Clinical aromatherapy as a complementary care ? Let's talk about it !

Essential oils are used by health professionals, mainly via the olfactory route in the emotional sphere. They improve the well-being of patients as a complementary approach.

Symptoms such as anxiety, panic attacks, cognitive disorders, nausea and chronic pain can be relieved by the olfaction of certain essential oils. Nowadays, aromatherapy is used in oncology, palliative care, psychiatry, gerontology and pre- or post-operative care.

Essential oils were extensively studied and characterized in the late 20th century. Each essential oil contains hundreds of molecules, but the concept of 'chemotype' (key chemical constituants) has allowed us to better define their composition and hence their specific properties. Because they come from aromatic plants, their composition can vary depending on the environment, season and method of production. Therefore, it is crucial to choose high-quality, "chemotyped" essential oils from organic agriculture and specify their full analytical profiles.

The absorption and metabolization of the main classes of molecules present in essential oils is becoming increasingly well known. The cutaneous route is the best studied, given the widespread use of essential oils in cosmetics: the French Ministry of Health published «Recommendations relating to quality criteria and risk assessment linked to the use of essential oils» in cosmetic products in 2008. The scientific evidence for the oral route comes from research on food flavorings as well as a few essential oil-based medicines for oral use.

New monographs published in the European Pharmacopoeia enable pharmacists to prepare blends and dilutions of essential oils for the oral, cutaneous and inhalation routes. The main toxicities based on the components present in these essential oils are listed in the EMA monographs. For example:

MOLECULES	RISK
1,8 Cineole or Eucalyptol	Neurotoxicity
Bergapten (Furanocoumarins)	Phototoxicity
Citral	Irritation
Limonene, Linalool	Allergy
Menthol	Irritation, Neurotoxicity

Many patients are using essential oils without medical advice, their use by trained medical teams guarantees a framework for the practice and safe exposure. Aromatherapy can be used with minimal risk when it is supervised by caregivers.

The toxicity of essential oils will therefore depend on the components present, the level of exposure, the concentration and the route of administration - as well as the patient's predisposition (elderly people, atopic patients, epileptics, pregnant women, children under 6). To limit this toxicity, certain essential oils are reserved for pharmaceutical use only and must be prescribed. All the others can be purchased over the counter.

The review of cases of toxicity due to essential oils carried out by anti-poison centers reports cases of allergy or irritation under normal conditions. The other categories of toxicity are only observed in cases of misuse, by misinformed consumers, and never in hospital settings.

Fondation Gattefossé
pour l'aromathérapie clinique

Essential oils via dry inhalation : What are the risks for patients?

From the Scientific Board of the Gattefossé Foundation

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The aromastick is a device where between 10 and 30 drops of essential oils are poured on a cotton wick. This wick is placed in a plastic tube and then closed. The patient can then breathe in the volatile substances through the tube opening in dry inhalation. The maximum quantity of essential oil used per wick is 1ml. The volatile fraction that penetrates the body by inhalation is not known, but work is currently in progress to clarify this point. It is anticipated that the amount of essential oil absorbed systemically, will be very small. This route is designed to stimulate the olfactory receptors. The sticks are placed under the nostrils, so absorption through the nasal microcirculation remains limited.

Inhalation provides an immediate effect through the passage of aromatic molecules into the nasal mucosa and stimulation of the olfactory bulb. Dry inhalation from a stick does not a priori present any risk of drug interaction. The oils used in hospitals for their benefits on the emotional sphere, are considered to be the least toxic.

ESSENTIAL OILS	MOLECULES AT RISK (AVERAGE RATE MONOGRAPH PHARMACOPOEIA)	RISK ASSESSMENT FOR DRY INHALATION
Lavender (Lavandula angustifolia Mill. =L. officinalis Chaix), flowering summit	Linalool Terpinene	Low - except allergies
Mandarin (Citrus reticulata Blanco.), pericarp of fresh fruit	Limonene Gamma-Terpinene	Low - except allergies
Lemon (Citrus limon (L.) Burm.f.), pericarp of fresh fruit	Limonene Beta-Pinene Citral (neral max 1.5% + geranial max 2.3%)	Low - except allergies
Sweet orange (Citrus sinensis (L.) Osbeck. = Citrus aurantium L. var. dulcis L.), pericarp of fresh fruit	Limonene Linalool Alpha- Pinene Beta-Pinene	Low - except allergies
Bergamot (Citrus aurantium L. subsp. Bergamia (Wight et Arnott) Engler.), pericarp of fresh fruit	Bergapten Limonene Linalool	Low - except allergies
Peppermint (Mentha × piperita L.), flowering summit	Menthol Cineole (eucalyptol) Pulegone Menthofuran	Risk of irritation
Petit grain bigarade (Citrus aurantium L. ssp. Aurantium (C. aurantium L. ssp. amara Engl.), leaf	No monograph Linalool	Low except allergies
Scots pine (Pinus sylvestris L.), leaf, branch	Alpha- Pinene Beta-Pinene Limonene	Low except in adults with history of convulsions or epilepsy
Noble chamomile Chamaemelum nobile (L.) All. (Anthemis nobilis L.) flowering summit	No molecules at risk No monograph	Low
Ginger (Zingiber officinale Roscoe), rhizome	No molecules at risk No monograph	Low

Aromasticks offer patients olfactory care to reduce stress and anxiety and relieve emotional nausea or chronic pain. The risk using an aromastick is minimal for the patient because the molecules contained in these essential oils have a low toxicity and its absorption by inhalation is low.

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