

Making your own medicinal tinctures at home

Many people I know use herbal medicines to treat acute or chronic problems, but have trouble affording the expensive preparations found in health food stores. (Example: taking 1/4 tsp per day, storebought Vitex tincture at \$7/oz (chasteberry, for menopause symptoms) costs \$35/month, but homemade, it is \$3.88 per month). Tinctures are cheap and easy to make at home.

A tincture is an alcohol extraction of an herbal medicine. It is a good way to prepare herbs that are resinous, high in alkaloids, and/or tough (like roots and barks). It is *not* a good way to prepare delicate leaves and flowers, usually (they are made into infusions and salves; still cheap and easy to make at home!).

This handout gives, as an example of how to produce your own herbal medicines at home:

- Traditional indications of some popular herbal medicines (what conditions they might help).
- Tincture recipes, based on solubilities of active ingredients (example, "1:5, 60%" - see following pages for what these mean).
- Trial starting dosages, mostly as elucidated by American herbalist Michael Moore (Southwest School of Botanical Medicine, <http://www.swsbm.com>).
- Approximate retail prices per pound for dried plant material, in most cases using prices from Mountain Rose Herbs (www.mountainroseherbs.com), which is our local herb warehouse where I live, as examples. In most cases, the prices are for powdered herb. (Powdering is usually appropriate for roots and barks, but less appropriate for delicate leaves and flowers, as their volatile factors are easily lost during processing.)
- How to measure the proportions of herb-to-solvent.
- How to make the solvent to the proper strength of alcohol + water.
- How to measure the dosage, how to take the medicine, and how to tell if the medicine is working.

Important: **Always** consult your healthcare provider for guidance **before** self-diagnosing **or** self-treating! (If your provider does not want to work with you in this, you must at least, as a courtesy and a precaution, notify them what you are taking and how.) Together, you and your provider can look up the active ingredients. Your provider can tell you if they're appropriate for your individual situation, including interactions with other medical conditions, medications, and lifestyle factors. You will need specific data on active ingredients. Some reliable sources you can both use:

PubMed, www.pubmed.gov (scientific studies on whole herbs and active ingredients)

The Cochrane Collaboration, www.cochrane.org (analyses of research studies)

Nat'l Center for Complementary and Alternative Medicine, <http://1.usa.gov/18VYQi>

The Herb Research Foundation, <http://bit.ly/z0SOaQ>

Sloan-Kettering Memorial Center, <http://bit.ly/ynhLcM> (cancer research)

University of Maryland Medical Center, <http://bit.ly/9Dd8Om> (herb search engine)

Southwest School of Botanical Medicine, <http://www.swsbm.com>

Sigma-Aldrich, <http://bit.ly/zyEMOr> & search engine (for solubility and safety data)

With herbal medicines, as with all medicines, "start low and go slow." Start with a minimal trial dosage to rule out allergy or any adverse reactions. Increase the amount slowly, every few days, to determine an effective dosage. Keep careful records. Know how you will tell if the medicine is working.

Cardiovascular

- Hawthorn berry (*Crataegus*). Atherosclerosis; essential or diastolic hypertension; palpitations, angina. Tincture [1:5, 60%] 10-30 drops, up to 3 times/day. \$9
- Tribulus (*Puncture Vine*). Adrenal cortex hyperfunctions from stress, with hypertension, stomach hypersecretions ("acid stomach"). Lowers cholesterol and uric acid. Gout flare prevention. Erectile dysfunction with metabolic syndrome. Tincture [1:5, 60%] 30-60 drops up to 3 times/day. (No price found at this time from Mountain Rose; \$10-20/lb from various sources on Internet.)

Adrenals

- Spikenard (*Aralia racemosa*) root. Adrenal cortex hypofunctions, hyperlipidemia. Tincture [Root, 1:5, 50%] 10-30 drops, up to 3 times/day. \$24
- Eleuthero (*Eleutherococcus*, "Siberian Ginseng") root. Adrenal cortex hypofunctions ("adrenal fatigue"). Also, Lowers cholesterol. Tincture [1:5, 60%] 20-60 drops, up to 3 times/day. \$9

Circulation (blood, lymph)

- Red Root (*Ceanothus*). Astringent. Mouth sores, pharyngitis, tonsillitis/tonsil stones (gargle). Mononucleosis, enlarged/inflamed spleen. Fibrocystic

breast disease. Tincture [Root, 1:5, 50%] 30-90 drops, up to 4 times/day. \$13 (See <http://bit.ly/ytBqfB>)

- Collinsonia (Stone Root). Edema, venous stasis, varicose veins, hemorrhoids, pelvic congestion. Tincture [Root, 1:5, 60%] 45-60 drops up to 4 times/day. (No price found at this time from Mountain Rose; \$23-56/lb from various sources on Internet, including Frontier Co-op.)

Liver and gall bladder

- Oregon Grape root (Mahonia). Dyspepsia from fats. Acute biliousness from food or drug excess. Recovery from hepatitis. Gastric or duodenal ulcers. Acne, eczema, psoriasis, itching. Diabetes/hyperglycemia. Tincture [1:5, 50%] 10-60 drops up to 3 times/day. \$11
- Schisandra chinensis (5 flavor berry). Tincture [No recipe found; best guess from polarity of dibenzocyclooctadiene/schisandrin-B, 1:5, 50%] 10-20 drops up to 3 times/day. \$18
- Milk Thistle seed (Silybum). Elevated serum liver enzymes, fatty liver, chronic hepatitis, cirrhosis (liver scarring). Strong tincture [1:3, 70%] 1/2 to 1 teaspoon, up to 4 times/day. \$11

Bio-male issues

- Saw Palmetto (Serenoa). Prostate enlargement. Tincture [1:5, 80%] 30-90 drops, up to 3 times/day. \$14 (See <http://1.usa.gov/wPnRlr>)
- Pygeum (P. africanum). Prostate enlargement. Strong tincture [best guess given poor water-solubility, 1:3, 70%] 1/4 teaspoon, up to 4 times/day. (See <http://bit.ly/rrCaKR>) \$21
- Uva Ursi (Arctostaphylos, Manzanita). Bladder/urethral pain, painful urination, UTI. Tincture [1:5, 50%] 30-60 drops, up to 3 times/day. \$12.50
- Angelica sinensis (Dong quai). Chronic orchitis/epididymitis, prostatitis. Tincture [Root, 1:5, 65%] 30-60 drops, up to 4 times/day. \$12.50
- Black Cohosh (Cimicifuga racemosa). Chronic orchitis/epididymitis, prostatitis, pelvic pain. Tincture [1:5, 80%] 10-25 drops up to 4 times/day. \$22
- Horny goat weed (Epimedium grandiflorum, xian ling pi, yin yang huo). Erectile dysfunction, osetopenia. Strong tincture [best guess given poor water-solubility of icariin, 1:3, 70%] "Traditional curing of epimedium herb by stir frying with lamb fat (20% w/w) followed by drying only slightly reduces total flavonoids content but significantly improves their water extractability" - Leung's Encyclopedia.] 1 tsp as needed, or 30-90 drops, up to 3 times/day for chronic use. \$9

Bio-female issues

- Angelica sinensis (Dong quai). Painful, irregular, and/or heavy menses. PMS. Tincture [Root, 1:5, 65%] 30-60 drops, up to 4 times/day. \$12.50
- Chaste Tree Berry (Vitex agnus-castus). Palpitations, fainting spells in menopause or puberty. Progesterone deficiency/ "estrogen dominance." Painful or heavy menses. PMS. Alternative to angelica/dong quai. Tincture [1:5, 65%] 30-60 drops, up to 4 times/day. \$8
- Black Cohosh (Cimicifuga). Menopausal pelvic congestion, heavy menses. Tincture [1:5, 80%] 10-25 drops, up to 4 times/day. \$22
- Cramp Bark (Viburnum). Painful menses. Tincture [1:5, 50%] 30-90 drops as needed. \$14
- Uva Ursi (Arctostaphylos, Manzanita). Bladder/urethral pain, painful urination, UTI. Tincture [1:5, 50%] 30-60 drops, up to 3 times/day. \$12.50

Immune system

- Echinacea angustifolia (preferred), purpurea (alternative). Bacterial infections. Tincture [1:5, 70%] 30-100 drops, up to 4 times/day. Purpurea root \$17, Angustifolia root \$26, Purpurea whole herb chopped \$7 (Traditionally, use root acutely for immune stimulant and whole herb for immune tonic)
- Cat's Claw (Uncaria tomentosa) root. Inflammatory/autoimmune issues (e.g. arthritis). Strong tincture [best guess given poor water-solubility of sterols and alkaloids, 1:3, 70%] 1/4 teaspoon, up to 4 times/day. \$8 (See <http://bit.ly/yor12e>)

Nervous system

- Skullcap (Scutellaria). Nerve pain due to herpes or trigeminal neuralgia. Neurogenic oversensitivity to pain. Anxiety. Insomnia. Agitated depression (hysteria). Tincture [Plant, 1:5, 50%] 20-60 drops as needed. \$15
- Valerian. Insomnia. Nerve pain with exhaustion. Depression. Alcohol withdrawal. Tincture [1:5, 70%] 30-90 drops, up to 3 times/day. \$14
- Passion Flower. Insomnia. Agitated depression (hysteria). Also, diastolic hypertension, headache with high blood pressure, antispasmodic for airway (asthma, chronic dyspnea). Tincture [Herb, 1:5, 50%] 1/2 to 1 1/2 teaspoon as needed. \$14
- Marijuana (Cannabis indica, sativa, ruderalis). Many uses, including pain and muscle spasms, glaucoma, breakthrough seizures, cachexia, etc. Strong tincture preferred for medicinal use, less psychotropic, higher cannabidiol (CBD) content [Whole plant, 1:5, 95%], 5-30 drops as needed for acute issues, 1/4 tsp 3 times/day scheduled for chronic (e.g. glaucoma, seizures). Legal for State Medical Marijuana Program members only. Hemp (non-psychoactive) is legal to import/use (state cultivation laws pending) & is highest in CBD; preferred. (See <http://bit.ly/yFNnEW>, & <http://projectcbd.org/>)

What do these recipes mean?

Basic instructions:

Combine plant material with solvent (alcohol solution) in a jar (quart or pint canning jars are handy), cap tightly, and let it sit in a dark place (e.g. cupboard) at room temperature for **6 weeks**. (Date and label the jars!) Then strain (using coffee filter, cheesecloth, layers of nylon stocking, etc.), bottle, and use as above.

What do "1:3" and "1:5" mean?	To make 1 qt of tincture,	To make 1 pt of tincture,
Ratio of plant material to liquid: 1:3 = 1 ounce plant to 3 fluid ounces solvent 1:5 = 1 ounce plant to 5 fluid ounces solvent	1:3 = 2/3 lb (10 2/3 oz) plant to 32 oz solvent (1 qt or 4 cups) 1:5 = Approx 1/2 lb (6.4 oz) plant to 32 oz solvent (1 qt or 4 cups)	1:3 = 1/3 lb (5 1/3 oz) plant to 16 oz solvent (1 pt or 2 cups) 1:5 = Approx 1/4 lb (3.2 oz) to 16 oz solvent (1 pt or 2 cups)

Measuring the plant material:

Q: I don't have a scale to weigh my plant matter. How can I use a cup measure to measure my herb? For example, I need 2/3 lb. How many cups is that?

A: Depends on the density of what you are weighing. Example: a pound of flour is about 4 cups, and a pound of sugar is about 2 1/4 cups (more dense than flour), and a pound of bran is about 8 cups (less dense than flour).

How to calculate:

Buy the plant material you'll use, dump it into a big bowl or pot, and measure *how many even cups the total amount is*. Use that amount to calculate how many cups you need, to obtain the weight your recipe calls for.

Here are some examples using 1 lb purchased and measured (using a measuring cup, each cup flat across the top):

<i>If 1 lb contains 8 cups:</i>	<i>If 1 lb contains 6 cups:</i>	<i>If 1 lb contains 4 cups:</i>	<i>If 1 lb contains 3 cups:</i>	<i>If 1 lb contains 2 cups:</i>
2/3 lb = 5 1/3 cups 1/2 lb = 4 cups 1/3 lb = 2 2/3 cups 1/4 lb = 2 cups	2/3 lb = 4 cups 1/2 lb = 3 cups 1/3 lb = 2 cups 1/4 lb = 1 1/2 cups	2/3 lb = 2 2/3 cups 1/2 lb = 2 cups 1/3 lb = 1 1/3 cups 1/4 lb = 1 cup	2/3 lb = 2 cups 1/2 lb = 1 1/2 cups 1/3 lb = 1 cup 1/4 lb = 3/4 cup	2/3 lb = 1 1/3 cups 1/2 lb = 1 cup 1/3 lb = 2/3 cups 1/4 lb = 1/2 cup

Putting together the solvent:

Q: What does "50% alcohol" (for example) mean?

A: *Strength of solvent, using grain alcohol.* You can mix up your own solvent to a specific strength. Some plants need stronger solvents than others. For convenience, I regard grain alcohol as 100% ethanol. (It is actually only 95%, mixed with 5% water.)

Here are some representative solvents and how to mix up a quart or a pint of each:

[95% alcohol = grain alcohol (already has 5% water in it)]

<i>80% alcohol = 8 parts grain alcohol + 2 parts water</i> 25.6 oz grain alcohol + 6.4 oz water = 1 qt (3 1/4 c grain alcohol + 3/4 c water) 12.8 oz grain alcohol + 3.2 oz water = 1 pt (1 2/3 c grain alcohol + 1/3 c water)	<i>65% alcohol = 6.5 parts grain alcohol + 3.5 parts water</i> 20.8 oz grain alcohol + 11.2 oz water = 1 qt (2 1/2 c alcohol + 1 1/2 c water) 10.4 oz grain alcohol + 6.6 oz water = 1 pt (1 1/3 c grain alcohol + 2/3 c water)
<i>70% alcohol = 7 parts grain alcohol + 3 parts water</i> 22.4 oz grain alcohol + 9.6 oz water = 1 qt (2 3/4 c alcohol + 1 1/4 c water) 11.2 oz grain alcohol + 4.8 oz water = 1 pt (1 1/2 c grain alcohol + 1/2 c water)	<i>50% alcohol = 5 parts grain alcohol + 5 parts water</i> 16 oz grain alcohol + 16 oz water = 1 qt (2 c each) 8 oz + 8 oz water = 1 pt (1 c each)

Q: How is grain alcohol sold?

A: Everclear brand grain alcohol is sold in liquor stores, in these sizes:

1.75 L (1750 mL) = 59.2 fluid oz (7.4 cups, about 1 3/4 qt) 750 mL = 25.4 fluid oz (3.18 cups, about 1 1/2 pt) - costs about \$20	375 mL = 12.68 fluid oz (1.59 cups, about 3/4 pt) 200 mL = 6.76 fluid oz (0.85 cups, about 1/2 pt)
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How will you know your herbal medicine is working?

- ~ In some cases you will know right away: for example, skullcap helps you get to sleep, or urinary pain goes away after 2 days of Uva Ursi.
- ~ In other cases, you need to check and keep track of your progress (examples: use a pain scale to keep track of your chronic pain, or a home blood pressure cuff to keep track of your blood pressure).
- ~ In still other cases, you may need your healthcare provider's help to gauge progress. For example, you need your cholesterol or three-month blood sugar (hemoglobin A1c) tested. (Some areas have labs allowing you to get these tested without a doctor's order, but you still might need help establishing goals and interpreting results.)

In **every** case, it's important to keep records of:

WHEN & HOW you made your medicine,

HOW OFTEN, HOW MUCH & HOW LONG you took the medicine, and

*WHAT WAS THE **MEASURABLE RESULT*** of taking it.

Buy a notebook for this purpose. Date your tinctures with a waterproof marker before and after bottling them. Use a standardized measuring device for dosing (or at least the same spoonful each time, for example).

Q: Do I have to count the drops for every dose?

A: No. As pharmacists measure them, 20 drops = 1 mL.

1 standardized tsp = 5 mL = 100 drops.

Therefore, "30-60 drops" is roughly 1/2 tsp.

(This is a pharmacist's teaspoon - not the spoon you use for your oatmeal! Choose a measuring spoon, and count the drops needed to fill it.)

How to take your medicine:

- Take tincture doses in a large volume of fluid (at least 1 cup).
- Consider making up a day's supply every morning (for example, 1 tsp in a quart of water or tea). You can sip it throughout the day or drink it with meals.
- If you drop your tincture dose into *hot* tea, almost all the alcohol will evaporate away. This is useful for those who must avoid alcohol.
- Peppermint, ginger, and cinnamon help to cover up the flavor of strong-tasting herbal medicines.
- Tinctures may be administered sublingually, as drops under the tongue or as an oral spray, so that the medicine (and the alcohol) are absorbed directly through the mouth tissues, bypassing the digestive system. This is useful for people with gastrointestinal problems. You can dilute the tincture with water or tea, and can add sweetener if desired (examples: peppermint tea and honey; refrigerate for long-term use if sweetened). Keep careful records of your dilution formula and the dosages you have tried, and what their effects were. Dropper and spray bottles are available by mail order on the Internet or from your local herb warehouse.
- Pain-relieving tinctures may be applied directly to the skin as a liniment.