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## Medical Herbalism and Frequency of Use

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### 1. Introduction

Medical herbalism is today a sophisticated system of natural medicine using plant extracts and herbs to help treat physical and mental disorders. Herbalism is a traditional medicinal or folk medicine practice based on the use of plants and plant extracts. Herbalism is also known as botanical medicine, medical herbalism, herbal medicine, herbology, and phytotherapy. The scope of herbal medicine is sometimes extended to include fungal and bee products, as well as minerals, shells and certain animal parts. Medical Herbalism is the modern version of traditional herbal medicine which has been used throughout the world for thousands of years. Herbalists use concentrated whole plant extracts, in the form of tinctures, infusions, salves, creams and pills, as part of a holistic treatment plan to address the underlying causes of your condition (Kennedy et al., 2009; Tapsell et al. 2006; Fabricant, 2001)

Ancient Indians, Chinese and Europeans discovered origins of medicinal herbs. They have been using them for curative purposes successfully. In India itself, there are more than 1100 medicinal plants grown all over the wild forests. Of these, some 60 geniuses are used immensely in medicinal preparations. Despite their demands today, they are not grown in a controlled manner. Rather tribes use them as their livelihood in some belts where they are grown in the wild. Unlike India, in China, the spurt in demand for traditional medicines has made the government to allow growth of these plants for further research and development. About 100 units have nearly 600 plant types, grown for their medicinal value. Herbal medicines are used in Ayurveda, Naturopathy, and Homeopathy, traditional and Native American medicines. About 74 plant types are used in modern medicines. (Vickers & Zollman, 1999; Goldman, 2001; Tapsell et al. 2006; Fabricant, 2001)

Herbal medicine in China has for centuries been a well-organized system of knowledge based on observations, experiments, and clinical trials, and the effectiveness of a significant number of these remedies has been verified by modern science. Elsewhere, the latest effort in plant codification has been undertaken by a consortium of medical researchers, pharmaceutical companies, and herbalists who are investigating the flora of the rain forests in the hope of discovering new plant resources that might yield cures for heart disease, cancer, AIDS, and other deadly disease (Goldman, 2001).

Herbal medicine is the use of plants-their leaves, stems, bark, flowers, fruits, and seeds to prevent or cure disease. Four billion people or about 80% of the world's population uses herbal medicine today as part of health care (Sonal Sekhar et al., 2008). Different cultures use

herbs located in their geographical locations for curing common illnesses. They have been successful to a certain extent and over many centuries, some of the herbal cures have proved to be far more useful than allopathic drugs (Sonal Sekhar et al., 2008; Tapsell et al., 2006; Fabricant, 2001). The most frequently used Chinese Medicine therapies were Chinese herbal medication (93.6%) (Lin et al., 2010).

Many of today's synthetic drugs originated from the plant kingdom, and only about 200 years ago our pharmacopoeia was dominated by herbal medicines. Medical herbalism (i.e. the medicinal use of preparations that contain exclusively plant material) went into rapid decline when pharmacology established itself as a leading branch of therapeutics. In much of the English speaking world, herbalism virtually vanished from the therapeutic map about a century ago. In contrast, many developing countries never abandoned medical herbalism (e.g. Ayurvedic medicine in India, Kampo medicine in Japan, and Chinese herbalism in China) and in other countries, e.g. Germany and France, medical herbalism continued to co-exist with modern pharmacology, albeit at an increasingly lower level (Ernst, 2000). In recent years, this situation has started to change again. The usage of herbal medicines by the general US population, for instance, increased by 380% (from a 1-year prevalence of 2.5–12.1%) between 1990 and 1997 (Eisenberg et al., 1998). A more recent US survey suggested that 16.4% of all patients attending an internal medicine clinic were current users of herbal medicines (Rhee et al., 2004).

Herbal medicine has become a popular form of healthcare. Even though several differences exist between herbal and conventional pharmacological treatments, herbal medicine can be tested for efficacy using conventional trial methodology. Several specific herbal extracts have been demonstrated to be efficacious for specific conditions. Even though the public is often misled to believe that all natural treatments are inherently safe, herbal medicines do carry risks. It is need to know which herbal remedies do more harm than good for which condition (Ernst, 2000).

The aim of this chapter is to provide a general introduction to using herbal medicine, type of herbal medicine, characteristics of herbal medicine user, adverse-effects of herbal medicine, method of application of herbal medicine, and cost of herbalism.

## 2. Methods

Search's stages involved: Searching literature, result examination, result synthesis. All database searches ran from 1997 to 2011 inclusive. Although only English papers were extracted, no geographical or methodological limitations were placed on the literature. The majority of articles were found in the health care databases, Medline, Cinahl, Social Science, Web of Science, Science Direct and Wiley-Blackwell. Google scholar however proved a useful adjunct to the traditional databases. Articles searched were considered for review. Abstracts and full-text of articles were reviewed. Total 84 articles were reviewed and 36 of these articles were used for the chapter.

The chapter's subheadings and keywords used for literature searching. Search keywords were herbal medicine, using frequency, botanical medicine, phytotherapy, adverse-effects, application of herbs and cost of herbalism.

### 3. Results

#### 3.1 Frequency of herbal medicine use

The prevalence of herbal use among diverse racially/ethnically varies from culture to culture and population to population. The most common types of complementary alternative medicine used were herbal therapies (34%) (Huillet et al., 2011). Overall, 36% of one study sample reported ever using herbs. The proportions of herbal users varied across racial/ethnic groups, with use being reported by 50% of Hispanics, 50% of Asians, 41% of Whites, and 22% of African-Americans. Herbal use by other family members was reported to be 41% (57% among Hispanics, 45% among Asians, 37% among Whites, and 30% among African-Americans). About 40% of all of the survey respondents, but especially Asians (55%) and Whites (47%), believed that taking prescription medications and herbal medicines together was more effective than taking either alone. About 41% of Hispanic respondents believed that herbal medicines were superior to prescription medications, as compared to 12% of Whites. One hundred sixty-two of the 485 respondents answered affirmatively to using herbal medication (34%). Broken down by gender, 116 of 331 female respondents (35%) and 46 of 153 male respondents (30%) use herbal medication. The ingestion of herbal medicines was similar in the Asian and Caucasian respondents (38%, 35% respectively). Frequency of herbal medicine use was as follows: daily by 63 patients (39% of herbal medicine users), week by 16 patients (10%), once a month by 20 patients (12%) and less than once a month by 48 patients (30%). Other group patients were taking 65 different preparations containing at least 45 distinct ingredients. The most frequent herbal medicine consumed was echinacea, glucosamine, garlic, ginkobiloba, St.John's wort and "chinese mix" also common. Thirty-five patients (22%) did not know the once a name of the medication they were taking. The largest numbers of consumers of herbal medicines (31.5% of users) were in the 31-45-yr-old range, which was also our largest group of patients. The 46-60-yr-old group accounted for 25% of overall use and the over-60 group in our institution accounted for 17% (Lennox & Henderson, 2003). Research studied in surgery patients showed thirty-eight percent of the study population had consumed herbal medicine in the 2 years before surgery and 16% continued the use of herbal medicine in the month of surgery (Adusumilli et al., 2004). A survey conducted with 1200 pregnant Nigerian women demonstrated that 12% used native herbs (Gharoro & Igbafe, 2000). Herbal medicine product use was more prevalent amongst nulliparous women (42%). A study conducted in South Africa showed that out of 229 pregnant women, 55% had used herbal medicine products during pregnancy (Mabina et al., 1997). Herbal medicine product use was more prevalent amongst nulliparous women (42%). A study conducted in South Africa showed that out of 229 pregnant women, 55% had used herbal medicine products during pregnancy (Mabina et al., 1997). In other study, one hundred and nine out of 392 women (27.8%) reported to have been taking one or more herbal products during pregnancy, in the 36.7% of cases throughout all pregnancy (Ayaz & Yaman Efe, 2010). Results of studies confirmed that herbal medicine has been frequently used by variety patient groups, pregnant and healthy people

#### 3.2 Type of herbal medicine used

More than 100 different types of herbal remedies were cited. The most frequently reported ones were lime, mint, rosehip, lemon, clary, parsley, garlic, nettle, thyme and camomile. The

most commonly used herbs were lime, mint, rosehip and lemon (Nur, 2010). Traditional herbal medicines constitute major parts of the consumption of therapeutic remedies, often the combination with allopathic medicines. Different cultures use herbs located in their geographical locations in different forms for curing common illnesses. Aromatherapy is the use of oils from herbs and other aromatic plants to achieve relaxation or relief from a disorder. Ayurveda and Chinese herbal medicines are ancient healing systems from India and China stresses the mind and body relationship in the maintenance of good health (Sonal Sekhar et al., 2008). Adusumilli et al. determined that patients taking herbal medicine often consumed more than one type of product. Patients also consumed cod liver oil (15.2%), primrose oil (11.2%), herbal tea (53.3%), herbal vitamins (15%), and other herbal supplements (11.3%) (Adusumilli et al., 2004).

Sixty three percent (63%) of Asian women used most common was a vegetarian diet, followed by use of dietary and herbal supplements and alternative medical systems. Females reported a significantly higher use a vegetarian diet, and use of dietary and herbal (Šarić-Kundalić et al., 2010). Herbal practitioners will consider a woman's symptoms and health before creating a treatment plan. There are many herbs that may be used such as black cohosh, ginseng, dong quai and agnuscastus, dependent on the symptoms (Gollschewski et al., 2004).

The most commonly used herbal medicine products during pregnancy were garlic, aloe, chamomile, peppermint, ginger, echinacea, pumpkin seeds, and ginseng (Gharoro & Igbafe, 2000). A survey of 200 pregnant US women demonstrated that 15% used 'home remedies' (most commonly ginger, vitamin B6, chamomile, and cola) in an attempt to relieve morning sickness (Gibson & Powrie, 2001). The most frequently herbs taken by interviewees were chamomile, licorice, fennel, aloe, valerian, echinacea, almond oil, propolis, and cranberry (Ayaz & Yaman Efe, 2010).

The most frequently prepared formulation was an infusion (used in 42.68% of the individually mentioned applications). Other applied preparations mentioned with decreasing frequency were decocts (17.24%), ointments (10.40%), direct application of plants without prior preparation (5.88%), fluid unctions (5.47%), syrups (4.10%) and tinctures or a collars (3.69%), freshly pressed juices (3.42%), powders (2.33%) and finally macerations (1.09%) (Šarić-Kundalić et al., 2010).

### 3.3 Characteristics of herbal medicine user

A research showed that majority of user was male, immigrants, college graduates, and had access to care. Older age, female gender, unmarried, and higher income was associated with use of dietary and herbal supplements; Asian women who reported being vegetarian were more likely to be female, unmarried, spiritual, and self-reported their physical health to be fair or poor (Šarić-Kundalić et al., 2010). Another study was found herbal users were mostly female, were more highly educated and were more likely to live in smaller house holds of one to four people (Nur, 2010). The same study was determined herbal remedies are likely to be used by the young people, females, those with higher education, those with good or excellent perceived health status and those with chronic illness, and it seems essential to offer informational programmes for them (Nur, 2010).



In a study found that there was significant association of herb use with/without drugs with age and employment status. Prevalence of herb use alone was lowest in people aged 65 years and older and highest in 35–44 and 45–54 year-olds whilst concomitant herb–drug use was highest in people aged 65 years and older and lowest in 18–24 year-olds (Picking et al., 2011). Another study stated approximately 18.9% of adults used herbs in the preceding year, but use varied significantly by socio-demographic category and socioeconomic status. Women, for example, were more likely to use herbs than men. Use rates were highest in middle age (21.9% of adults aged 45 to 64 years) and lowest in older adults (10.4% of adults aged >75 years). Hispanics (17.4%) were slightly less likely to use herbs than non-Hispanics (19.1%). Persons of multiple race (32.2%), Asians (24.6%), and American Indian or Alaskan natives (21.9%) had relatively high use rates, whereas blacks were less likely to use herbs (14.3%). Residents of the western United States were relatively heavy users of herbal medicines (24.9%) compared with those in the South (16.3%). Herb use was positively correlated with socioeconomic status. College graduates were more likely to report medicinal herb use (25.3%) than adults who did not graduate from high school (10.4%). Adults with annual family incomes less than US \$20,000 were less likely to use herbs (15.8%) than those who earned more (20.1%). Those with public insurance reported the lowest use rates (13.8%), whereas those with private insurance only reported the highest use rates (21.2%), and 18.1% of uninsured adults used herbs in the preceding 12 months. Herb use was also associated with good health and positive health behaviours. Adults who described their health as excellent (19.3%) or very good (19.6%) were more likely to use herbs than those who described their health as fair (17.4%) or poor (14.3%) who had quit smoking were more likely to use herbs (21.7%) than those who had never smoked (18.2%) or current smokers (18.3%). Adults who exercised >3 times per week used herbs more often (26.3%) than those who did not (16.5%). The relationship between herb use and conventional medical care access and utilization was complex. Many or most adults appeared to use herbal treatments as a complement to conventional medical treatment. Herb use was relatively common among adults who used prescription medicines (20.6%) or over-the-counter medicines (20.6%), and use of herbs increased as total health expenditures increased, with the highest rates among adults from families that spent US \$5000 or more annually on medical care (24.5%). However, there is also some evidence that herbs are being used as an alternative to conventional medical treatment. Adults who delayed (27.7%) or avoided (27.2%) needed medical care due to cost were more likely to use herbs than those who did not. Adults who could not afford to purchase a prescribed drug (26.9%) were more likely to use herbs medicinally than those who could afford their prescriptions or were not prescribed any medications (18.3%). Most users considered herbs and other natural products somewhat important (29.7%) or very important (27.8%) in maintaining their health or wellbeing. Two common acute conditions, head or chest cold (29.7%) and stomach or intestinal illness (10.6%), were the most frequently cited illnesses treated with herbs, but respondents also reported using herbs to treat a variety of chronic conditions (eg, arthritis, anxiety/depression, recurring pain) (Kennedy, 2005). Results of studies given showed that herbal medicine users have been women, person with high education, people with middle and older, individual who have chronic illness, and person those with good or excellent perceived health status.

### 3.4 Use reasons of herbal medicine

Species of the genera *Achillea*, *Hypericum*, *Mentha*, *Teucrium*, *Thymus*, and *Urtica* were particularly highly recommended by the majority of the informants. The most frequently

mentioned indications were urogenital tract disorders, respiratory system disorders, gastrointestinal tract disorders, skin ailments, blood system disorders, nervous system disorders, cardiovascular system disorders, and rheumatism (Šarić-Kundalić et al., 2010). Ivy leaf contains sponging which are considered to have mucolytic, spasmolytic, bronchodilatory and antibacterial effects (Sieben et al., 2009; Gepdiremen et al., 2005). Despite widespread use of ivy leaf extracts, the effectiveness for the treatment of acute cough is not well established (Holzinger & Chenot, 2011). Other study found most frequently used herbal medicine were species from the genera *Urtica* (4.13%), *Olea* (4.13%), *Salvia* (3.83%), *Arctium* (3.39%), *Hypericum* (3.10%), *Rubus* (2.80%), *Centaureum* (2.65%), *Allium* (2.65%), *Matricaria* (2.51%), *Malva* (2.21%), *Aesculus* (2.21%), *Betula* (2.06%), *Achillea* (2.06%), *Plantago* (1.92%), *Lavandula* (1.92%), *Juniperus* (1.92%), *Mentha* (1.77%), *Equisetum* (1.77%), *Fragaria* (1.62%), *Tilia* (1.47%), *Thymus* (1.47%), *Symphytum* (1.47%), *Artemisia* (1.47%) and *Arnica* (1.47%). The most frequent indications were urogenital tract disorders (16.05% of the mentioned applications), respiratory system disorders (16.05%), gastrointestinal tract disorders (14.40%), skin ailments (11.52%), blood system disorders (8.78%), nervous system disorders (7.13%), cardiovascular system disorders (6.58%) and rheumatism (5.90%). Less frequent indications were metabolism disorders (strengthening of the organism; 3.84%), senses disorders (eyes, ears; 2.06%), influenzal infections (2.06%), liver and gall disorders (1.92%), parasitic induced ailments (1.65%), inflammations (0.96%), musculoskeletal system disorders (0.82%) and endocrinological disorders (0.27%) (Šarić-Kundalić et al., 2010). A study determined the reasons for using herbal remedies included that they are natural products (79.8%), for health enhancement (58.9%) and to overcome health problems (32.2%). Nearly three in five people in this study reported using an herbal remedy to overcome health problems or for health enhancement. The major purposes for using the herbal remedies were health enhancement or to prevent possible health problems (58.9%), to treat specific conditions (47.2%), or to cure gastrointestinal (35.8%) or urinary problems (19.2%) (Nur, 2010). Cui et al. found that the most common reason for using Chinese herbal medicine among breast cancer patients was cancer treatment (81.5%), followed by immune system enhancement (12%), metastasis prevention or side effect management (7.9%), and the reduction of menopausal symptoms (4.7%) (Cui et al., 2004). According to these and other survey data, medical herbalism was most commonly employed for allergies, insomnia, respiratory problems, and digestive problems (Ernst, 2005). Alternative herbal based therapies are prevalent and popular in urologic disease in general and prostatic disorders in particular. Typical herbal therapies recommended for benign prostatic hypertrophy (BPH) with some clinical evidence of efficacy includes saw palmetto (*Serenoa repens*), stinging nettle (*Urtica dioica*) and *Pygeum africanum* (Hirsch, 2000). Bee pollen extract (cernilton) has also been used with less evidence of efficacy for BPH. Lower urinary tract symptoms (LUTS) provide a complex but common connection between BPH and chronic prostatitis. Therefore, alternative agents, whether use alone or in combination for treatment of BPH, are also recommended for men with prostatitis (Shoskes & Manickam, 2003). Alternative and complementary therapies are also popular in men with prostate cancer. Since these agents either target prostate cancer cells or the side effects of therapy, they are seldom used in men with prostatitis. Another well-known supplement is zinc. It was one of the earliest factors identified in seminal plasma with an antimicrobial effect. The initial discovery that many men with chronic bacterial prostatitis have low levels

of zincin the semen has led to the longstanding recommendation for zinc supplements in men with all forms of prostatitis (Shoskes & Manickam, 2003). The most commonly used therapy of hypertensive patient was herbal therapy, usually taken as a tea or infusion (Gohar et al., 2008). Some herbalists still recommend white willow to treat headaches, arthritis, and other painful conditions, contending that it is less likely to produce stomach upset and other adverse effects of aspirin (Goldman, 2001). The reasons for taking herbal medicines were diverse, including constitutional symptoms, respiratory complaints, arthritis, gastrointestinal disorders, hormonal and bladder symptoms (Lennox & Henderson, 2003). Kelly et al. stated the reason for taking any product containing herbal and other natural supplements was examined for subjects interviewed in 2002; the 2 most common reasons reported by both sexes were vitamin and supplement diet, at 21% and 12%, respectively. Other common reasons among men were energy (7.0%) and prevention. Women reported health (7.2%) and physician recommended (4.7%) at similar proportions as among males. Energy, menopausal symptoms, and immune booster each accounted for approximately 4% of the use of herbal and other natural supplements among women (Kelly et al., 2005). In general, herbs are effective for treating minor ailments such as digestive problems, flu, cough, headache, and rash. Herbal practitioners will consider a woman's symptoms and health before creating a treatment plan. There are many herbs that may be used such as black cohosh, ginseng, dong quai and agnuscastus, dependent on the symptoms (Gollschewski et al., 2004). Herbal medicine has been used for remedy of so many diseases and decreasing of symptoms and health promotion.

### 3.5 Recommendations source for herbal medicine use

The decision to use herbal products was mainly based on personal judgement and on the conviction that these natural substances would be safer than traditional medicines (Cuzzolin et al., 2010). The decision to use herbal remedies was mainly based on recommendations from the mass media (45.1%). Only 29.1% of users obtained information from their physicians or health providers, and only 37.9% informed their doctors. The decision to use herbal remedies was mainly based on the recommendations of mass media (45.1%), family members (43.1%), friends (32.0%) and neighbours (26.3%). Herbal remedy users obtained herbs from multiple sources. However, purchasing herbal remedies from herb sellers or folk remedy shops were the most common (67.8%) (Nur, 2010).

The most common sources of herbal information were friends and family (68%) and doctors (44%). Among those who reported using herbals, 53% had discussed their herbals use with a physician and 47% had seen a herbals practitioner (Huillet et al., 2011). About half of the patients learned about CAM from their relatives or friends, with more women than men using the therapies (Gohar et al., 2008). Only a small proportion of users (5.2%) consulted a complementary and alternative medicine provider about herbs or other natural products, and only a third (33.4%) told a physician or other conventional medical provider about their herb use (Kennedy, 2005). As expected, factors associated with herbal use included race/ethnicity, having an immigrant family history, and herbal use by other family members. In addition, it was found interactions between having an immigrant family history and herbal use by other family members (Kuo et al., 2004). Seventy-four patients (46%) had informed their family physician that they were on herbal medicines, while 72



patients (44%) stated that their family physician was unaware that they were taking these medications. Of the 162 patients using herbal medicines, 54 were taking them on the advice of their doctor (33%) and 88 were self-prescribing (54%) (Lennox & Henderson, 2003). Women reported physician recommended (4.7%) at similar proportions as among males (Kelly et al., 2005). Of the patients who took herbal medicines, 36% of the patients learned about herbal medicines from friends, 27% from family members, 11% from magazines, 8% from audiovisual media, 6% from newspapers, and 12% of the patients from the Internet and health food shops (Adusumilli et al., 2004). Patients who reported using herbs indicated that they received information about those herbs mainly from family members and relatives. Nevertheless, most patients reported that they preferred receiving herbal information (e.g., on effectiveness, side-effects, and drug interactions) through hand outs or brochures from there. Physicians or pharmacists, followed by having access to a consultation service or a Web site (Kuo et al., 2004).

### 3.6 Method of herbal medicine application or use

Infusions were the most frequently prepared formulation. Other applied preparations mentioned with decreasing frequency were decocts, ointments, direct application of plants without prior preparation, fluid unction, sirups and tinctures or collars, freshly pressed juices, powders, and finally macerations. Balms known as "mehlems" were special to Bosnia and were prepared from freshly chopped or freshly pressed herbal parts of various plants. Warmed resins from *Abies* or *Picea* species, bees wax, raw cow or pig lard, olive oil and honey were used as additives in the mehlem formulations. Representatives of the genera *Arctium*, *Carlina*, *Euphrasia*, *Hypericum*, *Plantago*, *Teucrium*, and *Urtica* were most frequently used in these balms (Sarić-Kundalić et al., 2010).

For medical purpose, dried herbs are usually recommended because their increased concentration makes them more potent than the fresh plants. Leaves and flowers are dried in an airy, shady place; sun bakes out their oils and may also damage other medicinal ingredients. Roots and heavy stems are cleaned, chopped, dried, and then stored in glass jars or other non-metallic containers in a cool, dry place until they are used. Medicinal herbs are most often steeped in boiling water and consumed as a tea. These teas, which can be unpleasantly bitter or strong-tasting, should not be confused with the pleasant, commercially available herbal teas, which contain only a small fraction of the herbs used in a medicinal brew (Sonal Sekhar et al., 2008). It is seen that herbals are used variety shape. This condition increases frequency use.

### 3.7 Adverse effect of herbal medicine

Herbal therapies may produce adverse effects, cause toxicity, or interact with conventional medicines. Moreover, in the majority of countries (with the notable exceptions of Germany, France, and Sweden) herbal products are marketed without proof of testing for efficacy or safety. They are sold as food and dietary supplements under regulations for Current Good Manufacturing Practice, which ensures that they are produced under sanitary conditions but provides no guarantee of purity or efficacy (Nicholson, 2006).

One study determine four out of 109 women (3.7%) reported side effects: constipation after a tisane containing a mix of herbs, rash and itching after local application of aloe or almond

oil (Cuzzolin et al., 2010). Users were more often affected by morbidities pregnancy-related and their neonates were more frequently small for their gestational age. A higher incidence of threatening miscarriages and preterm labours was observed among regular users of chamomile and licorice (Cuzzolin et al., 2010). Many plants are highly toxic. Herbal medicine probably presents a greater risk of adverse effects and interactions than any other complementary therapy. Serious adverse events after administration of herbal products have been reported, and in most cases, the herbs involved were self-prescribed and bought over the counter or were obtained from a source other than a registered practitioner.

In the most notorious instance, several women developed rapidly progressive interstitial renal fibrosis after taking Chinese herbs prescribed by the staff of a weight loss clinic. Herbal products may be contaminated, adulterated, or misidentified. Adverse effects seem more common with herbs imported from outside Europe and North America. In general, patients taking herbal preparations regularly should receive careful follow-up and have access to appropriate biochemical monitoring (Vickers & Zollman, 1999).

Many herbs are highly toxic, even in small doses. Be cautious of homemade remedies, and if you gather wild herbs, be sure you know what you are picking. The following herbs can be fatal: Aonite, Arnica, Beladonna, Yohimbe, Lobelia etc. Researches confirmed some herbals are toxic. So, herbals should be used with physician's suggest.

### 3.8 Cost of herbal medicine

In the UK, cough liquids accounted for sales worth 102 million pounds in 2008 (Proprietary Association of Great Britain, 2009). Coca and Nink (2008) "Supplementary statistical overview," in pharmaceutical prescription among these non-antibiotic cough remedies, herbal preparations containing extracts from the leaves of ivy enjoy great popularity in many European countries (Coca & Nink, 2008; Glaeske et al., 2008; Guo et al., 2006). In 2007, more than 80% of herbal expectorants prescribed in Germany comprised ivy extract and amounted to nearly 2 million prescriptions nationwide and a volume of sales exceeding 13 million Euros (Coca & Nink, 2008).

Most patients reported collecting their own medicinal plants (214/264, or 81%) and a few were supplied with bush medicines by friends or relatives, but little use was made of herbal shops, herbalists, or bush medicine doctors. Bush medicines were used at least every week by 107/264, or 41% of patients surveyed. The frequency of bush medicine use was not clear for 56/264 (21%) of users, possibly because they only took bush medicines when specific illnesses were experienced (Mahabir & Gulliford, 1997).

In most industrialised countries, herbal medicinal products (HMPs) have become increasingly popular and in the Third World they have always been a main source of medical treatment. Survey data show that between 1990 and 1997 the use by US citizens of herbal remedies has increased by approximately 400%. More and more physicians are either referring patients to herbal practitioners or practising phytotherapy themselves (Gepdiremen et al., 2005). US sales figures for herbal remedies have risen almost exponentially and, in 1997, exceeded \$US350 million (Sieben et al., 2009). HMPs are used to treat a large variety of conditions as well as for 'maintenance of health', i.e. disease prevention. HMPs come in guises ranging from a commercially marketed product to a self-made tea produced from home-grown plants. The issue is further complicated by the fact

that several different 'cultures' exist, e.g. European herbalism (often using single herb remedies) and Chinese or Indian herbalism (typically using mixtures of many herbs). The consumer is often led to believe that 'natural' can be equated with 'harmless', yet HMPs are associated with numerous risks. The high level of usage renders rigorous safety assessment of HMPs an ethical imperative (Gepdiremen et al., 2005). The following article attempts to give a short introduction to this area by providing several examples of HMPs causing concern in recent years (Ernst, 2004). It could be not reached adequate literatures about cost of herbal medicine. It is difficult to say about the cost dimension for overall world.

#### 4. Conclusion

Herbal remedy use was common in world wise, especially among females, the more highly educated and those with health-related problems, particularly. Nearly three of five users reported using herbal remedies for health enhancement or to prevent health problems, while almost half of the users wished to over come specific conditions. Almost a third of users were concurrently taking drugs while four of five were not aware of potential interactions with regular medication. Precautions many plants are poisonous. Make sure that you know exactly what is in an herbal remedy before you take it internally. Before using any herbal remedy for a child's illness, consult a paediatricians or paediatric nurse. Take only the recommended dosage. Herbal products that are safe in small amounts can produce severe side effects when taken in larger doses.

Despite the complexity of herbal products, investigations of their efficacy are feasible and desirable, particularly vis-a-vis their popularity. For some but by no mean sell herbal medicines, efficacy data are now emerging. Some herbal medicines are efficacious for certain indications. All herbal medicines are associated with safety issues which are often complex.

Generally speaking, research into herbal medicines is much less active than research into conventional drugs. Lack of commercial impetus due to lack of paten protection is one obvious reason. Another reason may lie in the legal status of herbal medicines: as dietary supplements they are not under any formal obligation to prove efficacy. Based on the data available today, it is impossible to draw general conclusions about the therapeutic value of herbal medicines. Healthcare professionals have therefore been cautious in recommending herbal medicines.

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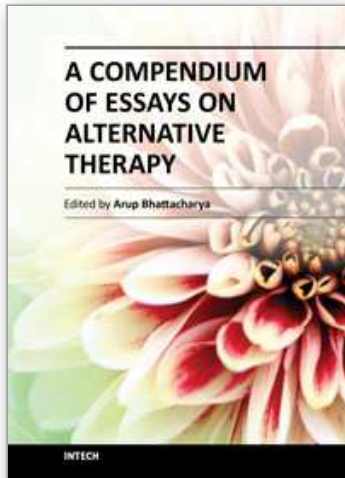
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A Compendium of Essays on Alternative Therapy is aimed at both conventional and alternate therapy practitioners, besides serving as an educational tool for students and lay persons on the progress made in the field. While this resource is not all-inclusive, it does reflect the current theories from different international experts in the field. This will hopefully stimulate more research initiatives, funding, and critical insight in the already increasing demand for alternate therapies that has been evidenced worldwide.

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