

Medical Botany

2. History & General Guidelines

History

- The exact origins of herbalism are unknown. Probably it was several different groups of prehistoric peoples who discovered that some herbs were good to eat, whereas others had curative powers.
- Humans also discovered plants with peculiar, reality altering, stimulating and inebriating effects. In ancient cultures these were considered to be 'plants of the gods'.

History

- The mechanism of action of herbs remained a mystery for centuries – and in some cases still remains a mystery. Only the development of sophisticated techniques of chemical analysis in the last century has begun to provide some of the answers.
- The first medical records date from ancient Assyria, China, Egypt and India.

History

- William Turner was the first person to study plants scientifically in the sixteenth century. He travelled widely throughout Europe and grew plants in his gardens in south-west London (later the Royal Botanical Gardens, Kew).

History

- At this time the Doctrine of Similars determined how plants were used. It was promoted by Paracelsus (1493–1541). According to this paradigm every plant acted in effect as its own definition of its medical application, resembling either the part of the body afflicted or the cause of the affliction.
- Nicholas Culpepper (1616–54) was an influential proponent of the Doctrine of Signatures as well as various astrological theories, by which herbs were set under the domination of the sun, moon or one of the five planets then known. His herbal, published in 1652, was extremely successful, being reprinted many times.

History

- In America Samuel Thomson (1769–1843) used simple herbs for bodily correction. He was so successful that opposition from the medical profession was strong and uncompromising. His fame spread to England where, thanks to the promotion by a Mr George Lees, the Thomsonian system was embraced by Mr Jesse Boot when he opened the first of what was to become the UK's biggest multiple pharmacy chain, in Goose Gate, Nottingham in 1872.
- Renewed interest in 'natural' medicines has led to a resurgence of demand for herbal medicines in the last 20 years.

Theory

- Traditionally, the herbalist has recognised four clear stages when offering treatment for any particular condition, individualising the prescription according to holistic methodology to take account of their patients' particular needs:
 1. Cleansing the body.
 2. Mobilising the circulation.
 3. Stimulating digestion.
 4. Nourishment and repair.

Theory

1. Cleansing the body: removal of toxins and other noxious influences – real or imagined – that might cause a physical or mental barrier to treatment. Diuretics, expectorants and laxatives are involved here.
2. Mobilising the circulation: traditionally disease was seen as a ‘cold’ influence on the body and before any other treatment the body should be comforted by ‘heating agents’. Hot spices and pungent medicines (e.g. ginger) and more gentle warming medicines are available for this purpose.

Theory

3. Stimulating digestion: inappropriate or too much heat in the body manifests itself as fevers and inflammatory conditions. Thus, the so-called 'cooling medicines' are those used to treat these circumstances, leading to improved digestion. Anti-inflammatories, antiallergics and sedatives are examples of therapeutic classes of drugs that fall into this category.
4. Nourishment and repair: in this phase the herbalist deals with the debility arising from disease in the body. The term 'tonic' covers a wide range of medicines used to support the body. Examples include hawthorn (*Crataegus oxycanthoides*), milk thistle (*Silybum marianus*) and St John's wort (*Hypericum perforatum*).

Sources of reference

- Materia medica
- Repertory
- The *British Herbal Pharmacopoeia*
- The *American Herbal Pharmacopeia*

Sources of reference

- Materia medica: a comprehensive list detailing the main characteristics and uses of medicines, e.g. *Potter's Cyclopaedia of Botanic Drugs*
- Repertory: a comprehensive list of medical conditions with suggested medicines for treatment, e.g. *Herbal Medicine* by Miller and Murray

Sources of reference

- The *British Herbal Pharmacopoeia* gives identification and usage information as well as providing instructions on how medicines should be prepared and the *British Herbal Compendium* provides up-to-date summaries of the available scientific knowledge on medicinal plants
- The *American Herbal Pharmacopeia* (www.herbal-ahp.org) began developing qualitative and therapeutic monographs in 1994, and intends to produce 300 monographs on botanicals, including many of the ayurvedic, Chinese and western herbs most frequently used in the USA.

General types of medicinal herbs used

- Practitioners use medicinal plants with:
 - *powerful actions*, e.g. liquid extracts of foxglove and belladonna, with substantial toxic risk
 - *intermediate actions*, e.g. tinctures of arnica and khella, with some adverse drug reactions (ADRs)
 - *gentle actions*, e.g. infusions of German camomile and peppermint with less risk of ADRs.
- In many instances conditions can be treated by drugs in each of the three groups, e.g. cardiac disease responds to foxglove in the powerful group, arnica in the intermediate group and hawthorn in the gentle group.

Quality Control

- Herbal supplements do not require FDA approval because they are considered food supplements
- Herbal supplements may have active ingredients that vary among dose forms
- The FDA is working with several trade organizations to develop guidelines for herbal supplements
- Table 23-1 covers other factors affecting herb quality
- See Table 23-2 for information on herbal forms

General Guidelines for Herbs

- Ask all clients whether they give herbs or other supplements to their animals
- Inform clients that herb-drug interactions exist
- Encourage the use of standardized products from respected manufacturers
- Use herbal therapies in recommended doses
- Avoid herbs with known toxicities
- Do not use herbs in pregnant or nursing animals, the very young, or the very old
- Accurate diagnosis of the animal's condition is essential to evaluate all therapeutic options
- Document all herb or supplement use in the animal's medical record

Examples of the therapeutic use of herbal remedies

<i>Therapeutic group</i>	<i>Example of herbal remedy</i>
Anticoagulants	Alfalfa, arnica, fucus, garlic, ginger
Coagulant	Mistletoe
Cardioactive	Coltsfoot, devil's claw, ginger, ginseng, parsley, wild carrot
Diuretic	Burdock, dandelion, elder, juniper, pokeroor, squill
Hyperglycaemic	Devil's claw, ginseng, liquorice
Hypoglycaemic	Alfalfa, garlic, ginger, juniper, marshmallow, myrrh
Hypolipidaemic	Alfalfa, garlic, ginger
Hypertensive	Blue cohosh, coltsfoot, gentian, ginger, liquorice
Hypotensive	Celery, devil's claw, fucus, garlic, ginger, St John's wort
Sedative	Camomile, hops, passionflower, St John's wort, valerian

Active constituents in herbal medicines

- Bitters
- The 'hot' medicines
- Resins
- Saponins
- Tannins
- Volatile oils

