

Stress and Trauma in the Body

Before we talk about specific strategies for working with trauma and stress, I want to lay some foundational work about the impacts of stress – which, though it’s extremely damaging, is generally downplayed in our culture because “everyone is stressed”. I want to be clear that we can’t underestimate the role of stress - even stress that would not be considered traumatic - not only in chronic disease, but specifically in depression, PTSD, and the ability to recover from trauma.

In this space and format, we can’t possibly discuss all the evidence behind the foundational principles I want to work with, so I’ve referenced studies and articles at the end of these notes.

Our bodies have only one mechanism for dealing with stress, and that involves adrenaline and cortisol. In many cases, we can’t choose to *not react* (though we can train ourselves to react less strongly), and we can’t choose to react with some different physiological mechanism: adrenaline and cortisol are always involved.

Adrenaline has some specific, unavoidable effects on the body, including changing the way our eyes function (which changes the way we see the world and our place in it), the way we digest our food, and the way our circulatory systems function.

Cortisol also has some specific, unavoidable effects on the body – the two that I really want to draw attention to are the effects on the hippocampus and the interrelationship with insulin.

The *hippocampus* is where, among other things, we process short term memories into long term memories – in other words, the hippocampus is where we “get over it” – whatever stressful or unpleasant thing “it” is. It follows that the healthier the hippocampus, the less difficult it will be to “get over it”. Repeatedly, we see that prolonged exposure to cortisol measurably damages the hippocampus – which means that a person who has been chronically exposed to high cortisol levels will have a more difficult time recovering from trauma than a person who has not had chronic high stress levels.

There are two factors to consider with *insulin*: the first is that high insulin levels lead to high cortisol levels. Even a person who is living in a stress-free environment, but who consumes a high-sugar diet, will have high cortisol levels – in this case, not through what would culturally be considered “stress”, but in response to the insulin itself. This necessarily means that diet plays a very large role in our ability to recover from

trauma. (And in fact, not just in terms of the insulin-cortisol connection, but also from the perspective of basic nutritional requirements.)

Additionally, when a baby is developing, if the mother is in a high insulin state, then not only is the baby pre-exposed to a high insulin and therefore high cortisol environment, but the baby is “pre-set” for insulin resistance – this is an evolutionary defense against famine. If a mother’s body is in a high stress environment, the developing baby is also pre-exposed to a high cortisol state during development. This has very important and far-reaching implications. Research into “genetic memory” and the epigenetic impacts of a mother’s stressful living conditions on the health of her children is ongoing to investigate these connections, and some very interesting results have already been published.

Using cardiovascular disease as a marker for levels of stress, consider the following: a person who regularly sleeps 5 hours a night or less is 300% more likely to have a heart attack, and environmental noise is a greater risk factor for heart attack and cardiovascular disease than elevated cholesterol levels. Underserved demographics are more likely to work multiple low-wage jobs and to work irregular shifts, which interfere with ideal sleep quantity and quality. Underserved communities are also often found where environmental noise levels are more likely to be high. Additionally, in these communities environmental toxins more prevalent, and social stressors such as unsafe living environments are common.

The intersection of these effects in underserved communities means that the underserved are born into a high-stress (high-cortisol) state, which is exacerbated throughout their lives due to dietary and environmental factors.

At this point it should be clear that the challenges we face in working with trauma in the underserved are not only made more difficult because of lack of access to services, but also due to the physiological effects of poor diet, lack of sleep and safe places to live, as well as the cascade of generational effects these factors initiate. Recovery must include interventions in as many of these areas as possible.

Mitigating Stress and Trauma with Lifestyle Changes

Although we’re herbalists, generally our first approaches for recovery start at the foundational level: food, sleep, movement, lifestyle and living conditions. Sometimes herbs are the only intervention that we actually have access to, either because of the cost-prohibitive nature of the most

effective changes to these factors (which is a whole discussion in itself!), or because the client is unwilling to make change in these foundational areas. Nonetheless, it's important to discuss them: just because an effective intervention is costly doesn't mean that underserved communities don't have the right to it, it only means that we have to be much more creative in how we can make it accessible.

As we go through these items, you may find yourself thinking they're somewhat boring. That's true! Strategies don't have to be flashy to work – simple boring stuff, done consistently and with enough creativity to make them accessible and achievable, is enough to get the job done! In many cases, it's the *only* thing that will get the job done. It's more labor intensive than a pill, and it's often less appealing to clients than an easier (but less complete) approach, but it is the most effective way.

Also, some of these suggestions may be met initially with skepticism as they are not necessarily fashionable in our times. That is not unique to underserved communities, and it's not a good reason to avoid the strategies. The things that are fashionable in society right now are generally not healthy, so no matter who we're working with, a big part of the job is *motivational speaking*: convincing our clients that a new and possibly foreign idea is worth trying.

Dietary Interventions for Trauma Recovery

The things we eat build our bodies. In order to have the strength to function, we've got to provide the nutrients a body expects. You may never have thought of an apple as an anti-depressant, or of spinach as a tool to recover from trauma, but in fact, the nutrients in our foods provide the chemicals our bodies require to perform these tasks, as well as to keep us healthy in all other areas.

Dealing with stress isn't just about dealing with the thing that's upsetting you right in this moment – all stress is stress. Malnourishment not only means that the body doesn't have the resources required to do the work of recovery, but is itself also a stress on the body. It's not just failing to add to your ability to manage stress, it's actively detracting from that ability. This is why, even though dietary changes are difficult, it is absolutely worth the time and creativity required to make them accessible.

By counseling a client towards a diet lower in refined carbohydrates, we can reduce their cortisol levels even if we can't change their baseline

stress levels. Motivating clients to skip refined treats isn't necessarily easy, even in the best of situations, but it is worth an attempt. Even if the best we can do is to choose rice instead of bread and baked goods, this will still have a positive impact on cortisol levels.

Fresh vegetables are not always easy to come by in underserved areas. If the client is lucky enough to have the space and the leisure to garden, as may be possible in rural areas, that makes the situation somewhat easier – and time spent in the garden is a specific strategy for recovery all on its own! – but in an urban environment, that's generally not available. When we're working with a specific community, often community gardens can be made available if there is someone to champion the cause with the city. But there are other methods: farmers' markets in Boston accept SNAP 2-for-1, and if you are able to wait until towards the end of the market, generally you can get even better deals than that as farmers don't want to take unsold produce home. If someone in the family (even a responsible child) can be available to go to farmer's market, this is a very effective way to get fresh vegetables at a very low cost. If not, use frozen vegetables. Frozen vegetables are frozen at the time of harvest, and are often a better option nutritionally than fresh vegetables that have been shipped across the country.

Organ meats are tremendously nutrient dense, and although many don't relish the taste or texture, it's important to remember that most cultures still consider organ meats to be an important part of traditional cuisine. Because many of our underserved communities are of varied ethnicities, do not assume that a suggestion of organ meats will be unwelcome. They're cost-effective, and many people do actually enjoy them. If your clients (or you yourself!) do not relish organ meats, invent recipes to hide them in other foods – beans and rice with a good measure of spices and finely chopped liver is a fantastic way to drastically increase not just protein, but many essential nutrients.

Broth made from marrow bones contains not only very high quality fats, but also very absorbable minerals. Boiled with a couple handfuls of seaweed and seasoned to taste, this makes a very nutrient dense broth that can be added to any meal. Seaweed may seem unfamiliar at first, but it's cost effective at Asian markets or purchased in bulk, and boiled in the soup it doesn't retain the "seaweed" flavor that folks fear. If you keep some trial size samples on hand, your clients may be more easily convinced – and it's worth it, because the seaweed adds tremendous value in vitamins and minerals. Even if someone doesn't have a kitchen, as long as they have access to electricity, broth can be made in a crockpot – these are often available for \$5 or less at thrift shops.

Fat is particularly critical in resolving issues in the nervous system, whether they're physiological or emotional. Fats to emphasize include good quality fats from healthy animals, olive oil, responsible coconut and palm oil, good quality butter, and ghee. Often, at the farmer's market, good quality pork or beef fat can be purchased inexpensively or even taken for free, and can be added as-is to a meal or rendered into lard, which an older relative or community member may be able and willing to do while younger adults are working. Fats to avoid because they cause inflammation are corn, canola, soy, and "vegetable" oils.

Enlisting older relatives, who may not be working, in the business of food preparation is a very useful strategy – it not only allows fresh food to be prepared where it otherwise may not be (because the adults in a family are working), but it also gives the elder a feeling of purpose and contribution. If we can pair up the elder with school-aged children, we can even increase the effect so that multiple families benefit with fresh meals. Elders and children are incredible resources – and giving them access to self-sufficiency also improves their own abilities to recover from trauma. Today, working-age adults are acculturated to believe that they have to be responsible for everything: work, the kids, and elder care. Traditionally, however, each of the generations would have contributed, and reviving those traditions, even beyond actual family lines, gives us a very powerful multi-purpose tool in recovery.

Two supplements that are particularly useful in dealing with recovery are magnesium and D3. These two are also reasonably cost-effective, especially if D3 can be administered by a primary care provider and covered by insurance. Both play many different roles in healthy functioning of the nervous system. Additionally, B12, specifically in the form of methylcobalamin, and its complement B6, are very important. Again, this is another supplement that can be available from a primary care physician. It should be noted that therapeutic levels are considerably and even drastically higher than US RDA and reference levels.

The microbiome has been receiving a lot of press lately in relation to depression, mood, and other neuro/psychological areas. Probiotic supplementation is expensive, but it is quite cost effective to make probiotic foods. Especially when using cabbage as a base for fermenting vegetables, you receive both the probiotic effects as well as the prebiotic effects, and although prepared fermented foods are costly to purchase, they are simple to make when time and space can be made available. This is another place we can engage elders and children in community care, and it can even be done as a neighborhood co-op or CSA, further adding to the self-sufficiency factor. This is a great use of produce "seconds" which can be purchased very cost-effectively at farmer's

markets. Also, although fermented foods may be a forgotten taste for many folks, they may be more willing to try something produced right in the neighborhood by people they know.

Finally, it is important to emphasize that certain common foods are very potent contributors to emotional and mental instability – ranging from mental illnesses like schizophrenia and bipolar, to much less intense but still quite troubling symptoms such as brain fog, depression, and cognitive dysfunction. The biggest of these are gluten and dairy, though additional common allergens (like soy and corn) are good to remove for overall health. Although removing these foods is often challenging, it is definitely worth exploring, at least as part of a short term recovery strategy. The impact that both gluten and dairy play in mental health issues cannot be overemphasized.

Sleep Mitigates the Impacts of Stress

Sleep is so fundamental to any kind of recovery, and so inaccessible in our current culture. Not only are our lives too full of obligations to allow enough time for proper restful sleep, but our society seems to see sleep as an unnecessary evil – the most desirable sacrificial lamb on the altar of Doing More Stuff. This is true across socio-economic class lines, though of course it's easier to resolve in affluent communities (tangibly easier, that is, though possibly not any easier emotionally). Aside from cultural views about sleep (and the impact they have on our physiological *ability* to sleep), environment plays a big role: sleep requires darkness and quiet. Underserved communities have more light pollution than affluent ones, not to mention more noise, and poorer quality housing closer together. Finding safe, quiet, restful space to sleep isn't necessarily easy.

Some factors in why sleep is so important involve the body's ability to *detoxify* – a trendy word right now, but nonetheless very important. It is the liver and the lymphatic system, and importantly to our topic, the glymphatic system, that take care of this work. Traditionally, when we talk about the detoxifying actions of the liver and the lymphatic and glymphatic systems, we're talking about physiological waste products that need to be removed from the body, and that is true in the case of trauma recovery as well. However, when we consider some factors involved in trauma – such as the proper function of the hippocampus which relies on the body's ability to clear out cortisol, but also the reality that memories and emotions live *somewhere* in the body – when we talk about the detox systems' abilities to “clear out the trash” or the “toxins”

from the body, we need to consider that this may not be purely physiological.

Light plays a big role in our ability to get to sleep and stay asleep. A simple solution to the problem of street lights and other light pollution is to get good light-blocking curtains; however, this can be cost-prohibitive. Cost-effective (if less attractive) alternatives are to tack blankets or towels over windows. Blankets can be found at thrift shops for a couple dollars, and sometimes are large enough to cover more than one window.

Streetlight is not the only problematic evening lighting: there are multiple studies linking exposure to light in the blue spectrum (such as from the television or computer/phone screens, as well as most electric lighting) to depression. The use of electric lights after sundown is a convenience for our culture – allowing us to choose to do things (or to impose tasks on employees) after a point when, evolutionarily, the human body expects activity to stop. Melatonin – a hormone that not only helps us sleep, but also fights viral infections and has a role in preventing cancer, and is one of the most potent antioxidants currently known – is produced by the body in cycles as the light wanes. Electric lights, televisions, computers and phones all degrade the body's ability to create melatonin.

Across all socio-economic lines, and even in people who are not recovering from trauma, we have never found a client whose situation did not improve by putting aside all electric devices and turning out lights after 7:00pm. (Candles, or very dim lighting, can be used if necessary) This allows the body to produce and increase levels of melatonin over a couple hours before sleeping, so that when a person goes to bed, they don't lay in the dark for a long time waiting for sleep. It's also important to recognize that hormones are all interrelated: a person whose insulin, or cortisol, or other hormone levels are disrupted will have more difficulty maintaining healthy melatonin levels.

There's a second benefit to this action: this also means no television after that point. These days, television has become more and more sensational, polarizing, and fear-inducing. Again, across all clients, we find that giving up television is a fantastic intervention for relieving stress and anxiety, and lowering levels of perceived threat. Often we couple this strategy with a specific plan for more community contact, more outdoor time, etc.

What will people do if the lights are turned off? Some tasks don't require a great deal of light: laundry can be folded, dishes put away, bags packed for the next morning, etc. Reading also requires reasonably little light, and this can also be a time when one member of a family reads out loud

for the rest of the family. Storytelling can happen during this time as well, or simply just conversation with friends or family members.

For people who do shift work, the day/night cycles need to be artificially recreated in order to sleep (though regularly sleeping off the natural day/night cycle comes with problems that can't be completely resolved by mimicking this cycle), which means care needs to be taken to provide a darkened environment to stimulate the production of melatonin before sleeping.

Noise can also be very disruptive to sleep. Although it's not easy to control, especially in underserved communities where there may be airplanes flying over and other industrial noises, or disruptive noises from neighbors, ear plugs can be a helpful way to block out some noise. These can be found at drugstores for very little money, and while people may find them uncomfortable initially, generally it is not too difficult to accustom to them.

The more difficult problem to solve is lack of time, often due to the need to work long or shifted hours. Several suggestions in this area again revolve around community – for example, finding a neighbor or relative who can effectively help the children through their homework and dinner and off to bed can make space for a parent to get more sleep. Even if this intervention is only twice a week, that's still some time each week for the parent to catch up.

Teaching children that sleep is important (by the adults in their lives modeling this behavior) is tremendously helpful for their health as well – and here's where getting rid of the television can help. A family could, instead of watching TV in the evening, tell stories to each other (and even draw pictures to accompany them!) and then go to bed early. Again, even if a family only does this a couple times a week, it's a tool to help not only catch up on sleep but also allow the family to be building strong ties. Specific to our topic of trauma recovery, two needs are met with one activity – not just getting rest (and avoiding evening blue-light depression and television adrenaline), but also the need to tell stories, and specifically to tell the stories of our experiences. It would be useful to spend some time instructing the family in storytelling, and in allowing uncomfortable stories to be told without criticism.

Again, this is the sort of suggestion that is often initially met with skepticism, regardless of who we're working with. But the real goal here (besides getting away from the light and fantasticism of television) is rebuilding community, rebuilding family, and rebuilding the self in connection – as opposed to the self in disconnection.

Making Self-care Accessible

Often in our culture, and across socio-economic lines, the concept of self-care is relegated to sugary treats and retail therapy. The idea that we need to take time to take care of ourselves – that we are not robots that can just keep functioning forever without maintenance – is irritatingly all-pervasive. (Whoever came up with that analogy was not a mechanic!) This is made more difficult in communities where people who work may work two or more part-time jobs, and where many people may not be employed/occupied. The concept of self-care needs to be distinguished from simply having nothing to do. We'll start with some concepts around self-care and then look at how they can be adapted to these groups.

First of everything, we can learn a great deal about self-care from the animal world. Animals spend large portions of each day caring for their bodies: fur, feathers, scales, whatever they have. Maintaining a body requires a great deal of attention. Humans are not any different! We need to spend time looking at our bodies, making sure in particular that our skin and teeth/gums are well cared for. Simply looking at our bodies, and giving what care is required, can drastically reduce the need for medical interventions further down the line, especially in the case of clients with diabetes, and in regard to dental care. Slowly and with support, this can also help a person with dissociative disorders and body-related trauma issues to find comfort in and reclaim their bodies.

It is appropriate for the care of the body to require a not-insignificant amount of time each day – and finding that time may be the big challenge in compliance. Again, though, this is something that we can do in community: a parent, for example, can do this together with a child. Spending time on caring for the body with our children not only means that we're cared for, but it also helps foster care of the self in a child, making them more likely to turn to self-care instead of self-harm in future times of stress.

All of the next items fall into the category of assessing what is needed and then making space for that to happen. Self-care doesn't need to be fancy, or to cost anything, but it does require some thought. Often – across demographics – our ideas about “relaxing” are not actually relaxing! Settling on the couch for some television is very appealing at the end of a work day, but the television is actually keeping the brain in a place of stress and effort. This is comfortable, because it's familiar, but it's not relaxing.

In order to relax, we need to disconnect from technology, and reconnect to the natural world, to our communities, and to our own bodies. Truly

relaxing activities would include going for a walk in a park, relaxing near a pond, stream, or fountain, or visiting with a neighbor. Dancing, stretching, and walking are all ways that we can set aside our thinking selves and reconnect in our bodies – and they are things that can be done for free, and with friends. Although underserved urban environments often lack for greenspace, any bit of park can be used and larger greenspaces usually can be accessed with public transportation.

Going for a walk in particular is a very important part of recovery. Repeatedly, research finds that even just 30 minutes of non-specific exercise daily or 45 minutes 3 times a week, is as effective as or more effective than the pharmaceutical Zoloft. When we look at the body physiologically, we see the importance of movement as well: a sedentary body is stagnant. If blood isn't moving, and lymph isn't moving, how can we expect emotions to be moving? Moving through and past trauma requires actual movement! This particularly important part of recovery also requires no dollars, which means it can be accessible to anyone. Of course, I would prefer that everyone have time to move around barefoot on natural surfaces that are free of litter, and there are plenty of studies that show that moving in nature is extremely beneficial (refer to the Japanese “forest bathing” studies), but the Zoloft studies were not done that way – they simply used a treadmill. First move, then move better.

An important part of self-care is story telling. Telling the stories – the stories of our day, as well as of our trauma – is a way that we process our experiences, and create our own understanding of what has happened in our lives. We can decide how we interpret our experiences – whether we can see a silver lining in negative experiences, whether we can come to a place of control over our traumatic memories – when we have a safe space to tell our stories. Perhaps not surprisingly, this is another place our elders can help us! In a community with mixed generations, elders may be more available for storytelling than peers. Elders may also have useful perspectives to help with the storytelling. Elders certainly need their own time for storytelling, and this can be intergenerational or with peers. Children also need to be involved, and although some stories won't be suitable for children, it's important to recognize that they know what is going on far more than we usually expect, and that they too need time to process these events, even if they're not experiencing them directly. As parents, being able to reframe our own stories and share them after a stressful or traumatic time will help our children understand their world better, and will model for them effective processing of these experiences.

None of these ideas are, in themselves, difficult or even revolutionary. The difficulty is in implementation – because our society doesn't place value on these activities, there is little time available for them. Self-care

requires a commitment on the part of the client to care for themselves (which means that, as practitioners, we're back to motivational speaking).

A bigger, longer term factor in the self-care equation is this: when we look at our bodies and start taking responsibility for them, when we start making time to make sure that we care for our bodies, this causes a mental shift. What starts out initially as "I need to make sure my skin isn't dried out and my gums and teeth are healthy" leads to "I am important. I have value." This is a place where we can provide not only care for the body, but also a foundation from which empowerment can be built.

Herbs for Trauma Recovery

Throughout every step of the recovery process, there are herbs that can help. Although we're herbalists, we see the herbs as only one of many tools we have to find health and balance. It's very easy, especially given that most of us grew up in this conventional allopathic model, to think of herbs simply as "weak pharmaceuticals", and/or to use a dispensary approach to herbalism – instead of seeing the plants as an integrated part of a protocol in which each aspect – finding time to tell stories, making dinner in community, spending time outdoors, sleeping well – is as important as the "medicine" component.

It's very important to work from this holistic place: when we see herbs as a thing we can dispense to fix problems, we see ourselves as Fixers of Problems. This causes a significant shift in perspective: as Fixers, we become responsible for other people's problems. We become authorities on resolving those problems. That is, however, impossible: we can not work through trauma on behalf of another person. As practitioners, we can only empower our clients to work through their own trauma. Disciplining ourselves to remember that herbs are one of many tools to do this work helps us stay in a place of supporting our clients on their own paths, not fixing their problems for them.

Unless otherwise specified, these herbs are generally gentle and safe to experiment with.

I would like to note: in our language, it is very difficult to talk about plants without a tone of exploitation. I prefer to say things like "work with" plants, or that plants can "help with", instead of to say "good for" or "used for" – I wouldn't say that my friend could be used for helping people move, and I

don't like to talk that way about plants either. However, our language doesn't always structure well to talk about plants in non-exploitative terms. Please join me in contemplating how we can build partnership relationships with plants, instead of exploiting them for particular "uses", even when our grammar favors the latter.

Herbs to Support Good Nutrition

Green herbs are tremendously nutritious, and are a cost-effective way to improve someone's vegetable intake. These range from simply eating parsley to making a long infusion of nettle and dandelion leaves. Some grocery store options include parsley, cilantro, dill, scallions, and fennel – these are commonly found in grocery stores and are generally cost-effective, especially parsley. Often, a bunch of parsley can be bought for a dollar or less, and it doesn't need to be prepared at all – it can simply be eaten right as it is, stalks and all. Scallions are another favorite, as they too can be eaten without preparation, and all parts are edible. Scallions are sulphur-containing vegetables, and while an onion might be too much to eat raw, generally scallions are mild enough that they can be munched as is. For someone with the ability to cook, even just adding parsley and scallions in rice and beans is a huge improvement nutritionally.

Dandelions can be gotten with no dollars at all – they are ubiquitous and easy to identify, and they will continue to grow if you don't take too much from any one plant. In many areas, garlic mustard is also abundant, and this too can be eaten as a vegetable. It's easy to identify by smell and taste, and none of the potential look alike plants are harmful – in fact, the two most common (violet and ground ivy) are quite beneficial! All parts of these plants can be consumed.

Green herbal *infusions* like nettle, peppermint, and dandelion are all cost-effective options. All three can be purchased in bulk and mixed together into a long-infused tea that will taste good to most palates. High in vitamins and minerals, a quart of this tea daily will drastically increase nutrients in anyone's diet, and especially in a typical "food desert" diet. Typically, we put two or three tablespoons of dried herbs in a one-quart mason jar, then fill the jar with boiling water. Let sit overnight, or for 4-8 hours, and strain. This can be consumed cold, or reheated, and sweetened if necessary. The long infusion allows much higher mineral concentration in the resulting tea – including magnesium, which is critical for managing stress levels. The dose is typically the whole quart, daily.

This tea should not be given to someone taking blood thinners, or who is told that they cannot consume spinach/leafy greens. This tea is somewhat diuretic, and can be used to manage high blood pressure in some cases, if taken consistently.

There are many nourishing *roots*, but two of the most basic are burdock and dandelion root. Burdock root can often be purchased fresh at Asian markets for reasonable prices, but both can be gotten dried and easily added to broth, rice and beans, or any other food that involves boiling. These roots contain, among other things, inulin, a prebiotic fiber which helps preferentially feed beneficial probiotic bacteria. Both also improve liver function slowly and gently, and will aid those with a history of alcohol or drug abuse in particular. Neither works so quickly or strongly on the liver that any drug interactions have been documented.

Herbs to Support Good Sleep

In general, I do prefer to work with herbs as tea, though sometimes at night people prefer tinctures so that they won't have to go to the bathroom in the night. The first three of these plants are generally considered quite palatable, the latter ones are more bitter.

Chamomile, *Matricaria recutita*, is a fairly easy-to-find herb, and it's tremendously useful. It's gently relaxing and calming, and can be used at bedtime as well as during the day. Chamomile is particularly useful for ADD, for calming energetic kids, and for anyone who feels unfocused and frenzied. Very few people are allergic to chamomile (reactions are similar to hay fever). Chamomile is also useful as an anti-spasmodic, though the tea needs to be brewed stronger and over more time for this effect to be strong.

Eastern Wood Betony, *Stachys officinalis*, is a plant with a long history of use for concussions, as well as minor digestive complaints. Betony is also particularly useful for people who feel "spacey" or like they can't focus, often due to feeling overwhelmed by stress or by stimulus/input.

Linden, *Tilia cordata* and *T. americana*, is relaxing to both the nervous and the circulatory systems. Linden is very useful for palpitations, for anxiety, and for prolonged stress events. Linden is also very helpful for headaches and migraines. Linden is particularly good for people who are dry, or who use words like "fried", "frazzled", indicating dryness in the nervous system.

Skullcap, *Scutellaria lateriflora*, and Passionflower, *Passiflora incarnata*, are gentle sedatives that are effective for some with insomnia, especially when there are circular, repetitive thoughts, or when anxiety is described as “thoughts racing through the mind”, or like a “hamster wheel” in the mind. Both, though Skullcap in particular, are also very good for tension at the base of the neck.

Wild lettuce, *Lactuca virosa*, can be useful as a more potent sedative in particular when pain (often back pain) is keeping a person awake. Although for strong pain, an extract of the latex of the plant is recommended, for general aches and pains and the sleeplessness that comes of them, tea made from the leaves is generally sufficient.

Hops, *Humulus lupulus*, is another stronger sedative. Although it’s quite bitter, it’s also a reasonably commonly accepted flavor, because of its prevalence in beer. Nonetheless, a cup of Hops tea is not terribly pleasant, and the tincture is generally preferred.

Ashwagandha, *Withania somnifera*, is an adaptogen, which is a category of herbs that help the body withstand stress in a generalized way. In the case of Ashwagandha, this means a restoration of circadian cycles, and it is particularly good for folks who have identified as “night owls” and are trying to get to a more regular sleep schedule. Ashwagandha is also very useful for folks who find it difficult to sleep through the night. A decoction of the roots drunk as tea daily is very helpful – bring to a boil, then simmer for 20 minutes – and can be taken throughout the day without fear of sedation. Ashwagandha has beneficial action on the adrenal glands, as well as the hippocampus.

Herbs to Support Movement

Solomon’s Seal, *Polygonatum multiflorum*, is particularly good for keeping joints well-lubricated, especially when there is an injury or arthritis. Solomon’s Seal is used topically, as tincture or infused oil. It’s important to note that while Solomon’s Seal is not endangered, it is not an abundant plant, and should be used responsibly.

St. John’s Wort, *Hypericum perforatum*, used topically, is excellent for working with neuropathy, in particular with diabetics, and especially when nerve discomfort is a barrier to movement. St. John’s Wort is generally considered safe to use topically, even if a client is taking pharmaceuticals – though it should not be used internally in that situation.

Circulatory stimulants, such as Ginger, *Zingiber officinale*, Damiana, *Turnera diffusa*, and even Cayenne, *Capsicum annuum*, are very useful to help a sedentary person get moving again. Movement – of the muscles and of the blood – means nourishment and lubrication flowing through the body, and getting things flowing physically promotes getting things flowing emotionally as well.

Herbs Specifically for Trauma Recovery

Tulsi, *Ocimum sanctum*, has beneficial impact on the hippocampus as well as the adrenal glands, and has a generalized blood sugar lowering effect. It can help with anything as simple as PMS to complicated issues of trauma, and is particularly useful when self-medication with marijuana or alcohol has become a factor.

Rose, *Rosa spp.*, is very helpful for folks who feel overwhelmed, or hunted. A Rose bush in the wild grows into a kind of natural shelter for small mammals, protecting them from hawks, foxes, and other predators: we work with Rose in the same way for humans, only instead of a physical shelter to hide in, Rose can be taken as tea or elixir.

Elderflower, *Sambucus nigra* or *S. canadensis*, may be most commonly known for its ability to help sweat out a fever, but Elder works this way emotionally as well. When emotions are held too tightly, or when someone is not able to let go of emotions, Elder can help release that tension. Elder flowers are typically taken as tea or an elixir.

Motherwort, *Leonurus cardiaca*, is also good for anxiety with palpitations, and it particularly useful for “door mat” personalities, though it’s an ally for anyone who is working to set healthy boundaries.

Ghost Pipe, also called Indian Pipe, *Monotropa uniflora*, is a very rare plant that is exceptional in helping people deal with overwhelming thoughts, overwhelming stimulus, and a feeling of being alone in the world. Calming and settling to even severe panic, traumatic flashbacks, the pain of disturbing emotions, and even psychotic episodes, Ghost Pipe cools and calms the nervous system, allowing the client to put his or her pain to the side and cope with their reality. This is a low-dose plant – not because of toxicity, but because a low dose is sufficient and the plant is quite rare and difficult to come by. Three drops of the tincture is generally sufficient, and can be taken as needed.

Common garden Sage, *Salvia officinalis*, is a very effective remedy for the nervous system, for extreme stress, and agitation. Sage works very well for those who are so overwhelmed by their situation that they don't know what to do with themselves. As a tea it combines well with Linden.

Lemon Balm, *Melissa officinalis*, is a cooling plant, and particularly well suited to agitation, and even aggression (especially when feelings of aggression are not helping the situation).

Eastern Wood Betony, Linden, Chamomile, Skullcap, and Ashwagandha from previous sections are also applicable in direct regard to trauma recovery.

Here are some good starting guidelines for working with herbs:

- Not all herbs are appropriate/effective for all people. Herbs have specific qualities that can generally be classified at a base level as warming (such as Ginger or Cayenne), cooling (such as Peppermint), moistening (such as Slippery Elm or Marshmallow root), or drying (such as Witch Hazel). These qualities are foundational, and come before the actions that we might recognize therapeutically, such as relaxing, anti-spasmodic, etc. An herb that is comforting for a person who tends to “run cold” (a person with hypothyroid, for example) may not be comforting to someone with a “hot temper”. There is a system for making these decisions: to learn more, investigate Matthew Wood's writing on Western Energetics. Until then, the herbs that we've talked about today are all safe to experiment with, with the exception of St. John's Wort, which should not be given to folks who are taking pharmaceutical medications*.
- There are general guidelines for dosing: typically for a 150-lb individual, 3 droppersful of tincture (alcohol, vinegar, or elixir), or 3 cups of tea daily are recommended. However, those are just guidelines. You must take into account that just as with conventional medications, some people will respond quickly to a small amount, whereas other people require higher doses. Very few of the herbs we have discussed can't be given in very high doses, and many of them benefit from very high doses, as they are really more like food than medicine. The herbs in this handout that should be given in small doses are Ghost Pipe (Indian Pipe) – typically three drops of tincture, and it is only used as tincture. Hops should not be given to anyone on sedatives.
- St. John's Wort significantly speeds the liver's ability to clear toxins from the body. Even if a drug is keeping someone alive, say in the case of organ rejection drugs, the liver still sees it as a toxin. A person taking St. John's Wort will clear pharmaceuticals from

their body much faster than a doctor might intend. For this reason, we never give St. John's Wort internally to anyone taking most pharmaceuticals. This would include anti-depressants, since instead of having any anti-depressant action, the St. John's Wort can induce withdrawal symptoms from the medication.

Our general approach encompasses diet, sleep, self-care, movement, and herbs – some of these are much easier to implement in an affluent community, but it's not ok to skip to the “cheap stuff” since “that stuff is too expensive”, or in other words, to fail to examine how to make these strategies available to underserved communities.

Katja Swift
July 2015

CommonWealth Center for Holistic Herbalism
commonwealthherbs.com

Reference Links

Some of these references are studies, others are analysis articles that reference studies. You will also find some helpful resources.

Dietary Interventions

A study on gut inflammation, the microbiome, and traditional vs. modern diets with African Americans and black South Africans
<https://www.psychologytoday.com/blog/evolutionary-psychiatry/201505/junk-food-gut-and-brain>

Traditional Diets, the Microbiome, and Mental Health
<https://www.psychologytoday.com/blog/evolutionary-psychiatry/201501/diet-depression-and-the-microbiome>

An analysis on insulin and hippocampal atrophy
<http://evolutionarypsychiatry.blogspot.com/2012/09/glucose-and-hippocampus.html>

The function of magnesium in the brain with regard to stress hormones
<http://evolutionarypsychiatry.blogspot.com/2010/10/magnesium-and-brain.html>

Sleep and Light

The Glymphatic System, Blue Light

<https://www.psychologytoday.com/blog/evolutionary-psychiatry/201310/the-self-cleaning-brain>

Effects of blue light at night

<http://www.jneurosci.org/content/33/32/13081.full>

Sleep Suggestions

<http://whole9life.com/2015/04/mental-health-sleep-1/>

Lifestyle Interventions

The need for stories

<https://www.psychologytoday.com/blog/talking-apes/201506/you-feel-what-you-can-say>

Exercise vs. Zoloft

<http://www.ncbi.nlm.nih.gov/pubmed/11020092>

full text here: <https://www.madinamerica.com/wp-content/uploads/2011/12/Exercise%20treatment%20for%20major%20depression.pdf>

Stress and the Hippocampus

Analyses on stress, insulin, and the hippocampus

<http://drgailgross.com/academia/effects-of-stress-on-the-hippocampus/>

<http://evolutionarypsychiatry.blogspot.com/2010/08/stress-is-metabolic-syndrome.html>

This study suggests that depression is the cause of the hippocampal atrophy, and not the other way around, but there is debate on the topic

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC60045/>

An analysis on the stress-adrenaline release/amygdala-hippocampus feedback loop, which also includes data on developmental impacts of stress hormones on a developing fetus

<http://evolutionarypsychiatry.blogspot.com/2010/08/chronic-stress-is-chronic-illness.html>

Ashwagandha as a neuroregenerative.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1576076/>

“Ashwagandha + hippocampus” yields many studies

Studies on Tulsi in Stress

http://www.gaiaherbs.com/uploads/1596_HPR_HolyBasil_ResearchPaper-1371567034.pdf

this paper is provided by an herbal supplier, however, it is well referenced and written by a reputable author, and is useful at least as a starting point for further research.