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POSE OF THE MONTH

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Garbha Pindasana -- (Embryo in the womb) Garbha means womb, pinda means embryo. Indeed we are making ourselves like an embryo in the womb in this posture! This posture is particularly good for females as it strengthens the uterus, it is good during pregnancy and is said that it helps prepare the fetus for correct positioning at birth, it is beneficial for a pregnant woman and may be practiced up through the first trimester. After all it is said that we rock and roll clockwise nine times signifying the nine months of gestation.

Kukkutasana – (Rooster pose) here our arms and hands resemble the legs and claws of a rooster. I noticed in Yoga Mala that P.Jois has a vinyasa between Garbha Pindasana and Kukkutasana, my guess is over the years due to time this vinyasa has been eliminated.

Garbha Pindasana and Kukkutasana begin some work on the back of our body. The back of our body houses important organs as well; there we have the kidneys, adrenals, and ureter channel.

Yoga Mala points out the Garbha pindasana also purifies the liver and spleen due to the heels pressing into the abdomen as we pull our arms through our legs (past the elbows when possible) squeezing our heels in toward these organs. Also the act of pulling our arms through our legs exposes the back of the body better so the rolling motion is more effective. Also of benefit here; the arms squeezing through the calf and thigh exerts pressure on the lymphatic vessels of the arms helping to cleanse the lymph tissue. In cancer therapy, patients are taught a method of massaging the arms to move lymph. In our case we are taking a preventative approach and cleansing the lymph system BEFORE disease sets in.

When we are rocking and rolling on our backs in Garbha Pindasana, it is not necessarily just the kidneys we are trying to roll on — although this is good not only for the kidneys but also the adrenals — we are primarily rolling over the ureter channels helping our body get rid of the waste.

Method:

- ॐ From downward dog hop through to Dandasana
- ॐ Inhaling place your legs in louts, RIGHT LEG FIRST. Remember to protect your knees by fully bending the knee joint and moving your calf and thigh as one connected unit into the lotus position. If possible (as you get more flexible in lotus) “tighten” your lotus by squeezing your knees toward each other and press your heels toward your navel. This makes *slightly* bigger opening to thread your arms through . . .
- ॐ Exhaling thread both your arms through the opening between your thigh and calf
 - I like to thread my left arm through first — then pull the left lower leg up a little and slip the right arm through, palm up aiming your right hand toward your groin as you thread it through. It is helpful to first thread through with your palm up, trying to thread through up to your elbows,
- ॐ Bend your elbows and if possible catch your ears or your chin Hold here balancing on your sitz bones for 5 deep breaths while pressing both heels in on either side of your navel.



Options!:

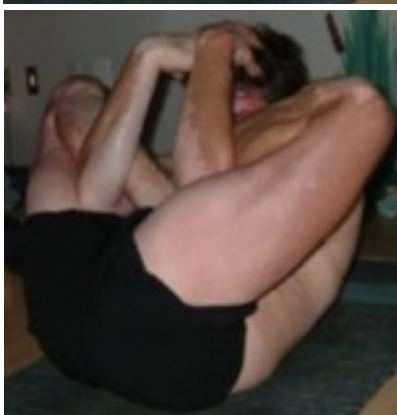
Coming into full lotus may take years for our western bodies that have adapted to sitting in chairs instead of on Mother Earth. If this is the case for you, continue to work on your lotus positions in other poses, instead in this pose cross your legs wrap your arms around your thighs.



ॐ Bend your head forward take hold of the crown of your head and exhaling roll back on the spine, inhaling roll forward on the spine as you go around in clockwise motion (while your hips are in the air swivel them to the right to help with this motion). If possible roll directly on the spine (if this is painful pad your mat up underneath you), this rolling on the spine helps to align the vertebrae. Be careful not to swing your neck or legs as you rock and roll; instead pull your legs in tight with your arms as you round your spine and use your bandhas to rock.

Options:

If you are not in lotus to rock and roll it is much easier to swing the head or legs to get momentum—PLEASE DO NOT DO THIS! Let the rocking movement come out of the connection with your breath and bandhas and the push/pull between your arms and legs.



ॐ Round your spine, tuck your chin, isometrically push/pull your arms and legs into each other, and begin your rock and roll. If you are challenged with rocking and rolling on your spine this can be due to two reasons, 1) weak abdominals or 2) a rigid spine

that does not flex. If either of these is the case for you, practice the rocking back on your spine training the abdominals and the spine, do not add the clockwise motion until you are able to rock and roll smoothly.



ॐ When a full circle has been completed-preferably as you begin your 10th roll, take a big inhale roll up with a little more force to balance on your palms lifting your body off the floor and lifting the back and chest fully, this is **Kukkutasana**. While in Kukkutasana release mula bandha and do uddiyana bandha and nauli as much as possible while deeply breathing and keeping the heels pressing in on either side of your navel. If you are not in lotus — or in lotus but not yet able to thread your hands through you can press your hands



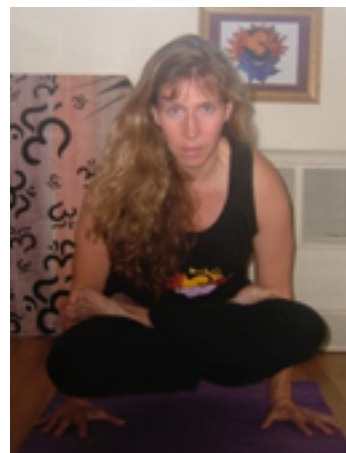


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down into the floor and lift up as best you can. Hold Kukkutasana for five deep breaths.

ॐ Exhale release down, pull your arms out ground your hands by your hips pick up and pull through while in lotus and jump back for vinyasa.

Benefits: Garbha Pindasana cleans and tones the liver and spleen and strengthens the uterus and rectum. It activates the first three chakras. Kukkutasana strengthens the arms and shoulders, relieves urine problems by strengthening the urethra and when done with nauli cures constipation. Garbha Pindasana and Kukkutasana both are very effective in opening the hip joints even further making your lotus more comfortable.



Your Kidneys and your Ureter Channel

The reference to the urinary system refers to garbha pindasana's effect on your kidneys and ureters. Your kidneys are part of the detoxification of your body; **they filter excess water and water-soluble wastes from your blood** ridding toxins and other wastes that would otherwise build up in your body and cause you to become ill. Just like we have fat soluble and water soluble vitamins; we also have fat soluble and water soluble wastes. Your liver filters out the fat soluble wastes while your kidneys filter the water soluble wastes. **Many toxins from excess protein and sugar to bacteria and yeast make their way into your urine.** This makes your liver and kidneys your main organs of detox, although the spleen and lymphatic system are quite involved as well. Ridding toxins from our bodies is very important in today's toxic environment. We are exposed to more toxins than ever before — newborn babies are found to have upwards of 200 known toxins in their blood!

<http://www.cnn.com/2010/HEALTH/06/01/backpack.cord.blood/>

Health is not only the ability to take in and digest nutrients, but also the ability get toxins out — and better yet would be to avoid as much toxic exposure as you can!

In your lifetime your kidneys will purify more than one million gallons of water! Enough to fill a small lake. Amazingly, if you lose a kidney one kidney can increase in size by 50% within two months to step up to the task of both kidneys.

The kidneys are important because they keep the composition, or makeup, of the blood stable, which lets the body function. In addition to preventing the build up of wastes and extra fluid in the body, they:

- ॐ keep levels of electrolytes stable, such as sodium, potassium, and phosphate
- ॐ make hormones that help
 - regulate blood pressure
 - make red blood cells
 - bones stay strong

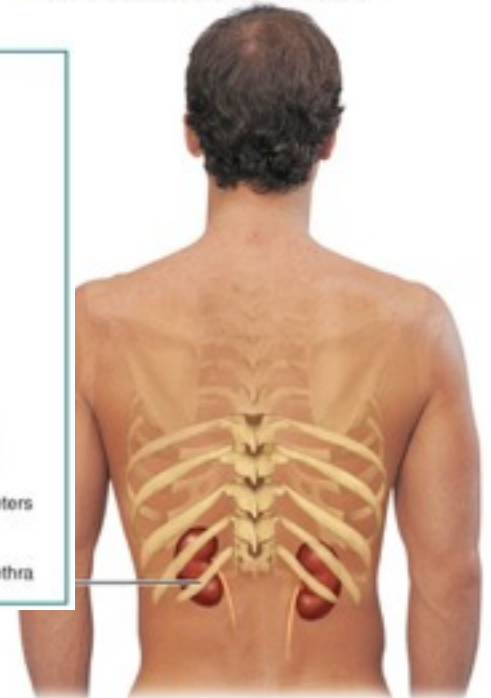
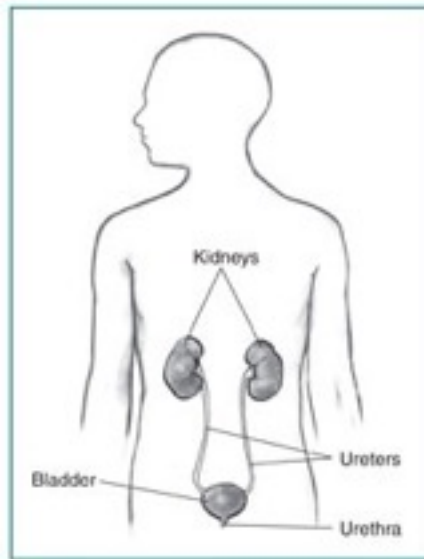
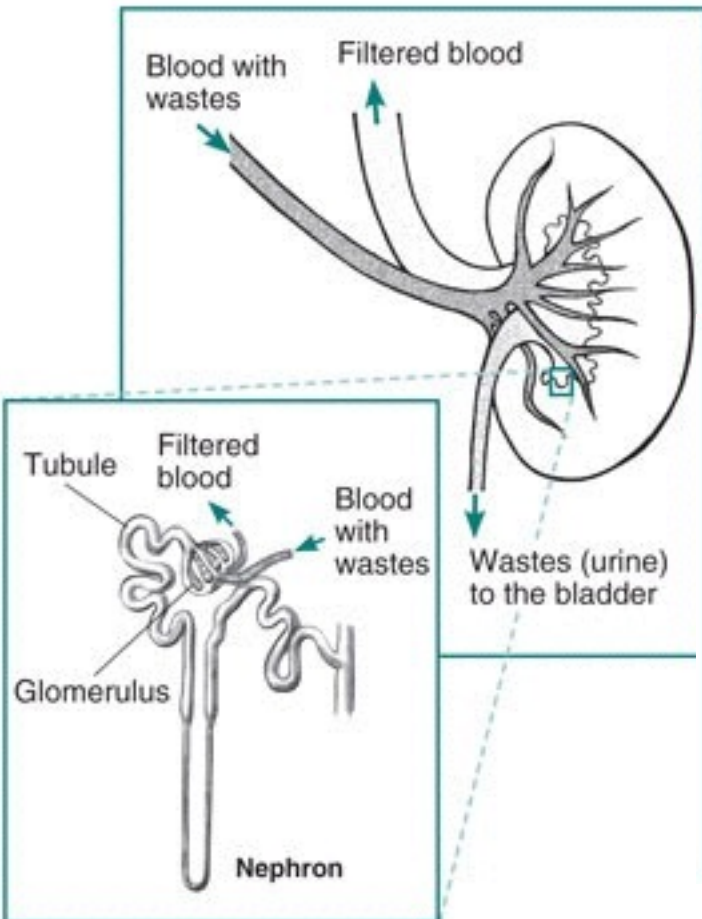
If you notice changes in the way your urine looks or smells, the cause might be something as benign as what you ate, such as beets or asparagus. Or, your body could be telling you something you should pay attention to. I do not want to get into a pee discussion here but I will provide you a link that discusses changes in your urine and what to look for. Your body has many ways of signaling you something is out of order, learning to read your body's cues is an important part of your health —

paying attention to our waste products is another way to take control of your own health. Here is a link with further information about your pee: <http://www.lifspa.com/the-perfect-pee/>

The kidneys are two bean-shaped organs, each about the size of a fist. They are located just below the rib cage, one on each side of the spine. Every day, the two kidneys filter about 120 to 150 quarts of blood to produce about 1 to 2 quarts of urine, composed of wastes and extra fluid. The urine flows from the kidneys to the bladder through two thin tubes of muscle called ureters, one on each side of the bladder. The bladder stores urine. The muscles of the bladder wall remain relaxed while the bladder fills with urine. As the bladder fills to capacity, signals sent to the brain tell a person to find a toilet soon. When the bladder empties, urine flows out of the body through a tube called the urethra, located at the bottom of the bladder. In men the urethra is long, while in women it is short.

Each kidney is made up of about a million filtering units called nephrons.

Relationship of the Kidneys to Vertebrae and Ribs





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When we are rocking and rolling on our backs in Garbha Pindasana, it is not necessarily just the kidneys we are trying to roll on — although this is good not only for the kidneys but also the adrenals (which I will talk about next) — we are primarily rolling over the ureter channels helping our body get rid of the waste and helping to prevent blockages in the ureters — which brings me to the next topic . . .Kidney / Urinary Stones

How to prevent them — or if you've already experienced them, how to reduce your risk of it happening again!

Kidney stones most often lodge in the ureter channels. The ureters are a thin muscular tube (actually the muscles are within the walls) that carries waste products from your kidneys to your bladder. If the ureter becomes blocked by a kidney stone, it may swell up (hydro-ureter) and cause the muscles to spasm. The spasms can be very painful.

Kidney stones can be as small as a grain of sand or, at the extreme, grow to be as large as a golf ball. More typically, kidney stones that cause problems are as small as two millimeters in diameter (conversely, larger stones may pass without any symptoms). Stones that grow large enough can block the flow of urine out of the kidney. Most commonly, they move into a ureter, sometimes, they become lodged there. Some of the stones are sharp and spiked, these are the stones most often to get lodged as the spikes grab onto the ureter walls. Once lodged, they create irritation, swelling of the ureter lining, and muscle spasm of the wall — making the lumen (the inside space of a tubular structure) even smaller. There are also parts of ureters which are more narrow to start with and the stones lodge there the most. It's the backing up of urine and the resultant stretching of the system that causes pain. It's important to note that some 90 percent of the more common small kidney stones pass out of the body by themselves without invasive treatment.

When a stone in the ureter causes severe pain, this is known as renal colic. If the ureter becomes swollen, you may experience symptoms such as:

- ☪ nausea and vomiting
- ☪ feeling like you need to urinate all the time
- ☪ pain when you urinate

A blocked ureter can also cause an infection in the kidney because waste products cannot pass, which may cause a build-up of bacteria. The foods and information below not only help prevent kidney stones but may also be useful in the advent of a stuck stone.

☪ **Prevention is easier than curing . . .**

Calcium and vitamin D supplements increase risk of kidney stones especially for women (here again is the whole food story — calcium rich foods help to prevent urinary stores . . . putting calcium in supplements and taking only the elemental calcium increases risks). Just a note, there is a lot of new data surfacing that calcium supplements not only don't help your bones but they are quite detrimental, increasing your risk of kidney stones and artery calcification. Here are some links to some of the research:



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<http://chriskresser.com/calcium-supplements-why-you-should-think-twice>

<http://www.sciencebasedmedicine.org/calcium-supplements-and-heart-attacks-more-data-more-questions/>

<http://www.greenmedinfo.com/blog/how-too-much-calcium-can-break-your-bones>

<http://www.medscape.com/viewarticle/812233>

<http://www.npr.org/blogs/health/2013/02/25/172876965/most-people-can-skip-calcium-supplements-prevention-panel-says>

<http://www.greenmedinfo.com/blog/confirmed-lower-your-bone-density-lower-your-breast-cancer-risk?page=1>

<http://articles.mercola.com/sites/articles/archive/2009/07/18/the-milk-myth-what-your-body-really-needs.aspx>

- o Basically calcium supplementation does not only promote kidney stones — it has been connected to artery calcification! And furthermore the very reason people take calcium — for their bones — is also detrimental. As it turns out calcium supplementation makes your bones brittle albeit a bit thicker. What we want in our bones is tensile strength — protein provides this — not calcium. Adding further insult is that many calcium supplements are made from waste calcium that is loaded with toxins and calcium can interfere with digestion making it even harder to absorb nutrients . . . Data is now confirming what we have been told was not effective . . . that is **we can get all the calcium we need from foods — NOT dairy foods though . . . greens especially, and fermented foods :)** Just because you are dumping all this elemental calcium in your body does not mean your body is going to use it to build your bones

☯ Soy. and high protein diets also increase your risk of kidney stones.

Preventative measures:

☯ 2 popular probiotics may reduce or help to break down kidney stones, they are Lactobacillus casei and Bifidobacterium breve. study posted at: <http://www.greenmedinfo.com/article/lactobacillus-casei-and-bifidobacterium-breve-reduce-urinary-oxalate-excretion> Studies are pointing to lactic acid bacteria (LAB) degrading oxalate in the intestinal lumen, reducing urinary oxalate excretion.

☯ Citrus fruits - We also know that low amounts of citrate in your blood predispose you to kidney stones. Lemonade therapy or orange juice is a natural no side effect way to increase your citrate levels in your blood and reduce your risk of kidney stones.

☯ Mineral water rich in calcium, magnesium and bicarbonate also has a positive effect on reducing the risk of recurring kidney stones.

☯ Omega3 fatty acids help to prevent formation of kidney stones.

ॐ The ayurvedic herb, kulattha may be better than meds in treating kidney calcification: <http://www.greenmedinfo.com/article/ayurvedic-herb-kulattha-superior-potassium-citrate-treating-kidney>

Other substances that have been researched to help prevent or treat kidney stones:

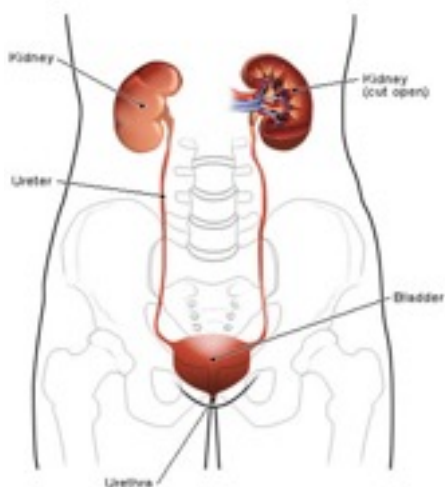
- ॐ Coconut water! Treatment with coconut water inhibited crystal deposition in renal tissue as well as reduced the number of crystals in urine. Furthermore, coconut water also protected against impaired renal function and development of oxidative stress in the kidneys. The results indicate that coconut water could be a potential candidate for phyto-therapy against urolithiasis.
- ॐ Pomegranate juice
- ॐ Plantain - a weed growing in your backyard . . .
- ॐ Hibiscus
- ॐ Evening primrose

Garbha Pindasana and Rolling on your Back

While there is no proof that rolling on your back prevents or breaks up painful kidney stones (although medically they have a device they attach to your back that pounds away at the stone trying to break it up . . .), **rolling on your back does help move wastes from your kidneys to your bladder where you can rid it from your body more easily.** And maybe in the process help pass wastes before they have a chance to form into a kidney stone.

For the rolling motion, I have been told to roll directly on the spine as this helps to align the vertebrae — some people like to roll on either side of the

spine to get more pressure on the tissues that are around the spine. I think either can be useful — maybe doing a little of each in your practice is the most beneficial.



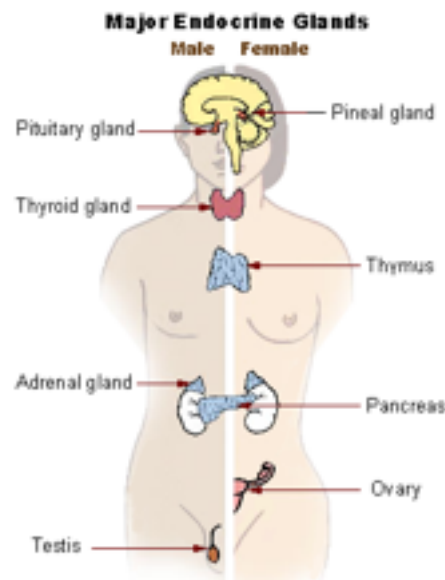
The rolling motion on your back massages your adrenals helping to cleanse and balance your **Adrenals.**

Hormones . . . Our endocrine system . . . I have been avoiding addressing the hormonal system as this area is not well documented by science! We really don't understand the endocrine system. We are just now realizing most of our organs secrete hormones -- not just the 7 glands/organs in the body we thought were responsible for our hormones.

But now is the time, I can't avoid it any longer. Garbha pindasana does effect our adrenals, as does rest pose, forward bending, backward bending, and twisting . . . So I think I will tiptoe into our endocrine system by first looking at our adrenals.

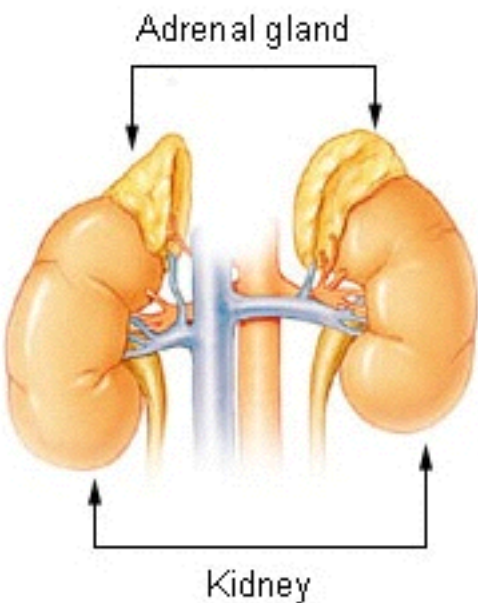
We are only just now learning about our adrenals, until recently we were treating adrenal dysfunction based on research from the 50's by Hans Selye. The father of stress ... In his time he was an innovator and won a Nobel peace prize. His research outlined 7 stages of stress leading to adrenal fatigue --however brilliant that was at the time ... stress leading to adrenal fatigue is not quite so predictable and varies with each individual.

Our adrenals are small crescent shaped (or thumb shaped) glands that sit atop each kidney. Our adrenals are our main tool for stress.



They are small but mighty, they secrete over 50 hormones — or chemical messengers that communicate with your brain, immune system, and metabolism (hormones affect every function, organ, and tissue in your body directly or indirectly).

The main adrenal hormones are responsible for
 ☯ the release of adrenaline and noradrenaline (aka epinephrine and norepinephrine) neurotransmitters and hormones with similar characteristics — they vasoconstrict our blood vessels reducing blood flow, to the areas our body does not need it for immediate survival.
 ☯ the release of steroid hormones like cortisol, and sex hormones



I am going to focus on stress, adrenaline, and cortisol. So it has been said that stress is the root of all disease Maybe so, but certainly it exacerbates any pre existing condition we currently have or are in the process of ramping up our immunity to destroy.

STRESS AND OUR ADRENALS

Our bodies are meant to operate most of the time in our parasympathetic nervous system. Short times of stress are not bad, and rather needed (short-term increases in cortisol are critical for survival). **They promote coping and help us respond to life's challenges by making us more alert and able to think on our feet — rushing blood to our brain, heart, and muscles — and then dampening processes like digestions, immune system response, and other functions that are not needed for immediate survival** so to marinate in stress hormones throughout most of our day is setting a chain of unfavorable events in our body beginning with over stimulation of our sympathetic nervous system.

Under the stress response:

- ☯ Your heart rate increases
- ☯ Your lungs take in more oxygen



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- ☪ You get dry mouth and/or cold sweats, maybe a racing heart,
- ☪ Shallow breathing which slows down the digestive tract and diverts blood flow and body energy from our organs to fight or flight and stimulates the release of adrenaline.
- ☪ Parts of your immune system become temporarily suppressed, which reduces your inflammatory response to pathogens, your immune system is suppressed as your body sends energy to your muscles instead of your organs and immune system so you can run to save your life.
- ☪ When stress becomes chronic your immune system becomes less sensitive to cortisol released by your adrenals, which also heightens the inflammatory response. Cortisol is anti-inflammatory which is why you get injected with it when you have pain and inflammation in various tissues, marinating in cortisol all day makes it less effective in your body.

Stress shuts down the part of your brain that regulates mood, short term memory, planning, organizing, behavior, and not to mention making good judgments! You don't want to be spending most of your day in this mindset!

Stress in the moment requires swift reaction with little time for thought (for example you're driving down the highway and suddenly see a car coming at you . . .). Studies show when we are stressed we have about 20 seconds to make a decision . . . not enough time to think through a matter and respond in the best way.

When we are operating under the influence of our parasympathetic nervous system we are calm, rejuvenating — in our rebuild and repair body operations, have a slower breathing rate, slower heart rate, lower blood pressure, our organs function optimally, and we have time to think through a response or reaction. As soon as we “come down” from the stress response, our body starts rebuilding and rejuvenating — you want to come down from your stress so your body can do this!

Stress releases cortisol into your system to give you energy to go and fight — or whatever! When you are frequently stressed your cortisol levels can become chronically elevated. Stress does not need to be real — **imagined stress is just as dangerous as real stress!** Let me say that again in a different way — if you are listening to the dramas in your head, you will set in motion the stress response in your body even if you are not having a “real” stressful situation . . . (This is one of the reasons meditation is so effective for stress.)

Also of importance here -- choose your company wisely. **Empathetic stress is real.** Of course there are studies ... That show we take on the stress of those around us, even if we don't know them, if we observe them in stress we feel it too. And of course even more so when it is a loved one who is stressed. This also stretches to what you watch on tv. Cnn to violent/drama movies, to soap operas all effect our adrenals and stress levels. **Learning to use feel good movies and books during relaxation instead of drama movies and news — and/or distance your self from family drama and friends who are drama queens will improve your own stress levels.**

So before I give you the bad news about what excess stress does to you I have to pause and explain two points . . . first of all if you believe stress is not detrimental to your health it is less so . . .



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so how much do I tell you? Well I do believe the cat is out of the bag on that one as most of us already know stress takes a toll on our health.

Second point, stress is not that hard to release! Ever have a bad day, feel stressed over something . . . then viola! . . . the phone rings. Its an old friend or a funny story or someone calling to make some plans for something fun . . . Suddenly your stress lifts. It does not even require someone from outside of ourselves to do this, **you can simply change what you are thinking to a happy or hopeful thought and release your stress!**

Dr. Alan Christianson, another functional medicine dr. I have listened to stated a British study (Whitehall II study: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3085201/>) that followed and observed people while monitoring their cortisol levels. Those who were healthy but stressed otherwise (high cortisol) died sooner than “chilled out” people who smoked or had other heart disease risk factors! <http://www.integrativehealthcare.com/are-you-secretly-smoking/>)

Also a note on this study from my own experiences: Europeans smoke more than Americans, however they are more likely to roll their own cigarettes — this reduces the chemical load that is traditionally found in american made cigarettes. Also of note here is the herbicide sprayed on tobacco — polonium 210 — is what is responsible for lung cancer, not the tobacco itself . . . <http://articles.mercola.com/sites/articles/archive/2014/02/10/radioactive-fertilizer.aspx>) My guess is, if this same study was done on American smokers the results may be a little different.

What cortisol does:

Cortisol not only is your main stress hormone, it also is responsible for waking you up in the morning and helping you fall asleep at night (with the help of melatonin). Your cortisol levels are meant to slope throughout your day, they peak in the morning to help you wake up, and slowly drop all day so you can sleep at night. As we sleep our cortisol levels slowly rise to wake us up in the morning

Cortisol and melatonin work together in a rhythm. Your adrenals and cortisol work with your pineal gland and its secretion of melatonin to help us get good sleep. When cortisol peaks, melatonin plummets. When melatonin is down, cortisol is up. That’s normal.

Stress will interfere with this rhythm and make it hard for you to fall asleep at night. Marinate in stress hormones all day and you disrupt this natural rhythm and mess with your sleep patterns.

Melatonin primes your immune function and thus stimulates inflammation (for healing), while cortisol tends to dampen immunity and reduce inflammation (so you can deal with the “emergency” at hand) — so when you do not sleep well your immune system is not working throughout your body while you sleep scavenging up damaging bacteria . . .

Calcification of your pineal gland will also disturb your circadian rhythm. Your pineal gland is what is responsible for making your melatonin. When your pineal gland is calcified your melatonin production is reduced therefore disrupting your circadian rhythm and your cortisol levels. Fluoride and Calcium are two of main culprits of pineal calcification . . . more on this when I talk about inversions and the pineal gland in depth.

YOUR ADRENALS AND SLEEP



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Sleep is an important part of our health, so important that someone once asked me in a workshop what I felt about getting up at 4am to do your practice . . . My response was as long as you are getting a good 7-8 hours sleep, 4am is fine if your body likes that time. If you are getting up at 4am after six hours of sleep or less then you are creating more disharmony in your body. Sleep first, then practice. Lacking sleep day after day after day has shown to make your brain shrink! This leads to dementia types of diseases. Lacking sleep chronically also messes with your blood sugars, makes you hungry all day long, and leaves you not operating at your best. Your adrenals need rest to reboot and rebuild your body, sometimes rest is the best thing you can do for stress induced adrenal fatigue. Your adrenals need sleep and rest.

Cortisol is the primary adrenal stress hormone, it is not a bad hormone, it serves many good purposes when in balance:

- 3️⃣ Cortisol influences carbohydrate, protein, and fat metabolism - again commanding when your body needs energy to run and fight or when you can relax.
 - o In chronic excess, cortisol can lead to metabolic disorder and immunosuppression.
- 3️⃣ Cortisol increases your blood sugar level in different ways to help you cope with an emergency: It increases your liver's production of glucose to send energy to your muscles
 - o Cortisol can also effect insulin levels as glucose will be sent to muscles to fight or flight instead of to organs for digestion or repair of your body. This is why high cortisol levels also effect your blood sugar
- 3️⃣ Cortisol increases fatty acids in the bloodstream to be used as fuel for energy.
- 3️⃣ Cortisol is largely catabolic in nature, meaning it can break things down. Cortisol breaks down glycogen to glucose for use to run and and fight. . . A little is necessary — too much is a problem. Too much cortisol in your system can lead to muscle wasting and brain/neuron wasting due to its catabolic function.
 - o However, cortisol is needed for certain anabolic, or building, functions, such as gut repair.
- 3️⃣ Cortisol counteracts inflammation — which is why cortisol steroid shots are injected into inflamed and in pain tissues . . . just remember the other side of this . . . the catabolic action of cortisol is why Doctors will not give you repeated shots. I personally would avoid one at most costs as I saw some preliminary data showing cortisol shots interfere with your own bodies cortisol production. I have seen studies on cortisol level balance being the highest predictor for heart disease (whitehall II study).
- 3️⃣ Cortisol helps maintain energy, mood, and emotional stability during stressful situations (when in balance).
 - o Therefore cortisol helps maintain resistance to stress -- when it is balanced! Meaning high in morning and sloping down to a night low for sleep.

We need a balance of cortisol in our blood stream -- just the right amount. Too much is a problem and too little is a problem.

Lets look at the physiology of what happens in our body when we feel stress — real or imagined — for long periods of time:

Excess stress leads to excess cortisol leads to



- 3 Low libido - when the adrenals are constantly putting out stress hormones they get depleted — and turn to reproductive hormones like testosterone and progesterone because they quickly convert to adrenal hormones. This leaves you feeling less than desirable . . .
- 3 Increased blood sugar levels - When stress persists the adrenals stimulate the desire for more sugar for energy — this is hard on the liver and pancreas as they have to produce more insulin to keep our blood sugars in check. This can add blood sugar issues to your problems . . . if you would run and fight as we used to have to do when stressed we would use up many of these sugars in the blood . . .
 - o This process also adds to AGES (Advanced Glycation End Products) — free radicals in our blood that make us age prematurely.
- 3 Reduced ability to use protein leading to muscle wasting and heart fatigue. Protein is a rebuilding fuel, during times of stress your body is in survival mode, not rebuilding mode so your body does not effectively use protein when you are under the stress response. **This also effects your bones and leads to osteoporosis** (protein makes your bones stronger and more flexible.)
- 3 Thyroid issues - when all else fails, the adrenals will try to up-regulate the thyroid to increase metabolic activity with more thyroid hormone, only to exhaust thyroid function over time.
- 3 Neurodegenerative changes in your brain that negatively impact short term memory -- what you want to say is just on the tip of your tongue but you can't quite remember it, forgetfulness, senior moments . . .
 - o Cortisol (from excess stress) has a corrosive effect that, over time, wears down the synapses responsible for memory storage and processing. It will affect your memory by causing a gradual loss of synapses in your prefrontal cortex — your hippocampus. This is the brain region associated with short-term memory. This is being seen at younger and younger ages! To the point Drs are just saying it is age related because it is prevalent. Not because it is natural! This decline is associated with senior moments Difficulty falling asleep, memory problems -- Forgetting where your keys are or where you parked your car, moodiness, difficulty in learning new information. http://www.huffingtonpost.com/jenny-c-evans/how-stress-is-literally-m_b_6064966.html?ncid=fbklnkushpimg00000063
 - o Previous research has also linked chronic stress with working memory impairment. (<http://www.jneurosci.org/content/20/4/1568.full>) Other recent research suggests that stress may even act as a trigger for or speed up the onset of Alzheimer's disease, which currently afflicts about 5.4 million Americans, including one in eight people aged 65 and over. (http://www.alz.org/downloads/Facts_Figures_2011.pdf)
- 3 Suppressed immune function - When we are in our parasympathetic nervous system is when our body heals, repairs tissues, digests, regenerates. If we are stressed our body is preparing to put out energy to run or fight so energy does not go to rebuilding the body. Hence the negative impacts on our immune system.

When your cortisol levels are too low, your adrenals are not functioning well usually because they are getting burned out! You may feel :

- 3 Cold all the time
- 3 Feel tired most of the time
- 3 Not handle stress well
- 3 Frequently sick



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- ॐ Not sleep well
- ॐ Low blood sugar issues
- ॐ Chronic fatigue symptoms
- ॐ Low libido
- ॐ Menopausal symptoms

- **MENOPAUSE AND YOUR ADRENALS**

Many symptoms of menopause are really stressed out adrenals. As our ovaries stop producing estrogen the adrenals try to help by secreting estrogen in addition to other hormones. If we enter the perimenopausal stage with stressed out adrenals our mood swings, fatigue, and/or depression will be intensified. Stressful living makes menopausal symptoms worse and depletes our adrenals. Sadly during this time many women turn to coffee and sugar -- as we know coffee and sugar increase adrenal secretions -- momentarily giving us energy — then our energy levels crash and we crave caffeine and sugar setting us up for a viscous cycle.

If you experience some of the symptoms above, it may be time to address your adrenals . . .

In addition to the same symptoms that put too much cortisol in your bloodstream like burning the candle at both ends, not getting enough sleep, over-exercising or over-practicing (yes many “fit” people over do it!), listening to the dramas in your head, along with all the other normal work and family responsibilities that can stress us out . . . **other factors that harm your adrenals leading to not enough cortisol include:**

- ॐ **eating lots of sugar and carbs**
- ॐ **too low cholesterol from statins or a strict low-fat diet,**
- ॐ **low iron**
- ॐ **leaky gut syndrome** (connected to many diseases!) Latest research is saying in any disease treat the gut first! This solves many diseases.
- ॐ **cortisol or steroid shots . . .** I saw some preliminary data showing cortisol shots tell your body you don't need to produce cortisol since it is coming in from the outside.

If you have symptoms of low cortisol levels:

- ॐ Check your iron. Your adrenals need iron to produce cortisol.
- ॐ Eat fermented foods
- ॐ Get tested for inflammation (see if there is an underlying issue in your body).
- ॐ Eat more saturated fats in the form of grass fed ghee and butter, coconut oil, and other fats from nuts and seeds to avocados to olive oil
- ॐ Eat more vegetables

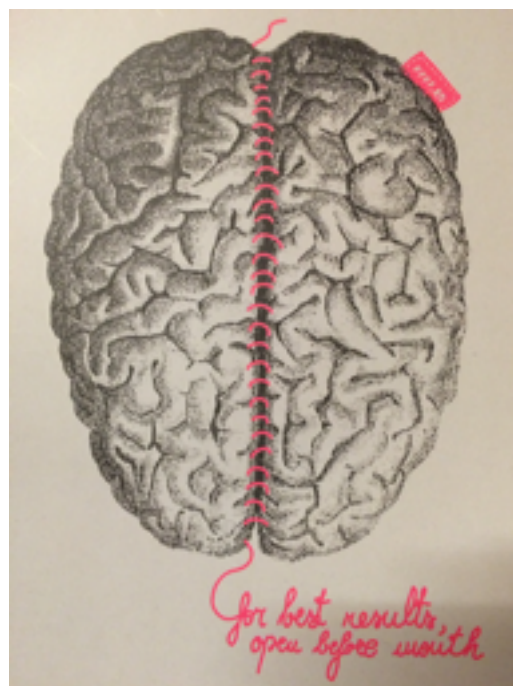
When cortisol is chronically depressed, there's a particular supplement called **licorice root extract** (not the candy!), also known as glycyrrhizin (yashi madhu (Sanskrit)) that can help preserve the half-life of cortisol and help extend its activity. It doesn't affect actual cortisol production but rather helps maintain what little cortisol happens to be available and allows your body to use it more effectively.

If your cortisol levels are out of balance, your body will crave sugars and breads — but it would be better for you to switch to a fat based diet with lots of vegetables.

YOUR ADRENALS AND YOUR BRAIN - This is in your control . . .

Your brain tells your adrenals when you need cortisol and when you don't -- in other words your brain tells you when you are stressed and when you are not. This is why what you think becomes your reality ... If you think your stressed even if you are not in an emergency -- you are stressed

Your brain controls your adrenals — instead of treating adrenal exhaustion it may be more beneficial to treat the brain and the gut first. Adrenal burnout is your brain turning down the alarm button . . . **It is your brain that controls your stress**, for example; you are walking down a dark street at night, you hear footsteps coming up behind you . . . this sets off your stress response — your senses heighten — you hear better your eyes dart about, your body picks up your pace preparing to run if necessary, your mouth gets dry and your palms sweaty . . . in the next moment you hear your friends voice call out to you . . . STRESS GONE in about 10 seconds . . . your body's systems return to normal and stress symptoms are gone :) **You can do this switch at will as soon as you realize you don't need to be in your stress response!**



You want to be able to control your stress, using your brain is a good way to do this. There are some tools that can help us use our brain to turn down the stress response — as we all have experienced this is easier said than done! Here are some tools to help:

☪ **Exercise . . .** The interesting point here is, thankfully, you don't have to do hour long exercise sessions, just 5 minutes bursts throughout your day have the biggest effect on enhancing mood and combatting stress. (Barton, J., Pretty, J. (2010) "What is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis." Environmental Science & Technology. 44: 3947-55.) **It is a lifestyle . . . Find little ways all day long to get bursts of movement that elevate your heart rate briefly . . . stand and work — do a standing pose for 2 minutes while you work, park farther away and briskly walk to your destination (this gets you precious outside time too!), run up the stairs, start a garden, get a clothesline and save on energy as well (no one in Europe has dryers!) . . .**

☪ **Latest research is showing our food sources are also largely responsible for this decline in our hippocampus!** Higher blood sugar levels — too much sugar and carbs primarily make our brain unhealthy and inflamed — Making it more challenging for us to use our brain to control our stress.

- o Processed, nutrient deficient foods, too many sugars and breads, not enough fat. Bad food is also associated with inflammation (from your body trying to recover from the bad food) of another important part of our brain that reacts to stress:

☪ Inflammation is a cause of degeneration of the part of our brain that sits upon our brain stem (mesencephalic midbrain), this part of your brain produces adrenaline for use by your brain and nervous system. **This mid-brain part of your brain controls the amplitude or strength**



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of your adrenal/cortisol response. Meaning, if this part of your brain is inflamed you **over react to stress**, make a big deal of little issues and have a hard time letting them go.

Foods that help your brain stay in balance and detoxify:

- ☪ Vegetables with lots of folic acid and B vitamins (greens, cabbage, brussel sprouts, beets, asparagus)
- ☪ Fermented foods
- ☪ Eggs (choline in the yolks)
- ☪ Magnesium - Leafy greens and Epsom salts baths are good sources of magnesium. Magnesium replaces aluminum in your body, detoxes and stimulates your parasympathetic nervous system.
- ☪ Cholesterol! 25% of the cholesterol in your body is in your brain.
- ☪ Omega3 (walnuts, chia, flax)
- ☪ Fat
- ☪ Vitamin D (Sunshine :)

Exercise, Food, and Meditation, are your best brain enhancers!

Meditation is tool that shows immediate improvement in your brain. And the good news is — you don't even need to be a good meditator! Just sitting and breathing everyday for as little as 5 minutes shows big benefits :) (http://lifespa.com/nobel-prize-winner-studies-meditation/?utm_source=article&utm_medium=email&utm_campaign=nobelprize&inf_contact_key=54b9e2c9b10af69c3a83ab12cb870d9702bac36b9facb4e518b874151a6d4e43)

http://lifespa.com/nobel-prize-winner-studies-meditation/?utm_source=article&utm_medium=email&utm_campaign=nobelprize&inf_contact_key=54b9e2c9b10af69c3a83ab12cb870d9702bac36b9facb4e518b874151a6d4e43)



Deep breathing with a slow exhale is the best therapy in this case.

Taking in a little co2 in this process seems to be helpful. This is because stress makes us over breathe, hyperventilate, and/or breathe through our mouth which increases the stress response even further.

☪ **Stress tends to depress GABA** production (gamma aminobutyric acid — a neurotransmitter released into our body with meditation and deep breathing.) GABA is best known for stabilizing mood disorders.

Anxiety, tension, insomnia and epilepsy are related to low levels of GABA. <http://www.ncbi.nlm.nih.gov/pubmed/20722471>

The mid-brain — that sits on your brain stem — is directly connected to the gut through the vagus nerve, a unique information highway unique to mammals that begins at the top of your spinal cord and extends to your gut. The brain and the gut are always connected.

Our vagus nerve is our gut brain connection; what is going on in your gut effects your brain!

- ☪ If symptoms associated with stress are chronic, conditions such as gastrointestinal infections and severe dysbiosis (gut microbiology disruption) result — **or even could be at fault** (which came first?). Unhealthy imbalances in your GI microbiome (gut bacteria) certainly impact the brain through the vagus nerve and the brain's capacity to manage stress, as well. **What happens in the gut most decidedly influences what happens in the brain and vice versa.** You can be tested for the presence of many forms of dysbiosis (i.e., imbalances of gut bacteria).



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To keep our GABA production balanced

- ॐ Meditation
- ॐ Deep breathing
- ॐ Exercise throughout the day
- ॐ **Eat fermented foods and probiotics**
- ॐ Earthing will improve the damage done by inflammation to this part of your brain and improve your GABA levels.

BANDHAS! When you can't get your brain to cooperate . . . try your bandhas.

Both Mula and Uddiyana bandha are scientifically designed to put pressure on specific nerves — the pelvic splanchnic nerve and the vagus nerve in our gut — that are connected to our parasympathetic nervous system. This helps us to switch from our stress response to our rest and rebuild response.

Also another point on your body that stimulates your para-sympathetic nervous system is your lips, touch your finger to your lips as if you were going “shhhh”. **And gently rock** . . . suddenly you feel more relaxed. Try it!

ASHTANGA YOGA AND YOUR ADRENALS

Massaging the adrenals everyday with yoga asanas will recharge and balance them. Garbha PIndasana directly massages the adrenals, but most of our practice restores the adrenals:

REST POSE :) is for the adrenals

- ॐ standing poses stimulate them
- ॐ inversions recharge them
- ॐ twisting postures and back bends wring them out improving their function and aiding in their release of hormones
- ॐ forward bends soothe them.
- ॐ However **the best pose for the adrenals is rest pose**, a nice long supported rest pose is important. It is even more important if you are juggling a full time job, kids, household chores, aging parents, etc.

And it is important to relax in the poses! Do your “exercise” in the sun salutes, standing poses, vinyasas, arm balances, jumps, etc. But don't let this be all your practice is. **RELAX in the poses — don't try to push or pull your body anywhere it is not easily going.**

Remember in your practice to keep it in perspective. Don't let your ashtanga practice add to your stress load. **Your practice each day should make you feel good; doing intense full practices 6 days per week may add to your adrenal overland, it's ok to have half practices, gentle practices, or shorter practices some days.**

And remember your bandhas to help keep you in your parasympathetic nervous system. You can choose if you want your practice to destress you or stress you out. If you are pushing and pulling and working too hard you are creating cortisol and adrenaline in your practice. If you relax, breathe deep, and pull away from your thinking mind you will create more GABA, and the feel good endorphins that naturally come with exercise. **Make every practice feel good.**



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Preventing adrenal fatigue is easier than curing adrenal fatigue . . . WHAT YOU CAN DO ABOUT STRESS AND CORTISOL! – Preventative Methods

Remember . . . stress is what you are thinking! Be careful not to walk around as if there are tigers everywhere . . . the bill in the mail is a tiger, work drama is a tiger, family can be a tiger . . . if you are finding lots of tigers in many different areas of your life it might be time to relax . . .

Rest when you feel tired! When you feel tired in the afternoon don't have coffee for a pick me up . . . instead listen to your adrenals and take a 20 minute nap . . . pushing yourself through tiredness with caffeine and sugar is a sure fire method to set you on your way to adrenal dysfunction . . . If you do have adrenal issues you do need to be very careful with sugar and caffeine.

Sunlight! - At least a half hour per day. Sunlight helps your body regulate your circadian rhythm and balance your cortisol and melatonin.

Sleep! - Sleep at least 7-9 hours each night . . . more on sleep to come in a later month.

Stay Hydrated.

Meditation or stress reduction program - take a few quiet moments to yourself each day. Many people, parents especially, have no time to themselves in an average week. 5 - 20 minutes once or twice per day is adequate.

- ☪ Is really about quiet time. Noise stress is huge in our lives, having some quietness reduces stress that we are sometimes not even aware of.
- ☪ It's ok to think. Bubbles coming up that need to release ...

Deep Breathing / Pranayama - Breathe through your nose all day long. When you feel stress, take a longer exhale (about double your inhale). When you sit down to work; start by taking a few slow deep breaths as we do in Padmasana.

Movement throughout your day and exercise - Yoga / Sun Salutations: A few rounds of this simple yet profoundly effective flow of postures that alternately contract and expand the spine will help boost energy by using the body's own prana, or life force, to circulate energy rather than tapping the adrenals once again. Do standing poses while you work . . . Try not to sit for longer than 15 or 20 minutes, fidget, sit like a yogi, try to make a standing work space too, get out side frequently even just for short periods.

Minimize Stress . . . Remember the big picture . . . what is really important? Two of my favorite quotes:

What other people think of you is none of your business. Actually one of the best stress strategies is just to **mind your own business** . . .

Avoid negative people and negative self talk, your *environment* is one of the most important components. Be kind to yourself. Try to avoid saying negative things about yourself and others. It is important to choose to be around positive people and stay positive about yourself as well.



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Have a regular schedule

Think like a baby . . . if you don't have rest or food on your schedule you get cranky. Babies that are able to keep to their daily rhythms each day are less crankier! Sleep and food do best in our bodies on a schedule. Be careful not to get too rigid about that! It is ok to have one or two nights in a week where you stay up or sleep in and enjoy life a bit :)

Avoid Late Meals - There are two main thoughts on eating late, Ayurveda says : Have your last meal no later than 6pm and make it a light one (soups or cooked vegetables). Skipping supper altogether a couple times a week may also boost energy levels and is not a bad idea. If you decide to try that, make sure that you have a large, balanced and nourishing lunch that day, to get you through the night without hunger pangs. Other studies like you to fast all day and eat at night (like many Europeans). If you are in the habit of eating dinner late — try not to eat it later than 6pm. A high protein meal late at night could interfere with your sleep.

Laugh and do something fun everyday.

Make a list

- ☯ On one side list all the things that you feel stress from
- ☯ On the other side list all the things you enjoy doing in your life

Plan your life in a way to do more of the things you enjoy each week while seeing if you can lower the stress load.

Adrenal Recovery Time

Recovery for adrenal fatigue can take a little while. After all, it took months, maybe years to wear out your adrenals; so it takes a little time to build up their strength again. For full adrenal recovery you can expect it to take:

- 6-9 months for minor adrenal fatigue
- 12-18 months for moderate fatigue
- Up to 24 months for severe adrenal fatigue

The best approach is to make solid changes to your lifestyle for lasting results. If you aim for a balanced lifestyle with a healthy level of sleep, exercise, fun, and positive environment, then you are most likely to keep your adrenal system going strong!

Herbal support and Adaptogenic herbs — if you do need some help recovering your adrenals:

There are also some herbs that can help with stress, many of these herbs are called “adaptogenic herbs”, adaptogenic herbs are herbs with intelligence. For example, ginseng can lower blood pressure in someone with high blood pressure, and it will increase blood pressure for someone with low blood pressure. Ashwagandha, a very popular ayurvedic adaptogenic herb, can influence your thyroid — if you are hypothyroid it will raise your thyroid hormones, if you are hyperthyroid it will reduce your thyroid hormones, **the herb communicates with your body.**

A new study that came out this year showed that plants actually exude "nanoparticles" called **exosomes**, that contain within them regulatory RNAs — RNAs like talk to DNAs (my own way of explaining this!) — RNAs are nucleic acids found in every cell, they are non-coding, meaning they don't produce proteins. But they are information-containing sequences that modulate the DNA within those who consume them. Take ginger for example, you eat it and the RNA's go into our body and



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actually start to modulate the expression of our DNA. That's almost like the plant is talking to our body — or your body is talking to the plant — telling it what it needs so the plant can enable our body to come back into balance.



- ۞ Ashwagandha (means the strength of 100 horses) has the amazing property of supporting energy production during the day and safeguarding a deep sleep at night — it is one of the most well-researched adaptogens in the world.
- ۞ Brahmi or Gotu Kola - This herb has been long understood as the premier brain tonic in Ayurveda, supporting healthy memory, clarity, mood, sleep and longevity. But recent studies are beginning to explain *why* this herb has been so effective: ***it has been shown to support the optimal health of the skin of the intestinal tract. Supporting our gut-brain connection.***
- ۞ Shilajit - In Ayurveda there is an herb called *Shilajit*, which is widely known in India as the “Destroyer of Weakness.” It is rich in rare constituents called fulvic and humic acids that the mitochondria use to make energy. ***Shilajit replenishes the deep energy-making centers of the body, the mitochondria.*** In one study, Shilajit was able to help the mitochondria convert fat and sugar in the body’s main energy source, ATP. (9)
 - o Historically, Shilajit was used by Himalayan mountain climbers to store the energy needed for climbing at heights above 20,000 feet. Local sherpas to this day take Shilajit before each climb and sell it to climbers to help oxygenate at high altitudes.

All this rocking and rolling on your back is important for the organs on the back of your body, let me remind you this: Taking care of your kidneys is very important . . . if you have heart disease doctors have figured out how to work with that plumbing, you have liver issues . . . the liver regenerates . . . you have kidney issues . . . get your affairs in order! **Or better yet, live your life so your affairs are always in order :)**

more research coming on kukkutasana — tune back in please.