

Forgotten Pharmacy: Beyond Tinctures and Teas

By Glen Nagel N.D.

The 3 B's of Herbalism

For years, herbalists of all types have had 3 great loves. I call them the 3 B's or specifically books, bags and bottles. The books are the lover of the older non techno herbalist. These include the old texts by the phyomedicalist and Eclectic physicians. I would often search book stores for old herb texts and have come across one or two in my time but others like David Winston have made it a career finding old herb books and many are offered on there web sites. But because of web sites like ebay most of the old books find there way to the web. Now we have the old books on the web in PDF files and other forms. Maybe I should change my saying to BYTES instead of books.

The second of my three B's are bags. I'm talking about the brown paper bags filed with medicinal, culinary or plain fun herbs. Now too many herbs about bought in plastic bags and foil seal bags. It is rare to see the herbs in glass jars lined along the shelf. The herbs have to get out of the field and the herbalist will find a way thru a variety of containers and bags.

The third of my three B's is bottles. Oh there is a special fascination with the bottles which contain many types of exciting herbal brews. I remember years ago I made my own hand sewn herbal bag. I was so excited about how I sewed my own leather bands which would exactly hold a once ounce Boston amber round. This at the time was my choice of bottles. I would place all my various tinctures in once ounce rounds and place them in my bag and take off. With the fascination with bottles can the even more curious was the mysterious herbal liquids found inside them. The beloved tinctures that I first loved are now called extracts. They are still often put into the one ounce Boston round too. Over they years the lure of the 3 B's has been the stable of the herbalist and the herbal industry. There has been much change but at the heart of it our the herbs and the books to tell us about it and the bags and bottles to carry them around. What started as a home grown do it yourself kind of herbalism has now changed into a billion dollar industry where you can enter a store and see row and row of bottles and bags and books but not one real herb or plant. It is important to remember our roots finding recipes in old books, taking the herbs out of the bags and making medicine to put in bottles.

Important Reminders: Pharmacy and Fallacies

More and more people believe that making the medicines should be left to the experts or that they have less time for doing the dirty work. This is where I will state my first premise of Forgotten Pharmacy.

- **Remember, making the herbal medicine is medicine!** The goal is the journey not the destination. It's a bit like making a home made meal at home or going out. Nothing can really replace the process of sitting around a kitchen with a bunch of people and putting food, herbs and love into a meal. The same with the herbs. How many of us love to make the elaborated morning tea or coffee ritual more than drinking the brew. I have had patients that I have involved in making there own medicine often for financial reasons but in the process of making the medicine healing was taking place. Don't rob yourself from your roots. You could turn the title of this talk around and say the forgotten part of herbalism is the pharmacy, is the making or your own unique medicine.
- **Massage your friends, Don't eat them.** Play with your friends to have herbal fun. The magic in herbs is in the relationship with the herbs and the people playing with the herbs. Focus more one being with herbs, putting on you skin and less on having to put them inside your body and digest them and their active ingredients. External use has been ignored for years, and often thought as a lesser method. People think if you can't swallow it then it is not useful. The active part is the whole being. It's like say what is the active part of your friend? Do you like them for only there active parts? No, it is the whole

person that leaves an impression. In our modern scientific world one of the biggest disservices is to always break herbs down into parts.

- **The sum of the whole herb is greater than the parts.** I remember back in college some teacher said that if you take the human body and reduce it to its elemental level it becomes a small pile of minerals worth 15 cents, now probably 23 cents. Isn't there more value in the whole person? It there is a trend that is starting in the scientific community which studies herbs it is the synergy of the whole plant. I strongly believe that this will shown to be true more and more. You can't isolated the so called active parts of a plant if you do they become drugs. Those herbal drugs or isolates may have value but they are not herbs. Whole herbs for whole people was the old and now new rallying cry.
- **Use all your senses: Herbal Organoleptics.** Organoleptic Defined: Making an impression upon an organ. Said of the effect or impression produced by any substance on the organs of touch, taste or smell, and also on the organism as a whole. Enjoy the beauty of the herbal world and remember that they much to be said for the senses and how herbs make an impression upon them. Taste is only once sense! (See Organoleptic Chart at end)

Beyond Tinctures and Pills

There are many other forms that have become less common in use because they don't sell well not because they are not useful. In the retail world if it's not a capsule or pill it doesn't sell well. The following are the top of the forgotten pharmacy. These herbal products that are not only fun to make but are very useful too.

- Emulsions and creams: Using fixed oils and gums to make a cream.
- Mels and oxymels: honey and vinegar and honey extracts.
- Wine infusions
- Herbal Jello's: Herbs and agar agar or pectin.
- Poultices and Fomentations
- Herbal Beers

Creams by the Emulsion Method

There are many ways to make creams. Some methods use beeswax, some aloe gel, some lanolin, and many a combination of all of these and more. The way that I have learned, and that seems to be in danger of becoming a lost art, is making **creams by the emulsion method**. It seems that the herbalists trained in England have learned and teach the emulsion method, whereas those trained in the U.S. tend to emulsify with the waxes, like beeswax. Emulsions can be made with a mortar and pestle. I suspect that it was the way to make creams until high-speed blenders came upon the scene. If you read the Eclectic physician materials, they used emulsions.

There are a few advantages to making creams by emulsion. The last one that you'll notice is that the clean-up is *much* easier. This is because the emulsion method uses much less oil and no wax. As a result **the product that you make has a much less "greasy" feel** to it, and absorbs through the skin with ease. It is much more cooling than the beeswax product and once the emulsion is made you can add tinctures to medicate the oil.

Learning to make an emulsion can also be useful in the internal application of essential oils. As you know, essential oils can be very irritating to mucous membranes and have a level of toxicity. By making an emulsion, you can suspend the droplets of essential oil in an aqueous solution, and deliver it in a diluted nonirritating manner. You can also use essential oil emulsions as flavorings for tinctures. One of the problems with dispensing essential oils is that they do not dissolve in water but once they are emulsified they are easily dispensed or mix with other water

based extracts. Many naturopaths use emulsified essential oils to add peppermint, cinnamon and orange essential oil flavor to nasty tasting tinctures. If the oil is in emulsion form it mixes into the tincture rather than forming an oily layer floating on the top of the tincture. They can also be used to emulsify oils into the bath with out leaving an oily ring around the tube.

Types of Emulsions

1. Oil and water are immiscible liquids, but a brisk shaking of the liquids will form a temporary emulsion. However, upon standing, the oil and water will once again separate out. There are two types of basic emulsions, they are :
 2. Oil in water (O/W) and Water in oil (W/O).
 - a. Oil in water emulsions is more commonly used. Obviously, they are lighter and less oily than W/O emulsions, and are best for non-greasy creams.
 - b. The type of emulsion formed is dependent on the relative proportions of oil and water. If water is the predominant proportion, then it will be an O/W emulsion. If oil is predominant, then the emulsion will be W/O.
 - i. The predominant liquid is called the Continuous Phase. The lesser proportion is called the Dispersed or Non-continuous Phase.
 - ii. There are 2 basic requirements to produce an emulsion of immiscible liquids, they are :
 1. The dispersed phase must be reduced to fine droplets, which are dispersed through the continuous phase.
 2. A third agent known as the Emulsifier, which should suspend and prevent the immiscible liquids from Cracking or Creaming. Creaming is the concentration of dispersed globules. Milk with a layer of cream on top, is a good example. Cracking is the destruction of the Emulsion system and the ingredients separate. Cracking is the most common problem with emulsions. However, the change may be biological, chemical or physical. The most common causes are ;
 - a. Bacterial action, which affects the emulsifier or brings about chemical changes in the phases or the emulsifier.
 - b. A change in the pH, which modifies the emulsifier.
 - c. Extreme temperatures, which change the properties of the emulsifier.
 - d. The introduction of substances which are not compatible with the emulsifier.

The Theory of Emulsification

Emulsifiers depend for their action on the fact that their molecules have a non polar end and a polar end. A tadpole would be a good analogy. The head is the polar end, whilst the tail is the non polar end. The polar head is charged and is Hydrophilic (water loving). The tail is Hydrophobic (water hating). For convenience, they may be classified into 4 groups as follows:

- (1) Anionic Emulsifiers, which form negative ions, e.g., soaps and sulphates.
- (2) Cationic Emulsifiers, which form cations or positive ions, e.g., ammonium compounds.
- (3) Non Ionising molecules, such as the esters and ethers.
- (4) The Natural Colloids, e.g., gums, mucilages, proteins and waxes. It is this class, which is of prime importance for the preparation of natural remedies.

Examples of the natural colloids emulsifiers are :

Gums :

Acacia, which is the dried exudation from the stem and branches of the *Acacia* spp. Acacia is incompatible with alcohol. Tragacanth, which is a dried exudation of the *Astragalus gummifer*., which is also insoluble in alcohol. This is the type I find superior but it is hard to find.

Mucilages :

The mucilages are a very useful group of substances, being in most cases both demulcent and nutritive. In general, they may be used as suspending agents. They are obtained from both land and marine plants, for example:

Agar, belongs to the phylum *Thallophyta*, which comprises the seaweeds and other fresh water forms.

Bladderwrack, *Fucus vesiculosus* or Kelpware.

Chondrus, *Chondrus crispus* commonly known as Carrageen or Irish Moss.

Fenugreek, *Trigonella foenum - graecum* L. Fenugreek seed.

Psyllium. The seed or husks of *Plantago spp.* Linseed. *Linum usitatissimum* L.

Althaea ssp. or *Malva Officinalis*. Common name, Marshmallow root.

Proteins :

As a general rule, these substances need to be avoided in the preparation of natural remedies. Typical examples are: Casein, Egg Yolk (lipids) and Gelatin. These substances are obtained from non-plant sources. They are prone to attract virulent bacteria.

Waxes:

The waxes are obtained from diverse sources, e.g., Bees, Mammals and Plants. Chemically they are classed as Esters, which are large molecules of alcohol and a fatty acid. However, in practice they are very variable. Generally, the true waxes are exudations. There is a very fine chemical line between the Fats, Oils and Waxes.

Making an Oil / Water Emulsion

Using an essential oil:

- a. 2 parts essential oil to 1 part gum (acacia or tragacanth) to 2 parts water.
- b. Place the gum into a clean and completely dry mortar.
- c. Slowly triturate the oil into the powder, using the pestle to stir them together. It is important that you stir in one direction only. It is thought that an electrical charge is generated while making the emulsion which allows the suspension to exist. In any case, if you stir in more than one direction, your emulsion will not take.
- d. As you stir, a cloudy suspension with uniform appearance (i.e. no lumps) should develop. Once you have reached this stage, begin to pour in the aqueous solution, slowly triturating, again stirring in the same direction. A clicking or snapping sound will be heard if you do this correctly. This sound means that your emulsion has "taken".
- e. You can now add aqueous solution to your hearts content. The oil phase will stay suspended in the aqueous phase and will appear as a milky liquid.

Using a fixed medicated oil to make a cream :(Like olive, sunflower or almond oil)

- a. 4 parts oil to 1 part gum to 2 parts aqueous.
- b. Add the phases in the same manner as above.
- c. If making large amounts, you may use a hand blender once the emulsion has "taken".
- d. Continue adding water or water based decoction, till desired consistency
- e. Add essential oils for fragrance at the end.
- f. Add vitamin E, propolis tincture, Grapefruit seed extract for preserving
- g. Store in refrigerator to prevent molding. Take small amounts out for daily use.

Reference Books:

- "The Herbal Medicine Makers Handbook" by James Green. Crossing Press, 2000.
- "Herbal Medication: A Clinical and Dispensary Handbook" A.W. Priest, L.R. Priest, Fowler & Co. 1981.
- The National Formulary: 1936 (6th edition) to 1916 (4th Edition)
- King's American Dispensary, H.W. Felter, J.U. Lloyd, 2 Vols.1898, Reprinted Eclectic Medical Publications, Sandy, OR.

