice of avocado. EAT VEGGIES! Keep in mind this slice of avocado's anti-oxidants will go toward combatting the frying of meat and will not counter any free radicals already in your body ... so along with that slice of avo add some onion, lettuce, tomato, red pepper, get the idea?

Each persons risk factor is individual

ॐ How much of the toxin are/were you exposed to?

ॐ Is it over a period of time?

ॐ Does your lifestyle make you more susceptible — meaning do you eat lots of processed foods, have high stress levels, lack physical exercise, etc.

ॐ Do you detox well?

IN THE EMOTIONAL BODY (The issues are in the tissues!)

Beyond their physiology, all organs have a metaphysical (beyond the physical) dimension. Consider the symbolic and psychological aspects of the heart. We 'speak from the heart', 'give our heart' to others, suffer a 'broken heart', etc.

In Ayurveda the liver is hot and red — it is part of the agni (fire) of digestion. Bile, which the liver creates is extremely heating and acidic as it is what metabolizes fat and toxins and escorts them to our colon.

Symbolically, the liver represents our struggles with anger and frustration. Just as the liver is critical to the digestion of food and nutrition, it also plays an important role in the digestion of emotions—particularly those those hot fiery emotions as the liver is a hot fiery organ. The liver is considered the seat of anger, hate, and resentment. It is also tied to the challenging emotions that are expressions of an imbalanced pitta — feelings of envy, irritability, frustration, impatience, and excessive ambition — or type A personalities.

You can learn a lot about the health of your liver by the flavor of your emotions (or even undue tightness or restriction of movement around the liver). How well you are able to respond to, and move through, the challenges of anger or resentment? Do you have difficulty expressing your anger without "losing it"? Do challenging situations quickly and completely overpower you? Can you release them? If you are someone who hangs on to anger or harbors resentment for years on end, it can lead to an impairment in your liver, which in turn makes it harder to process and release these emotions. One of those vicious cycles.



If this sounds like you, I would encourage you to try to seek a way of expressing how the situation is angering you without a big emotional out burst that goes along with it. A gentle and meaningful talk will go much further.

Yet organs also have a positive dimension, for the liver also embodies our innate drive toward 'path and purpose' – the search for meaning to life. Liver = Live, reason for living. Here liver issues might also indicate the need to reflect on one's sense of destiny, of connection with deeper purpose. The liver is associated with the healthier expressions of pitta as well: will power, courage, confidence, contentment, satisfaction, enthusiasm, cooperation, acceptance, and surrender.

Sometimes society or our tribe (family) impresses upon us what they think or feel is best for us; so we may do what "they say" even though it goes against the grain of what we feel we should be doing (getting a "day" job for example). In this case we might experience pain or tightness around the liver.

Many of our yoga postures cleanse the liver, as you wring out your liver you may feel bouts of anger -- do not repress it, instead identify it for what it is. You do not need to act on it, just openly identify it and let those emotions flow through and out of your body. Your liver may be telling you its time to digest what's going on around you -- open yourself up to your path and purpose and see how fun and fulfilling it is to go with the flow of the Universe :)

And remember, if your external body is not allowing your heel to get close to your liver due to tightness or pain -- keep practicing! And use your mind power! As you are in the posture breathing, direct your thoughts toward the liver, this will not only help your body to relax and "get there" but it will also provide much of the same benefit as if your heel were "there".

[How about a Liver Meditation??](#) Try this out :)

Yoga Inside Out

Taking a look at Yoga from the inside out:

Seated postures are where the real work is done, some postures focus on an organ or nerve or system of the body, some poses counter balance a previous pose and some prepare us to go deeper into the next posture. The postures that get into the organs I call the "core postures".

Dandasana

Dandasana is our transition pose; standing pose work more externally on the body releasing our lower back, hips, and hamstrings allowing us to get a little more flexible for the seated asana.

Seated poses are where the most internal cleansing is done. Use your five breaths in dandasana to mentally make the shift from the external to the internal.

For more information on Dandasana: <http://www.befityoga.com/philosophy-lifestyle/ashtanga-yoga-poses/> and scroll down to dandasana.



Paschimattanasana and most seated forward bending postures

Why would ashtanga yoga make the first seated forward bending posture one of the hardest? For a good reason! Paschimattanasana is where the internal cleansing starts . . . Paschimattanasana presses your abdomen onto your thighs -- it is the pressure of your abdomen pressing on your thighs that begins the “squeezing and soaking” process of the organs , so it is ok to bend your knees when forward bending to get this benefit.

Forward bending postures also put pressure on the lymphatics in our gut — Starting your practice with a few forward bends helps to clear out and move lymph fluid, this will make us better detoxers for the rest of our yoga practice because we are emptying the trash so we have more room to collect and clean out the trash our body releases from our practice.

Forward bending postures also relieve tension and induce relaxation.

More information on Paschimattanasana: <http://www.befityoga.com/philosophy-lifestyle/ashtanga-yoga-poses/> and scroll down to paschimattanasana.

Purvattanasana

This pose is complementary to Paschimattanasana; counterposing the extreme forwarding bending action required with both legs extended. This pose/counterpose keeps the spine balanced and healthy, stretching one side of the body while strengthening the other and then reversing it. Purvattanasana stretches the entire front of the body while strengthening the back of the body and legs.

Purvattanasana is a heart opening pose-it requires us to remove the “shield” of rounded shoulders and collapsed chest -- to expose our heart. This can be challenging! Many of us are required to sit at a desk for long periods working over a computer, this position causes us to slump, round our spines and collapse our chest and shoulders leaving us with poor posture. Purvattanasana corrects this, it turns our face upward making us shine 😊

More information on Purvattanasana: <http://www.befityoga.com/philosophy-lifestyle/ashtanga-yoga-poses/> and scroll down to purvattanasana.

First Core posture:

Ardha Baddha Padma Paschimattanasana

A word about hips and lotus positions with the legs:

This pose starts the challenge of the half lotus and full lotus positions. The lotuses in yoga cause quite a dismay for the average American who wears shoes and has toilets and chairs . . . making our hips tight. Lotus positions on individuals with tight hips puts a strain on the knee and needs to be worked into slowly and intelligently. The hips are one of the slowest joints to change or open due to all the musculature surrounding them. Sitting in Baddha Konasana everyday will help to prepare your hips for lotus, as will (of course) daily practice. Also lifestyle habits will open your hips, for example; sit on the floor often -- and if you have to sit in a chair, don't sit like a lady or a gentleman . . . sit like a yogi, meaning to sit with one leg up under you, or in half lotus, or crossed



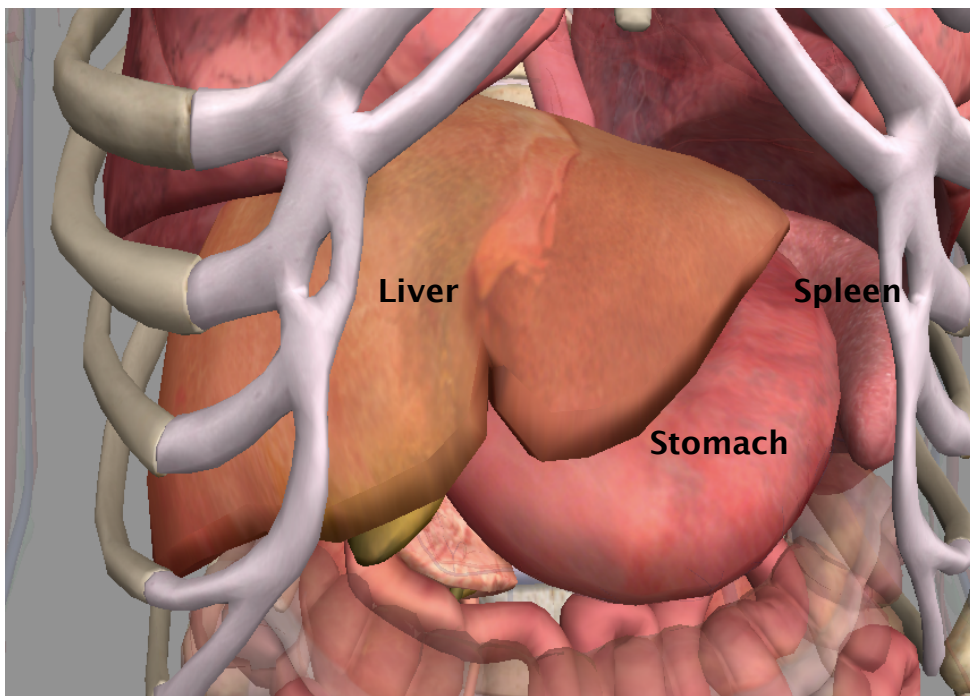
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legged, etc. When you sit in a chair all day with your feet on the floor it cuts off your circulation disconnecting your upper and lower bodies. Full squats will also keep your hips (and knees) healthy, since we have toilets and we want to keep them . . . make sure you do full squats otherwise; for example, squat down to pet your dog or talk to your child at eye level. Squat down and up to pick things up instead of bending over, etc.

The lotus positions while forward bending are the best organ detoxifiers and cleansers, so you do not want to dismiss them if your body is tight. We use the heel as a tool; directing it toward a specific organ to help “wring” out the organ. In addition, the heel is therapeutic as it carries heat aiding in the removal of the toxins.

The liver is a very large 2-lobed organ that sits on the right side of your belly, beneath the diaphragm above your stomach, sitting mostly under your rib cage. All forward bending postures (and many back bending postures) help to cleans the liver. Specifically when we forward bend with our leg in

lotus position it puts a little more pressure on the liver helping it to cleanse deeper.



In the liver cleansing postures, as you put your left foot in lotus and forward bend, aim your heel above your navel, just to the left of your right ribs. I find in the standing version, ardha baddha padmottanasana, I can feel my heel tuck up under my ribs pressing even deeper into my liver than many of the other seated postures.



THE SPLEEN

Learning about our organs and how our body operates gives you power to take control of your own health and healing. A little knowledge and understanding of your body will help you to heal yourself -- or better yet stay healthy and learn how to care for your body inside and out. In addition this will allow you to speak knowledgeably with a doctor and not put yourself in the hands of the corporate medical world.

The spleen is also an amazing organ . . .

- ☯ It is another purifier of our blood, it is connected with our lymph system and is a key organ in removing toxins and filtering bad bacteria from our blood, preventing infections.
- ☯ It supports our immune system -- think of it as a big lymph node except it filters our blood instead of our lymph.
- ☯ It also collects old red blood cells and recycles them, as well as recycling iron, so it assists in making blood.
- ☯ The spleen stores a large amount of blood.
- ☯ The spleen also plays an important role in trauma. When our body is under duress — such as hemorrhaging or not breathing — our spleen contracts and expels large quantities of red blood cells -- and therefore O2 -- into our bloodstream to help oxygenate the cells during the “emergency”.
- ☯ This also happens during pranayama when you hold your breath, the first breath hold (kumbhaka) is sometimes the hardest -- after the first kumbhaka the spleen contracts and expels red blood cells and O2 into our bloodstream thus making the remaining kumbhakas much easier.

Traditional Chinese Medicine (TCM) has some interesting views on the spleen.

Traditionally Chinese medicine coupled the stomach and spleen together putting them both in the digestive process (Western medicine puts the spleen in the immune system.) My chinese doctor in Maui tells me this was an error or either a typo made in the old TCM manuals and that he considers the spleen part of the immune system. In my mind, I feel since the spleen is close to the stomach and the other digestive organs it could help with circulation around the digestive processes, though that is my hypothesis about the confusion of which system the spleen really belongs in (digestive or immune) and not something factual that I am aware of at this time.

The spleen in TCM controls the blood. TCM says the spleen is responsible for manufacturing blood. The spleen also helps in circulation of blood and nutrients since the spleen can contract strongly to pump large amounts of oxygenated blood into your bloodstream. **Therefore if the spleen is weak we do not get well nourished according to TCM.**

Possibly when we place our right heel in half lotus and forward bend, the pressure of our foot pressing into the stomach and spleen could encourage the spleen to “pump” and help with circulation of blood around the abdomen.

Enlarged Spleen?



If your spleen is having issues, some people will develop an enlarged spleen. There are not many symptoms other than tenderness around your stomach or feeling full when you have not eaten much. An enlarged spleen is usually the cause of your spleen having to work extra hard to rid your body of infections or infectious agents. If you suspect you have an enlarged spleen I would encourage you to make sure you are not harboring any underlying bacterial infections.

Symptoms to look for if you suspect your spleen is out of balance:

- ☯ Do you feel full even when you have not eaten?
- ☯ Do you have tenderness around the left upper quadrant of your torso?
- ☯ Do you bruise easily?
- ☯ Do you bleed easily or profusely?
- ☯ Do you frequently get sick, or have frequent infections?

I like how Ayurveda and TCM look to diagnose with observations instead of tests. TCM says the lips manifest what is happening in your spleen; red, moist vibrant lips indicate a healthy Spleen while pale, dry lips could indicate you need to improve the health of your spleen.

If you feel your spleen it out of balance, add the foods below to help the spleen reset itself and find proper functioning. You may also want to check with your doctor for signs of an underlying infection that could be going on in your body.

Tips, Eat to clean your spleen:

In general first of all a healthy diet rich in foods such as :

- ☯ fruits and vegetables
- ☯ nuts and seeds
- ☯ fish (for the omega3s)
- ☯ seaweed
- ☯ green tea
- ☯ Avoiding processed foods and cold foods also benefit the spleen.

These are good for all our body, and especially the spleen.

Other specific foods to boost the health of your spleen:

- ☯ Mushrooms are rich in beta-glucan which increases the amount of immune cells in our blood (white blood cells which kill bacteria).
- ☯ Omega3s help your spleen cleanse itself of toxins.
- ☯ Stay hydrated, your spleen needs water to function effectively.

In the Emotional Body

Since the spleen's job is to battle "invaders" (bacterial invaders); spleen issues may signify 'feeling invaded'. It can range from a more global "bacterial invading", for example, man's pollution of the earth, to an individual level of feeling betrayed by a friend.

Also check your worries, **worry is the emotion of the spleen; excessive worry can weaken your spleen, or a deficient spleen can weaken our mind and our capacity to think clearly.**

At the positive end of the spectrum, the spleen represents our oneness -- our unity.

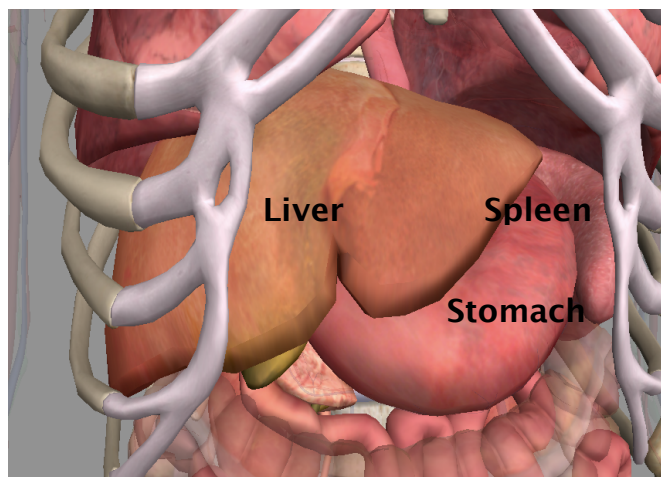
Illnesses involving the spleen, like frequent infections, prompt us to check the monkeys in our mind; are you feeling betrayed? Is there another way to look at that scenario that could bring unity on either or both the individual level and a global level. While we may not be able to “control” what is happening at a global level with concerns like pollution or polluting our water ways we can make choices with our own purchases that support companies who choose not to pollute our earth, this does give us a little power in what is happening globally. Corporations — even ones that don’t care about our planet, listen when money speaks.

If it is a more personal or individual feeling of “invasion”, try to open and connect with others who may not share our views or political opinions, remembering we share a oneness -- we all have similar struggles.

The spleen in our yoga practice :

When we are forward bending with one or both legs in the lotus position we are using our heels to help tone and cleanse various organs in our torso.

For example when our right leg is in lotus as in Ardha Baddha Padma Paschimattanasana, our right heel aims for the spleen, which is tucked behind the stomach, between the 9th and 10th rib (the last two “attached” ribs). It can be difficult to reach since it sits behind the stomach, you will have to put a little pressure on the stomach (another good reason to do practice on an empty stomach).



As you forward bend with your right heel in your gut, dorsiflex your foot and tuck your heel in under your ribs.

The many different lotus positions to start the internal cleansing of the Liver and Spleen.

- ☸ Ardha Baddha Padmottanasana
- ☸ Ardha Baddha Padma Paschimattanasana
- ☸ Garbha Pindasana
- ☸ Pindasana
- ☸ Baddha Padmasana
- ☸ (Marichyasana B & D also include the half lotus positions, however in these postures we are working more with the colon and less with the liver and spleen.)

For more information on Ardha Baddha Padma Paschimattanasana: <http://www.befityoga.com/philosophy-lifestyle/ashtanga-yoga-poses/> and scroll down to ardha baddha padma paschimattanasana.



Since the flow of this book is following the flow of primary series, I will pause to quickly review Tirianga Mukhaekapada paschimattanasana.

Tirianga Mukhaekapada Paschimattanasana

This posture does not directly effect an organ, but being a forward bending posture it indirectly effects all the organs in the abdomen. The direct benefits of practicing this posture are more external; the foot position opens up the ankles, which can become stiff in the standing position, and can prevent or cure fallen arches and flat feet.

The leg position also correct sprains in the knee and ankle, if practiced wisely and not during an acute episode.

This pose requires internal hip rotation of the leg that is tucked back help to release tight external hip rotators that are common in western societies. If your knee flares to the side in the marichyasana series . . . or if your knees want to bow outward in paschimattanasana (two legged seated forward bend) . . . these are signs you have tight external hip rotators, this pose will be useful to correct that.

This pose is also a counter balance to the external rotation of the hip joint in the padmasana (lotus) and half lotus posture — keeping the hip joint balanced. These postures externally rotate the thigh or femur bone, and will need to be counter-balanced with internal rotation of the thigh to keep the thigh joint balance.

The yoga texts also say this posture helps keep the body symmetrical in that it keeps the thighs in proportion to the rest of the body, and by pressure on the thigh during the pose it helps to reduce swollen thighs or water retention in your thighs.

Also this posture can help to relieve sciatica and hemorrhoids, on the side the leg is tucked back. If you are flexible enough and struggle with either of those ‘pains in the butt’ it could be helpful when you have to sit, to sit with that leg in tirianga position.

ॐ According to Ayurveda if your colon is sluggish (meaning you don’t go to the bathroom regularly) you have a much higher risk for sciatica and hemorrhoids, if this is your case, see the information on the Marichyasana series, as this series is about the colon.

ॐ In Ayurveda; when sciatica is present apana vayu and vyana vayu (there are 5 vayus or winds in the body that each perform a function) are not working properly. Vyana vayu is the “wind” or movement during the night that moves around the body and collects waste material generated by metabolism. When we eat heavy or animal based foods too much at night they are harder to digest and eliminate. This process of vyana vayu takes all night and terminates by giving over the toxins to Apana Vayu (the energy of ‘down and out’ as in giving birth or going to the bathroom) which then becomes active to remove all the waste that Vyana vayu collected during the night – this should allow an evacuation in the morning. If you ate late at night or ate a lot of heavy food in your day the process of collecting the toxins takes longer — until the body is able to rid the waste through apana vayu — vyana vayu is still active on removal of wastes and will make the body stiff which aggravates the sciatic nerve.



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A reminder, these benefits come with consistent practice over a long period of time! In yoga terms this would be called *durga kala* (very long time) and *nairantarya* (without break).

For more information on Trianga mukha eka pada paschimattanasana: <http://www.befityoga.com/philosophy-lifestyle/ashtanga-yoga-poses/> and scroll down to trianga mukha eka pada paschimattanasana.

TO BE CONTINUED . . .

Next chapter we will start with exploring the nerves known as shivani nadi and virya nala . . . two of the nerves we press on with our heel in the Janu Sirsasana series, and how these nerves are connected to the pancreas (pressure on these nadis helps to regulate the release of insulin). Yet again the pancreas is another amazing organ!