POSOLOGY

The Pharmacological Determination of Appropriate Doses from Medicinal Embryonic Phytotherapy

By Dominique Richard © 2013

How many drops are in a liquid herbal extract?

The number of drops in a bottle of liquid extract will vary greatly depending on the liquid’s viscosity (thickness) and molecular weight, making it impossible to know with 100% certainty the number of drops in a bottle. Complicating matters further are the potential inconsistencies from person to person in terms of the amounts dispensed in “one squeeze” – some people press harder on the dropper, thereby dispensing two drops when intending to dispense only one, and some people are simply careless. For these reasons, it is absolutely critical that you take an extra two minutes to explain to your patients and clients the importance of being precise. Especially since, contrary to existing OTC products for which we have had plenty of time and opportunity to study and learn about problems of instability or precipitation, custom-made individual programs simply can’t be universally studied because of cost. So please remind your patients about:

- The procedure of gently tapping the bottom of each bottle before pre-mixing the herbal program and placing it in a blank brown bottle.
- The importance of never mixing a medicinal embryonic phytotherapy program too many days in advance.

For an example, let’s look at the embryonic plant extract of arnica:

- 15ml (or ~.5 ounces) = ~600 drops
- 50ml (or ~1.69 ounces) = ~2,000 drops
- 1 Dropperful (which is considered one squeeze of the rubber toper of MEM) = 1 Milliliter, so a 50ml bottle represents ~50 drops (gtts) for gutta.

Of course it also largely depends on the plant species and its other phytochemical constituents – clearly, it is close to impossible to offer an across-the-board absolute number.
Lower percentage amounts of alcohol extraction will contain smaller amounts of active phytochemicals and fewer phytohormones, resins, pigments, etc., and will therefore be of a quality inferior to that of a higher alcohol extraction. Liquid embryonic plant extracts are a much more efficient (bioavailable) means of getting all pharmacological active constituents out of the crude herb and into the bloodstream.

Liquid herbal extracts are much easier for the body to absorb and assimilate than dried herb capsules and tablets, which are made from raw crude plant tissue and must be metabolized (i.e., extracted) by the body before the plant’s pharmacological constituents can be absorbed into the bloodstream. Since many plants are very woody (fibrous), bioconversion and absorption are unlikely to be sufficiently effective.

1 ppm = 1 milligram (mg) per Liter

Parts-per notation is used, especially in science and engineering, to denote relative proportions in measured quantities, especially in low-value (high-ratio) proportions at parts-per-million (ppm), parts-per-billion (ppb), and parts-per-trillion (ppt) levels. Since parts-per notations are quantity-per-quantity measures, they are known as dimensionless quantities; that is, they are pure numbers with no associated units of measurement. In regular prose, parts-per notations generally take the literal “parts per” meaning of a comparative ratio, although in mathematical expressions, parts-per notations function as coefficients with values less than 1.

Parts-per notation is often used for the measure of dilutions (concentrations) in chemistry (e.g., it is used for measuring the relative abundance of dissolved minerals or pollutants in water). The expression “1 ppm” means a given property exists at a relative proportion as one part per million parts examined, as would occur if a water-borne pollutant was present in a concentration of one-millionth of a gram per gram of sample solution, as shown below:

| ppm parts per million | 1 ppm = 1 part in 1 million ($10^6$) = 1 mg/L |

The conversion ratio into Milligrams Per Dropper (MgPD) can therefore be extrapolated by the following formula: MgPD = PPM / 1000.

Using this formula, to calculate the Milligrams of Calcium per Dropper (MgPD), divide 2500 ppm by 1000 to get 2.5mg per dropper, or 2500mcg per dropper (mcg = mg X 1000). Note that this will also be 100% absorbed because the ultramolecular weight is infinitesimal, which is more conducive to osmosis.

While ostensibly this may seem like a small amount of calcium compared to a typical 50 or 100mg calcium carbonate supplement, it is estimated that less than 1% of the calcium extrapolated from a compound form is actually absorbed on the cellular level, and even that small amount is dependent on individual enzymatic functionality not being impaired. In other words, the most a healthy individual could absorb on the cellular level from a 50mg calcium carbonate supplement pill is typically .5mg, and these same ratios hold true for every mineral from Boron to Zinc.
The proven superiority of embryonic plant extractions over adult plant extracts is well-known, clearly established, and linked to their respective phytochemical constituents. Adult extracts contain inconsistencies in phytochemical constituents from batch to batch, whereas embryonic extracts contain the same amounts (within 5% variance) of active pharmacological constituents. This has been shown in reproducible analysis studies conducted by me and several independent sources. Furthermore, embryonic plant extracts are not polluted since they have not yet interacted with the environment; adult plants have had the time to interact with the environment and are therefore, inferior since they have been tainted with pollutant contaminants.

As a general rule, embryonic plant extracts require only a third of the amount required when adult plant extracts are used. In fact, not only do embryonic plant extracts contain all the phytochemicals from every part of the adult version, but they do so in higher amounts, as well, which is precisely why the embryonic version is so much more effective at smaller doses.

Not always found in embryonic plant extracts are various secondary metabolites (that are produced only as part of a plant’s defense mechanism when invaded by predators of pathogens) and a handful of phytochemicals (that are produced only when a plant matures, including some phytohormones that cause abscission and the death and falling of leaves). Indeed, these developing phytochemicals and phytohormone, like ethylene, are found only in the adult stage of growth. These absences are inconsequential; however, because they provide no benefit for human health – in fact, they cause accelerated aging, advanced glycation, and further oxidation in the human body. Can there be any doubt about the superiority of embryonic phytochemistry’s regenerative health benefits?

Adult phytotherapy dosages vary, ranging from 15 to 150 gtts, tid, qid, PRN, QD.

Embryonic phytotherapy dosages also vary, from 5 to 30 gtts, tid, qid, PRN, QD, with the exception of Betulinic acid concentrate and Silver Birch saps, both of which require 30-150 gtts, tid, PRN QD and never qid.

Infants require about one-third of the above adult dosages, and children under 80 pounds require one-half of the adult dosages.

CONCENTRATION

1:10 or the equivalent of classic mother tincture (MT), which is 10% concentration of a crude extract, without all the debris that only adds stress in the body. Furthermore, mother tinctures have proven to possess better osmosis and bioavailability. The double concentrated extracts, when in need of a higher dosage, are more economical and require fewer drops than the single concentrated extract (1:20, or half of a classical mother tincture 5% concentration).

Posology is also very important in terms of increasing and decreasing dosages when adverse side effects are present or when standard dosing produces no response. Some individuals will require very small dosages, independent of age, weight, and health status, while others will need large dosages because of past drug use.
(prescription or recreational). Determining the correct dosages is not a matter of luck or guesswork; it requires homework, many hours of studies, diligent charting and notekeeping, and consistent monitoring of lab work.

**In Acute-Care** (i.e., like that of trying to abort a common cold or the flu with Arresto-Prevento PSC®), dosing should be frequent: adults would take 15 gtt sublingually or into a little water q 1h every waking hour (14 to 16 times per day) during the day for two days, then PRN. This complex is the alternative to Tamiflu and works with a 90% success rate in aborting the severity and duration of the common cold and influenza. There is a 10% failure rate that can be attributed to different strains that may require another complex.

In the case of a genital herpes outbreak, you would give an Adult: Herpecell-Oral PSC® 25 gtt q 2h, 6 times daily; for prophylactic use, give 15-30 gtt tid, PRN, QD to prevent the frequency of outbreaks.

In the case of bronchitis, initially when febrile or in great pulmonary distress, you would give Broncho Modulato PSC®. An adult dose is a dropper full PRN, depending on the severity and response to its use, as needed. Reduce the interval as condition improves, but stay in top of it – do not let the viral infection control you. For smoker's cough, an adult dose can be 30 gtt tid, qid, PRN, QD. This works by offsetting both the side effects, and the damages caused by smoking. The same applies for occupational hazard coughs.

**Please Note:** when you are not having success with a given agent(s), it could mean that further investigation and evaluation are necessary. Your dosage may be too low or too high based on the needs of the individual being treated. The amount required for each person is dependent on their entire health status – not just a single event.

**BIOTHERAPEUTIC PROGRAM**

When designing a custom-made Biotherapeutic Combinatorial Program consisting of many plants (i.e., 10+ herbs) mixed together, you must consider their compatibilities, degrees of importance (as in Polycrest vs. Adjuvant), synergistic effects, and interactions.

As an example, let’s look at a case study: if you are in need of three geminating seeds, you may need to consider fewer or more depending on the severity or response to chosen plants.

- Caraway - Carum Carvi (geminating seeds) 5-15 gtt tid, QD and when used as the only seed in your biotherapeutic program you could give as much as 30 gtt, tid, QD
- Maize – Zea Mais (geminating seeds) 5-15 gtt tid, QD
- Nigella – Nigella Sativa (geminating seeds) 5-15 gtt tid, QD

The germinating seeds contain some basic phytochemicals that are common among all seeds, like the fungal antioxidant proteins caseolin and oleosin, as well as the same phytohormone composition that is high in brassinosteroids. So considering all of that, you must understand that you are giving many of the same additive agents, and that you are combining many other phytochemicals unique to that plant species. You may
only need 5-10 gtts, tid of each to achieve a maximum dose of 30 gtts, tid, as would be
the case when using only a single germinating seed.

In the case of Nigella, which is treasured for its thymoquinone content and is one of the
only phytochemicals known to interrupt pancreatic cancer's proliferation, you would now
break those dosage rules and need to give 50 gtts, tid in order to have a sufficient
therapeutic effect against such odds.

This is why understanding phytochemistry in great depth gives such a critical advantage
in prescribing. I have taught and mentored many students in the last decade, and when
designing a biotherapeutic program, it is quite common for my program designs to differ
from theirs. That isn't a failure on their part, it is simply the result of me having
significantly more experience than they do. I understand interactions, biotherapeutic
end equations, blood test implications, and embryonic phytochemistry nutritional content
better, and that is directly attributable to experience. As I've stated a thousand, times,
proper prescribing and program design requires time, attention, and careful study.

One way of prescribing these plants is to give one plant in a higher dose before
breakfast, a different plant in a higher dose before lunch, and yet another different plant
in a higher dose before dinner. However, in my experience, that approach is futile since
the average half-life of these plants is 4 ½ hours. Without maintaining blood saturation,
therapeutic correction is essentially impossible, so effective programs require a
continuous level amount to achieve corrective results.

Another consideration is for a plant that contains phytomelatonin, like Sour Cherries
Montmorency – Prunus Cerasus (buds). Giving such a plant during daytime is, for
obvious reasons, counterproductive.

The last dose of the day from any complex biotherapeutic program should not be taken
less than 4 hours before bedtime so as not to cause nocturia (for example, a stimulating
plant like Oak, which is the equivalent of coffee, should not be taken at bedtime).
Conversely, sedating plants are desired in the evening, especially when someone
suffers from insomnia.

You also need to consider **acute** versus **chronic** when choosing agents and dosages.

**P = Polycrests** are those remedies of the **first order** for a particular pharmacological
indication and necessary for an **acute condition**.

**A = Adjuvants** are remedies of **second order** for a particular pharmacological
indication, meaning they assist and complement by potentiating the action of other
remedies. Adjuvants are normally not chosen for acute events.

**POTENTIATION** refers to combining a couple of different **adjuvants** synergistically in a
specific targeted therapeutic action(s) goal and/or interaction(s). Sometimes the
**combinatorial synergy** from **two adjuvants** can render a **polycrest**, which in this way
can be used for an **Acute Condition**.

**Exceptions to the rules**

You may on occasion intentionally mix two incompatible remedies to get the benefit of
one and offset the aspect of the other unwanted therapeutic action. This can often be
encountered with low platelet. Where you may want the benefits from a plant that has
an anticoagulant effect and offsets this with a plant that has the opposite effect of increasing platelet. In embryonic phytochemistry because of their content of undifferentiated plant stem cell (PSC), remember that they have yet to become specialized until they enter a particular environment in the blood and then become two specialized cells. This is why we have anticoagulants that at the same time can arrest hemorrhaging. The best example is Dogwood, European Alder, and Horse Chestnut.

You can mix as many as 10-14 plants together if needed for a very ill patient or a patient with multiple health problems in need of many targets. When this is done, it should not be a blind shotgun approach, but rather a very well-designed, custom-made protocol.

WHEN TO TAKE

It should always be taken on an empty stomach and depending upon the size of the program, should be anywhere from 15 to 45 minutes before each meal into ½ glass filtered water and SIP over a period of at least 5 minutes and never to guzzle it down. The exception to this rule is Betulinic acid concentrate, which is always taken first and by itself (before any other herbs) into ½ glass water and guzzled (do not sip). If using the Sap you can actually dilute the herbs into it as your medium to take the herbs; extra added filtered water is always recommended. Always err on the side of too much water rather than not enough water.

HOW LONG SHOULD IT TAKE TO SEE IMPROVEMENT?

This is a difficult question to answer with any degree of certainty, but within two weeks from the start of a full program, there should be signs of improvement.

For acute conditions, as with most drugs, it will be 48 hours before you see improvement, but with minor ailments, improvement can be seen as quickly as within 30 to 45 minutes of taking a decongestant, for example.

In the case of chronic conditions, improvement should be noticeable within two weeks, assuming protocol and dietary compliance.

SIDE EFFECTS

For the first to two weeks (maximum), there may be some detoxification symptoms, such as light-headedness, fatigue, and mild headaches from coming off coffee. However, these programs, when well-designed, are usually very well tolerated and their initial side effects are short-lived; in fact, some individuals report feeling well quite quickly (within just a few days). But just as Rome was not built in a day, a biotherapeutic program takes time. But remember that successful therapy is contingent not just on you, but on the MANDATORY cooperation of your patients and clients, as well.

WHAT IS THE DURATION of BIOThERAPEUTIC PROGRAMS?

Ten weeks is recommended, with another evaluation visit at the conclusion of the ten weeks to review before-and-after symptoms, followed by lab work after fasting 10-12 hours. Allow only water during the fast, chart the results on a spreadsheet to monitor the progression of blood before and after until optimal values have been met and sustained, and then put the patient on a maintenance program and follow every 6-12 months, as needed.
Some patients will require to be seen more often than others.

The only time of the month a female can have a meaningful blood test (in terms of accurately evaluating hormones) is during the luteal phase – unless, of course, you are checking for ovulation or other hormones. However, if not evaluating hormones, you need to be at least 10 days from the end of menstrual cycle.

As early as age 35, males and females should already have a baseline blood test evaluating all hormones, including neurohormone. It is not advisable to wait for problems to occur before collecting the baseline data. There are specific instructions for each of the many different tests, all of which you will find in my Master blood table, which is coming soon as I’m working very hard on finishing the edit. Until then, I have provided you herein a minor synopsis of the approach to a successful Biotherapeutic Program.

If you are not a physician, then proceed without blood testing. Even if you are not a physician, if you study hard you still can accomplish many great health improvements. I exclude no one, for I do not know who may possess the gift of healing. The Natural Prescriber, Healers, First, Doctors Second.

Happy designing to all.

Dominique Richard