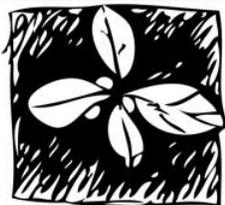


Safely Combining Pharmaceuticals & Botanicals



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MY BASIC DISCLAIMER: *The information in this handout is meant for general education, has not been approved by the FDA, and does not in any way intend to diagnose or prescribe. Always consult with your health practitioner before taking any remedy. Above this, I also recommend that you...*

1. *Research an herb in at least three good sources before ingesting it (see my website for sources),*
2. *Listen to your body/intuition to determine if an herb resonates or doesn't resonate with you.*
3. *Take proper steps to ensure that any wildcrafted or cultivated plant is what you think it is, AND*
4. *Check with your pharmacist for herb-drug interactions if you take prescriptions.*



Portions of the following notes (annotated sections) have been adapted and reprinted with permission from my article on the Herbal Academy Herbarium.

Learn more about the Herbal Academy and its various programs, including the subscription-based Herbarium and Advanced Online Herbal Study Programs at theherbalacademy.com

As much as herb-lovers might wish differently, pharmaceuticals are a fact of life for many Americans. Nearly half of the United States population has taken at least one pharmaceutical drug in the last 30 days, and 75 percent of people who seek medical care will be prescribed medication. One tenth of America takes a cocktail of five or more drugs (CDC, 2015), and up to half of our elder population takes multiple medications (Loya et al., 2009). In one study, researchers found nearly half of elders were at risk for drug-drug interactions, with nearly one third at risk for drug-dietary supplement interactions (Loya et al., 2009).

Meanwhile, the use of dietary supplements including herbs is on the rise, exceeding drug use with slightly more than half the population taking natural remedies (Gahche et al., 2011; Bailey et al., 2013). (This fact alone will have many herbalists jumping for joy!) While much of this dietary supplement use is multivitamins and other non-herbal supplements, nearly a fifth of Americans turn to herbal medicine each year (Bardia et al., 2007).

What's more, approximately 75 percent of those taking dietary supplements are self-prescribed, not recommended by a doctor or health practitioner (Bailey et al., 2013). This can be a sign of Americans empowering themselves to play a more active role in their health decisions and seek natural alternatives. But it also means they might not be aware of potential herb-drug interactions and other safety risks.

With so many people seeking drug and natural therapies, the opportunity for crossover is huge. One study of nearly 500 outpatient veterans found that 43 percent were taking at least one dietary supplement alongside prescription medications. The researchers analyzed the risks and found that among these 45 percent has the potential for an herb-dietary supplement risk but that most (94 percent) did not pose a serious danger (Peng et al., 2004).

Herb-drug interactions can be a disadvantage to people who combine the two without properly education themselves, as well as those on medications who avoid all natural remedies for fear of interactions. The solution? Education. The fact is that drug-drug interactions are *much* more prevalent and serious than herb-drug interactions (Loya et al., 2009) – partly due to the prevalence of their use, partly due to their strength and side

effects (Liu et al., 2015). Nonetheless, herb-drug interactions *are* a real and potential concern. These interactions are also easily avoided by those those who take a few precautionary steps.

HERB-DRUG INTERACTION RESOURCES

The types of resources you seek when determining the risk for an herb-drug interaction will depend on your level of competency in medicine and herbalism. Many consumers might not be skilled enough to comprehend technical resources. Seeking a practitioner who has the ability to navigate the data while customizing recommendations to your individual needs can be invaluable. Meanwhile, healthcare practitioners need to understand the primary risks and have go-to resources to look things up.

The Herb-Drug Safety Health Care Team

For the average consumer, the best way to ensure against herb-drug interaction is to enlist the aid of a good health team. Different types of practitioners have different skill sets, abilities, and weaknesses. It's helpful to have at least one or two of the following on your health care team and to understand what they can and can't do.

- **Doctor:** Doctors and similar medical professionals like physicians assistants and nurse practitioners should always be kept in the loop on whatever herbs and drugs you take. Seek a practitioner open-minded about natural medicine (ask the front desk and/or the practitioner if you're not sure). Understand that most medical practitioners have limited, if any training in herbs and dietary supplements, so they may not be the most reliable source regarding use, safety, and interactions.
- **Pharmacist:** Pharmacists can't advise on what you should or should not take – natural or otherwise. However, they may have training in herb-drug interactions – and at the very least usually have access to the most up-to-date interaction databases. If you're doctor is unable to advise whether or not you can safely take a particular herb alongside your prescribed drugs, as your pharmacist.
- **Naturopathic Doctor or Herbalist:** Naturopathic doctors and herbal practitioners are generally the most qualified to give advice on the use and safety of herbals, and most are also trained in sleuthing potential herb-drug interactions. For a client on many medications or overwhelmed and unable to sift through the data themselves, seeking one of these practitioner's guidance will be the best bet. Herbalists will not be legally or ethically able to tell you whether or not (and how) you can take your pharmaceuticals, while a licensed naturopathic doctor may. Both can guide you to safe herbal use customized to your needs and empower you to work with your doctor if you decide you'd like to limit or wean off medications.

Practitioners and patients share joint responsibility. Clients should fully disclose everything they take to all their practitioners, and practitioners should ask clients what they're taking. This is especially important if you need to go to the hospital and before surgery.

Fostering Good Doctor-Herbalist-Client Relationships

The doctor should not be the enemy and ideally your holistic and conventional practitioners will work together for your better health. If you don't trust your doctor and don't feel like your doctor respects you and your wishes, find a new doctor. Herbalists can help in many ways, but they cannot legally or ethically tell you how to take or not take your pharmaceuticals. They can't diagnose illness either. Clients should not adjust or stop medication without talking to the doctor first. Empower yourself to ask questions and get guidance. See the questions in the next section for ideas. Your pharmacist and herbalist will likely know more about potential herb-drug interactions than your doctor, but you should still keep your doctor in the loop.

* **For Practitioners:** It is important to remember that herbalists cannot legally or ethically make recommendations on how to take – or stop taking – pharmaceuticals. The doctor would need to be involved. That said, we CAN empower our clients and support them in the process.*

* **For Clients/Individuals:** Individuals should feel empowered to take an active role in the health BUT it is recommended to work the doctor and not simply take yourself on/off meds.*

Herb-Drug Safety Resources: Books, Websites & Databases

For practitioners and consumers who want to take the ability to understand herb-drug interactions for themselves, you'll want to beef up your library with some good resources to turn to. Several books and websites are available in price ranges from free to thousands of dollars. You'll want to have at least a couple trusted and well-organized resources at your fingertips to guide your research. Make sure it's updated regularly as new research develops.

Do not expect to learn or automatically know all there is about herb-drug interactions. This arena is vast and constantly changing as new research comes out. We have used herbal medicine for as long as humans have lived on this planet, and there are hundreds, if not thousands, of herbal medicines available. Meanwhile, pharmaceuticals only began gaining traction in the early 1900s, with thousands of drugs now approved by the FDA (Gaffney, 2014). We've only been combining these two categories of therapies over the past few decades, and the possibilities of combinations are endless.

Although we will touch on some of the most common herb-drug interactions, you will want to refer frequently to your resources as you make your decisions. It can be useful to have resources that are organized by drug as well as by herb. (As an herbal practitioner, I find it much more useful to use a guide organized by drug so that I can note all potential interactions for a client as they walk in the door.) Here are some potential resources to consider that are relatively affordable or free:

- **Mosby's Nursing Drug Reference:** Updated yearly and easy to use, this guide is organized by pharmaceutical drug. It not only lists potential interactions but explains what the potential risk or side effect would be. It also discusses pharmacokinetics of drug, including how the drug is metabolized by the body's detoxification system, and it explains how the drug works, its class, and the range of potential drug side effects. It's moderately cautious. Interestingly, the number of herb-drug interactions listed have dropped significantly in more recent editions. Presumably less realistic risks were cut. It retails for \$44.95.
- **AHPA Botanical Safety Handbook:** Recently updated in 2013, this unwieldy tome is organized by herb. It provides useful context both for the herb's general safety (including in pregnancy and while nursing) and risk of herb-drug interactions. It takes a scrutinizing look at the data to rule out unrealistic concerns and explains the studies behind the claims. It retails for \$119.95.
- **Herb, Nutrient, and Drug Interactions:** This book by herbalist Jonathan Treasure, naturopathic doctor Mitchell Bebel Stargrove, and medical doctor Dwight McKee is a favorite amongst herbalists for its measured, no-nonsense approach to interactions written by actual health practitioners. It's organized by herb and nutrient. It's very detailed in its 70 monographs, but this is still a relatively short list of all the herbs in common use. Unfortunately, having been last updated in 2008, it's a tad out of date. The book retails for \$117, the web application for an annual subscription of \$80.
- **Aisle7:** This program (formerly called HealthNotes) is available for a fee to drug and natural food stores and business websites to educate their customers on evidence-based natural medicine in a DSHEA-compliant way. Consumers can access it on website that provide it. This changes periodically, but at press time, you can access it for free at <http://publix.aisle7.net>. It's well-organized and easy for general consumers to understand. Study references are available as well. The program features drug monographs and an interaction checker. It's expensive if you'd like to buy the program for your website or store; but it's free if you find a website that has it available already. Though copy written in 2016, it's difficult to say if that's truly how recently the data has been updated.
- **University of Maryland Medical Center:** This free website provides easy-to-understand information via A.D.A.M., including the ability to get interaction information on common medicinal herbs and dietary supplements. Unfortunately, most of the information has not been updated since 2007. It's available for free at umm.edu/health/medical/altmed.
- **Drugs.com:** This free website has a nifty Drug Interactions Checker at that allows you to plug in the drugs and herbs being used, then check for potential interactions. It rates the severity of the potential

reaction and explains what the interaction would be. Although you can look up individual drugs to view potential reactions, it does not readily list herb-drug interactions unless you plug in the specific drugs and herbs together in the Interaction Checker. You can look up drug interactions by herb, but the way it lists individual drugs is overwhelmingly detailed; instead of listing “sedatives” or “benzodiazepines” it lists every single name brand and generic possible drug/combination for each category.

- **WebMD.com:** This website tends to be unnecessarily cautious, with overblown cautions, interactions, and dangers at the same time that it minimizes herbs’ benefits. (For example, the antianxiety drug Ativan combined with the sleep herb valerian can have a synergistic sedative action. Drugs.com lists this as a “Moderate Interaction” concern while WebMD.com calls it “Serious – Use Alternative.”) Yet, it is free, expansive, and accessible. It features write ups on individual herbs, individual drugs, as well as an interaction checker. In the drug and herb monographs, the interactions descriptions are well organized, explained, and easily understood; they describe potential drug reactions in terms of both the drug class (i.e.: sedative medications – benzodiazepines) and examples of specific common drugs in this class with both generic and brand names (i.e.: Some of these sedative medications include alprazolam (Xanax), clonazepam (Klonopin), diazepam (Valium), lorazepam (Ativan), midazolam (Versed), temazepam (Restoril), triazolam (Halcion), and others). Like Drugs.com, WebMD.com unfortunately does not provide herb interactions when you look up specific drugs for general information; you need to look up the individual herb or do a specific herb-drug interaction check to get this information.

Pharmacists are GREAT resources for interactions.

Some are even *herbal* pharmacists...in NH we have...

Marty Donovan at Wellness Corner Natural Pharmacy, Concord www.naturalwellnesscorner.com

Greg McCrone at the Herbal Path, Dover & Portsmouth www.herbalpath.com

Steven Ottariano at the VA pharmacy in Manchester www.manchester.va.gov

And ANY AHG member can contact the **Massachusetts College of Pharmacy’s Center for Drug Information and Natural Products (CDINP)** at (617) 732-2759 with herb-drug reaction questions.

A practitioner may choose to combine remedies that could potentially interact if the benefit appears to outweigh the risk. But, it is up to the practitioner to be well educated in the possibilities to weigh this out in the client’s best interests. Clients generally trust that their practitioners are giving them solid advice, but it never hurts to double-check, especially if multiple practitioners are recommending drugs and/or herbs.

Clients can easily use interactions checker tools on Drugs.com or WebMD.com and alert their practitioners to any potential interactions listed. For example, you can ask, “According to Drugs.com, this herb and this drug that I am taking may interact and cause this particular side effect. Do you think that the benefit of these remedies is worth the risk of interaction, or do you think we should change my protocol? Why or why not?”

It helps to have practitioners you trust who are open to this kind of dialog and to be respectful and listen to what they have to say. Ultimately, as a patient, you are your own best advocate. If you don’t trust your practitioners or feel like they don’t listen to and respect you, then it’s probably time to seek replacements. Visiting doctors and never trusting or listening to their advice wastes both your time and your money and may put you in a potentially dangerous place if you blindly ignore very valid recommendations.

CONSIDERATIONS & TIPS FOR COMBINING HERBS & DRUG THERAPIES

Want to Eliminate Medications?

You/the client SHOULD work with the doctor to determine the best way to do this.

Clients should ask their doctors...

1. Is it possible/safe to eliminate “x” medication?

2. What do we need to achieve in order to make elimination of “x” medication possible? Stay stable for a certain number of months? Integrate lifestyle techniques? Get a specific number above/below a parameter?
3. What would be the concern of eliminating “x” medication? Withdrawal symptoms? Side effects? Return of particular symptoms? Increased risk of disease?
4. What is the best way to wean off of “x” medication? Alternate days, lower dose, etc?
5. What signs will we use to indicate that we should return to the medication or that we are successful in eliminating it? Lab tests? Symptoms?
6. How often should we check in to observe progress?

Considerations for Replacing Drugs with Herbs

Know that herbs may or may not be sufficient to replace a drug in action. It is essential to work with your doctor and a good idea to also work with your herbalist or naturopath.

- First, start with herbs or lifestyle choices that can help maintain the desired state with the least likelihood of drug interaction.
 - General healthy diet, exercise, sleep, stress management, meditation, etc.
 - Healing foods like fish oil/omega 3s, berries, specific vegetables, etc
 - Flower essences, homeopathy, inhalation of aromatherapy
 - Herbs that are unlikely to interact
- If you hope to use an herb that could interact with the drug to replace the drug, switch slowly.
 - Gradually eliminate the medication, working dosage down.
 - Gradually introduce the herb, working dosage up.
 - Take the herb and drug at different times of day, if possible.
 - Be aware of and observe for signs of potential interaction as well as signs that the herb is not sufficient.
 - Do necessary tests to assess situation, dosing, etc – ie: lab tests, blood pressure checks, blood sugar checks.
 - Listen to the body and intuition – feeling good? Vital? Off?...

COMMON (GENERALLY) NEGATIVE HERB INTERACTIONS

Some of the Most Common Herb-Drug Reactions

For commonly prescribed drugs in the general public and everyday herbs, here are some of the most common potential interactions.

Blood-thinners: Serious interaction = Blood-thinning medications, particularly Coumadin (warfarin), can...

- Increased bleeding risk when combined with *many* herbs and foods, most notably angelica, dong quai, evening primrose oil, feverfew, garlic, ginger, ginseng, ginkgo, ginseng, vitamin E, fish oil, cranberry juice, alcohol, red sage, blueberry, chamomile, saw palmetto, green tea, seaweed, possibly turmeric, and high-salicylate herbs like willow, as well as NSAID drugs like aspirin and ibuprofen (Milić et al., 2014; Liu et al., 2015; Skidmore, 2016; Gardner & McGuffin, 2013; Mousa, 2010).
- Decreased drug effectiveness when combined with high vitamin K foods including most leafy green vegetables, alfalfa and possibly nettle, as well as dietary supplements containing vitamin K, goldenseal, and co-enzyme Q10 (Milić et al., 2014; Liu et al., 2015; Skidmore, 2016; Gardner & McGuffin, 2013; Mousa, 2010).

St. John’s Wort: Serious interaction = Various documented and theoretical drug interactions exist between St. John’s wort and many medications. Due to long list of drugs with which St. John’s wort may interact, practitioners should carefully cross reference all of a client’s medications before recommending the herb alongside pharmaceuticals (Skidmore, 2016; Gardner & McGuffin, 2013).

- The most notable potential interaction is due to the herb's effect on the liver's P450 pathway (including the enzyme CYP3A4), generally reducing the effectiveness of medications that are cleared via this pathway (Izzo & Ernst, 2009; Liu et al., 2015, Skidmore, 2016; Gardner & McGuffin, 2013). Although the research is much more limited and mixed, evidence suggests that **echinacea, milk thistle, and schizandra** may have similar actions and **grapefruit** has the opposite action (Gardner & McGuffin, 2013; Izzo & Ernst, 2009).
- However, St. John's wort may also interact with medications including (but not limited to) antidepressants and pain relievers due its selective serotonin reuptake inhibitor (SSRI)-like properties and other potential actions, most often increasing the risk of drug side effects including serotonin syndrome (Skidmore, 2016). Expect similar side effects from the dietary supplements **SAME, tryptophan, and 5HTP** (EBSCO CAM, 2010).

Licorice: Moderate to severe interaction = For its common use, licorice is an amazingly dynamic medicinal herb with possible unintended side effects and drug interactions. These dangers relate to the glycyrrhizin content and are not a concern with deglycyrrhized (DGL) licorice. Its risks are greatest with high dose or prolonged use as opposed to an occasional cup of licorice tea. According to the Botanical Safety Handbook and World Health Organization, "No case reports of adverse effects have been reported in persons using licorice within the recommended dose (less than 50 g daily) and treatment period (less than 6 weeks) (Gardner & McGuffin, 2013).

- Licorice affects the kidneys and may alter the effectiveness of diuretics, potassium and sodium levels, and blood pressure. This is of particular concern when combined with diuretic and blood pressure regulating medications. It's contraindicated in hypertension, liver, and kidney disease, low potassium, and heart disease (Gardner & McGuffin, 2013)..
- Licorice also contains mucilage, phytoestrogens, and steroid-like compounds, which can have effects on intestinal absorption of compounds and endocrine system balance (Gardner & McGuffin, 2013). It may also alter the cytochrome P450 pathway (Skidmore-Roth, 2010).

Sedative Herbs: Moderate interaction = These herbs may interact with a wide range of pharmaceuticals, increasing central nervous system sedation.

- Drug categories of particular likelihood for a synergistic action include (but not limited to) sedative drugs, sleep aids, anti-anxiety medications, and pain medications, as well as alcohol indulgence (Skidmore, 2016).
- This interaction is most often noted for valerian and kava, as well as chamomile, lavender, and possibly other sedative herbs like passionflower, jujube, and skullcap (Skidmore, 2016; Gardener & McGuffin, 2013)

Types of Herb-Drug Interactions

While some listed herb-drug (and drug-drug) interactions are based on studies or case reports, many are theoretical. As with a drug or an herb side effect, not everyone necessarily experiences the interaction, but we should nonetheless be cautious and attempt to avoid it.

Herbs and drugs can interact in a variety of ways:

- **Synergy:** Increases effects of the herb and/or drug. This may occur when taking herbs and drugs with a similar purpose. This can be desirable (captopril plus garlic more effectively lowering blood pressure), but caution is generally recommended since the effects are not always predictable (Liu et al., 2015).
 - **Sedative herbs and sedative drugs** (as well as alcohol consumption) have synergistic actions. This might not be so bad if you simply have a better night's sleep, but it could be dangerous if it makes you fall asleep while driving or begins to suppress vital signs (Skidmore, 2016).
 - **Therapeutic doses of kelp/seaweed/iodine with thyroid hormone drugs** can increase the risk of hyperthyroid storm if not carefully monitored and with doses adjusted as needed (Skidmore, 2016).
 - **Hawthorn with blood pressure and/or digoxin medication** might potentially have a synergistic effect and with increased side effect risks, though data doesn't strongly support this. Doctors in the 1960s and 1970s reportedly intentionally combined hawthorn with cardiac drugs, using a lower dose

of the drug yet still achieving the desired effect with fewer drug side effects (Gardener & McGuffin, 2013).

- **Counteract:** Decreases the effect of the herb and/or drug. Since we presumably are taking herbs and drugs for their desired effect, we generally don't want to counteract those effects. That said, sometimes a moderate decreased effect might be desired to buffer an effect.
 - **Caffeine alongside sedative sleep herbs** is just counterintuitive (Groves, 2016).
 - Yet, a gently **stimulating adaptogen herb like holy basil alongside a sedative antianxiety medication** may have a synergistic calming effect while gently buffering or counteracting over-sedation during the day (Groves, 2016).
- **Increase Side Effect Risk:** This is generally a synergy of side effects rather than (or in addition to) actions.
 - The best-known and most widespread and serious risk is **blood-thinning** herbs and supplements along blood-thinning drugs like Coumadin (warfarin).
- **Affect Drug Clearance:** This can increase or decrease drug effects and possibly increase the safety risks.
 - Most of the clinical information we have for this involves the inhibition or induction of the cytochrome P450 pathway (including the enzyme CYP3A4) in the liver and **St. John's wort** (which induces it) and **grapefruit** (which inhibits it), reducing or increasing (respectively) *many* drugs' effects and risks, including anti-rejection drugs, birth control pills, and various heart medications (Izzo & Ernst, 2009; Liu et al., 2015, Skidmore, 2016; Gardner & McGuffin, 2013).
 - CYP: CYP3A4/CYP2D6/CYP2B6/CYP1A2 inducers/inhibitors such as cayenne, schizandra, grapefruit juice, SJW, berberine/goldenseal, licorice, black pepper may affect drug levels. For more details, see
 - CYP3A4: <http://herbpedia.wikidot.com/cyp3a4>
 - CYP2D6 <http://herbpedia.wikidot.com/cyp2d6>
 - CYP2B6 <http://herbpedia.wikidot.com/cyp2b6>
 - CYP1A2 <http://herbpedia.wikidot.com/cyp1a2> etc....
 - Another well-recognized interaction is **high-fiber and high-mucilage plants** (flaxseed, psyllium, glucomannan, marshmallow, slippery elm, aloe gel, seaweed, fenugreek), which when taken alongside medications may bind to them and increase their elimination via the digestive tract, with less drug making its way into the bloodstream to have its effect. Taking them at separate times of day should limit this concern (Gardner & McGuffin, 2013; Skidmore, 2016).
 - Some drugs have a similar interaction with **minerals like calcium, magnesium, and iron**, reducing each other's effectiveness when taken at the same time. Although data is lacking, you may want to use caution with high doses of nettle, oat straw, and similar high-mineral plants. Taking them at separate times of day should limit this concern (Skidmore, 2016). **Tannins** may also affect the absorption of nutrients and some drugs.
 - Much less is known about the potential interaction of **detoxifying herbs** alongside medications, but caution should be taken in general. Specifically, be cautious with herbs that may speed up the pathway in which the drug is metabolized (which you can find out if you know the drug's pharmacokinetics). For example, use caution combining a lot of herbal diuretics with a drug that it primarily excreted via the kidneys and the urine. It may be prudent to avoid doing "a cleanse," especially one that relies on a lot of detox herbs, when taking pharmaceutical drugs (Groves, 2016).
 - On the same note, be cautious when combining traditional "**synergist**" herbs like black pepper and cayenne with pharmaceutical drugs. Though little is known or noted in the literature regarding drug interactions, theoretically they may boost the activity not only of herbs but also of medications taken at the same time (Groves, 2016).

There is really still much we don't know about herb-drug interactions. Most of what is known revolves around the herbs that are most commonly used in commerce, particularly in countries like Germany where there is more research, reporting, and doctors recommending herbs. Data is more limited for bioregional herbs and herbs from other herbal traditions like Ayurveda and traditional Chinese medicine. You can't necessarily assume that it doesn't interact simply because your resource doesn't list it. At the same time, because many listed interactions are theoretical, scientific studies and clinical experience may ultimately determine that the reality of these

interactions is minimal. It is up to both the client and the practitioners to think critically about the possibilities, gradually introduce new remedies, and observe carefully to determine if a negative interaction is occurring.

Special Disease Considerations

Herbalists should have significant experience and specialized training before tackling clients with cancer, AIDS, surgery, severe kidney and liver disease, and similar serious, complicated, and life-threatening illnesses where multiple life-saving drugs and procedures may be at play. Though diabetics can often use natural remedies, they will need to be very careful in monitoring blood sugar levels to avoid inadvertently increasing or (more likely) decreasing blood sugar into dangerous ranges. Patients in these scenarios who would like to incorporate natural remedies would likely be best served by seeking the care of a naturopathic doctor, integrative medical doctor, or very well-trained herbalist who specializes in the necessary fields. You may also opt to stick with natural approaches with the least likelihood for interaction and risk, such as dietary changes, lifestyle recommendations, flower essences, and homeopathy (Groves, 2016).

Herbs and Natural Therapies with the Least Risk for Interactions

It's easy to get discouraged when looking at a long list of potential herb-drug interactions. Consumer and new natural practitioners may feel as if they can do alongside multiple medications, yet this is not true. Although resources for *safe* herbs to use alongside pharmaceuticals are hard to find, there are *always* things that safely be introduced. The options vary depending on the specific individual, health concerns, and medications being used, but here are some general guidelines (Groves, 2016).

Diet: Moderate healthy diet changes and functional foods are *generally* unlikely to pose a risk for drug interactions. Be aware of exceptions (i.e.: in diabetes, with grapefruit juice, and blood-thinning medications), and opt for slow rather than fast transitions into a new way of eating. Clients should feel educated and empowered to listen to their bodies and be aware of potential signs of trouble, such as blood sugar or blood pressure wobbles, which may manifest as irritability, anxiety, or headaches.

Lifestyle: Movement, meditation, time spent in nature, breath work, journaling, massage, and art therapy are just a few of the non-invasive yet profoundly useful changes that can promote health while posing little to no risk of interacting with medications.

Dilute Remedies: Though often poo-pooed by evidence-based medicine proponents, incredibly dilute remedies like flower essences and most homeopathic remedies should not pose any risk for interaction due to their lack of chemical activity. Be aware that some homeopathic *are* bioactive herbal extract (i.e.: 1X potency is a 10 percent herbal extract) and may pose an interaction risk whereas standard potencies (30C, 1M) generally will not. Some “homeopathic” remedies are really herbals in disguise – companies can list more on the label if it is fashion it as if it is a homeopathic remedy – so be sure to check the potency (Reichenberg-Ullman & Ullman, 2010; FDA, 1995; NIH, 2015).

Herbs Not Listed as Potential Interactions: We can never be 100 percent sure of an herb-drug interaction because the data is so limited while the possibilities for combinations are endless (not to mention client variables and genetic mutations that affect herb/drug metabolism). Yet, actual cases of herb-drug interactions beyond the most common ones already listed appear to be very rare. You can generally use non-listed herbs with comfort and simply keep a watchful eye to ensure no negative side effects pop up. For example, although sedatives interact with many medications, clinical experience suggests that gentle nervines like milky oat seed, motherwort, and lemon balm as well as calm-energy adaptogens like gotu kola and holy basil may be safer alternatives with a lesser risk for interaction for people on anxiety and anti-depressant medications (Groves, 2016).

Visit the Links page of **www.WintergreenBotanicals.com** for Local & Online sources for *herbs, supplies, informative articles... upcoming classes, consults, and to buy my book!*
