VELAS LARGAS
HEALTH CARE EQUIPAMENT

WHAT IS AROMATHERAPY?

Aromatherapy refers to the therapeutic use of essential oils that come from vegetable world. In order to use the essential oils for medical purposes, they should be checked on a quality level, pure, standardized in their constituents and biological as well. A medical prescription and a pharmacist preparation are always necessary before using the oils for therapeutic, unless pharmaceutical or herbal products, regularly sold on the market are used.

The actual term "aromatherapy" first originated in 1937 when French chemist Rene-Maurice Gattefosse invented the word after a burn incident spurred his curiosity about the healing power of essential oils. On the heels of Gattefosse's "discovery" that lavender oil helped to cure his burn, French surgeon Jean Valnet used essential oils to help heal soldiers' wounds in World War II, proving the medical benefits of aromatherapy.

The method used to apply (topic use) or administer (inhalation and internal use) the essential oils, can contribute to the efficacy of the treatment; the general result of the whole therapy is, however, strongly influenced by the therapist-client's relationship, known as "therapeutic relationship". The most common methods of application/administration of the essential oils are the inhalation and the external applications, such as massages, baths and wraps.

The most common form of treatment is the massage with the essential oils.

The massage, thanks to the mechanical movement of the hands, facilitates the absorption and penetration of the essences on the skin. The aromatic molecules penetrate through hair follicles and sweat glands and, since they are soluble in the lipids, they can penetrate through the hydrolipidic film of the skin as well.

The underlying blood capillaries can then absorb the oil and let it circulate in the blood throughout the body. A different degree of absorption of the aromatic components in the blood has been calculated, varying from 4 to 25 per cent (corresponding to about $8 \times 10 - 6$ and $1 \times 10 - 5$ g/ml di O.E.), when 5 ml of an essential oil diluted to 2 per cent in a carrier oil are applied on the skin of a Rhesus Monkey or of a man (Bronough et al., 1990). Many aromatherapists administer great quantities of essential oils, orally or per rectum (Penoel and Franchomme, 1991), thus obtaining an higher concentration of the components in the blood.

The biological tests used to describe and explain the function of the volatile oils, are usually carried out on mice, rats and toads, such as the influence of the peppermint essential oil on the intestinal transport (Beesley et al., 1996); the effect of the volatile oil on the permeability of the skin (Abdullah et al, 1996); the effects on the fibers of the skeletal muscles (Fogaca et al., 1997) and the screening of the essential oils for the study of analgesic properties. (Aydin et al., 1996) and anti-inflammatory ones. (Maruyama et al., 2005).

VELAS LARGAS, HEALTH CARE EQUIPAMENT
Rua Dr. António Martins, Número 44, 2º Esq, Benfica, Lisboa, na freguesia de São Domingos de Benfica, Portugal
Email: info@velaslargas.com
Website: www.velaslargas.com

A growing number of aromatherapists and physicaltherapists are using the essential oils both for private use and in hospital settings, and some results regarding the positive effects of the essential oils have been reported on the most important magazines about aromatherapy. (The Aromatherapist Journal, Aromatherapy, The International Journal of Aromatherapy).

The Four Most Common Therapeutic Uses of Aromatherapy

The scents of the various compounds used in aromatherapy are meant to create specific results. From stress relief to immune function improvement, aromatic plants and their essential oils have a wide range of therapeutic uses. The most common ways in which aromatherapy is used therapeutically are:

- **Energy enhancer** :the use of oils such as Orange, Grapefruit, Peppermint, Basil, Ginger to boost your energy be able to keep you alert during any sort of repetitive or routine tasks because it will stimulate certain areas of the brain.

- **Mood booster** : It is known that the scent of Bergamot, Melissa (Lemon Balm), Geranium, Peppermint, Orange, Jasmine, and Sandalwood are all "uplifting" and greatly improve the mood of those who inhale their aromas.

- **Stress reducer** – Scent is meant to stimulate but also to calm, and that is why one of the most common ways that aromatherapy is used therapeutically is for stress relief. It is also why so many practitioners will tell you that aromatherapy works for headache, a racing or accelerated heartbeat, and even indigestion because they are viewing the stress relieving properties of the compounds used. Lavender, Chamomile, Ylang Ylang, Sandalwood, and Bergamot are great resources for stress.

- **Memory :** Studies have been done to see if recall is improved when associated with smell, and the evidence points to it being a valid theory. Thus far, the scents most often used to trigger improved memory are Rosemary, Lemon, and Clary Sage, though Basil and Bay Laurel show good results too.

MEDICAL AROMATHERAPY

The determination and grouping of hundreds of different aromatic compounds which fall within the composition of the essential oils, represents an important stage in the understanding of their own therapeutic function; there are, however, specific properties for many aromatic molecules. Despite this, it is important understand that, if, for example, you should treat an infection, it is more logical to consider an essential oil rich in phenol or monoterpene alcohol rather than an essential oil rich in ester; on the contrary, in the treatment of a spasmodic condition, the probability of obtaining a good result is greater if you use an essential oil rich in ester or ether.

The aromatherapists are very well informed about the important relationship between the aromatic molecules' chemical structure and their own physiological and pharmaceutical properties and activities.

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Unfortunately, sometimes this relationship has been seen in a very simplistic and generalized way. For example, it has been said that ketones are neurotoxic, but now it is universally accepted that not all the molecules with functional ketone groups are neurotoxic. However, in the presence of a possible risk, the attitude to generalize this danger, although inaccurate, is safer than a behavior that would hide the risk.

There are many more advantages than disadvantages in using the functional aromatic molecules approach. After all, many categories of synthetic drugs have been created following the model of molecular structure and functional groups of plants (Penoel, 1999).
Some advantages in knowing the aromatic molecular language are:

1. The understanding of the importance of chemotypes

2. The flexibility in using the essential oils; if a specific essential oil is not available, the active molecule required can be found in another oil.

3. The creation of effective aromatic synergies.

4. A better communication between pharmaceutical and medical facilities, more easily understandable to them rather than the energetic and holistic thought and route.

Nevertheless, our intention is not to reduce the aromatherapy to molecular structures. Our great admiration for the aromatic plants and the deep respect for the typical English practice, that is soft and holistic, does not allow us to adopt such a reductionist attitude. A realistic attitude should recognize that the essential oils can become a very practical and simple way to treat the most common illnesses. Besides, a better knowledge of the molecular language does not necessary imply the total abandonment of the holistic health strategies that, on the contrary, can be strengthened.

Medical applications of the essential oils
A medical consultation consists of three main orientations:

1. A curative proposal

2. A preventive action

3. A research on the health improvement (for example: I'm fine, but I would feel better and improve my potentialities on the whole.)

The essential oils can be used in all the three orientations. In most cases, in orthodox medical practice , a patient is given a pharmaceutical product for a specific disorder and he/she would like to stop taking medicine as soon as possible. With the high quality essential oils the situation is completely different: they can integrate themselves in our life in a very harmonious way. Thanks

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to our experience we know that the care, prevention and evolution often go together when we consider the aromatherapy.

We can divide the therapeutic aromatic applications in three main aspects:

1. Aromatic emergency procedures

2. Aromatic intensive care

3. Aromatic regular care (for chronic conditions)

As for the emergencies, the essential oils' action, especially in traumatic cases, is so massive and fast that aromatherapy is completely distinguished from herbal therapy. For what concerns acute diseases, in particular for bacterial and viral infections, the employment of intensive technique of aromatic treatments offers the best chance of success and faster healing. The intensive aromatic therapies employ all possible penetration methods of essential oils in a concentrated form and in a repetitive way.

The aromatic intensive care is also recommended in the interruption of the vicious cycle of chronic diseases and respiratory infections. A daily use of the essential oils is recommended rather than waiting for the recurrence of bacterial invasions and the consequent use of antibiotics for a period of at least 10 days. In this case, the therapeutic treatments for chronic conditions and the preventive treatment are closely linked. The main reason for the efficacy of the essential oils is certainly the global, intelligent and harmonious action which does not cause bacterial mutations and therefore resistance, but, on the contrary, it respects the microflora balance and strengthens the immune system.

Preventive care

The preventive aromatic treatments, especially the evolutionary ones,, represent a personal choice rather than an absolute necessity. The aromatherapists state that a regular application of the essential oils produce many positive effects, with a low investment in term of cost and time. Among all other forms of natural medical therapies, the relationship between investment and efficacy is probably the best. It is, however, very important to use always high quality essential oils.

Synergy of essential oils

Some essential oils in blend produce an effect of mutual reinforcement, as a consequence, the overall effect of the mixture is superior than the effects of the individual parts added. "horizontal" and "vertical" synergistic blends of essential oils can be distinguished.

An horizontal functional molecular synergy mingles essential oils containing similar functional groups. For example, different essential oils rich in monoterpenic alcohol, such as "palmarosa" (Cymbopogon martini, rich in geraniol), tea tree (Melaleuca alternifolia, rich in 4- terpineol) and thymus ct. 4-tuianolo (Thymus vulgaris) and Thymus saturoides rich in borneol.

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A vertical functional molecular synergy mingles essential oils containing different functional groups. For example, a synergists blend may contain antimicrobial molecules (monoterpenic alcohol, as mentioned above), mucolytic molecules (such as monoterpenic ketones) and antispasmodic molecules (including some esters). This approach is the most logical, since, a disease generally involves different pathophysiological processes that can be treated with specific aromatic molecules.

In any case, it is always very important to explain what is being used and why it has been chosen.

The therapeutic methodology

When using the therapeutic methodology of aromatherapy, some choices regarding the treatment to be applied should be taken into consideration, in particular how to use the essential oils and how other therapies can be used at the same time. The following factors should be taken into consideration:

1. It is a mono-therapy treatment (aromatherapy is only used), or multi-therapy (aromatherapy combined with conventional medical treatments)

2. It is a mono-aromatic treatment (only one essential oil is used), or multi-aromatic (two or more essential oils are used in horizontal or vertical synergy)

3. It is a mono, bi- or three, interface treatment. The essential oils can be applied through the skin, through the respiratory system and/or the digestive system.

4. What areas are considered in each interface and what is the concentration of the essential oil or of the synergistic blend?

5. A single blend (in relevant and appropriate dilutions for each interface) has been used, or different mixtures for each interface?

6. In each case, what is the duration of the treatment?

A well-studied treatment corresponds to the realization of a comprehensive program that will take into consideration the following factors:

1. The patient medical condition

2. The patient's ability to carry out the program, taking into consideration the psychological aspects, the life style and every financial limitation.

3. The attitudes and reactions of the people who are in close contact with the patient.

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Generally, it is possible to ask for a greater effort for a short period of time, or for a continuous but moderate or slight effort for a long period of time. The request of a greater effort for a long period of time is not realistic at all.

Properties and action mechanisms of the essential oils

Despite their own diversity and variability in the chemical composition and in the specific therapeutic effects, all the essential oils have in common some general properties: antiseptic, antibacterial, antifungal, antiviral, analgesic, anti-inflammatory, anti-toxic, digestive, draining, toning, healing, hormonal, immune, mucolytic, expectorant, antispasmodic.

Conclusions

According to the folk medicine as well as the aromatherapy, the essential oils have been used and still they are, as therapeutic agents. Beside their pleasant flavour these natural compounds produce significant biological and pharmacological effects on different experimental models, mainly due to their lipophilic nature. The analytic knowledge of the composition of the essential oils allows a more specific application as well as a more detailed knowledge of the action mechanism contributes to give a greater prominence to the aromatic components: these two conditions allow an appropriate use of the essential oils in different fields of application.

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