

HERBS FOR RESPIRATORY SUPPORT



I must admit that most of my experience with smoke inhalation comes not from being around forest fires but living in homes that used woodstoves as heat. Anyone who has ever done that knows that it can mean days in a row when a weird backdraft creates a smouldering, smoky fire that spews smoke into the house every time you open the stove to add wood. Woodstoves are not as romantic as people make them out to be. I think it was just my mom's common sense and remedies that kept us from being sick all the time.

INDICATIONS AND ENERGETICS

Most people who are exposed to smoke experience dry or itchy eyes, persistent dry cough, a raw sore throat, and sinus inflammation because the tissue is dry and inflamed. Some people complain of symptoms that are somewhat like altitude sickness due to lack of oxygen like headache and fatigue. Secondary infections can crop up, especially in people with poor immune systems but I haven't seen that often. Most often the pattern we are dealing with is hot and dry.

THERAPEUTIC GOAL

When we are dealing with a situation where the lining of the respiratory tract may be dry, irritated, or injured, we don't want to give many of the herbal remedies that we use when trying to dry up or expectorate phlegm. We want to give the respiratory tissue a break while it is healing.

Aromatics and essential oils are not proper here as they are eliminated from the body through gas exchange in the capillaries of the lungs. Even though I am

somewhat known for recommending slathering chest rub on people, I would not use an aromatic chest rub for these types of coughs unless dampness occurs indicating that a secondary infection has set in. Aromatics can be harsh on raw lungs. I also avoid strong expectorants as they often stimulate mucoliary clearance by irritating respiratory epithelial tissue lining. I don't use wild cherry, elecampane, or other stimulating expectorants like mullein.

MATERIA MEDICA

That leaves us with gentle demulcent herbs and the good old standby pectin. Demulcent is a term for plants that have constituents that increase the secretions of the epithelial tissues, so they lubricate and hydrate. They are broken down into the following categories.

Mucilaginous – fenugreek seed (*Trigonella foecum-graecum*), flaxseed (*Linum usitatissimum*), Irish Moss (*Chondrus crispus*), marshmallow leaf and flower (*Althaea officinalis*), plantain seed (*Plantago spp.*), Violet leaf and flower (*Viola odorata*).

Oleaginous – butter, olive oil, almond oil, ghee, tahini, and tallow

Gelatinous – gelatin and Irish moss.

Farinaceous – oats, barley, and wheat groats.

Pectins are immuno-modulating polysaccharides that have been shown to increase phagocytosis and antibody production, but more importantly are natural humectants. Pectins are plentiful in apple skins, crabapples, sugar beets, pears, quince, cranberries, and citrus fruit peels.

I make my own liquid pectin from crab-apples, but you can also buy it at the store. You can mix equal amounts of liquid pectin and pureed fruit, drop it on an oiled fruit leather tray, and dehydrate them to be sucked on like a hard candy. You can add a flavouring agent if you like. I like lemon, my husband likes rum.

You might not know this but those old orange slices and other recipes like that were made to meant to preserve fruit for eating over the winter. If you have ever had prickly pear candy you have had something like this. I had kind of moved away from making them but as the vegan movement in my area has grown more people are okay with sugar again. These can also be a portable substitute for a syrup.

HOMEMADE PECTIN JELLIES

INGREDIENTS

160 grams applesauce
230 grams other fruit pureed through a food mill (I often use berries)
15 grams powdered pectin
340 grams sugar (12 oz)
1 tsp flavouring that complements your fruit

INSTRUCTIONS

Mix the applesauce with the pureed fruit and put them in a saucepan.
Stir in half the sugar
Bring this to a boil and then add the half the sugar with the pectin
Bring to a boil. You want to get the heat up to 200F for 5 minutes.
Remove from heat and stir in your flavouring.
Pour into silicone moulds and let it sit over night
In the morning pop them out of the moulds and roll them in a mixture of sugar and citric acid.
I then dehydrate them for a bit so that the outside sets up a bit and they are more portable.

I make my applesauce with the peels on, so it naturally has more pectin. I have noticed that store bought applesauce is a little runnier than mine. You might need to increase the amount of pectin if yours do not set up.

In this formula I use apple skins as a source of pectin and calendula as a source of carotenoids, to promote the integrity of the epithelial tissue. This is my go-to winter hydration formula as well.

DEEP HYDRATION INFUSION

INGREDIENTS

- 1 pt. dried mallow/hollyhock leaves
- 1 pt. dried mallow/hollyhock flowers
- 1 pt. dried violet leaves
- 1 pt. dried calendula flowers
- 1 pt. dried apple peel
- 1/4 pt. plantain, flax, or fenugreek seeds



DIRECTIONS

Even though I don't often decoct flowers, I find this blend works better if you simmer it for a short time to really break down the plant cells walls and extract mucilages and pectin. You can drink it hot or cold. I mean if it's midsummer and very hot you don't necessarily want to be drinking hot tea.

For each ounce (30 grams, I think) of this I would put 2 litres of cold water in a pot and bring it to a low simmer.

Let it simmer for 3-5 minutes.

You might have heard that marshmallow needs to be infused in cold water, but That's a bit of an urban myth that seems to have surfaced in the eighties. Marshmallow contains special mucilages (shear-thinning pseudoplastics) that become less viscous when they are heated and congeal as they cool.

If you look back at historical usage, they boiled the leaves/flowers for coughs and the roots for sprains. I am not a stickler on using *Althaea officinalis*, either. You can use any mixture of *Althaea*, *Malva neglecta*, *Malva sylvestris*, or *Alcea rosea* (hollyhock) you can scrounge up. The picture up above is of my hollyhocks.

SOOTHING DRY COUGHS

Coughs associated with smoke inhalation are usually somewhat akin to a persistent, dry smoker's cough. Mucilaginous that act as humectants are the best way to address that type of cough. We want to coat and soothe. Here are a couple of citrus-y preparations you can try:

FLAX SEED COUGH TONIC

- 125 grams flax seed
- 15 grams orange peel
- 500 mL water
- Juice of one orange

Place the flaxseed, orange peel and fenugreek and water in a pan.
Simmer over medium heat until it gels up.
Strain through butter muslin or thin cotton towel
Add the juice.



LEMON SYRUP

PREP. TIME: 35 MIN TOTAL TIME: 2 Hours SERVES About 4 cups

- DIRECTIONS -

Zest one lemon and save the zest for bitters.
Use a pastry blender or food processor to mash the rest of the lemon into one pound of sugar.

Stir the lemon juice into this mixture.
Place in a saucepan and simmer for 5-7 mins.
Allow to cool and strain into a bottle.

STEPHANY HOFFELT BA HAS

I really love violet cordial (beverage syrup) made from the leaves and flowers of *Viola odorata* for this because it is a mucilaginous demulcent and has the added action of gently stimulating the lymph system.

OLD-FASHIONED VIOLET CORDIAL

INGREDIENTS

240 mL (1 cup) distilled water

50g fresh violet flowers and leaves – chopped coarsely.

1 cup sugar

DIRECTIONS

1. Put the violet in a non-reactive glass container with a tight lid.
2. Boil the water, pour it over them and close the lid.
3. Let this sit overnight and then strain the liquid into a double boiler.
4. Add the sugar to the liquid and stir frequently.
5. Cook for five minutes.



Really, this is just making a simple syrup with a violet infusion. If you don't use distilled water, chances are you won't get the purple coloured infusion because the pH of tap water is too alkaline. Try adding a little bit of lemon juice to the infusion.

Butter, especially a nice grass-fed variety, is a good way to get healthy oleaginous demulcents into someone. We give the children hot apple cider with the rum batter when they are sick. You could also accomplish the same thing by letting people wind down with a nice hot, buttered rum at night.

Oats and barley are what they used to call farinaceous demulcents and regardless of what some fanciful herbalists might have you think invalid "gruels" were most often made with these ingredients This is the way my people who came from Renfrewshire, Scotland made it.

OATMEAL GRUEL

Adapted from my Grandma Ralston's Recipe

Ingredients

1-quart cold water

1 cup oatmeal finely ground

1 tsp mixed spice

½ teaspoon salt

Butter the size of an egg.

DIRECTIONS

Stir the oatmeal into the cold water and let it infuse for at least a few hours.

Strain the liquid off the top and put it in a saucepan.

Just barely bring it to a simmer and add the spice and salt. For those who don't know mixed spice is akin to pumpkin pie spice but better. There is a recipe on my blog.

Allow to thicken slightly. This can be served like a soup with a big dollop of butter melted on top. You can also add sweetener.

When it cools it will form a jelly which can be spread on toast and fed to someone who is ill. This is not my favourite. I prefer it warm.

EYECARE

Dry eyes can be hydrated with gentle eyewashes made of scarlet pimpernel, chickweed, or if you don't have either of those chamomile. You can also use this solution as a nasal rinse.

HERBAL EYEWASH

17 grams (one tablespoon) of scarlet pimpernel, chickweed, or chamomile
250 mL (one cup) of water.
2.5 grams (1/2 tsp) salt

Place all the ingredients in a pan and bring to a simmer over medium heat. Stir while simmering – just long enough to dissolve the salt. Strain this solution through filter paper or a coffee filter to remove any particulate matter.

Saline solution is also perfectly fine for washing dry eyes, although I like the addition of a cooling anti-inflammatory. I've seen people recommending eyebright, but I think that's going too far. Eyebright is an astringent used for conjunctivitis and other eye infections that are damp in nature.

BLOOD BUILDING

Oxygen is a conventional treatment for smoke inhalation. So common sense dictates here that we want to be eating nourishing blood building diet full of foods that contain lots of chlorophyll and magnesium.

Some people working in fire areas have reported that taking supplemental chlorophyll has been useful for the headaches and fatigue. This is likely because chlorophyll supports the growth of new red blood cells and increases the capacity of haemoglobin to carry oxygen to tissues. Bog bean is an old Irish blood builder that is said to have a special affinity for the lungs.

Sarsaparilla was also used in the past as used as a tonic for people with lung complaints like consumption. Since it is easier to come across, I am going to share with you my take on the old-fashioned syrup of sarsaparilla that was once a common household staple.

In the old pharmacopeia, a syrup was a medicinal compound formulated with fluid extracts. Fluid extract is a term used to describe an extract with a 1:1 ratio of

plant material to solute. I've seen it used to describe macerated hydroethanolic extracts, percolations, and Soxhlet extracts. I use a 1:1 percolation. Beginners might try a 1:1 maceration. If you need instructions on how to make a maceration or a syrup, see my beginner's handout.

SYRUP OF SARSAPARILLA

Adapted from Physicians Manual of Therapeutics (1900)

INGREDIENTS

200 ml fluid extract of sarsaparilla

10 ml fluid extract of sassafras

5 ml rum or rum extract

475 ml of liquorice syrup

DIRECTIONS

The rum is optional, but it improves the flavor. Mix these ingredients in a blender for a few seconds. It will help to evaporate some of the alcohol from the extracts. Store in a bottle and take 15 mL daily.

GENERAL DIETARY RECOMMENDATIONS

Smoke exposure tends to result in a lot of oxidative stress, so turn to plant anthocyanins that help address that. Hibiscus, *Malva sylvestris* flowers, cranberries, black currants, blueberries, and so on.

There is likely some tissue damage so foods that have a lot of vitamin C to help with collagen production.

Astragalus is a particularly interesting nutritional adjunct for collagen building. The saponin (astragaloside-IV) seems to decrease the activity of proteins in the skin that suppress collagen synthesis. It has been shown to increase levels of hyaluronic acid, which improves the skin's ability to retain moisture.

For those who eat meat, broths for soup are both hydrating and contain gelatine which is a hydrolysed form of collagen. This means that the collagen in the connective tissue has been denatured by heat. There are studies that show that eating gelatin boosts collagen production in your body.