**Phytotherapy**

**The list contains the plant found in Iraq and herbs common in the market as food supplement**

Table 1: **The gastrointestinal and biliary system (CH 14)**

Natural products are still the most commonly used remedies in cases of constipation, diarrhoea and flatulence.

|  |  |  |
| --- | --- | --- |
| Plant | Active constituent | Uses |
| Rice suspension | Polysaccharide (starch) | Diarrhoea |
| Opiates derivatives | Alkaloids derivatives | Diarrhoea |
| Acacia catechu, tea or coffee | Tannin | Diarrhoea |
| Linsseds (flax sees)The swelling factor 45 | polysaccharides | polysaccharides |
| Plantago ovate (Ispaghula) | polysaccharides | Polysaccharides |
| Senna , cascara | Anthraquinone glycosides | Osmotic laxative |
| Liquorice (G. glabra) | Saponine glycoside | Ulcer |
| Chammomile (Matricaria chammomilla | Flavonoids glycoside and terpene | Anti-inflammatory, spasmolytic, |
| Artichoke (CYNARAE FOLIUM) | sesquiterpene lactone and flavonoids) | Dyspepsia |
| Mentha species (Mint family) | monoterpene | bloating |

Table 2: **Liver diseases**

|  |  |  |
| --- | --- | --- |
| milk thistle (Silybum marianum) | Flavolignan (silymarin) | Antihepatotoxic (Jaundice) |
| Turmeric (curcuma domestica | terpene | hepatoprotective |

**CH. 15 Cardiovascular system**

|  |  |  |
| --- | --- | --- |
| Digitalis purpurea or D.lanata | Digoxin and lanatosides | Heart failure |
| Ginkgo bioloba | Diterpene ginkgolides | Circulatory disorder |
| Salvia miltiorrhiza (Sage) | diterpene | Circulatory disorder |
| Vitis vinifera (red grape) leaves | Poly phenol mainly flavonoids | Treat CVI and prevent further CVI |
| Alium sativa (garlic) | Allin to allicine | Hypolipidaemic activity |

**Ch. 16 the respiratory system**

|  |  |  |
| --- | --- | --- |
| Ephedra sinica  | Ephedrine alkaloid | decongestant |
| Theobroma cacao, coffee and tea | Theophylline | bronchodilator |
| Cinnamomumcamphora | Camphor | Inhalation |
| Eucalypti aetherleum  | cineole (eucalyptol) | Remedy for cough and colds |
| Mentha species | menthol | Decongestant for cold and in colic |
| Ammi visnagaKhella | Khellin, (furanocoumarins) semisynthetic,cromoglycate | Vasodilator |

**Cough preparations**

**A- Cough remedies**

The purpose of these drugs is to reduce the viscosity of phlegm in cases of chest and throat infection.

|  |  |  |
| --- | --- | --- |
| Thymus vulgaris (Thyme) | Thymol and carvacrol | carminative, antiseptic,antitussive, expectorant |
| Salvia offecinalis (Sage) | α and β-thujone, cineol | forchronicbronchitis, catarrh, asthma |
| Hedera helix (Ivy leaves) | Saponine (hederacosides) | Expectorant, mucolytic |
| Myroxylon balsamum (Tolu balsam) | Cinnamic and benzoic acid and their esters  | Expectorant |
| Ipecac (Cephaelis ipecacuanha) | Alkaloid emetine | Expectorant |
| Papaver somniferum | codeine | Sedating and constipating. antitussive |

**B- Phytomedicines used in colds and Influenza**

Some of these herbs have antiviral and anti-inflammatory activity, some are demulcents or stimulate the immune system

|  |  |  |
| --- | --- | --- |
| Pelargonium (Pelargonium sidoides) | hydrolysable tannins,catechin, gallic acid | Acute bronchitis |
| Althea officinalis (Marshmallow) | mucilage | coughs and bronchial complaints |
| Echinacea pallida | cichoric acid and caffeic acid derivatives (echinocoside) | Immunostimulant |

**Ch. 17: Central nervous system**

Drugs acting on the central nervous system (CNS) include the centrally acting (mainly opioid) analgesics, anti-epileptics and anti-Parkinson agents, as well as

those for psychiatric disorders. Drugs of plant origin are important in all these areas.

|  |  |  |
| --- | --- | --- |
| Humulus lupulus | Oleo-resin | Sleep disturbances and restlessness. |
| Melissa officinalis (lemon balm) | Monoterpene (citronellal, geranial) | Sedative  |
| Piper methysticum (Kava) | kavalactones | Potentiate GABAA receptor activities  |
| Valeriana officinalis | Volatile oil and the iridoid valepotriate constituents. | mild anxiety and toaid sleep |
| St John’s wort (Hypericum perforatum) | Hypericin (binaphthoquinoid) | antidepressant |
| Papaver somniferum (opium) | morphine | Major analgesic |
| Claviceps purpurea (Ergot) | Ergotamine | Migraine |
| Ginkgo bioloba | Diterpene ginkgolides | prevent memory deterioration |
| Galanthus nivalis | Galantamine | dementia.(Acetylcholinesteraseinhibitingdrugs) |

 **Ch. 18 Infectious disease**

|  |  |  |
| --- | --- | --- |
| Arctostaphylos uva-ursi (Uva Ursi) | Glycoside arbutin. | Treat cystitis and urethritis |
| Cranberry juice | proanthocyanidins | have the ability to affect the binding of the E.coli, which is a major causative agent of UTI |
| Cannabis sativa | tetrahydrocannabinoland cannabidiol | Active against Gram-positive bacteria such as S.aureus and its methicillin-resistant (MRS) |
| Artemisia annua | Sesequiterpene lactone | Treat malaria |
| Cinchona bark | Quinine alkaloid | Treat malaria |
| C. marshallii (Pyrethrum) | Pyrethrins ester | Insecticidal, kill lice and house flies  |

**Ch. 19 Endocrine system**

Phytomedicines are often used in the treatment of hormonal disorders. In diabetic patients, many foods and herbs can help to reduce blood glucose levels and may assist in controlling hyperglycaemia in milder cases of non-insulin dependent diabetes.

|  |  |  |
| --- | --- | --- |
| Gymnema sylvestre | saponine | antidiabetic |

**Phytoestrogen:** There are many plants that contain oestrogenic substances (phytoestrogens), and pharmacological and epidemiological evidence suggests that they act as mild oestrogens or, in certain circumstances, as anti-oestrogens (by binding to oestrogen receptors and preventing occupation by natural oestrogens). They generally have beneficial effects, including chemopreventive activity.

|  |  |  |
| --- | --- | --- |
| soya | Isoflavones, including genistein and daidzein | phytoestrogen |
| Red clover | isoflavones genistein | phytoestrogen |
| Vitex agnus | diterpene | menstrual cycle disorders |
| Urtica dioica | Lignans present in the root, including pino-resinol,secoisolariciresinol, | Therapy in rheumatic ailments. |

**Ch. 20: Reproductive tract**

|  |  |  |
| --- | --- | --- |
| Ergot  | Ergotamine  | Induce child birth |
| Papaver somniferum | Papaverine alkaloids | Male impotence |
| Yohimbe bark | Yohimbine (indole) alkaloid | Sexual stimulant |

**Ch. 21**

**The musculoskeletal system**

|  |  |  |
| --- | --- | --- |
| Ananas comosus (Bromiline) | proteaseinhibitingenzymes | Anti-inflammatory |
| The rhizomes of turmeric | Curcumin terpenoid | Anti-inflammatory and hepatotoxicity |
| Salix spp.,(willow bark) | The glycoside salicin | for osteoarthritis and lower back pain |
| Colchicum autumnale | Colchicines alkaloid | Antigout |

**TOPICAL ANTI-INFLAMMATORY AGENTS**

Most topical antirheumatics are rubifacients, which act by counter-irritation. They are used for localized pain or when systemic drugs are not appropriate. Many contain salicylates, and capsaicin is used for severe pain. They should not be used in children, pregnant or breastfeeding women or with occlusive dressings.

|  |  |  |
| --- | --- | --- |
| Capsicum frutescens | Capsaicin (oeo-resin) | Local analgesic |
| Betula lenta ( Wintergreen oil) | methyl salicylate (about 98%), | antiinflammatory and antirheumatic |
| Cinchona spp. | Quinine alkaloid | Night cramp |

**Chapter 22**

**The skin**

|  |  |  |
| --- | --- | --- |
| Arachis oil or peanutoil | a fixed oil consisting mainly of glyceridesof oleic and linoleic acids. | emollient creams |
| Avena sativa, (oats) | Protein, plysacharide and linoleic acid | Emollient |
| Aloe vera (Aloe barbedisis) | Polysacharride and amthraquinone glycoside | antibacterial,antiinflammatory, emollient and moisturizing effects |
| Evening primrose oil | 70% cis-linoleic acid | treatment of atopic eczema |

**Ch. 23: the eye**

|  |  |  |
| --- | --- | --- |
| Pilocarpus microphyllus | pilocapine | miotic |
| Atropa belladona | atropine | Mydriatic and in Anterior uveitis |
| Hamamelis virginiana | tannin | soothe the eye and clearredness |

**Ch.24: The ear and nose and orthopharynx**

|  |  |  |
| --- | --- | --- |
| Olea europea | Olive oil | Removal of wax |
| Prunus amygdalus | Almond oil | Removal of wax |
| Thymus spp | thymol | Oral and throat irritation |
| Mint and spearmint | Peppermint oil (menthol and menthone | Antiseptic in dental product |
| Salviaofficinalis (sage) | Α-and β- thujone | Used as gargle |
| Eugenia caryophyllatas or Syzygium aromaticum | Clove oil mainly eugenol | Dental preparation as tooth remedy |

**Ch. 25 Miscellaneous supportive therapies**

Preventive medicines are used to strengthen the immune system, improve memory and alertness, enhance sexual performance, promote healing and stimulate the appetite. The most important herbs are ginseng, ginkgo, astragalus, mushroom and tea.

|  |  |  |
| --- | --- | --- |
| Acia berry(Euterpe oleracea | Polyphenol (flavonoids) | Antioxidant in USA slimming agent |
| Withania somniferum (ashwagandha) | Alkaloids and steroidal lactone | Antioxidant and immunomodulatory |
| Panax ginseng | Saponine glycosides | Relief stress and tonic |
| Magnolia | Lignans | Increase energy and sexual tonic |
| Camellia sinensis | Xanthines alkaloids and epigallocatechin | Stimulant and diuretic |