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**FILE: ■Aromatherapy
■Essential Oils**

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RE: Aromatherapy: Apart from or a Part of Modern Herbalism?

Buckle J. Aromatherapy: What is it? *HerbalGram* 2003;57:50-56.

The author examines the roots and uses of aromatherapy, a field which, while separate from herbal medicine, is clearly derived from it. Many popular, low-cost, so-called aromatherapy products marketed today are made from inexpensive synthetic fragrances and are intended simply for pleasure. While Buckle discusses many issues that are in disagreement among aromatherapists, virtually all practitioners seem to agree that synthetic fragrances have no place in the field. Such compounds have been linked to the growing epidemic of fragrance sensitivity, as well as to asthma and allergies. By contrast, true aromatherapy uses essential oils, volatile parts of aromatic plants extracted by steam distillation or expression. (Expressed oils are obtained only from the peel of citrus fruits [*Citrus* spp.]). According to the author, not only synthetic fragrances, but oils obtained by solvent extraction, direct heat, or even carbon dioxide extraction are unacceptable to the purist.

Aromatic plants have been used for healing since Neanderthal times, and there are references to their use in ancient Chinese, Indian, Tibetan, Australian and New Zealand, North and South American, Egyptian, Roman, and Middle Eastern sources. Traditionally, aromatic essences were inhaled, applied topically, or ingested. Aromatherapy did not become separate from herbalism until modern times, when the advent of pharmaceutical drugs all but extinguished herbal medicine. As herbal medicines in general were in decline, the word "aromatherapy" was coined by the French chemist Gattefossé, "the grandfather of aromatherapy" in his 1937 book, *Aromathérapie: Les Huiles Essentielles Hormones Végétales*. In the same year, Hunt, an Englishman, wrote *Fragrant and Radiant Healing*, in which he discussed using plant scents as "aromatherapy." In the 1950s, a "renaissance" in aromatherapy occurred in France and was later exported, in altered form, to England. French physicians used all three traditional methods of essential oil use, as seen in Valnet's 1964 *Aromathérapie (The Practice of Aromatherapy)*, and again in Belaiche's three-volume *Traite de Phytothérapie et d'Aromathérapie* (1979). Maury, an Austrian nurse who worked in France before World War II and helped renew interest in aromatherapy in the U.K. during the 1960s, chose to introduce its benefits (i.e., for skin conditions such as psoriasis) to beauticians rather than to the medical profession, believing that beauticians would be more interested in it. Maury and her assistant, Ryman, viewed essential oils as drugs which could not be taken orally without a prescription; as a result, oral applications were not introduced into England along with topical and inhalation applications. The oral use of essential oils (sometimes called "aromatology") has been used in the U.K. since 1998.

In England, nurses are trained and insured by the Royal College of Nurses to use essential oils, both topically and inhaled, to improve patient care and may do so without a doctor's specific order. Some

hospitals also allow non-nursing personnel to use essential oils. This adjunct therapy involves massage with very low concentrations of essential oils in a carrier oil. In France, nurses do not give aromatherapy massages, but some physicians administer essential oils orally. Aromatherapy massage is also used by nurses in Australia, New Zealand, Canada, Germany, and Switzerland; over 30 states in the U.S. allow aromatherapy and other complementary therapies as part of holistic nursing care. Buckle points out that during such massage, inhalation invariably takes place.

Aromatherapy may produce both psychological and physiological effects. Psychological effects, such as relaxation or stimulation, can be very rapid; physiological effects from topical application (i.e., warming or cooling) are also usually quick to occur. Gattefossé wrote, "Knowledge of how smells are absorbed... is important because, to be effective, they must penetrate the skin... Gases and thus aromas...incorporated in glycerides, readily penetrate the skin where the blood can transport them." The assertion that essential oil components could be absorbed through the skin into the blood was apparently controversial for some years, but has been demonstrated in numerous human and animal studies; some have found that lipophilic compounds in essential oils can penetrate the blood-brain barrier. Researchers have reported an increase in cerebral blood flow in the cortex of healthy human subjects after inhalation of an essential oil; in one case, this occurred in a subject with anosmia (inability to smell).

Buckle mentions many clinical uses of aromatic oils in discussing methods of administration, the importance of the sense of smell, and antimicrobial effects of essential oils. For example, Valnet used essential oils for infection, writing, "Essence of thyme (*Thymus vulgaris*) destroyed the anthrax and bacillus and was a stronger antiseptic than phenol." Many essential oils have antibacterial, antifungal, and antiviral properties, and some studies have found them effective even against methicillin-resistant *Staphylococcus aureus* (MRSA), resistant *Shigella*, and resistant *Escherichia coli* bacteria. Buckle describes a case study of a chronic case of MRSA osteomyelitis in which a man's leg was saved from amputation by an ingenious topical application of essential oils of West Indian lemongrass (*Cymbopogon citratus*), eucalyptus (*Eucalyptus* spp.), tea tree (*Melaleuca alternifolia*), clove (*Syzygium aromaticum*), and thyme. Many studies indicate antimicrobial actions of essential oils: rosemary (*Rosmarinus officinalis*) against opportunistic infections; sandalwood (*Santalum album*) against herpes simplex 1 and 2; West Indian lemongrass against ringworm and other dermatophytes; tea tree oil against MRSA and was found more effective in head-to-head comparisons with a common antibiotic nasal ointment (mupirocin) and body wash (triclosan). In addition, citrus oils may enhance immune function.

Essential oils also have applications in pain relief and management. Topical applications of English lavender (*Lavandula angustifolia*), Roman chamomile (*Chamaemelum nobile*), neroli (a.k.a. sour orange; *Citrus x aurantium*), mandarin (*Citrus reticulata*), sandalwood, palmarosa (*Cymbopogon martinii*), and geranium (*Pelargonium* spp.) were found to enhance pain relief in children with human immunodeficiency virus (HIV). West Indian lemongrass has topical analgesic effects and enhances the effects of morphine. Topical application of Roman chamomile reduced perception of pain in cancer patients in a randomized study. Buckle points out that in these studies diluted essential oils were applied via massage, making it difficult to assess which analgesic effects were due to the oils and which to massage. However, a single-case study found inhaled essential oil of Damask rose (*Rosa damascena*) highly effective in reducing perception of chronic pain in a patient with uncontrollable pain despite patient-controlled morphine. German or common chamomile (*Matricaria recutita*) has anti-inflammatory properties thought to be comparable to hydrocortisone, due to the actions of chamazulene, a bright blue sesquiterpene, released during distillation.

Psychological uses of essential oils include reducing depression (basil [*Ocimum basilicum*], bergamot orange [*Citrus bergamia*], lavender, patchouli [*Pogostemon cablin*]), improving cognitive function (lavender, clove), promoting relaxation (lavender, bergamot), and stimulating creativity (eucalyptus).

Of the over 200 essential oils used in aromatherapy today, eight are specifically approved by the German Commission E. While these are listed in Table 1, no information is given on the conditions for which they are approved, dosages, or methods of use. In addition, the term "essential" or "volatile oil" is used 100 times in the index of the Commission E monographs, since several herbs listed contain essential oils. Many

plants, while safe to use in herbal medicine, are not safe to use as essential oils, or may be safe only in certain applications. When the whole plant is used, the percentage of essential oil is tiny, but in concentrated quantities, it may be, as with arnica (*Arnica montana*) "highly toxic," while others, such as cinnamon (*Cinnamomum verum*) may cause burns or blistering if applied topically. Buckle points out that even though the Commission E monographs refer to "arnica oil," this is not the essential oil, but an extract of 1 part whole herb to 5 parts inert oil. In addition, some essential oils have been found to affect topical application of conventional drugs such as haloperidol and chlorpromazine. The author urges clinical training for anyone using essential oils for a clinical condition and states that even if these oils are not being used clinically, it is wise to understand how to use them safely. She advocates training separate from herbal medicine for aromatherapists, based on lack of crossover between the two modalities in terms of plants and methods used, but says that today, "most...aromatherapy courses focus on pleasure rather than clinical outcomes."

Given the promising clinical evidence for essential oils' clinical applications, at least some common training for herbalists and aromatherapists would seem beneficial for both disciplines.

— *Mariann Garner-Wizard*

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