

# PROPOSED GUIDELINES FOR USING BOTANICALS DURING CLASSICAL HOMEOPATHIC CASE MANAGEMENT

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## ABSTRACT

Concurrent use of botanical medicine and classical homeopathy is controversial among natural medicine practitioners, particularly because botanicals are reported to interfere with homeopathics. However, medicinal plants represent a spectrum of potencies and modes of actions. The relationship between different classes of herbs, from Western and Chinese perspectives, and homeopathic remedies is discussed. Practical suggestions for prescribing homeopathic and botanical remedies for acute and chronic conditions outline a successful way to approach such combinations. Over 200 herbs are categorized by their position on the food-to-poison continuum.

Outside the naturopathic community, classical homeopathic prescribers often view botanicals as suppressive. An example of an allopathic prescription of an herb would be its use as an antibacterial, antiviral, or anything focused against the disease rather than promoting vitality and health. Herbs can also be prescribed homeopathically (according to the Law of Similars), nutritionally, or to tonify and help eliminate obstacles to cure.

It will be helpful to clarify what the author calls "the food to poison continuum" in order to evaluate better where each plant falls and thus assist in determining its appropriate application for someone on a classical homeopathic prescription. This paper presents guidelines for evaluating which herbs fall into which category and principles for case management that allow each of these modalities to complement the other in promoting a deep and lasting cure for the patient.

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Potential Conflict of Interest Statement: Dr. Heron is technical director of Botanical Pharmaceuticals, a small herbal extract company that markets to health care practitioners. This company produces all the botanical preparations (but not the homeopathics) mentioned in the paper, though they are widely available from other sources as well.

The accompanying article (see "Using Botanicals in Tandem with Classical Homeopathy: Three Cases") presents three cases where the alternate and concurrent use of both of these modalities, the author believes, has brought a better result than could have been achieved with either alone. The cases are presented as a preliminary documentation of the theory that when botanicals are prescribed with deep understanding and perhaps wisdom of their energetic and physiologic applications and interactions they can enhance, rather than antidote, homeopathic prescriptions.

In order to achieve a good result, the practitioner must also follow careful guidelines, be astute in observing the patient, and have considerable experience in case management of botanicals alone and homeopathics alone prior to combining both modalities in a case. When combining these modalities, the author uses botanicals as nutritive tonics, rather than for allopathic indications or to attempt to alter physiology. The balancing effect of medicinal herbs can be maximized to support healthy functioning of the body and to enhance the tendency of the vital force to find the best direction towards cure.

When one has a commitment to classical homeopathic prescribing (using only one remedy and waiting until its full action has been completed) and also wants to include botanicals to support the full vitality of the patient, a synthesis must be found that honors the strengths of each approach.

In order for naturopathic medicine to evolve, its practitioners must be willing to consider new, more effective therapies such as combining traditional remedies in non-traditional ways. After years of attention to the progress of health and disease in many individuals, the perceptive physician does this by devising creative ways to assist in healing. Practitioners who prescribe botanicals both in their crude form and in homeopathic dilutions need to start a dialog so that they can share experiences and refine the art.

### HOMEOPATHIC PRESCRIBING OF BOTANICALS

One example of homeopathic prescribing of botanicals is in the use of diaphoretic herbs for fevers. Many practitioners would think to use febrifuge herbs such as *Salix spp.* (willow) or antipyretic drugs such as aspirin when a patient has a fever. Diaphoretic herbs do not suppress body temperature but instead first raise the heat in the body per the homeopathic dictum—like cures like. The body then responds to the raised internal temperature and blood moves away from the internal organs towards the skin. Perspiration forms on the skin and its evaporation results in the subsequent lowering of the internal temperature along with elimination of toxins through the skin. Boericke's *Materia Medica* (1) gives numerous botanicals that are prescribed similarly—whether homeopathically or herbally—including *Symphytum officinale* (comfrey) for tissue and bone repair, *Hypericum perforatum* (St. John's wort) for nerve injuries, and even *Echinacea spp.* for septic conditions. Other botanicals are used in very different ways compared to their homeopathic counterparts. For example, *Papaver somniferum* (opium) is used herbally for pain relief and homeopathically for loss of consciousness and *Podophyllum peltatum* (American mandrake) is prescribed botanically for constipation and homeopathically for diarrhea.

For those just beginning to combine botanical and homeopathic prescribing it is useful to check the comprehensive homeopathic materia medica by William Boericke (1). Boericke discussed many remedies used more commonly botanically than by classical homeopaths. The author suggests using botanicals with indications common to both

herbal and homeopathic application while avoiding those with different and opposite indications. It might even be useful to compare the *Specific Medications* of Scudder (2) to begin an inquiry into compatible prescriptions. Scudder discusses single herbs (simples) in a homeopathic manner.

### THE FOOD-POISON CONTINUUM

To better understand how botanicals and homeopathics can be used together, the plant kingdom is visualized by the author as a continuum in its application to treating illness and maintaining health (see Figure 1). A similar concept has been mentioned by Dr. Francis Brinker (3). At one end are herbs that are also vegetables. Next are tonics and botanicals which are balanced in their multiple and varied effects. Then are midrange botanicals which are quite often used to create physiological effects. The other end of the continuum includes potent and potentially toxic herbs which are used by allopathic prescribers, be they herbalists, naturopathic physicians, medical doctors, or others. The potentially and truly toxic botanicals are best applied when no homeopathics are used. They are applied most often by prescribers who have more facility in their application or when the patient is unwilling to try homeopathics.

The vegetable botanicals can be eaten in quite large doses and for extended periods with benefit. When asked if an herb can be taken continually, remember that a varied diet is most compatible with health—so, too, with herb-vegetables. If the same vegetable is eaten almost exclusively for too long there can be detrimental effects. For example, during famine in Europe it was discovered that when *Pisum sativum* (garden peas) or *Lathyrus sativus* (a different species of pea) comprised more than 60% of the diet of the population, neurological toxicity symptoms such as paresthesias and tremors appeared (4,5). Interestingly, *Lathyrus* is used homeopathically for neurological problems. According to the Tibetans, peas decrease fertility when they want to space or retard child-bearing (6).<sup>1</sup> So even with vegetables the dose is important, as is a deeper understanding of all the applications and contraindications of a plant.

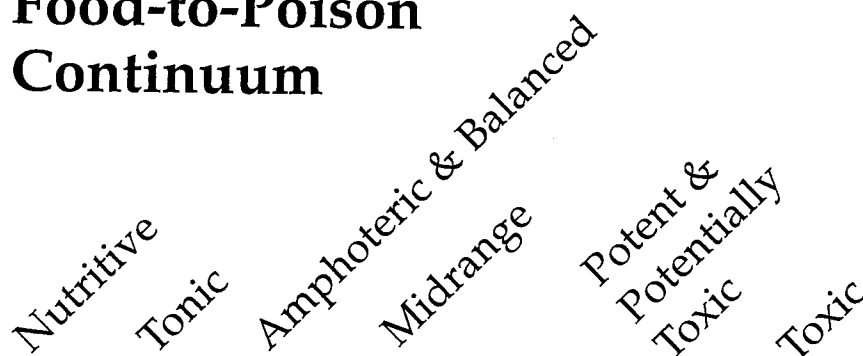
This contradicts Hahnemann where he writes in the footnote to aphorism #125 that "young green peas in the pod, green beans, steamed potatoes, and, if need be, carrots can be eaten. They are permissible as the least medicinal vegetables" (7). Not only are peas medicinal as just described, but carrots are mild kidney remedies and potatoes contain a toxic alkaloid, solanine, in the leaves and skins, where it can reach toxic concentration if they come in contact with light (4). In the potato's native habitat in the Andes, there are numerous varieties, many of which have these alkaloids in mildly toxic concentrations. In the extremely high altitudes where potatoes containing a larger proportion of toxic constituents are commonly eaten as a vegetable, they are either consumed with a type of clay that adsorbs enough of the undesirable constituents or are processed to decrease the glycoalkaloids (8). This makes them serviceable as a food that comprises a large part of the diet.

Botanicals can be prescribed nutritionally to help support a nutritionally depleted person. The author believes this form of botanical prescribing is totally safe while using classical homeopathic case management techniques. In *The Organon of Medicine*, Hahnemann writes about avoiding medicinal vegetables in aphorism #125 and more specifically in the footnote to aphorism #260 (7). However, one rarely hears homeopaths caution patients not to have celery seed in soup, or to avoid too much parsley or lettuce, because they haven't investigated sufficiently to realize that all plants, not just camphor, mints, and coffee, have some medicinal effect.

### NUTRITIONAL AND TONIC BOTANICALS

To further clarify those botanicals which can be used to maximize concomitant use with homeopathic remedies, more specifics will be given in each area of the continuum. In Europe *Urtica dioica* (nettles), *Taraxacum officinale* (dandelion) and *Tragopogon spp.* (salsify or oyster root) are common vegetables (6). In Asia the line between food and medicine is much less distinct. *Momordica charantia* (bitter melon) (9) is most often used in soup as are numerous other medicinal herbs. *Arctium lappa* (gobo root), a form of burdock, is a well-known macrobiotic and Asian vegetable (6).

# Food-to-Poison Continuum



Adaptogen

Kingly

Ministerial

Assistant

FIGURE 1

Other nutrient-dense botanicals like *Medicago sativa* (alfalfa) (6) and *Fucus vesiculosus* (bladderwrack) (10), along with numerous others, while most often regarded as medicine, have frequently been eaten as potherbs (8). Our vegetables have all evolved from wild herbs (8) and many that have been bred for taste still have medicinal effects. *Lactuca sp.* (iceberg lettuce) is nutritionally deficient, yet it has as much or more lactucarium than leaf lettuce. This is the active latex that popularized lettuce as a sedative (11), analgesic, and even intoxicant described as lettuce-opium. While iceberg lettuce is significantly milder than wild lettuce, it still has some calming effects. *Petroselinum crispum* (parsley) (12) and *Asparagus officinalis* (13) are diuretics, though they are rarely prescribed as such. *Apium graveolens* (celery) seed is used both as a diuretic and a sedative by European herbalists for people with arthritis (10).

One does not have to be an experienced herbalist to discern which botanicals can be used in large dosages as vegetables to support a deficient or malnourished patient. Yet when prescribing homeopathically for the same patient, and wanting to interfere the least with the action of the homeopathic remedy, a deeper understanding of plants is called for. Likewise with tonifying herbs, careful inquiry is needed. A tonic is a medicine that invigorates or strengthens. Presumably all herbs

that invigorate, strengthen or restore a healthy condition or "tone" to a system or organs should be beneficial. Yet some tonics like *Allium sativum* (garlic) are also antibiotics (14), and when used in this context, in full strength form, they need to be evaluated on a case-by-case basis to determine if all aspects of the case management are compatible. Eating garlic and onions, even in quantities found in most diets, is almost always beneficial when there is hyperlipidemia (15). And using *Allium sativum* as an antibiotic for respiratory, gastrointestinal and sometimes urinary infections (16-18) is often preferable to using drug antibiotics which are even more suppressive.

This regimen, however, requires a compliant patient and in some cases is less appropriate than using gentler, immune supportive herbs, allowing the vital force to mount its own response. *Allium sativum* is a true antibiotic and will kill microorganisms in a test tube (19). *Echinacea* is more broadly applicable as it works via stimulation of the immune response in promoting opsonization (20), phagocytosis and interferon production (20,21). It also protects hyaluronic acid (22) and has other mechanisms of immune stimulation activity. The late Wade Boyle, ND, a well-regarded naturopathic botanical expert, considered it suppressive, though effec-

tive, to paint *Echinacea* tincture on an infected throat (23).<sup>2</sup>

Other tonic herbs like *Crataegus oxyacantha* (hawthorn) are in the vegetable or fruit category, where they can be eaten in large quantities beneficially (24). Patients with a history of congestive heart failure managed on daily doses of *Crataegus* (25) can continue without significant interruption. Most other cardiac botanicals have strong cardiac glycosides and are not nutritive or even tonifying, but have specific medicinal effects that are called for only when energetic and supportive prescriptions are inadequate.

## AMPHOTERIC AND BALANCED BOTANICALS

Both adaptogens and the so-called amphoteric herbs are next on the continuum. They are often very useful in botanical prescriptions the author contends can be compatible with classical homeopathic case management. The term adaptogen was coined to describe *Eleutherococcus senticosus* (Siberian ginseng) and later also *Panax spp.*, particularly *P. ginseng* (26). In allopathy, strong medicinal effects are preferred to medicines such as adaptogenic herbs. Vitalist practitioners prefer the non-specific effects of plants like *Eleutherococcus* which promote health and support the body's return to homeostasis.

The amphoteric herbs are those which can have opposite effects within the same system, depending on what is needed at the time. *Achillea millefolium* (yarrow), acting on the female reproductive system, is an excellent example of this. In the case of menometrorrhagia or even hemorrhage, it acts as a styptic or antihemorrhagic to significantly decrease the flow of blood, but in the case of suppressed menses, it will help to bring on the flow (27). For the respiratory tract we have expectorants that are also antitussives—herbs that facilitate removal of secretions from the respiratory passages, while also decreasing an annoying cough—like *Tussilago farfara* (coltsfoot) (28) and *Inula helenium* (elecampane) (29). These amphoteric herbs are next on the continuum between tonic and medicinally altering herbs.

By delving into the traditions that support health and recognize the wisdom inherent in the disease process, one can find a great deal of substantiation for the healing effects

of these gentle botanicals. Rudolf Fritz Weiss, MD, a German physician, encouraged doctors to use rigorous scientific inquiry along with time-honored empiricism when prescribing herbs. In his lectures he described the benefits of gentle herbs including wide therapeutic range, no major side effects and effective when used for an extended period (30).

Hänsel, another German researcher, maintains that "quite a few of the gentle phytopharmaceuticals are considered to have practically no effect because they are investigated with methods designed for substances with acute and powerful actions" (30). An example is *Valeriana officinalis* (valerian), which, unlike barbiturates, does not cause central nervous system depression. Its sedative action can in fact be demonstrated by the testing method used for sedative drugs, encephalography (31), though valerian has a different mechanism of action from that of low-dose barbiturates (32). Current methods of testing may not be adequate in most instances to determine the actions of botanicals. This does not mean that herbs are ineffective, just that there are no tools yet to measure their efficacy. In fact, the gentleness of herbs is desirable because it allows practitioners to combine these herbs effectively with homeopathic remedies.

#### CHINESE HIERARCHY OF HERBS

Traditional Chinese Medical (TCM) philosophy illustrates another way to select botanicals which will work effectively when combined with homeopathics. In TCM and according to the author, nonspecific or so-called "harmonizing" effects are preferred as they support the vital force rather than pushing it in a direction the physician believes is correct. Examining TCM philosophy provides one more piece of evidence that concomitant prescription of botanicals and homeopathics needn't be suppressive, but rather complementary.

The Chinese grade herbal drugs according to toxicity (33) (see Figure 1). The superior or "kingly" drugs are those herbs which are absolutely harmless and can be used for promoting health and increasing vitality. These fall primarily into the nutritive, tonifying and adaptogenic categories and therefore do not

override a concurrent energetic prescription. The second grade are called "ministerial" herbs and are more powerful in their effects. They are the botanicals that are used therapeutically in pathological conditions to alter bodily function in the desirable direction. As many practitioners use herbs in this category these plants need to be studied more deeply. The numerous effects of the whole plant must be understood in order to prescribe appropriately alongside a homeopathic remedy, lest the plant's actions in other parts of the body inadvertently interfere.

The third grade of Chinese herbs is called "assistant" and is considered in TCM to be inferior to the kingly and ministerial classes. Assistants exert the most dramatic effects, but also require the most care to avoid harm. In their application there is a narrow therapeutic window (e.g., *Digitalis spp.* and *Veratrum spp.*). Only experienced practitioners should use them in non-homeopathic doses to the benefit of the patient. They are also best used only for short-term applications, although allopathic prescribers use them for long-term management of serious illnesses. As a result, these patients require the most careful follow-up in order to sustain their return to health. In TCM there is an additional category of herbs described as the "servant" class that are said to conduct the other herbs in a combination formula to the place where they are intended to act in the body. In Western herbal practice certain herbs are also described this way. This effect can be observed in facial flushing with *Armoracia rusticana* (horseradish) (13).

#### WHOLE PLANTS VS. STANDARDIZED EXTRACTS

Another important consideration when prescribing an herb together with a homeopathic remedy is to use a whole plant extract rather than separating out and amplifying one "active" constituent. Presumably, the whole plant often nourishes and tonifies, while over a longer period of time the patient's physiology is gently altered.<sup>3</sup> A prime example is the much researched *Matricaria recutita* (also called *M. chamomilla*) (German chamomile). We know some of its active ingredients (including azulenes, bisabolbols, more than 20 flavones and flavonols such as apigenin) (34). It has proven anti-inflammatory and spasmolytic ef-

fects (35,36). But chemical studies have also proven that the whole complex of constituents as contained in the flowers is more broadly active than any combination of its individual constituents (35).

It could be stated that, based on this research, one should rarely use standardized extracts like the European phytopharmaceuticals when both botanicals and homeopathics are prescribed for the patient. This is because, as mentioned above with the Chinese kingly class of herbs, nonspecific botanicals tend to interact positively with concomitant homeopathic prescriptions. Isolated constituents with more directed activity are closer to the toxic end of the continuum and are more likely to interfere with energetic prescriptions. Nature is always more sophisticated than current science.

As can be seen from the progress with *Hypericum perforatum* research over just the last five years, it is now believed hypericin is less responsible for its antidepressant activity than was previously believed (37). Thus, using botanicals within this framework, the most carefully picked whole plant will be closer to the nutritional end of the food-to-poison continuum than its extract which is standardized for drug effect. In doing so, the practitioner runs less risk of antidoting a concurrent homeopathic. Dr. R. Bauer, a well-respected German researcher, stated at a recent conference that the common view held in Germany today among the scientific community involved with medicinal plant research is that the effects of any medicinal plant cannot be explained by one constituent. They are more likely to involve a synergistic effect of several or numerous diverse compounds (37).

#### ENERGETIC BOTANICAL PRESCRIBING

With patients who lead busy lives and have little awareness of the cycles of nature it is difficult to prescribe botanicals primarily for their energetic effects, although this is the foundation of traditional healing in countries where people do live closer to the cycles of nature (38). Shamans and traditional healers prescribe botanicals primarily for their spiritual effects and only incidentally for their physiological effects. When botanicals are prescribed based on their energetic character, the author believes it is

unnecessary to simultaneously prescribe homeopathic remedies. This will only confuse the case, in fact, as the practitioner will not be able to determine which energetic effect resulted in the observed outcome.

In one case, a patient was prescribed nutritive and tonifying botanicals before being given *Sepia* homeopathically. While it is acknowledged that a patient-doctor interaction can have a healing influence, it appeared that these herbs acted not only therapeutically but also energetically. For, without any specific counseling on the subject, the patient reported a significant change in perception about not being willing to have a child after five abortions and was now open to the possibility. Her botanical formula included no nervines or other herbs that might have a relaxing effect.

It is suggested and has been this clinician's experience that this sort of emotional/mental shift using supportive botanicals alone occurs more commonly in people who have some spiritual awareness and a moderately healthy diet. In the occasional patient raised around plant medicines, who loves herbs and the direct experience of making teas and other preparations, or even in one who is interested in recognizing or picking wild plants it is possible to prescribe non-homeopathic doses of botanicals for their energetic effects. For the patient whose life is closer to nature or who has experienced Asian, Native American or other traditional medicine, it is not necessary to use classical homeopathic prescriptions to achieve deep energetic healing effects (39). They can be engaged in the process of collecting or preparing their botanical remedies and they can potentize them with their own intent or prayer (40).

#### GUIDELINES FOR COMBINING BOTANICAL MEDICINE AND CLASSIC HOMEOPATHY

In developing the concept of simultaneously prescribing homeopathics and herbs and in putting these ideas into practice, the following guidelines for managing a case were developed (see Table 1). Most importantly: **never alter both prescriptions at the same time.** The physician must be able to evaluate the most likely cause or precipitant of either a negative or positive change in the patient. In order to continue

to manage the complexity of clinical reality instead of textbook models it is essential to know what caused any change.

Considering homeopathic principles in case management is important. It must be understood that the original state is health and its restoration is paramount. It can be said that any physician has only a limited understanding of why any particular imbalance in an individual's health manifests. Thus it is suggested to treat the whole individual rather than altering a small aspect of the patient's condition (41). Additionally, the vital force must be allowed to determine what direction it will take towards cure (41).

When there is a complicated physical condition and the patient is already on several allopathic prescriptions it might be more appropriate to prescribe an individualized botanical formula first. When the central focus of the patient's imbalance or illness is presenting on the emotional or spiritual plane, the homeopathic prescription comes first. As is true for most naturopathic protocols, nutritional and lifestyle counseling are included early in the treatment as they help to remove obstacles to cure. Some homeopaths (42) maintain that it deters a patient who is not ready to change by discussing these usually entrenched habits before the remedy has begun to open the person to those aspects of his or her health which are out of balance. Patients who seek out naturopathic care already know that this approach includes such recommendations. They are not likely to be affected by strong counseling in these areas and will incorporate the recommendations when they are ready.

The individualized botanical formula, if it precedes the homeopathic, in the author's experience, is typically prescribed for a month or two until some benefit has been obtained and what still remains to be achieved is clear. Homeopathy is used to deal with the underlying predisposition that created the problem that led the patient to seek care (43). When combining both botanicals and constitutional homeopathics the author believes that it is usually most efficacious to prescribe a low potency daily dose of the homeopathic remedy to make sure its effect is maintained.

When individualized, multi-herbal formulas are developed and used for

patients attempting to address their entire complex of symptoms it is difficult to determine what exactly brought about the healing. It could have been any herb or combination of herbs in the formula. However, using a polypharmacy approach—similar to TCM prescribing—permits a practitioner to address the unique and complex set of symptoms of a patient, and can result in an improved outcome. This is in contrast to formulations designed to treat specific diseases rather than specific patients.

Although these botanical formulas are intricate, it is suggested they rarely be changed once the patient begins a single homeopathic remedy. Some homeopaths would find these herbal mixes anathema to the purity of the *similimum*. Complex botanical prescribing does not, however, exclude classical homeopathic prescribing, i.e., using only one remedy for an extended period until the entire benefit is obtained.

#### ACUTE SITUATIONS, AND ANTIDOTING OF REMEDIES

When an acute situation arises it is necessary to evaluate carefully whether it could be related to a proving (easily determined by temporarily stopping the homeopathic remedy or increasing the potency) or an aggravation as a consequence of the deep healing that is progressing. A proving is when a patient develops symptoms never encountered by the person before which are very characteristic of the remedy (43). Aggravations encompass reactions to homeopathic remedies when a patient's symptoms worsen temporarily.

Many homeopaths believe if herbs are used for acute problems, the herbs tend to antidote homeopathics more readily than drugs due to the similarity of the action of the remedies and botanicals (42). Thus drugs are considered preferable by some in such situations. It is contended here that, in general, homeopathics are not as easily antidoted by botanicals as is often alleged. Even mints appear to be overrated as specific antidotes, although *Mentha piperita* (peppermint) is more likely to interfere with a homeopathic remedy's action than other mints, including *Melissa officinalis* (lemon balm) or *Prunella vulgaris* (self-heal) (44). It appears that the intensity of the volatile oil (0.1-1.0% for *Mentha*

*piperita* and 0.1-0.2% for *Melissa* (44) and, more importantly, the susceptibility of the patient (41) are both significant factors in determining how much counteracting effect the botanical prescription will have.

In the final analysis, the results of implementing these practices—combining herbs and homeopathic remedies—are probably more dependent on the intent of the prescriber and the interaction between the patient and doctor than on any other factor. If the principle of supporting the body or vital force to heal itself is adhered to, rather than trying to direct any specific process, the participants and the observers will learn more and the cure will proceed. The next step is to gather more clinical input to confirm or deny this theory. Those practitioners using homeopathics and botanicals simultaneously are invited to contribute to this ongoing research.

#### SUMMARY OF GUIDELINES FOR COMBINATION PRESCRIBING

1. Never change homeopathic and botanical prescriptions simultaneously.
2. Use botanicals for support rather than for allopathic indications. Whenever possible, avoid directly altering the patient's physiology.
3. Use gentler herbs that have subtle and slower balancing effects.
4. Avoid toxic or extremely potent herbs in combination with homeopathic remedies.
5. Lower potency daily doses of a homeopathic remedy tend to maintain its effects during concomitant botanical medicine administration.
6. In acute situations, rule out a proving or an aggravation first and attempt to maintain only the constitutional prescriptions. (Using botanicals tends to be less disruptive than acute homeopathics for genuine acute conditions.) Continue or return to the constitutional remedy when the crisis passes.

TABLE 1

### HERBS BY CATEGORY ALONG THE FOOD-POISON CONTINUUM.

#### NUTRITIVE

*Agropyron repens* (46)  
*Althea officinalis*, *A. spp.* (47)  
*Asparagus officinale* (6)  
*Avena sativa*, *A. fatua* (48)  
*Cetraria icelandica* (49)  
*Chondrus crispus* (50)  
*Crataegus spp.* (51)  
*Cynara scolymus* (52)  
*Fucus vesiculosus* (50)  
*Medicago sativa* (53)  
*Nasturtium aquaticum* (30)  
*Petroselinum crispum* (54)  
*Sesamum spp.* (55)  
*Stellaria media* (11)  
*Taraxacum officinale* (56)  
*Trigonella foenum-graecum* (57)  
*Ulmus fulva*, *U. rubra* (47)  
*Urtica dioica*, *U. spp.* (58)  
*Zea mays (stigmata)* (50)

#### TONIC

*Agastache spp.* (54)  
*Allium sativum* & *A. spp.* (59)  
*Arctium lappa* (60)  
*Astragalus membranaceus* (61)  
*Calendula officinalis* (62)  
*Capsicum minimum* (63) *food*  
*Cnicus (Carduus) benedictus* (44)  
*Curcuma longa* (64)  
*Equisetum arvense* (11)  
*Euphrasia officinalis* (11)  
*Eleutherococcus senticosus* (26)  
*Foeniculum vulgare* (65)  
*Gallium aparine* (50)  
*Glycyrrhiza glabra*, *G. uralensis* (66)  
*Lavandula spp.* (50)  
*Matricaria chamomilla (recutita)* (67)  
*Mentha spp.* (50)  
*Momordica charantia* (68)  
*Nepeta cataria* (11)  
*Ocimum sanctum* & *O. basilicum* (47)  
*Pimpinella anisum* (69)  
*Plantago spp.* (47)  
*Prunella vulgaris* (70)  
*Rosmarinus officinalis* (71)  
*Rubus spp.* (72)  
*Rumex crispus* (11)  
*Salvia officinalis* (30)  
*Schizandra chinensis* (73)  
*Silybum marianum* (74)  
*Sticta pulmonaria* (50)  
*Tilia spp.* (47)  
*Viburnum opulus* (50)  
*Viburnum prunifolium* (50)  
*Zingiber officinalis* (75)

#### AMPHOTERIC & BALANCED MEDICINES

*Achillea millefolium* (27)  
*Alchemilla vulgaris* (48)  
*Aralia spp.* (76)  
*Anemopsis californica* (77)  
*Angelica archangelica* (48)  
*Ballota nigra* (48)  
*Chamaelirium luteum*= *Helonias dioica* (10)  
*Dioscorea spp.* (48)

*Echinacea spp.* (78)  
*Eupatorium perfoliatum* (79)  
*Filipendula ulmaria* (48)  
*Fouquieria splendens* (77)  
*Hypericum perforatum*, *H. spp.* (80)  
*Hyssopus officinalis* (48)  
*Inula helenium* (10)  
*Leonurus cardiaca* (81)  
*Ligusticum porteri* (82)  
*Melissa officinalis* (30)  
*Mitchella repens* (10)  
*Nepeta cataria* (83)  
*Potentilla spp.* (30)  
*Panax ginseng* (84)  
*Sassafras officinalis* (48)  
*Sambucus nigra*, *S. canadensis (flos & folium)* (85)  
*Scutellaria lateriflora* (48)  
*Symphytum officinalis* (86)  
*Trifolium spp.* (3)  
*Trillium spp.* (10)  
*Tussilago farfara* (48)  
*Vaccinium spp.* (87)  
*Verbena spp.* (48)  
*Verbascum thapsus* (88)  
*Withania somnifera* (89)

#### MIDRANGE MEDICINALS

*Aloe gel* (90)  
*Angelica sinensis* (91)  
*Arctostaphylos uva ursi* (92)  
*Artemisia vulgaris* (30)  
*Asclepias spp.* (50)  
*Baptisia tinctoria* (10)  
*Barosma betulina* (44)  
*Berberis spp.* (93)  
*Capsella bursa-pastoris* (94)  
*Caulophyllum thalictroides* (95)  
*Ceanothus spp.* (50)  
*Centella asiatica* (96)  
*Cereus grandiflorus* (77)  
*Chelone glabra* (50)  
*Chilopsis linearis* (77)  
*Chimaphilla umbellata* (50)  
*Chionanthus virginicus* (11)  
*Cimicifuga racemosa* (97)  
*Commiphora molmol* (98)  
*Eriodictyon spp.* (99)  
*Eschscholtzia californica* (100)  
*Eucalyptus globulus* (11)  
*Gentiana lutea* (30)  
*Geranium spp.* (11)  
*Ginkgo biloba* (101)  
*Gossypium spp.* (11)  
*Grindelia spp.* (102)  
*Hamamelis virginiana* (103)  
*Humulus lupulus* (104)  
*Hydrastis canadensis* (105)  
*Juglans spp.* (106)  
*Lomatium dissectum* (107)  
*Lycopus virginicus* (108)  
*Marrubium vulgare* (50)  
*Mentha pulegium* (11)  
*Myrica cerifera* & *M. spp.* (11)  
*Oplopanax horridum* (109)  
*Passiflora incarnata* (110)  
*Picraena excelsa* (111)  
*Piper methysticum* (112)  
*Populus candicans*, *P. spp.* (113)  
*Prunus spp.* (50)

*Rheum palmatum*, *R. officinalis* (114)  
*Salix* spp. (115)  
*Sambucus* spp. (cortex) (116)  
*Serenoa serrulata*=*S. repens* (117)  
*Smilax* spp. (116)  
*Tabebuia* spp. (118)  
*Tanacetum parthenium* (119)  
*Thymus vulgaris* (120)  
*Trillium* spp. (50)  
*Turnera diffusa*, *T. aphrodisiaca* (11)  
*Usnea* spp. (50)  
*Valeriana* spp. (121)  
*Vitex agnus castus* (122)  
*Yucca* spp. (123)  
*Zanthoxylum americanum*, *Z. clava-herculis* (124)

**POTENT & POTENTIALLY TOXIC**

*Aloe* extract (125)  
*Anemone pulsatilla* (50)  
*Aristolochia* spp. (50)  
*Artemisia absinthium* (126)  
*Cassia* spp. (127)  
*Chelidonium majus* (fresh) (128)  
*Chenopodium anthelminticum* (11)  
*Convallaria majalis* (81)  
*Corydalis* spp. (129)  
*Corynanthe yohimbine* (130)  
*Dryopteris felix mas* (131)  
*Ephedra sinica* (132)  
*Gelsemium sempervirens* (133)  
*Juniperus* spp. (134)  
*Lobelia inflata* (50)  
*Iris versicolor* & *I. spp.* (50)  
*Phytolacca americana* (135)  
*Piscidia erythrina* (136)  
*Rauwolfia serpentina* (137)  
*Rhamnus* spp. (11)  
*Sanguinaria canadensis* (50)  
*Sarothamnus (Cytisus) scoparius* (81)  
*Simplocarpus foetidus* = *Draconitum foetidus* (50)  
*Solanum dulcamara* (50)  
*Stillingia sylvatica* (3)  
*Tanacetum vulgare* (11)  
*Thuja occidentalis* (138)  
*Urginea maritima* (139)  
*Viscum alba* (140)

**TOXIC**

(Use Homeopathically or With Extreme Care)

*Aconitum napellus* (141)  
*Arnica* spp. (142)  
*Atropa belladonna* (143)  
*Bryonia dioica* (144)  
*Cephaelis ipecacuanha* (145)  
*Datura stramonium*, *D. meteloides* (146)  
*Digitalis purpureum* (147)  
*Hyoscyamus niger* (148)  
*Podophyllum peltatum* (149)  
*Rhus toxicodendron* (150)  
*Veratrum* spp. (151)

**ENDNOTES**

1. While this is not a reliable form of birth control for an individual, the author believes, an entire village eating a large proportion of peas in their diet can reduce the total number of pregnancies.

2. The author has been treating a patient who, while easily antidoting her remedy in numerous other ways, experienced no antidoting while taking *Echinacea angustifolia* tincture fairly regularly.  
 3. Botanicals are most often used for their physiological effects and therefore the patient requires the most potent and vital medicines. Tinctures and other extracts, when made from fresh or recently dried herbs maintain potency and are more easily absorbed than capsules or tablets, even when the latter are prepared by sophisticated modern techniques (45).

**REFERENCES**

1. Boericke W. Pocket manual of homeopathic materia medica with repertory. New Delhi: Homeopathic Publications, 1927.  
 2. Scudder JM. Specific medications. Portland, OR: Eclectic Medical Publications, 1903.  
 3. Brinker F. Vitalistic and materialistic theories in botanical medicine prescribing. Botanical Medicine Academy Newsletter 1996;1(1):3.  
 4. Kingsbury J. Poisonous plants of the United States and Canada. Englewood Cliffs, NJ: Prentice-Hall Inc, 1964.  
 5. Cohn D, Streifler M. Intoxication by the chickling pea (*Lathyrus sativus*): Nervous system and skeletal findings. Arch Toxicol Suppl 1983;6:190-3.  
 6. Hedrick U. Sturtevant's edible plants of the world. New York: Dover Publications, 1919.  
 7. Hahnemann S. The organon of medicine. Los Angeles: Tarcher, 1982.  
 8. Johns T. With bitter herbs they shall eat it—Chemical ecology and the origins of human diet and medicine. Tucson, AZ: University of Arizona Press, 1990.  
 9. Li S. Chinese medicinal herbs. San Francisco: Georgetown Press, 1973.  
 10. Mills SY. Out of the earth. London: Viking Arkana, 1991.  
 11. Duke JA. CRC Handbook of Medicinal Herbs. Boca Raton, FL: CRC Press, 1985.  
 12. Schilcher V. Aetherische Öle—Wirkungen und Nebenwirkungen. Dtsch Apoth Ztg 1984;29:1433-42.  
 13. Grieve M. A modern herbal. New York: Dover Publications, 1931.  
 14. Hughs B, Lawson LD. Antimicrobial effects of *Allium sativum* L (garlic), *Allium ampeloprasum* L (elephant garlic), and *Allium cepa* L (onion), garlic compounds and commercial garlic supplement products. Phytother Res 1991;5:154-8.  
 15. Warshafsky S, Kamer R, Sivak S. Effect of garlic on total serum cholesterol: A meta-analysis. Ann Intern Med 1993;119(7):599-605.  
 16. Mirelman D, Monheit D, Varon S. Inhibition of growth of *Entamoeba histolytica* by allicin, the active principle of garlic extract (*Allium sativum*). J Infect Dis 1987;156:243-4.  
 17. Weber N, Anderson D, North J, et al. In vitro virucidal effects of *Allium sativum* extract and compounds. Planta Med 1992;58:417-25.  
 18. Koch H, Lawson LD (eds). Garlic: the science and therapeutic applications of *Allium sativum* L. and related species. Baltimore: Williams and Wilkins, 1996.  
 19. Ahsan M, Chowdhury A, Islam S, Ahmed Z. Garlic extract and allicin: Broad spectrum antibacterial agents effective against multiple drug resistant strains of *Shigella dysenteriae* type I and *Shigella flexneri*, enterotoxigenic *Escherichia coli* and *Vibrio cholerae*. Phytother Res 1996;10:329-31.  
 20. Melchart D, Linde K, Worku F, et al. Results of five randomized studies on the immunomodulatory activity of preparations of *Echinaceae*. J Alt Compl Med 1995;1:145-60.  
 21. Hobbs C. Echinacea: A literature review. HerbalGram 1994;30:33-48.  
 22. Bushing K. Inhibition of hyaluronidase by Echinacin. Arzneim Forsch 1952;2:467-72.  
 23. Boyle W. What works and what doesn't. AANP Annual Convention. Missoula, MT, September 22-24, 1988.  
 24. Schlegelmilch R, Heywood R. Toxicity of *Crataegus* (hawthorn) extract (WS 1442). J Am Coll Toxicol 1994;13:103-11.  
 25. Schmidt U, Kuhn U, Ploch M, Hübner W. Efficacy of the hawthorn (*Crataegus*) preparation LI 132 in 78 patients with chronic congestive heart failure defined as NYHA functional class II. Phytomed 1994;1:17-24.  
 26. Brekhman I, Dardymov I. New substances of plant origin which increase non-specific resistance. Ann Rev Pharmacol 1969;9:419-30.  
 27. Zeylstra H. Yarrow. New Herbal Practitioner, Professional J Natl Inst Med Herbalists 1984;11:51-5.  
 28. Müller-Limmroth W, Frohlich H. Effect of various phytotherapeutic expectorants on mucociliary transport. Fortschr Med 1980;98:95-101.  
 29. Stelling K. *Inula helenium* (elecampane). Canadian J Herbalism 1994 Jan:8-14.  
 30. Weiss RF. Herbal medicine. Beaconsfield, UK: Beaconsfield Publishers Ltd, 1985.  
 31. Schulz H, Stolz C, Müller J. The effect of valerian extract on sleep polygraphy in poor sleepers: A pilot study. Pharmacopsychiatry 1994;27:147-51.  
 32. Müller-Limmroth W, Ehrenstein W. Investigation of the effect of Sedakneipp on the sleep of sleep-disturbed men. Med Klin 1977;72:1119-25.  
 33. Fulder S. The book of ginseng. Vermont: Healing Arts Press, 1993.  
 34. Heneka N. *Chamomilla recutita*. Austr J Med Herbalism 1993;5:33-9.  
 35. Jakovlev V, Isaac O, Flaskamp E. Pharmacologic investigations with compounds of chamomile. VI. Investigations on the antiphlogistic effects of chamazulene and matricine. Planta Med 1983;49:67-73.  
 36. Acterrath-Tuckermann U, Kunde R, Flaskamp E, Isaac O, Thiemer K. Pharmacological investigation with compounds of chamomile. V. Investigations on the spasmolytic effect of compounds of chamomile and Kamillosan (R) on the isolated guinea pig ileum. Planta Med 1980;39:38-50.  
 37. Hobbs C. Plants for food and medicine: Joint meeting of the Society for Economic Botany and International

- Society for Ethnopharmacology. *HerbalGram* 1996;38:56-7.
38. Griggs B. Green pharmacy. Rochester, VT: Healing Arts Press, 1991.
  39. Messegue M. Of men and plants. New York: Macmillan, 1970.
  40. Keewaydinoquay, Personal communication, 1991.
  41. Kent JT. Lectures on Homeopathic Philosophy. Richmond CA: North Atlantic Books, 1900.
  42. Rozenberg V, Personal communication, 1996.
  43. Vithoulkas G. The science of homeopathy. New York: Grove Press, 1980.
  44. Leung A, Foster S. Encyclopedia of common natural ingredients used in food, drugs and cosmetics. New York: John Wiley and Sons, 1996.
  45. Bone K, Burgess N, McLeod D. Phytosynergistic prescribing. Lake Oswego, OR: Communications Medicus, 1994.
  46. Christen A, Seoane J, Leroux G. The nutritive value for sheep of quackgrass and timothy hays harvested at two stages of growth. *J Animal Sci* 1990;68:3550-9.
  47. Morton JF. Mucilaginous plants and their uses in medicine. *J Ethno-pharmacol* 1990;29:245-66.
  48. Hoffmann D. The new holistic herbal. Rockport, MA: Element, 1991.
  49. Kartnig T. *Cetraria islandica*—icelandic moss. *Z Phytother* 1987;8:127-30.
  50. Wren R, Williamson EM, Evans FJ. Potter's new cyclopaedia of botanical drugs and preparations. Essex, UK: CW Daniel Company Ltd, 1988.
  51. Hobbs C, Foster S. Hawthorn. *HerbalGram* 1990;22:19-33.
  52. Kirchhoff R, Becker C, Kirchhoff G, et al. Increase in cholesterol by means of artichoke extract. *Phytomed* 1994; 1:107-15.
  53. Malinow M, McNulty W, Houghton D, et al. Lack of toxicity of alfalfa saponins in cynomolgus monkeys. *J Med Primatol* 1982;11:106-18.
  54. Foster S. Herbal renaissance: growing, using & understanding herbs in the modern world. Salt Lake City, UT: Gibbs-Smith, 1993.
  55. Fukuda Y, Osawa T, Kawakishi S, Namiki M. Chemistry of lignan antioxidants in sesame seed and oil. In: Ho C, Osawa T, Huang M, Rosen R (eds). Food phytochemicals for cancer prevention II: teas, spices and herbs. Washington, DC: American Chemical Society, 1994: 264-74.
  56. Cordatos E. *Taraxacum officinale*. *Austr J Med Herbalism* 1991;3:64-73.
  57. Sharma R, Sarkar A, Hazra D, et al. Toxicological evaluation of fenugreek seeds: A long term feeding experiment in diabetic patients. *Phytother Res* 1996;10:519-20.
  58. Teucher T, Obertreis B, Ruttkowski T, Schmitz H. Cytokine secretion in whole blood of healthy subjects following administration of *Urtica dioica* L plant extract. *Arzneim Forsch* 1996;46(9): 906-10.
  59. Silagy C, Neil A. Garlic as a lipid-lowering agent—a meta-analysis. *J R Coll Phys London* 1994;28:39-45.
  60. Lin C, Min J, Yang J, et al. Anti-inflammatory and radical scavenge effects of *Arctium lappa*. *Am J Chin Med* 1996;24:127-34.
  61. Zhao K, Mancini C, Dona G. Enhancement of the immune response in mice by *Astragalus membranaceus* extracts. *Immunopharmacol* 1990;20:225-33.
  62. Patrick K, Kumar S, Edwardson PAD, Hutchinson J. Induction of vascularization by an aqueous extract of the flowers of *Calendula officinalis* L the European marigold. *Phytomed* 1996;3(1):11-8.
  63. Kang J, Yoeh K, Chia H, et al. Chili—protective factor against peptic ulcer? *Dig Dis Sci* 1995;40:576-9.
  64. Kiso Y, Suzuki Y, Watanabe N, et al. Antihepatotoxic principles of *Curcuma longa* rhizomes. *Planta Med* 1983; 49:185-7.
  65. Abdul-Ghani A, Amin R. The vascular action of aqueous extracts of *Foeniculum vulgare* leaves. *J Ethnopharmacol* 1988;24(2-3):213-8.
  66. Calvert R. Licorice extract in Addison's disease: Successful long-term therapy. *Lancet* 1954;1:805.
  67. Mann C, Staba E. The chemistry, pharmacology, and commercial formulations of chamomile. In: Craker LE, Simon J (eds). Herbs, spices and medicinal plants: recent advances in botany, horticulture, and pharmacology. Phoenix: Oryx Press, 1986: 235-80.
  68. Raman A, Lau C. Anti-diabetic properties and phytochemistry of *Momordica charantia* L (Cucurbitaceae). *Phytomed* 1996; 2(4):349-62.
  69. Czygan F. Anise—*Pimpinella anisum* L. *Z Phytother* 1992;13:101-6.
  70. Lee H, Lin J-Y. Antimutagenic activity of extracts from anticancer drugs in Chinese medicine. *Mutation Res* 1988;204:229-34.
  71. Al-Header A, Hasan Z, Aqel M. Hyperglycemic and insulin release inhibitory effects of *Rosmarinus officinalis*. *J Ethnopharm* 1994; 43:217-21.
  72. Bamford D, Percival R, Tothill A. Raspberry leaf tea: A new aspect to an old problem. *Proc Br Pharmacol Soc* 1970;40:161-162p.
  73. Hancke J, Burgos R, Cáceres D, et al. Reduction of serum hepatic transaminases and CPK in sport horses with poor performance treated with a standardized *Schizandra chinensis* fruit extract. *Phytomed* 1996;3:237-40.
  74. Morazzoni P, Bombardelli E. *Silybum marianum* (*Carduus marianus*). *Fitoterapia* 1995;66:3-42.
  75. Bone M, Wilkinson D, Young J, et al. Ginger root—a new antiemetic. The effect of ginger root on postoperative nausea and vomiting after major gynaecological surgery. *Anaesthesia* 1990;45:669-71.
  76. Moore M. Medicinal plants of the Pacific West. Santa Fe, NM: Red Crane Books, 1993.
  77. Moore M. Medicinal plants of the desert and canyon west. Santa Fe, NM: Museum of New Mexico Press, 1989.
  78. Hobbs C. Echinacea: A literature review. *HerbalGram* 1994;30:33-48.
  79. Woerdenbag J, Bos R, Hendriks H. *Eupatorium perfoliatum* L—boneset. *Z Phytother* 1992;13:134-9.
  80. Upton R(ed). St. John's wort, *Hypericum perforatum*. *HerbalGram* 1997;40(suppl):1-40.
  81. Hyde F. Herbal remedies influencing the heart and circulation: Part 1 (heart disease). *Br J Phytother* 1990;1:20-3.
  82. Moore M. Medicinal plants of the mountain west. Santa Fe, NM: Museum of New Mexico Press, 1979.
  83. Sherry C, Koontz J. Pharmacologic studies of "catnip tea": the hot water extract of *Nepeta cataria*. *Q J Crude Drug Res* 1979;17:68.
  84. Wagner H, Nörr H, Winterhoff H. Drugs with adaptogenic effects for strengthening the powers of resistance. *Z Phytother* 1992;13:42-54.
  85. Zakay-Rones Z, Varsano N, Zlotnik M, et al. Inhibition of several strains of influenza virus in vitro and reduction of symptoms by an elderberry extract (*Sambucus nigra* L) during an outbreak of influenza B in Panama. *J Alt Compl Med* 1995;1(4):361-9.
  86. Olinescu A, et al. Action of some proteic and carbohydrate components of *Symphytum officinale* upon normal and neoplastic cells. *Roumanian Arc Micro Immunol* 1993;52(2):73-80.
  87. Morazzoni P, Bombardelli E. *Vaccinium myrtillus* L. *Fitoterapia* 1996;67:3-29.
  88. Zgorniak-Nowosielska T, Grzybek J, Manolova N, al. e. Antiviral activity of flos verbasci infusion against influenza and herpes simplex viruses. *Arch Immunol Ther Exp Warsz* 1991; 39:103-8.
  89. Wagner H, Nörr H, Winterhoff H. Plant adaptogens. *Phytomed* 1994;1:63-76.
  90. Vásquez B, Avila G, Segura D, Escalante B. Antiinflammatory activity of extracts from *Aloe vera* gel. *J Ethnopharmacol* 1996;55:69-75.
  91. Choy Y, Leung K, Cho C, et al. Immunopharmacological studies of low molecular weight polysaccharide from *Angelica sinensis*. *Am J Chin Med* 1994;22:137-45.
  92. Jahodar L, Jilek P, Faktova M, Dvorakova V. Antimicrobial effect of arbutin and an extract of the leaves of *Arctostaphylos uva-ursi* in vitro. *Cesk Farm* 1985;34:174-8.
  93. Wiesenauer M, Lüdtke R. *Mahonia aquifolium* salve for psoriasis vulgaris—an intraindividual study. *Phytomed* 1996;3:231-5.
  94. Steinberg A, Segal H, Paris H. Role of oxalic acid and certain related dicarboxylic acids in control of hemorrhage. *Ann Oto Rhino Laryngol* 1940;49:1008-21.
  95. Pilcher J, Delzell W, Burman G. The action of various 'female' remedies of the excised uterus of the guinea pig. *J Am Med Assoc* 1915;67:490-2.
  96. Mahajani S, Oberai C, Jerajani H, Parikh K. Study of venodynamic effect of an Ayurvedic formulation of *Centella asiatica* using venous occlusion plethysmography (VCP) and laser-Doppler velocimetry (LDV). *Can J Physiol Pharmacol* 1994;172(suppl 1):180.
  97. Düker E, Kopanski L, Jarry H, Wuttke W. Effects of extracts from *Cimicifuga racemosa* on gonadotropin release in menopausal women and ovariectomized rats. *Planta Med* 1991; 57(5):420-4.
  98. Al-Harbi M, Qureshi S, Razá M, et al. Gastric antiulcer and cytoprotective effect of *Commiphora molmol* in rats. *J Ethnopharmacol* 1997;55:141-50.



99. Dentali SJ, Hoffman J. Potential anti-infective agents from *Eriodictyon angustifolium* and *Salvia apiana*. *Int J Pharmacol* 1992;30:223.
100. Rolland A, Fleurentin J, et al. Behavioral effects of the American traditional plant *Eschscholtzia californica*: Sedative and anxiolytic properties. *Planta Med* 1991; 57(5):212-6.
101. Bauer U. Six month double-blind randomized clinical trial of *Ginkgo biloba* extracts versus placebo in two parallel groups in patients suffering from peripheral arterial insufficiency. *Arzneim Forsch* 1984;34:716-24.
102. Wat C, Johns T, Towers G. Phototoxic and antibiotic activities of plants of the Asteraceae used in folk medicine. *J Ethnopharmacol* 1980;2:279-90.
103. Korting H, Schafer-Korting M, Hart H, et al. Anti-inflammatory activity of hamamelis distillate applied topically to the skin. Influence of vehicle and dose. *Eur J Clin Pharmacol* 1993; 44(4):316-8.
104. Wohlfart R. The sedative-hypnotic principle of hops. *Planta Med* 1983;48:120-5.
105. Genest K, Hughes D. Natural products in Canadian pharmaceuticals. IV. *Hydrastis canadensis*. *Can J Pharm Sci* 1969;4(2):41-5.
106. Ahmad S, Wahid M, Bukhari A. Fungistatic action of *Juglans*. *Antimicrob Agents Chemother* 1973;3(3):436-8.
107. Carlson H, Douglas H. Antibiotic agents separated from the root of lace-leaved leptotaenia. *J Bacteriol* 1948;55:615-21.
108. Winterhoff H, Gumbinger H, et al. Endocrine effects of *Lycopus europaeus* following oral application. *Arzneim Forsch* 1994;44:41-5.
109. Smith G. Arctic pharmacognosia II. Devil's club, *Oplopanax horridus*. *J Ethnopharmacol* 1983;7:313-20.
110. Speroni E, Minghetti A. Neuropharmacological activity of extracts of *Passiflora incarnata*. *Planta Med* 1988;54:488-91.
111. Ninsi M. Profilaxis y tratamiento de pediculosis con casia amarga. *Rev Fac Cien Med (Univ Cordoba)* 1991;49:27-31.
112. Lehmann E, Kinzler J, Friedemann J. Efficacy of a special kava extract (*Piper methysticum*) in patients with states of anxiety, tension and excitedness of non-mental origin—a double-blind placebo-controlled study of four weeks treatment. *Phytomed* 1996;3:113-9.
113. El-Ghazaly M, Khayyal M, Okpanyi S, Arens-Corell M. Study of the anti-inflammatory activity of *Populus tremula*, *Solidago virgaurea* and *Fraxinus excelsior*. *Arzneim Forsch* 1992;42:333-6.
114. Yokozawa T, He L, Muto Y, et al. Effects of rhubarb extract in rats with diabetic nephropathy. *Phytother Res* 1997; 11:73-5.
115. Mills S, Jacoby R, Chacksfield M, Willoughby M. Effect of a proprietary herbal medicine on the relief of chronic arthritis pain: A double-blind study. *Br J Rheumatol* 1996;35:874-8.
116. Bingöl F, Sener B. A review of terrestrial plants and marine organisms having anti-inflammatory activity. *Int J Pharmacognosy* 1995;33:81-97.
117. Carraro J, Raynaud J, Koch G, et al. Comparison of phytotherapy (Permixon (R)) with finasteride in the treatment of benign prostatic hyperplasia: A randomized international study of 1,098 patients. *Prostate* 1996;29:231-40.
118. de Santana C, de Lima O, d'Albuquerque IL, et al. Antitumor and toxicological properties of extracts of bark and various wood components of pau d'arco (*Tabebuia avellanedae*). *Rev Inst Antibiot* 1968;8:89-94.
119. Murphy J, Heptinstall S, Mitchell J. Randomised double-blind placebo-controlled trial of feverfew in migraine prevention. *Lancet* 1988;ii:189-92.
120. Aeschbach R, Loliger J, Scott B, et al. Antioxidant actions of thymol, carvacrol, 6-gingerol, zingerone and hydroxytyrosol. *Food Chem Toxicol* 1994;32:31-6.
121. Leathwood P, Chauffard F, Heck E, Munoz-Box R. Aqueous extract of valerian root (*Valeriana officinalis*) improves sleep quality in man. *Pharmacol Biochem Behav* 1992; 17:65-71.
122. Miulewicz A, Gejdel E, Sworen H, et al. *Vitex agnus-castus* extract for the treatment of menstrual irregularities due to latent hyperprolactinemia. *Arzneim Forsch* 1993;43:752-6.
123. Bingham R, Bellow R, Bellow J. Yucca plant saponins in the management of arthritis. *J Appl Nutr* 1975;27:45-51.
124. Oriowo M. Anti-inflammatory activity of piperonyl-4-acrylic isobutyl amide, an extractive from *Zanthoxylum zanthoxyloides*. *Planta Med* 1982; 44:54-6.
125. Siegers C, von Hertzberg-Lottin E, Otte M, Schneider B. Anthranoid laxative abuse—a risk for colorectal cancer? *Gut* 1993;34:1099-101.
126. Vogt D. Absinthium: A nineteenth-century drug of abuse. *J Ethnopharmacol* 1981;4:337-42.
127. Grimminger W, Witthohn K. Analytics of senna drugs with regard to the toxicological discussion of anthranoids. *Pharmacol* 1993;47(suppl 1):98-109.
128. Kim D, Ahn B, Han B, Tsuda H. Potential preventive effects of *Chelidonium majus* L (Papaveraceae) herb extract on glandular stomach tumor development in rats treated with N-methyl-N'-nitro-N-nitrosoguanidine (MNNG) and hypertonic sodium chloride. *Cancer Lett* 1997;112(2): 203-8.
129. Bone K, Morgan M. Clinical applications of Ayurvedic and Chinese herbs: monographs for the Western herbal practitioner. Warwick, Queensland, Australia: Phytotherapy Press, 1996.
130. Charney D, Heninger G, Redmond D. Yohimbine induced anxiety and increased noradrenergic function in humans. Effects of diazepam and clonidine. *Life Sci* 1983;33:19-29.
131. Blakemore R, Bowden K, Broadbent J, Drysdale A. Anthelmintic constituents of ferns. *J Pharm Pharmacol* 1964; 16:464-71.
132. White L, Gardner S, Gurley B, et al. Pharmacokinetics and cardiovascular effects of ma-huang (*Ephedra sinica*) in normotensive adults. *J Clin Pharmacol* 1997;37:116-22.
133. Blaw M, et al. Poisoning with Carolina jessamine (*Gelsemium sempervirens*). *J Pediatr* 1979;94:998-1001.
134. Rajohn C, Wirth E. The toxicity of various preparations of extractum juniperi. *Arch Expt Path Pharm* 1952;166:222-8.
135. Hamilton R, Shih R, Hoffman R. Mobitz type I heart block. Pokeweed ingestion. *Vet Human Toxicol* 1995;37:66-7.
136. Aourousseau M, Bery C, Albert O. Studies on the pharmacodynamic properties of *Piscidia erythrina* L (Leguminosae). *Ann Pharm France* 1965;23:251-7.
137. Vakil R. *Rauwolfia serpentina* in the treatment of high blood pressure. A review of the literature. *Circulation* 1955;12:220-9.
138. Scognamiglio W. Effects of thujone on spontaneous activity and on conditioned behavior of rats. *Boll Chim Farm* 1968;107(12):780-91.
139. Tuncok Y, Kozan OC C, et al. *Urginea maritima* (squill) toxicity. *J Toxicol Clin Toxicol* 1995;33(1):83-6.
140. Kleijnen J, Knipschild P. Mistletoe treatment for cancer. Review of controlled trials in humans. *Phytomed* 1994;1:255-60.
141. Kolev S, Leman P, Kite G, et al. Toxicity following accidental ingestion of *Aconitum* containing Chinese remedy. *Human Exp Toxicol* 1996; 15:839-42.
142. Hörmann H, Korting H. Allergic acute contact dermatitis due to *Arnica* tincture self-medication. *Phytomed* 1995;4:315-7.
143. Lange A, Toft P. Poisoning with nightshade, *Atropa belladonna*. *Ugeskr Laeger* 1990;152:1096.
144. Munoz S, Salvarelli S, Saiz M, Conde F. A toxic protein from *Bryonia dioica* Jacq fruits. The bryidofin. *Biochem Biophys Res Comm* 1992;183:1011-8.
145. Schiff R, Wurzel C, Brunson S, et al. Death due to chronic syrup of ipecac use in a patient with bulemia. *Pediatrics* 1986;78:412-6.
146. Nogue S, Pujol L, Sanz P, de la Torre R. *Datura stramonium* poisoning. Identification of tropane alkaloids in urine by gas chromatography-mass spectrometry. *J Intl Med Res* 1995; 23:132-7.
147. Rich S, Libera J, Locke R. Treatment of foxglove extract poisoning with digoxin-specific Fab fragments. *Ann Emerg Med* 1993;22:1904-7.
148. Kurkuoglu M. Henbane (*Hyoscyamus niger*) poisoning in the vicinity of Erzurum. *Turk J Pediatr* 1970;12:48-56.
149. McFarland M3, McFarland J. Accidental ingestion of podophyllum. *Clin Toxicol* 1981;18:973-7.
150. Kollef M. Adult respiratory distress syndrome after smoke inhalation from burning poison ivy. *JAMA* 1995;274: 358-9.
151. Festa M, Andreetto B, Ballaris M, et al. A case of veratrum poisoning. *Minerva Anestesiol* 1996;62:196-6.

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