

LESSON 1 INTRODUCTION THE NATURE AND SCOPE OF MEDICINAL HERBS

Herbs have been used by humans for many thousands of years. Over the course of this time our understanding of their effects on our bodies has been learnt - initially through trial and error, and observations, then later through clinical trials. Today our knowledge of plants has given rise to a growing industry in botanical medicine.

WHAT ARE THEY?

Medicinal herbs are plants which contain chemicals that have an effect upon the body. Of course whilst many have a favourable effect, some which are classed as poisons are regarded as medicinal because when given in appropriate doses they can be used to attack pathogens in the body. But

how useful are these herbs? Some people swear by them, yet others are highly suspicious. Is their suspicion well-founded? The answer would have to be possibly, but not unequivocally. Herbs have been used for such a long time that it is hard to deny their usefulness. Before the mass production of synthesised drugs they were all we had to rely on.



Chamomile

If you delve a little deeper, you'll soon discover that many of the medicines prescribed by doctors and sold by pharmacists today also originate from herbs. Many synthetic medicines have been created to mimic compounds found in plants. For instance, aspirin (acetylsalicylic acid) is very similar to salicin which is found in willow bark. Once metabolised in the body, salicin forms various salicylic derivatives. Although their presence is not found in sufficiently high concentrations to provide an analgesic effect, other chemicals in the bark including flavonoids and polyphenols contribute to combat pain.



Elephant Garlic *Allium ampeloprasum*

The proper processing of herbs for medicinal purposes is complex and beyond the skills of the average home gardener, but there are many herbs which are relatively easy to grow and safe for most people to use; herbs such as rosemary, lavender, garlic and lemon balm. Many herbs also have the added benefit of attracting predatory insects to your garden which will keep unwanted pests in check.



Eucalyptus pauciflora

Whilst we mainly think of herbs as being useful for flavouring and garnishing food dishes, many of them can also be quite easily transformed into herbal teas or topical ointments which may provide medicinal benefits. Sometimes these benefits are preventative rather than curative - you can help your body to fend off infections and illnesses by boosting your immune system and natural defences.

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Suggested task

Look up and define the words: flavonoid and polyphenol; just write a sentence or so for each.

USES OF MEDICINAL HERBS

Here are some easy-to-grow herbs and what they are often reported to do:

- CHAMOMILE (*Matricaria recutita*) – treat chest colds, inflammation of gums, tooth abscesses, soothe skin conditions, antibacterial
- ECHINACEA (*Echinacea spp.*) - fights symptoms of cold and influenza, relieves sinus problems, soothes gum inflammations, treats infections
- EUCALYPTUS (*Eucalyptus spp.*) - antiseptic, breathe fumes to clear sinuses and ease chest infections
- GARLIC (*Allium sativum*) -antibacterial, reduces blood pressure, aids breathing
- GINGER (*Zingiber officinale*) -settles stomach, anti-inflammatory, lowers cholesterol, reduces blood toxins, treats colds
- LAVENDER (*Lavandula spp.*) -relaxant, aids sleep, antibacterial, antiseptic, heals skin conditions, relieves pain
- LEMON (*Citrus limonum*) -antibacterial, soothes colds and influenza symptoms, assists immune system
- LEMON BALM (*Melissa officinalis*) - relaxant, calms nerves, alleviates headaches, treats cold sores and viruses

- PEPPERMINT (*Mentha x piperita*) - aids with digestion, relieves headaches, soothes pain
- POT MARIGOLD (*Calendula officinalis*) - antifungal, anti-inflammatory, antibacterial, heals wounds, soothes skin irritations and mouth sores
- ROSEMARY (*Rosmarinus officinalis*) - lowers blood pressure, improves concentration, reduces fatigue, aids hair and scalp health
- TEA TREE (*Melaleuca alternifolia*) - antiseptic, antifungal, soothes pain, treats insect bites, calms acne and skin conditions
- THYME (*Thymus vulgaris*) -decongestant, soothes sore throats, treatment of coughs and colds, diarrhoea, antiseptic, treatment of cuts

Clearly there are many plants which are widely available regardless of where you live which could be grown with a view to harvesting them for their medicinal properties.



Mortar and Pestle

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Suggested task

Using books and/ or the internet

Look up the following common herbs and plants used as medicinal herbs – note down their scientific name and their suggested uses:

Basil
Dandelion
Echinacea
Eucalyptus
Sage
Dill
Fennel
Parsley
Pot Marigold
Arnica

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Suggested task

Using the internet, books, the library:

Read about the history of herbs: take notes and write a short history yourself in a timeline format (using short bullet points for each significant development).



A medieval herbalists workplace

THE EVOLUTION OF MEDICINAL HERBS

Various systems of medicine have evolved around the world over thousands of years and each has its roots in medicinal plants. In fact, botany and medicine only became separate disciplines in around 1500 AD. Of particular interest are the ancient systems of India and China because these have written records of plants and formulations which can be traced back about 3000 years:

- **Ayurveda** - traditional Indian medicine which holds that disease can be caused by external or internal factors and emphasises the role of diet and drugs in combating disease.

- **Chinese medicine** - traditional Chinese medicine includes dietary therapy as part of its approach to achieving balance in bodily systems, to avoid the onset of disease.

Other systems such as those which emerged in Egypt, the Middle East, South America and Africa also made wide use of plants, though there is a lack of written records for the latter two. In Europe, much of medicine was based on the teachings of the ancient Greeks like Hippocrates and included plant preparations such as herbal teas.

Nowadays, the majority of people around the world still rely on medicinal herbs and local herbal remedies which have evolved in their cultures. In Western society at least ten percent of pharmaceuticals have herbal components and many others are based on natural plant compounds.