Medicinal Herbs

Lesson 6

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Preparing Herbal Remedies

Lesson Aim

Prepare simple and safe herbal remedies in a domestic situation.

Medicinal herbs can be taken in a variety of ways eg. internally as a tea, or externally as an ointment. As different parts of each plant can be used (with some plants the root is used, whilst others the flower, stem or leaves are used), different methods of preparing the herb are necessary. A herb can be prepared in different ways to achieve different results. Also, some plants, when used in combination with others produce different results to those if the herb was used on its own.

It can be easy to spoil a medicinal preparation through incorrect preparation or use. Therefore, before taking herbal remedies, make sure you are preparing them correctly, and using the correct method of administering the medicine. Many herbs can be harmful, and the knowledge of correct application and combinations of various herbs for any patient's condition can be extremely complex. It is also best not to haphazardly mix herbal components as the outcome can be unpredictable. Simple remedies can however be administered, as long as it is remembered that just because herbs are natural, this does not mean they can all be used indiscriminately without causing harm. Medicinal preparations can also be wasted through improper preparation, or because they were not used to their best advantage. It must also be remembered, that as many medicinal herbs are mild in action, they must be given sufficient trial for results. Many herbal medicines must be prepared and administered correctly in order to derive any benefits.

DIFFICULTIES IN ACCURATELY FORMULATING HERBAL MEDICINES

There is no doubt that herbal medicine offers fantastic opportunities for developing new and effective treatments for many of our ills. In fact, many of the pharmaceuticals used today have been discovered by biochemists analysing and testing plant extracts.

We do know there are chemicals in plants which when applied to the body can cause beneficial effects; but these beneficial chemicals are mixed up with perhaps hundreds of other chemicals (i.e. impurities) in the plant.

Despite undeniable evidence that many herbs do contain beneficial chemicals in many cases we have the following major problems:

- the beneficial chemicals may not have been isolated
- the impurities (i.e. other chemicals in the same plant) are often unknown
- the impurities may have side effects which are undesirable, or perhaps desirable or of no consequence
- the beneficial effect may be the result of an interaction (what is known as a synergic reaction) with other chemicals in the medicine or in the body (and that interaction is often not fully) understood
- the best amount or dose of the chemical is not known

The quantity of the beneficial chemical found in the plant tissue varies considerably (from plant to plant, the part of the plant it is obtained from, time to time, place to place, etc).

There are many variables in the practice of herbal medicine, which makes it extremely difficult to give precise recommendations about what to use, how to prepare it and how to use it.

In the past, herbalists developed their formulae for medicines based upon a combination of traditional teaching and experience. A scenario may have been as follows:

How It Used to Work

Herbalists in a small German village used berries off a local clump of juniper bushes to prepare a medicine for 500 years. This clump of plants dropped seed, grew seedlings and hence rejuvenated continually for 500 years. The soil, shade/light, water and other conditions remained relatively unchanged. The genetic characteristics of these plants also changed very little.

Over the centuries the herbalists would have learnt that by harvesting the berries at a particular time, they achieved a better result. After 500 years, these herbalists may have developed formulae which worked extremely well, because they had eliminated many of the variables or unknown factors.

The problem is that if we try to apply formulae developed like this, in another place, we will be using plants grown under different conditions, and from different genetic stock (ie. a different variety or cultivar). With these variations, we will see a different combination of chemicals within the plant - an unknown combination. These differences will render the formulae developed in that small German village to be unsuited to the new situation.

The Difference in the Modern World

1. We are moving about more than ever before, and so are plants. This means that for most herbs, there are many different varieties or cultivars for each species; and each of those cultivars can exhibit a different chemical make-up.

2. We have the scientific knowledge to enable us to determine what chemicals occur in a plant, and which ones of those are the desirable ones. This approach will, in time, enable us to formulate medicines better than ever before. Scientists are starting to research herbal chemistry in some places, but this is only starting. It is a very complex, expensive and time-consuming process. Knowledge of this type is worth a lot of money, if the research is successful, so in the short term it may not be always accessible to the general public, or even to most herbalists.

3. Today we have better management and scientific skills to enable us to breed and select cultivars which have the best potential for use in herbal medicines. This also can be an expensive and lengthy process though, and where it does happen, the breeders may protect the variety (eg. Plant Breeders Rights). This means anyone who wants to use the best medicinal herb will need to pay the breeder a fee which is most probably built into the purchase price of the plant.

Where from Here?

If *you* want to achieve the optimum success with medicinal herbs, you probably need:

- firstly a broad understanding of the subject
- secondly an in depth understanding of chemistry and scientific research
- a lot of time to research and find out answers to your questions which are appropriate to your locality

Alternatively, you need to recognise and understand the complexity and challenges of this discipline do the best with the knowledge and resources that you do have, and like herbalists since ancient times, learn from your experiences and try to improve as you go into the future.

This course is the first step in developing skills to effectively grow select and use medicinal herbs. There are of course potential problems whenever dealing with the unknown, and within many of our medicinal herbs, you will find a range of unknown chemicals.

As long as you are cautious, proceed slowly, and thoroughly research any herbs or herb products before using them, the risks are minimal and the potential benefits great.

HARVESTING MATERIAL FOR MEDICINAL USE

Leaves, flowers, roots, bark, bulbs etc. are commonly used in botanic drugs. To get proper results from such herbs they must be harvested and handled properly and most of all, collected at precisely the correct time of year. The demand for pure, clean, properly handled material is high, both in Australia, and throughout many other parts of the world.

Leaves should always be collected on clear days, mid-morning, after the dew. For most medicines, collect when the plant is starting to flower. Leaves of biennial plants are best collected in the second year of growth. To dry, spread out on a clean dry surface. Stir occasionally until thoroughly dry. Remove stems from leaves and only keep leaves which have retained their natural colour. Leaves can turn black due to dampness! Leaves so affected should be discarded.

Flowers should be collected immediately after they open. Dry the same as for leaves and only retain those which keep their natural colour.

Bulbs should be collected immediately after the leaves of the plant die (usually in autumn).

Remove the outer scales of the bulb, slice it, and then dry it using artificial heat, but not over about 100 degrees Fahrenheit.

Barks should be collected autumn or spring. It is normally the inner bark which is required (remove the outer bark first). Most barks should be dried in sunlight (but not wild cherry).

Seeds should be gathered on ripening. Only larger, fully developed seeds are useful.

Harvest of Selected Herbs

Basil: cut stems close to ground about time of flowering, than treat like mint. Regrowth will provide one or two additional crops in a season.

Chervil: fresh leaves can be harvested and used like parsley. Seeds can also be used for culinary purposes (eg. flavouring vinegar).

Fennel: foliage is simply cut, dried then crumbled. Seed is harvested like dill.

Fenugreek: fruits picked as soon as ripe, before seed pods shatter. Seeds are shelled or threshed from pods, then dried using artificial heat.

Lemon Verbena: leaves are picked individually and dried.

Lovage: leaves picked while young, thin and tender then dried. Roots dug in late autumn of the second year, washed, sliced then dried at about 125 degrees Fahrenheit. Fruits handled similar to caraway.

Mint: shoots cut just before flowering on a dry day and air dried in shade. Leaves are stripped after drying and stems discarded.

Parsley: foliage handled like mint. Seed heads harvested on maturity and laid on dry surface, dried, then beaten or thrashed to obtain seed. Roots are occasionally dug (autumn of second year) and dried.

Rue: used mainly fresh, but may be dried.

Sage: tender herbaceous parts can be cut and handled like mint. Only one cut should be done in the first year, but two or three each year after that. Plants become increasingly woody over the years, and are usually replaced after 5 to 6 years.

Summer Savoury: cut at ground level when flowering starts and treat like mint.

Sweet Marjoram: normally used fresh, but can be fried.

Tansy: cut in full bloom. Air-dry leaves and flowers in shade. Discard stems after drying.

Thyme: cut when flowering and air dry. Flowers and leaves can be powdered or chopped - discard coarse stems. Two or three harvests in a season can normally be made

Winter Savoury: cutting stimulates growth - normally cut twice or more each year.

POSTHARVEST HANDLING OF HERBS

There has been a considerable rise in the availability of fresh and packaged herbs available to the general public. A number of factors need to be considered to optimise the post-harvest handling to extend shelf life. Although much research has been done for fruit and vegetables, little has been done for herbs. The following information comes from research specific to herbs (basil, coriander, mint, rosemary, thyme, small and large leafed oregano, parsley, sage, marjoram and summer savoury) and other leafy vegetables.

Temperature

Temperature is the most important single factor effecting shelf life.

A 10 degrees Celsius drop in product temperature may increase storage life by as much as 3 to 4 times.

Correct temperature control involves two phases:

a*. Precooling:* this is bringing the produce down to the optimum temperature. If herbs are harvested in the cool of the morning, the need for precooling may be eliminated. The preferred technique for rapid removal of field heat from leafy herbs and vegetables is probably forced air cooling (which utilise a cool-room and a fan). Other techniques such as hydro-cooling and liquid icing would be damaging to tender foliage herbs like basil, coriander and mint. Vacuum cooling may be suitable but the size and cost of equipment may make it uneconomical. The optimum temperature for most herbs, except basil, is a constant near 0 degrees. Longer storage, at higher temperatures, reduces quality of herbs except rosemary. At low temperatures, basil leaves darken, and discolour, eventually collapsing. Optimum storage temperature for basil is about 5 degrees.

b. Storage: this involves the holding of the temperature constant. Due to moisture content of herbs they should be stored at temperatures above 0 degrees to prevent freezing damage. Their high surface/volume ratio results in high water loss.

Moisture Loss

The best method for packaging herbs is in bags designed to minimised water loss. It is important to maintain a constant cool temperature, reduce condensation within the bag and fungal and bacterial growth. Partial perforations for ventilation or bags made of water vapour permeable polymers are fine for packaging. The relative humidity should be maintained at more than 95% throughout post-harvest, where practical.

Physical Damage

Careful handing and appropriate packaging can minimise and possibly prevent foliage discolouration and entry sites for microbial growth. Rigid clear plastic containers or "pillow packs" can be used to minimise post-harvest damage.

Ethylene

Ethylene is a gas produced by plants and ripening plant matter that has a detrimental effect of marketable produce by accelerating ripening and hence death of the tissues. Different herbs respond differently to various concentrations of ethylene. Some produced a downward bending of the petioles (epinasty), while others showed chlorosis or leaf fall.

The following mentions the reactions of selected herbs to ethylene:

Sensitive Herbs	Mint	Epinasty, chlorosis, leaf fall
	Marjoram	Epinasty, chlorosis, leaf fall
	Parsley	Marked chlorosis
Slightly Sensitive	Basil	Epinasty
	Oregano	Epinasty
	Savoury	Epinasty
	Thyme	Chlorosis
Insensitive	Rosemary	
	Sage	

Pathogens

Grey mould and bacterial soft rot are major contributors to unmarketable produce. It is important that throughout harvest and post-harvest that strict hygiene practices be followed.

More research is needed in the post-harvest care and storage of herbs. As experiments have shown the care requirements are similar to other leafy vegetables.

POSTHARVEST PRESERVATION

Changes in texture, taste and aroma of freshly harvested herbs can all be attributed to the natural breakdown in cellular tissue. However, this same process also allows access for micro-organisms.

The selection of the appropriate method of post-harvest preservation depends upon the commodity, intended use of the material, and qualities that need to be modified. For fresh herbs, marketability is determined by turgor, texture, colour, oil concentration and aromatic compounds.

Harvesting and Handling

Plants grown under optimum environmental and cultural conditions and harvested at correct stage will have the best qualities during and after storage. Those that are stressed or damaged during growth or harvest will deteriorate quicker. The stage of plant growth at which to harvest for best quality, is known as the maturity index. This is related to the concentration of chemical components and the use of the herb. With herbs such as lavender, rosemary and sage, it is the aromatics, tannins, terpenoids and other chemicals that give the plant odour, flavour or medicinal properties. These usually become most concentrated prior or at flowering. Culinary herbs may be harvested at almost any time of the growing season. Early morning harvesting is recommended to minimise loss of important volatile oils and to reduce cooling required to store.

Fresh Preservation

Temperature and relative humidity are the two most influential factors on storing fresh herbs. A 10 degree Celsius drop in temperature will slow biological reactions such as respiration by 50% in detached plant parts. Growth of micro-organisms is also slowed down by cold temperatures.

Refrigeration at 1 to 5 Degrees C is appropriate for most herbs except cold sensitive foliage.

A high relative humidity in the storage bay will reduce the rate of transpiration. By stopping this water loss, the plants will maintain turgidity and quality through storage life. A relative humidity of 90 to 95 % will slow water loss enough to prevent desiccation. Higher humidity may result in condensation and lead to spread of organisms.

Altering oxygen, carbon dioxide and ethylene can drastically affect life and quality of plant material. Low oxygen levels slow respiration and inhibits production of ethylene. High levels of ethylene stimulates breakdown of cell walls, loss of pigment (chlorophyll), softening of tissues and leaf adscission. High levels of carbon dioxide inhibit ethylene activity and growth of some organisms.

Modified Atmosphere Packaging (MAP)

Modified atmosphere packaging plastics are polymeric films with tiny "pores" that allow for differential transport of gases through the film, depending upon the mass and shape of the gas molecule.

These MAP films are primarily to impede water loss and provide specific low oxygen / high carbon dioxide in package atmosphere. Various MAP levels are designed though primarily for fruit and vegetables. For most plants, respiration is minimised when oxygen is 1 to 4 %. Not only should the individual fruit or vegetable need to be considered in regard to gaseous composition, but also the surrounding produce. Plants together in an MAP can modify the gas environment within.

HERBAL PREPARATIONS AND APPLICATIONS

Preparation of Teas, Rinses and Baths

1. For soft parts such as flowers and leaves, pour 1 cupful of boiling water over 1 teaspoonful of crushed, dried plant material. Steep 5 minutes in a covered cup before straining and drinking.

2. For hard parts such as roots, bark and seeds, boil 1 teaspoonful of the crushed dry plant material in 1 cupful of water for 35 minutes. Strain and drink warm.

3. Use porcelain (fireproof) glass or other nonreactive containers such as coated or stainlesssteel ones if porcelain and glass aren't available.

4. Don't overheat plants from which you are extracting essential oils. Some teas or infusion are made without any heat, such as marshmallow root which is soaked for several hours to extract the mucilage. Some plant ingredients are not easily soluble in water, and are extracted with other solvents in ethyl alcohol, brandy or wine.

How to Get the Most from Herbal Preparations

If you do not prepare or use flavouring or beverage herbs to their best advantage you may waste or spoil them. This has been a discouragement to many in the past, causing people to cease using botanicals (herbal preparations). It is important to try botanicals sufficiently in order to get the best results, as many are mild in their action. See your doctor for conditions which logically require his attention. Certain botanicals need to be prepared and administered *correctly* to gain the most benefit. For example:

Boneset herb is an old pioneer and Indian medicine; if used as a *hot* infusion in the evening when going to bed it induces perspiration. But if used in the morning as a *cold* infusion it works as a mild laxative.

Powdered slippery elm soothes the bowels when used as an enema. However, if the bowels are not flushed clean before using it is useless.

Chamomile or sage when used as a beverage is prepared like Chinese teas. As a medication they are made into a stronger infusion. As a hair application they must be used as a strong decoction. If sage is boiled in an iron kettle it will make a much darker hair dye.

Hops will lose its aromatic properties when heated to a weak infusion. A stronger infusion removes the bitter tonic principle and decoction removes the astringent properties. As you can see each operation gives a different result. An infusion and a decoction do not bring the same results. Through decoction the extractive, resinous and bitter principles are obtained, but by infusion a large amount of aromatic and volatile principles, essences

etc., are extracted.

Infusions

Infusion is the method used to extract watersoluble substances from leaves, stems and flowers (this method can also be used for small, chopped roots and fruits). Preparation of herbs by this method involves chopping the material into fine pieces and pouring boiling water onto it (500 ml water to 30 gm material). A porcelain, stone or glass vessel should be used with a tight lid (this is essential so the volatile substances are not lost during infusion). This should be left for 1015 minutes, then strained and cooled to blood temperature before the dose is taken. One pint of water plus approximately 1/2 oz. of leaves or flowers are used for an infusion. Firstly, pour boiling water over the herb and then let it stand for a short time. A little sugar or honey can help to make the tea (infusion) more palatable. This should be used while fresh.

Decoction

Decoction is the method used for harder plant parts such as bark, seed and woods. A longer hot water treatment is necessary before such harder plant parts release their water soluble constituents.

Material should be soaked in cold water for 10 minutes, and followed by 10 minutes steeping.

The dose is then strained and cooled. These are made more like you would make coffee, boiling the hard materials (bark, roots, wood chips, seeds etc.) for some time. Porcelain or glass utensils should be used for preparation of both infusions and decoctions. Keep covered while boiling.

1. Essence: dissolve approximately one ounce of the essential oil from the herb in a pint of alcohol.

2. Fomentations: a cloth (or towel) should be dipped into the infusion or decoction and then placed the part you wish to cover, after it has been wrung out.

3. Ointments or Salve: take 8 parts of Vaseline or lard (or similar substance) and add 2 parts of the remedy which you wish to use. eg. Sulphur salve: 8 oz. of Vaseline and 2 oz. of sulphur; heat and mix well; use when the mixture has cooled.

4. Plaster: bruise the leaves, roots, etc. and place between 2 pieces of cloth and apply to the surface you wish to cover.

5. Poultices: A poultice is an externally applied preparation, best applied indirectly to the skin by putting the paste between thin cloths before applying it to the infected body part. A poultice can use either fresh or dried material. Fresh material should be crushed and mixed with a small amount of hot water; dried herbs can simply be mixed with flour to soften them. Poultices are used to apply moist heat in order to sooth pain and inflammation and to draw. A soft substance, such as soap and sugar, bread and milk, mustard etc. is normally used.

6. Syrups: after preparing the substance as a tea, continue boiling for some time, then add 1 oz. of glycerine, and seal in airtight jars.

7. Tincture: add 4 oz. of water and 12 oz. of alcohol to 1 oz. of the powdered herb. Stand the mix for 2 weeks, and then pour off liquid and bottle in airtight container

PRODUCING ESSENTIAL OILS

A means of adding value to herbs is to extract the essential oil from the plant material. Much of the flavour and fragrance of herbs is due to their aromatic compounds and when these are extracted by distillation, the resulting product is a volatile oil-like material. Distillation techniques have been recorded to have been used as long ago as 3000 B.C. Other methods for extracting herbal essences are effleurage, maceration and pressing, however for most herbs distillation is the preferred process of extraction.

The yield of essential oil is usually very low in relation to the amount of plant material used. Depending on the quality of the herb and the distillation method used, yields of between 0.005% and 5% may be obtained. Different plants contain their aromatic compounds in different parts of the plant. Often the leaves and flowering tops are distilled, e.g. lavender and sage. Fruits, seeds, wood, leaf and stem, roots and bark are all

used to obtain essential oil, depending on the plant.

Two main distillation techniques are used to extract essential oils:

Water Distillation

The herb material is placed in a closed vessel (usually made of glass or metal) with water and heated rapidly. As the water boils and becomes steam the aromatic compounds in the herb are released and turned into a vapour. The two vapours mix as they rise up and enter a condensation chamber where they are rapidly cooled. Cooling cause the vapours to become liquid again, water reforms and essential oil forms on top of the water. The two parts are now separate, the water can be drained off and the essential oil collected.

Steam Distillation

Similar to water distillation, but the herb is placed on a mesh surface in the closed vessel and steam is pumped into the vessel. The steam 'boils ' the herb very quickly and draws off the vapourised oil. Again, the two vapours are rapidly cooled, separated and the essential oil collected. Modern essential oil producers may perform this process under a partial vacuum. This reduces the boiling point of the steam allowing a 'cooler' distillation which does less harm to the more fragile fragrance components.

In water distillation, interaction of the essential oil with water can cause an acid reaction, altering the quality of the oil. Steam distillation creates less interaction with water, so it is preferable for this reason. The greater control of heat in steam distillation is also advantageous. Therefore, it is the method normally used commercially. For many people, however, the equipment used to produce steam may not be available or accessible.

AROMATHERAPY

Essential oils can contain:

- vitamins and hormones
- antibiotics and antiseptics
- pheromones (ie. invisible but effective stimuli to different senses)
- chemicals which stimulate energise and even regenerate cells

Application

Concentrated essential oils are very strong, and are not needed in any large quantity to be effective. In fact, too much oil can be harmful in some instances.

1. Aromatherapy oils may be applied any of the following ways:
2. Bath or spa - add a few (maybe 5) drops to a bath, or (more) to a larger spa.
3. Massage - 5 drops of essential oil can be added to each 10 ml of aromatherapy carrier oil (eg. a non fragrant vegetable oil). This mixture can then be rubbed either lightly or heavily (depending on the effect required), into the skin.
4. Inhalation - add up to 10 drops of essential oil to a bowl of boiling water, and then breathe in the fumes (place your head over the bowl and cover with a towel). Place oil into an oil burner (ie. a candle under a dish (normally pottery) to slowly vaporise the oil.
5. Other applications include foot baths, facial oils or creams or gargles.

Safety

Aromatherapy has some dangers associated with it. Some commonly used aromatherapy chemicals can pose a problem under certain circumstances, and because of this, it is always wise to follow the following recommendations:

1. Never use pure (ie. essential) herbal oils. Always dissolve in an aromatherapy grade vegetable oil (This produces a diluted, less dangerous product).
2. Never take oils internally, unless advised by a medical doctor.
3. Keep oils (particularly essential oils) out of reach of children.
4. Always clearly label bottles containing oils.
5. Before using oils you haven't used before, test it on the skin first to see if there is any adverse reaction (eg. an allergic response)
6. Avoid oils which react with sunlight before going outside (eg. some oils produce a harmful effect when exposed to sunlight).
7. Pregnant women can suffer ill effects from rosemary, basil, fennel, hyssop, juniper, lovage, marjoram, citronella, cedar wood, tarragon, some sages and some thyme.
8. Avoid clary sage when drinking alcohol
9. Don't assume an oil or aromatherapy product is safe because it is for sale (some are not).
10. Avoid frequent repeated use of any oil. Some may develop harmful affects if used regularly.

USES OF EUCALYPTUS OIL

Distilled from the Australian native gum leaves, this product is now more popular than ever due to its medicinal properties plus the many uses around the home and office. To obtain the oil, 5kg of leaf is required to produce 50ml of oil.

Medicinal

Influenza and Head Colds

- 15 to 20 drops of oil in a bowl of steaming water and inhale, while head is covered with a towel
- a few drops on a handkerchief will help improve breathing
- 2 to 3 drops of oil on sugar or in water as a gargle 3-4 times daily for a throat reliever

Muscular Aches and Pains

- massage oil onto inflamed or sore areas until it is warm
- repeat as required

Insect Bites

Rub oil onto sore or swollen area. Repeat if required.

Insect Repellent

- mix Eucalyptus oil with a bit of vegetable oil
- the oil will make it easier to spread and makes it more difficult for insects to hold onto you
- you can also burn it in kerosene lamps/flares/lanterns

Mouthwash

- 2 drops on toothpaste when cleaning teeth
- or add a few drops into a glass of water and gargle

Cuts and Abrasions

Add a few drops onto the wound or onto bandage

Baths and Foot Baths

1-2 teaspoons of oil to a bath or foot bath is very relaxing.

Hand and Skin Cleaner

- a few drops in the palm of hand and rubbed well will remove bad smells, stains, grease and paint
- wash clear with soap and water

Vaporiser/Humidifier

- add a few drops to vaporisers and humidifiers to gain relief and to freshen the air

Scalp

- massage a few drops into scalp or add to shampoo to encourage healthy hair roots

Sauna

- add a few drops to the hot stones - this really clears out the pores and airways

Rubbing/Training Oil

Massage oil into muscles for a warming and soothing liniment. This can be "softened" by using baby oil mixed with the Eucalyptus oil.

Office and Home Use

Office/Craft/Work Sticker Remover

To remove sticky tape from scissors and remove stickers from articles, add a few drops to a cloth and rub.

Spot and Stain Remover

Moisten cloth with oil. It is best to place absorbent cloth beneath the area to be treated. Eucalyptus reportedly does not stain any material.

Woollen Washing

For soft and fluffy woollen garments: 300g ($^1/_2$ packet) of pure soap flakes, 200ml (1 cup) methylated spirits, 50ml (1 small bottle) of Eucalyptus oil. Mix methylated spirits and soap flakes, add oil and stir. Store in (sealable) jar - use 1 tablespoon per garment. Dissolve in hot water then pour into lukewarm water. Hand wash garment in this liquid.

Washing Cloths

1 teaspoon of oil per load

Carpet Shampoo/Stain Remover

Use the wool recipe above and apply to carpet with toothbrush and a little water.

Vinyl/Linoleum

1 teaspoon of oil to water bucket. Cleans and deodorises.

Bathroom

Use wool recipe stated above. If very dirty use the concentrate - dampen the tiles, then clean off with normal solution and a scrubbing brush. Rinse after cleaning.

Toilet

1 teaspoon of oil in toilet or drains

Leather Cleaner

Moisten cloth with oil and lightly wipe leather.

Plastic and Vinyl

Oil on a cloth will remove ink, carbon and other marks on plastic and vinyl.

Telephone

Clean and deodorise the phone. Wipe with cloth moistened with oil.

Paint Brushes

Oil-paint brushes can be rejuvenated by soaking in oil.

Chewing Gum/Paint/Ink Stains

To remove these from clothes and furnishings use an oiled cloth.

Tar Marks on Paintwork of Cars

Rub spots with oiled cloth. You may dilute oil: 1 part oil to 4 parts kerosene.

Pets and Pests

Dog Wash

To remove fleas, add a few drops into the dog's washing water. This is a good flea deterrent.

Garden Spray

To control snails, slugs, earwigs and slaters use the following mixture: 5ml oil; 2ml dishwashing liquid: 500ml water.

SOME COMMON HERBS AND THEIR MEDICINAL PROPERTIES

Reference: 'The Herbalist' by Joseph Meyer

Agrimony (*Agrimonia eupatoria*)

Family: Rosaceae

- Used as an astringent, tonic and diuretic. It has a reputation for curing jaundice and liver problems. It is considered useful in treating skin eruptions, such as acne as well as other blood diseases. A as a yellow dye, as a bath additive, or as a skin lotion. Sometimes used medicinally to treat an acid stomach. A decoction of the root and leaves, sweetened with honey or sugar, has been used to treat ulcers.

Aloe Vera (*Aloe* spp.)

Family: Liliaceae

- The juice from the leaves has been used to heal wounds, burns and sores, and is widely used in moisturising creams and milks. To make a tincture cover chopped leaves with methylated spirits and store in an airtight container.

Angelica (*Angelica archangelica*)

Family: Apiaceae

- Aromatic, stimulant, carminative, diaphoretic, expectorant and diuretic. Has been used in flatulent colic and heartburn.

Anise (*Pimpinella anisum*)

Family: Apiaceae

- A stimulant, this herb was used in the past to treat colic in infants and also nausea. It is carminative and pectoral, being used as a medicine in cough syrups. It can especially help hard, dry coughs. It is also used in lozenges. Anise oil is often mixed with wine to form Anisette, which can assist with bronchitis and asthma.

Basil (*Ocimum basilicum*)

Family: Lamiaceae

- Most often used in cooking, but has been used to assist rheumatic pain and with mild nervous disorders and headaches.

Bay (*Laurus nobilis*)

Family: Lauraceae

- The leaves, berries and oil of this plant have excitant and narcotic properties. Leaves and fruit are rarely used internally and berries should not be used by pregnant women. Leaves of this plant are regarded as a diaphoretic and as an emetic in large doses.

Borage (Borago officinalis)

Family: Boraginaceae

- It has diuretic properties and is also a demulcent and an emollient. It has been used to treat fever and inflammation of the nose and throat. It can also be used externally as a poultice to treat inflammatory swellings.

Caraway (*Carum Carvi*)

Family: Apiaceae

- The fruit and oil of caraway have stimulant and carminative properties. It has been used as a tonic for the stomach. It was once used greatly in medicine, but is now used more as a corrective or flavoring agent. Caraway essential oil can be used for indigestion.

Cayenne (*Capsicum annum*)

Family: Solanaceae

- It is a stimulant which can be used to treat atony in the intestines or stomach. It is believed that it is powerful in warding off diseases and is often added to tonics.

Catnip (*Nepeta Cataria*)

Family: Lamiaceae

- Can be used as a mild aromatic and carminative, useful in treating flatulence and upset stomach.

Chamomile- German (*Matricaria recutita)*

Family: Asteraceae

- It is known to be a carminative, a sedative and tonic. It has been used as a nerve sedative and a tonic for gastro-intestinal upsets. It can also be helpful in treating earache and stomach disorders.

Chicory (*Chicorium Intybus*)

Family: Asteraceae

- The root is used and is considered to be a tonic, a laxative and a diuretic. A tea made up from the dried root can be used to treat stomach complaints.

Cinnamon (*Cinnamomum zeylanicum*)

Family: Lauraceae

- Cinnamon is known as an astringent, as well as being stomachic and carminative. It is helpful in treating complaints such as diarrhoea, nausea and vomiting. The oil is a powerful germicide, but is rarely used in medicine as it is an irritant.

Cloves (*Syzygium aromaticum*)

Family: Myrtaceae

- This is an aromatic that is very stimulating and has carminative properties. It has been used to treat nausea, flatulence and indigestion. It is also used to assist the action of other medicines. It is a strong antiseptic, and week anaesthetic. It has also been used as an expectorant to assist bronchial complaints.

Comfrey (*Symphytum officinale*)

Family: Boraginaceae

- It has demulcent and expectorant properties and is a mild astringent. It is an ingredient in a large number of herbal preparations.
- It is also a gentle remedy for diarrhoea and dysentery. It has demulcent properties, being used to treat lung troubles and whooping cough. A modern medicinal tincture, employed by homoeopaths, is made from the root with spirits of wine. Comfrey leaves are also used as a poultice for swellings, bruises and cuts.

Coriander (*Coriandrum sativum*)

Family: Apiaceae

- It has stimulant properties. The fruit and oil are used in medicines as a flavoring. It has also been used in the past as a carminative to treat windy colic.

Dandelion (*Taraxacum officinale*)

Family: Asteraceae

- Dandelion has diuretic, tonic and aperient properties. It has been used to treat kidney and liver problems and is a general stimulant. It is a mild laxative, and is also effective in increasing appetite and promoting digestion.

Dill (*Anethum graveolens*)

Family: Apiaceae

- Both the fruit and oil of dill possesses stimulant, aromatic, carminative and stomachic properties. It has been used as Dill water in the past to treat flatulence in infants.

Echinacea *Echinacea angustifolia*

- Used as a treatment for colds and the flu. The roots contain a substance called Caffeic acid glycoside, which reacts with other chemicals in the body to hasten healing. It is considered to be one of the best

herbs for stimulating the immune system.

Evening Primrose (*Oenothera biennis*)

Family: Onagraceae

- It is an astringent and sedative, and used in the treatment of gastro-intestinal disorders, asthma and whooping cough.

Fennel (*Foeniculum vulgare*)

Family: Apiaceae

- It has aromatic and carminative properties. Is also used as a diuretic and stomachic. Is used in gripe water with other ingredients to treat flatulence in infants.

Feverfew (*Chrysanthemum Parthenium*)

Family: Asteraceae

- It is a tonic carminative, vermifuge and a stimulant. Leaves make an excellent poultice. The warm infusion is an excellent remedy in ordinary colds and flatulency. The cold infusion is a valuable tonic.

Garlic (*Allium sativum*)

Family: Liliaceae

- Garlic is a commonly grown herb with many healing properties. Generally speaking, it helps overcome the toxic effects of the environment on our body. Garlic reputedly builds up the body's resistance to disease, as well as relieves cramps, fight intestinal disorders, help overcome respiratory infections and expel gases. There are many other uses for garlic, including its use an antiseptic.

Ginger (*Zingiber officinale)*

- Aids digestion, relieve symptoms of colds, used in motionsickness prevention, available in capsule form.

Horseradish (*Armoracia rusticana*)

Family: Brassicaceae

- Useful in stimulating the stomach and promoting secretion, as of the urine. Externally it can be used as a rubefactant.

Hyssop (*Hyssopus officinalis*)

Family: Lamiaceae

- Stimulant, aromatic, carminative and tonic. It has been used in throat irritation, as a gargle with sage. As an expectorant it is beneficial in coughs. Leaves can be applied to bruises.

Juniper (*Juniperus communis*)

Family: Cupressaceae

- The berries of this plant are gently stimulant and diuretic. However, it can cause irritation in urinary passages when taken in large doses. Internal use should be avoided by pregnant women and people with kidney complaints.

Lavender (*Lavandula* spp.)

Family: Lamiaceae

- Aromatic stimulant and tonic.

Lemon Balm (*Melissa officinalis*)

Family: Lamiaceae

- Moderately diaphoretic, particualrly when used as a warm infusion.

Lovage (*Levisticum officinale*)

Family: Apiaceae

- Stimulant, carminative, stomachic and aromatic. Seeds may be chewed to freshen breath and to relieve upset stomachs.

Marigold - Pot (*Calendula officinalis*)

Family: Asteraceae

- Flowers may be used to treat skin ailments such as cuts, aromatic properties.

Marjoram (*Origanum vulgare*)

Family: Lamiaceae

- Has an aromatic, pungent bitter taste. It is a carminative and tonic and is useful in upset stomach and associated conditions. Can also be used in a gargle (tea) and as an antiseptic.

Mints (*Mentha* spp.)

- Mints are widely used medicinally. Peppermint is used in a variety of compound medicines, usually to make an unpalatable preparation more palatable, but it can also be used as a stimulant and carminative.

Parsley (*Petroselinum crispum*)

Family: Apiaceae

- Used for diuretic purposes and seeds are sometimes used as carminatives. Leaves bruised, are a good application for contusions.

Rosemary (*Rosmarinus officinalis*)

Family: Lamiaceae

- Gentle stimulant with the oil principally used as a perfume for ointments and liniments.

Rue (*Ruta graveolens*)

Family: Rutaceae

- Has been used as an aromatic atimulant which is very valuable for gas pains or colic. Be careful using this internally as it can act as an acro-narcotic poison, and should not be administtred after eating on account of its emetic tendencies. Ruse is an active irritant, and can cause dermatitis.

Sage - Common (*Salvia officinalis*)

Family: Lamiaceae

- Was once a very popular medicinal herb, is now mainly grown as a condiment. It is also sometimes used as an aid to digestion.

Savory - Summer (*Satureja hortensis*)

Family: Lamiaceae

- Stimulant and carminative. A warm infusion is beneficial to wind tonic.

Tansy (*Tanacetum vulgare*)

Family: Asteraceae

- Should not be used except for by those skilled in the use of herbs and when used very diluted. Has the qualities of an irritant narcotic.

Thyme - Common (*Thymus vulgaris*)

Family: Lamiaceae

- Reputedly thyme can be used for throat and bronchial troubles, and can possibly be used to control the spasms of whooping cough. An infusion is also useful in promoting perspiration and controlling flatulence.

Wormwood (*Artemisia absinthium*)

Family: Asteraceae

- Is an anthelmintic, tonic and narcotic. Has been used for many conditions, though should be used diluted and with care as taken too often or in large quantities, it can irritate the stomach and dangerously increase the action of the heart or arteries.

Yarrow (*Achillea millefolium*)

Family: Asteraceae

- Belongs to the aromatic class of sudorific tonics.

SET TASK

1. You will require access to:

- a kitchen or laboratory
- material to prepare some simple medicines
- basic equipment to prepare some herbal medicines (i.e. found in most well set up kitchens or laboratories)

Visit a garden or farm where you can harvest some fresh material from medicinal herbs for use in the preparation of medicines. Practise preparing the different plant parts in as many ways as possible.

Attempt at least three different ways of preparing herbs for medicinal use (eg. the roots might be chopped finely and used as a poultice, or as an infusion, etc).

Once you are familiar with some of the techniques, prepare two different herbal medicines

2. Find out as much as you can about distillation processes. (You may do this by undertaking internet searches, talking with someone who has done distillation; visiting a distillation plant; talking to the supplier of distillation equipment, or visiting a good technical library and looking at books containing information on both Herbal Oils and chemistry.