

Exploring the 'Herbal Jungle'.

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The general public knows little about herbal medicines, but the popularity and sales of these products have soared with sales totaling \$655 mil in 1994, which is expected to reach \$1.6 bil by 2001. The use of these herbal remedies in the general public is about 3%, but among patients suffering from AIDS, cancer, arthritis, asthma, and other debilitating conditions, the prevalence of these over-the-counter alternative medical remedies is common.

Walk down the "medicine" aisle of any supermarket these days and you will discover a "jungle" of plant-derived remedies or "herbal medicines." Such exotic substances as echinacea, saw palmetto, ginkgo, ginseng, and St. John's Wort casually sit next to the various aspirin, acetaminophen, and antihistamine preparations. Herbal substances are also marketed as beneficial additives in cosmetics, teas, and other food products. Most people know very little about the "medicinal" properties of plants or herbs and yet the popularity and sales of these products are soaring. The total sales of herbal preparations were \$655 million in 1994 and are expected to reach \$1.6 billion by the year 2001 (Gori & Campbell, 1998).

The prevalence of herbal substance use in the general population is estimated at 3%. This is probably a low estimate. Among patients with certain conditions such as AIDS, asthma, arthritis, cancer, anxiety, depression, infertility, premenstrual syndrome, and diabetes the prevalence of herbal use appears to be much higher (Beal, 1998; Blanc, Kuschner, Katz, Smith, & Yelin, 1997; Borins, 1998; Campion, 1993; Coppes, Anderson, Egeler, & Wolff, 1998; DiPaola et al., 1998; Eisenberg et al., 1993). Herbal medicine is probably the most commonly used alternative medical therapy (Brody, 1998; Eisenberg, 1997). There are more than 20,000 products commercially available which are commonly described as "natural" remedies (Gori & Campbell, 1998; Palmer, 1998; Vann, 1998). This number includes a vast array of herbs and products such as algae, shark cartilage, chromium, zinc, hormones such as DHEA, and "ancient" Chinese compounds. Most of these "natural" substances are sold as tablets, teas, or liquids which can improve "well-being."

It is well known that many of our modern drugs are derived from plants. From the early centuries, therapeutic effects of certain plants were evident. In some ancient cultures, specific plants were considered to have "magical healing powers." Digitalis, atropine, senna, and narcotics are notable examples of medications used today that originated in plant form. The pharmacologic properties of conventional medicines derived from plants began with anecdotal evidence. Trial and error methods used in the past resulted in a customary use of certain plant-derived medicines. However, over the years randomized, controlled clinical trials have repeatedly tested the efficacy, dose effects, and side effects of "conventional" plant-derived medications. Clinical investigators have performed a multitude of studies involving such drugs as digitalis, reserpine, morphine -- all plant-

derived agents. With these scientific investigations came an increasing knowledge base regarding indications and drawbacks of these drugs.

Very few of the "herbal remedies" which are commercially available have been subjected to such stringent clinical scrutiny. Most herbal substances have insufficient objective data substantiating health claims. Research studies and clinical use of herbal substances are more common in Europe than in the United States. German investigations of the medicinal value of herbs are particularly prominent in the literature. According to Winslow (1998), results of European studies cannot be used to legitimize use of herbal remedies in the United States. European countries have better regulation over the industry and standardized herbal products are available. In the United States, currently there is a lack of similar regulation and standards and a wide array of variation exists among herbal products. This leaves consumers with unanswered questions about efficacy, safety, and quality of the various available products.

Regardless of the unanswered questions, herbal medicine is said to exist within an "invisible mainstream" in the American health care system (Eisenberg, 1997). This increasing trend deserves the attention of all health care providers since it affects patient health care.

Why the Surge in Use of Herbs?

The literature offers several explanations for the surge in the use of herbal remedies among consumers. According to Vann (1998), there is a pervading sense of skepticism about modern medicine within society. Some people believe that conventional medicines are "unnatural" substances. People have a sense that "natural" substances help the body build on its own resistance. Also, many people are seeking comfort and control for chronic conditions which presently have no medical cure. Many of these individuals often use herbal remedies in addition to conventional medical therapies. Twenty-eight percent of 1,500 people surveyed in 1990 used both conventional and "unconventional" treatment methods for the same disorder. Significantly, 72% of these individuals did not tell their physician about using "unconventional" treatment (Campion, 1993). According to Angell and Kassirer (1998), part of the public's interest in herbal medicine stems from disillusionment with the impersonal care often delivered by conventional medicine. Also, at times, conventional medicine requires harsh treatments for life-threatening diseases. Many patients fear the distressing side effects of some conventional medication regimens and seek alternatives. Certain treatment modalities such as cancer chemotherapy are widely perceived by the public as unpleasant experiences. Often patients feel a loss of control when undergoing certain medical treatments for serious illnesses. Herbal medicine, lifestyle changes, and diet regimens often give patients a sense of control over their disorder.

Another probable factor involves the influence of the expanding cultural diversity within the American population. Many different cultural groups practice customs which involve traditional or folk remedies. Ayurveda, a healing practice rooted in India, makes ample use of herbs. Japanese, Chinese, Korean, and Southeast Asian traditions involve herbal powders and teas. Hispanic and Caribbean healing practices often involve the use of folk remedies containing herbs and heavy metals (Borins, 1998; Keen, Deacon, Delves,

Moreton, & Frost, 1994; Nuttall & Flores, 1997).

Finally, there is an increasing sense of legitimacy regarding the use of unconventional medical therapies. In 1992 Congress established the National Institutes of Health Office of Alternative Medicine to evaluate "alternative" remedies. Also, medical schools have included alternative medicine courses in their curricula. Some health insurers offer coverage for alternative therapies (Angell & Kassirer, 1998). A number of different factors have contributed to an increasing interest and demand for herbal products. Nurses should become familiar with the names and uses of popular herbal substances since these products can influence the presenting clinical picture of the patient and subsequent care.

Popular Herbal Preparations, Promoted Uses, and Reported Drawbacks

The following is a list of popular herbal preparations used by patients. Scientific support for promoted uses are based on anecdotal, equivocal, or preliminary investigational studies.

Aloe vera. Aloe vera gel is a preparation obtained from the leaves of the aloe vera plant native to Africa. The use of aloe can be traced to ancient Egyptian civilization. It is widely used in cosmetic products for emollient and moisturizing effects on skin. It is claimed to have antifungal, antibacterial, and anti-inflammatory properties which enhance healing. Positive dermatologic effects have been reported in a randomized, double blind study of 0.5% aloe vera extract in patients with psoriasis (DeSmet, 1997). Aloe vera yellow sap found at the base of the leaves can aid digestion or act as a laxative (Bown, 1995; Chevallier, 1996). Oral administration of aloe vera juice may reduce fasting blood glucose and triglyceride levels in patients with type 2 diabetes. Studies of more rigorous design are required to confirm these findings related to diabetes and digestion (DeSmet, 1997).

Capsaicin. Capsaicin, a derivative of cayenne pepper, is a pain reliever often found in topical cream. Applied to the skin, it is a mild local analgesic which desensitizes nerve endings. Repeated application of capsaicin can deplete and prevent accumulation of substance P, an endogenous pain mediator. Double-blind studies have shown that topical capsaicin produced more pain relief than placebo in postherpetic neuralgia and diabetic neuropathy patients (DeSmet, 1997; Gori & Campbell, 1998; The Capsaicin Study Group, 1992).

Echinacea. Native to North America, echinacea, also known as purple coneflower or snakeroot, has been promoted as enhancing immunity. It is used to prevent colds, flu, mild asthma, and urinary tract infection. Although its mechanism is unknown, it may enhance the process of phagocytosis by white blood cells. However, there have been reports of immunosuppression caused by prolonged use (Vann, 1998). Chevallier (1996) asserts that echinacea has antibiotic properties. The plant's root contains polysaccharides which may exert antihyaluronidase action and inhibit viruses from entering cells. Also, echinacea contains alkamides which may exert antibacterial and antifungal action. Controlled research studies are lacking regarding echinacea.

Ephedra (ma huang). Ephedra, also known as ma huang in traditional Chinese herbalism, contains ephedrine. Ephedrine is a sympathetic nervous system stimulant. It has been

used as an anti-asthma agent since it stimulates bronchodilation. Ephedra has also been widely used as a weight-loss agent, probably associated with an appetite-suppressing effect. It has been combined with other herbs and marketed as "herbal Fen-Phen." According to Vann (1998), doses used in herbal weight-loss products and cold remedies are typically excessive and the range of side effects are unpredictable. Patients should be discouraged from taking an herbal product containing this herb. Ko (1998) warns that ephedra or ephedrine is an undeclared constituent of many different herbal preparations. Linked to hundreds of adverse events and 17 deaths, ephedra use has been restricted in some countries. Adrenergic effects on the heart and blood vessels can lead to tachycardia and hypertension. It is used in preparations purported to enhance athletic ability. "Herbal ecstasy," an ephedra compound, is marketed as the pill that can give one a "natural high" (Palmer, 1998).

Evening primrose oil. The evening primrose plant is native to North America. The plant's oil is rich in linoleic acid, an essential fatty acid. In the United Kingdom, topical preparations have received approval as treatment for atopic eczema and breast pain or mastalgia. This oil is often added to cosmetics and skin preparations. Oral ingestion of linoleic oil may assist in producing hormone-like substances and is gaining popularity among females seeking relief from premenstrual syndrome and menopausal symptoms (Bown, 1995). However, the scientific literature does not contain significant evidence associated with this use. Also evening primrose oil is touted to relieve pain from diabetic neuropathy. However, in diabetes, primrose oil's effectiveness, dose, method of delivery, and safety issues remain unanswered (Gori & Campbell, 1998).

Feverfew leaf. Feverfew are daisy-like flowers which grow throughout Europe, Australia, and North America. Feverfew has a history as a remedy for fever, headache, and arthritis. Its mode of action is vague; however, it has been used to prevent migraine headaches in Great Britain since the 1980s (Chevallier, 1996; Zink & Chaffin, 1998). Studies have both confirmed and negated these antimigraine effects (DeSmet, 1997). Feverfew appears to inhibit prostaglandin synthesis and is a serotonin antagonist. It was not of significant benefit when compared with placebo in rheumatoid arthritis (Patrick, Heptinstall, & Doherty, 1989).

Garlic. Garlic has been reported to have lipid lowering, antihypertensive, antiplatelet, antioxidant, and fibrinolytic effects. According to DeSmet (1997), animal models and cell cultures have shown that garlic has anti-atherosclerotic activity. However, inconsistent results have been obtained with its antiplatelet aggregation and antihyperlipidemic effects. DeSmet warns that garlic products show considerable variation in concentration of allium, its active ingredient.

Ginkgo leaf (*Ginkgo biloba*). Ginkgo has been used in China since ancient times. It dilates arteries, capillaries, and veins. It is professed to enhance cognitive functions such as memory, concentration, and alertness. Recently, a study revealed the positive effects of ginkgo on dementia of Alzheimer's type (LeBars et al., 1997). There are studies which also show that ginkgo protects against cerebral insufficiency and may prevent cerebral ischemic damage (Kleijnen & Knipschild, 1992). Studies also show usefulness of ginkgo in peripheral vascular disease. In Germany and the Netherlands, physicians recommend ginkgo for arterial insufficiency of the lower extremity (DeSmet, 1997).

According to Gori and Campbell (1998), useful clinical studies are lacking to prove efficacy of ginkgo. Ginkgo's active ingredient antagonizes platelet activating factor and is being investigated for various conditions such as asthma, shock, graft rejection, and anaphylaxis. According to DeSmet (1997), currently ginkgo biloba is one of the top bestselling herbal medicines around the world. However, there have been reports of spontaneous bleeding associated with ginkgo (Palmer, 1998; Vann, 1998).

Ginseng. Ginseng is marketed as a substance which can build the body's resistance to stress, increase energy, treat impotence, elevate mood, and lower cholesterol. This herb is seen as an additive in many consumables, such as tea beverages. There are several different species of ginseng which confounds understanding of the herb. Although many report its effects are not adequately studied, others report benefits. Some assert ginseng reduces LDL cholesterol and fasting blood glucose levels (Gori & Campbell, 1998; Sotaniemi, Haapakesh, & Rautio, 1995; Vann, 1998). Ginseng preparations vary widely in composition. A recent analysis of 50 commercially available ginseng products revealed a wide range of concentrations of ginsenoside, the active ingredient. Forty-four preparations contained 1.9% to 9.0% ginsenoside and six contained no ginsenoside (Cui, Garle, Eneroth, & Bjorkhem, 1994). Also, one study reported an interaction between furosemide (Lasix[R]), a commonly prescribed diuretic, and ginseng which resulted in hospitalization (Becker, Greene, & Evanson, 1996). Ginseng has also been associated with estrogenic effects leading to vaginal bleeding and mastalgia (Greenspan, 1983; Punnonen & Lukola, 1980).

Ginger root. According to DeSmet (1997), several studies suggest that ginger root can relieve symptoms of motion sickness, acting differently from antihistamines. Also ginger root has been studied as an anti-emetic agent in hyperemesis gravidarum and postoperative nausea and vomiting. According to Beal (1998), ginger root is one of the most common herbs used for nausea of pregnancy or "morning sickness."

Kava. Kava is derived from *piper methysticum* a plant which grows in the Pacific Islands. For centuries this root has been chewed by natives of Fiji and neighboring islands for its relaxing and calming effects. Kava-based beverages are commonly served in the regions (Grady, 1998). According to DeSmet (1997), several clinical studies have suggested that kava may alleviate mild anxiety. In a randomized, double-blind study, treatment with kava for 4 weeks reduced the mean Hamilton Anxiety Score whereas placebo did not. Adequate assessment of therapeutic and possible adverse effects require further study.

PC-Spes. PC-Spes is an herbal combination which consists of chrysanthemum, isatis, licorice, saw palmetto, skullcap, and others. Its name PC-Spes stands for prostate cancer (PC) and a latin word, "spes," meaning hope. This is a dietary supplement which has estrogenic activity and causes significant reductions in serum testosterone levels. It has recently been studied in patients with prostate cancer who showed clinical reduction in prostate surface antigen. Adverse effects of PC-Spes were similar to those of estrogen in males -- breast tenderness and impotence (DiPaola et al., 1998). More research regarding this herbal preparation's effect on prostate cancer will be done in the near future.

Quinine (Chinchona tree bark). Quinine, a derivative of the chinchona tree, was used for its effect against malaria many years ago. In recent years, randomized, double-blind trials

have shown that an oral dose of 200 to 300 mg at bedtime can reduce nocturnal leg cramps. The potential benefits of this preparation must be carefully weighed against the small risk of serious toxic reactions such as thrombocytopenia and hypersensitivity (DeSmet, 1997).

Saw palmetto. Saw palmetto is a plant which grows along sand dunes from South Carolina to Texas. The berries of this plant are reported to have diuretic properties and can assist in treating urinary tract disorders (Chevallier, 1996). Extracts of saw palmetto contain fatty acids and sterols which have anti-androgenic activity in cell cultures. Known as the "man's herb," the extract is a widely used preparation in Europe to treat benign prostatic hyperplasia (BPH). It may be a useful adjunct to medical treatment or alpha-blocker therapy in BPH. There is a scarcity of supportive clinical studies. Recently, DiPaola and colleagues (1998) tested the extract of saw palmetto in combination with other herbal substances (called PC-Spes) to treat prostate cancer.

PC-Spes reduced prostate surface antigen, a tumor marker for prostate cancer. However, some patients suffered side effects such as deep venous thrombosis. PC-Spes may have some potential therapeutic benefit in prostate cancer. More clinical studies are needed to substantiate this claim.

St. John's Wort. St. John's Wort has been used in treating psychiatric disorders since the 15th century. A resurgence in interest has developed in its extract, hypericum perforatum, as a "natural anti-depressant." It is marketed as a remedy for depression, premenstrual syndrome, and menopausal symptoms. This herbal substance is pharmacologically similar to a monoamine oxidase inhibitor. The FDA lists this as a new investigational agent. Several studies found St. John's Wort to be more effective than placebo for treating mild to moderate depression (Linde et al., 1996). Research has not shown this herbal substance useful in treating major depression. Recently the National Institute of Mental Health announced plans to conduct a formal research study into this issue (Alexander, 1998). Since monoamine oxidase (MAO) inhibition creates a surplus of norepinephrine in the neural synapse, consumers should be cautioned about this herbal remedy. Certain tyramine-containing foods such as aged meats and cheeses, wine, and certain cold medications are contraindicated in combination with MAO inhibitors. Hypertension is a potential side effect. Also, people taking selective serotonin reuptake inhibitors (for example, fluoxetine [Prozac[R]]) or tricyclic antidepressants in combination with St. John's Wort may be at risk for serotonin syndrome. This syndrome is characterized by confusion, shivering, agitation, fever, diaphoresis, diarrhea, and hyper-reflexia (Vann, 1998).

Valerian. Since ancient Roman times, valerian root has been used as a sedative and relaxant. It is a plant which grows wild in Europe and Asia. The name is derived from the Latin "valere," "to be well." According to Chevallier (1996), extensive research from Germany and Switzerland confirm that valerian induces sleep, improves sleep quality, and lowers blood pressure. Available in tablet form, it is also used to relieve stress and anxiety. Its purported mode of action involves prolonging the effects of an inhibitory neurotransmitter. This has not been scientifically proven.

How Safe Are Herbal Medicines?

Lack of regulation. Within the United States, herbal products are considered dietary supplements, not drugs. Dietary supplements are exempt from FDA regulation. In 1994, Congress passed the Dietary Supplement Health and Education Act, which distinctly separated the dietary supplement industry from the FDA. Herbal preparations are specifically marketed without any claims of diagnosing or treating a condition. Many products make no claims about proof of efficacy or warnings about side effects (Borins, 1998). Dietary supplements are not obligated to undergo the same quality checks as over-the-counter (OTC) medications. With regard to food products, the FDA intervenes after a substance has been reported harmful (Angell & Kassirer, 1998; Love, 1998; Palmer, 1998; Zink & Chaffin, 1998).

Conventional OTC medications are subjected to a multistep approval process designed to provide proof of efficacy and safety (Palmer, 1998). Herbal preparations do not undergo this process, leaving us with a scarcity of information regarding side effects (Zink & Chaffin, 1998).

The increasing trend of herbal medicine usage has prompted governmental action to safeguard consumers. Recently the FDA proposed regulations for "good manufacturing practices" in the dietary supplement industry. Also a federal Commission on Dietary Supplement Labels has been instated. Because of these initiatives, more regulation and standardization is in progress within the industry. Herbal medicines are being produced by increasing numbers of reputable manufacturers.

Lack of standardization. There is disparity in herbal product content since the amount of "active ingredient" varies from product to product. There is no clear standard regarding the quantity of active ingredient which is an effective or toxic dose. This creates difficulty in assessing the safety of an herbal product and this issue prompted the World Health Organization to issue the following statement in 1991: "If an [herbal] product has been traditionally used without demonstrated harm, no specific restrictive regulatory action should be undertaken unless new evidence demands a revised risk-benefit assessment" (McGuffin, Hobbs, Upton, & Goldberg, 1997). Although herbal products do not undergo the scrutiny of other OTC medications, there are some mechanisms available to evaluate safety within the industry. The American Herbal Products Association (AHPA) publishes a botanical safety handbook which can be used as a dosage guide for herbalist practitioners. The AHPA evaluates safety of herbal preparations based on "normal human consumption patterns." They use a disclaimer which asserts that the "relative safety of an [herbal] product depends a great deal on the health of the consumer ... any person who utilizes an herb based on the classifications does so at their own risk." Currently there is no obligatory standard for product labeling and this is left to the discretion of the manufacturer.

Quality control of herbal products is another issue. Herbal product quality can vary from one manufacturer to another or from one lot to another. The composition of herbal substances is affected by a multitude of factors such as part of the plant used, species of the plant, time of the year harvested, soil type, and processing temperatures (Alexander, 1998). The same herbs may have different chemical properties depending on the species, conditions of their environment, and method of processing.

Cited contamination. Contamination has been a problem repeatedly cited in research studies involving less common herbal medications. In 1992, hai ge fen (clamshell powder), an herb imported from China, was found to contain significant amounts of lead. Severe anemia and acute abdominal pain requiring hospitalization was reported after ingesting tea brewed with this herb (Markowitz et al., 1994). Some traditional Chinese herbal substances found in retail stores contain contaminants and ingredients unlisted on the label (Espinoza, Mann, & Bleadsell, 1995; Ko, 1998; Gertner, Marshall, Filandrinos, Potek, & Smith, 1995). In chemical analysis, common undeclared pharmaceutical ingredients include ephedrine, chlorpheniramine, methyltestosterone, and phenacetin. Heavy metals such as lead, arsenic, and mercury have been found in Asian medicines and herbal remedies from India (Borins, 1998; Keen et al., 1994; Ko, 1998; Markowitz et al., 1994). Neurotoxicity, nephrotoxicity, hepatotoxicity, and cardiotoxicity can result from heavy metal ingestion.

Reported hepatotoxicity. Significant hepatotoxic effects have developed because of the lack of quality control and standardization among herbal products or dietary supplements. Acute hepatitis has been linked to ingestion of Jin Bu Huan Anodyne tablets, a Chinese herbal product. Available in the United States for the past 10 years, Jin Bu Huan contains a morphine-like substance which is used as a sedative and analgesic. Hepatotoxicity has been reported with many other "natural" herbal products such as germander, chaparral, senna, mistletoe, skullcap, comfrey, and herbal teas (Borins, 1998).

Cheun-Lin, a popular Chinese herb commonly given to newborns within the Chinese community, has caused jaundice. This herbal substance can displace bilirubin from serum protein binding sites (Borins, 1998). High bilirubin levels are particularly harmful to the newborn's maturing brain.

Conventional drug-herbal substance interactions. Many people self-medicate with herbal substances and take conventional medications simultaneously. Drugs and herbal preparations can have harmful additive or counteractive effects. For example, ginseng counteracts the diuretic effects of furosemide; particularly harmful in patients being treated for hypertension (Borins, 1998; Vann, 1998). Ginseng also has estrogenic effects and should not be taken in conjunction with hormonal therapy. Uterine bleeding can occur (Vann, 1998).

Some herbal preparations can have major cardiovascular effects. Ephedra (ma huang) has adrenergic effects which can raise blood pressure and stimulate heart rate. Herbal preparations with this ingredient should have cautionary warnings particularly for those taking antihypertensive medications or MAO inhibitors. Ephedra is a stimulant and is often marketed as a "natural energy boosting" medicine.

Garlic and ginkgo inhibit platelet aggregation, they can be synergistic with anticoagulants, such as warfarin. Prolonged use of ginkgo has been linked to reports of bleeds such as subdural hematoma (Rowin & Lewis, 1996).

St. John's Wort inhibits uptake of the neurotransmitters serotonin, norepinephrine, and dopamine as do many conventional antidepressant medications. Although there is no objective evidence, antidepressant medication and St. John's Wort in combination may

have harmful synergistic effects (Zink & Chaffin, 1998).

Abuse potential. Certain herbs are associated with abuse for hallucinogenic effects. Jimsonweed or angel's trumpet is a plant that has been ingested for recreational purposes. There have been reports of its abuse in Florida, California, and New York. The patient experiences CNS stimulation and anticholinergic side effects in varying degrees. The symptoms include mydriasis, flushed skin, fever, urinary retention, agitation, tachycardia, and hypertension (Forno & Terry, 1998; Palmer, 1998).

Implications for Nursing

Nurses should become educated about the herbal products patients are consuming. A comprehensive assessment requires the nurse to identify prescribed medications, OTC medications, dietary supplements, and alternative therapies used by the patient. Use of alternative therapies can have a substantial impact on the patient's condition. During the patient interview, a nonjudgmental approach is essential so that patients feel free to disclose use of alternative therapies. Often patients neglect to report use of herbal substances because they underestimate the significance of these substances in relation to their whole clinical picture. Some patients may be reluctant to divulge information about use of "unorthodox" therapies to those seen as "conventional" health care providers. Nurses should ask patients about their use of all alternative therapies including herbal medications.

Herbal substance use is an important aspect of patient assessment and may influence nursing interventions. Patients may seek advice from nurses regarding the use of certain herbal substances. The nurse may be asked questions about the efficacy and safety of herbal preparations.

Answering the Patient's Questions

How should the nurse answer patient inquiries regarding herbal medicine? According to Eisenberg (1997), it is in the patient's best interest to undergo a complete medical evaluation prior to self-medicating with herbal substances for symptoms or illness. A detailed discussion about alternative therapies should not occur until the patient has:

- * Undergone complete conventional medical evaluation including diagnostic assessment and where indicated referral to consultants.
- * Been advised of conventional therapeutic options.
- * Tried or exhausted conventional therapeutic options or refused these options for reasons documented in his/her record.

Nurses need to make patients particularly aware that review of the literature fails to provide unequivocal documentation of safety or efficacy of herbal remedies. Ideally there should be an open dialogue between patients and health care providers about available treatment regimens, whether conventional or unconventional.

Patients and health care providers share the task of decision-making regarding treatment choices. Nurses should be well informed about the uses of herbal medicines and the potential problems associated with these substances. When patients discuss use of herbal medicine or alternative therapies, nurses should not be critical or judgmental. It is most important for nurses to keep the lines of communication open, respect patient autonomy, provide accurate information, accurately document herbal drug use, and assure patient safety. This is a difficult task but essential, in the face of so many unanswered questions regarding herbal medicine.

Conclusion

A dearth of information exists about herbal remedies, yet patient use is on the rise. For now, it is a mutual journey into the exotic herbal jungle for patients and all health care providers. Advice for the consumer can be summed up in the adage "let the buyer beware." However, for nurses and other health care providers, the advice is "be informed and aware."

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