

## Aromatherapy: The Doctor Of Natural Harmony Of Body & Mind

<sup>1</sup>Yatri R. Shah, <sup>2</sup>Dhrubo Jyoti Sen, <sup>2</sup>Ravi N. Patel, <sup>2</sup>Jimit S. Patel, <sup>2</sup>Ankit D. Patel and  
<sup>3</sup>Parimal M. Prajapati

<sup>1</sup>Shree H. N. Shukla Institute of Pharmaceutical Education & Research, Gujarat Technological University,  
Behind Marketing Yard, Nr. Lalpari Lake, Amargadh (Bhichari), Rajkot, Gujarat

<sup>2</sup>Department of Pharmaceutical Chemistry, Shri Sarvajanic Pharmacy College, Gujarat Technological University,  
Arvind Baug, Mehsana-384001, Gujarat, India.

<sup>3</sup>I. K. Patel College of Pharmaceutical Education and Research, Samarth Campus, Opp. Sabar Dairy,  
Himmatnagar-383001, Sabarkantha, Gujarat, India.

### Abstract

Aromatherapy is a form of alternative medicine that uses volatile plant materials, known as essential oils, and other aromatic compounds for the purpose of altering a person's mind, mood, cognitive function or health. Since some essential oils such as tea tree have demonstrated anti-microbial effects, it has been suggested that they may be useful for the treatment of infectious diseases. Evidence for the efficacy of aromatherapy in treating medical conditions remains poor, with a particular lack of studies employing rigorous methodology; however some evidence exists that essential oils may have therapeutic potential. Aromatherapy is the practice of using the natural oils extracted from flowers, bark, stems, leaves, roots or other parts of a plant to enhance psychological and physical well-being. The inhaled aroma from these "essential" oils is widely believed to stimulate brain function. Essential oils can also be absorbed through the skin, where they travel through the bloodstream and can promote whole-body healing. A form of alternative medicine, aromatherapy is gaining momentum. It is used for a variety of applications, including pain relief, mood enhancement and increased cognitive function. There are a wide number of essential oils available, each with its own healing properties.

### Key words:

Aromatherapy, Fragrance, Essential oils, Mind, Mood, Cognitive function or health.

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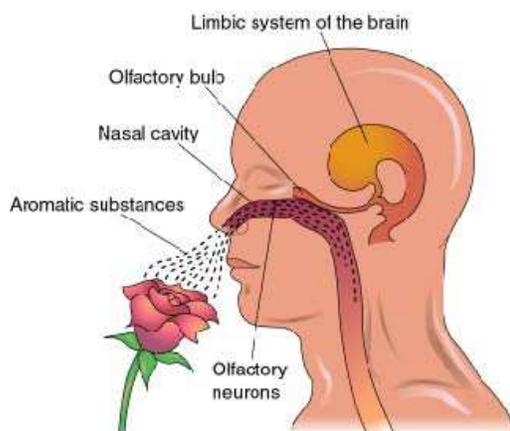
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### History:

In this article, we discuss the origin of aromatherapy and give you information about aromatherapy benefits and how to perform aromatherapy in your

\*Corresponding author, Mailing address:  
Email address: [mydream.yatri@gmail.com](mailto:mydream.yatri@gmail.com)

own home. Did you know that aromatherapy was discovered in the late 1920s? In 1928, French chemist Rene-Maurice Gattefoss was working in a laboratory at his family's perfumery. A sudden explosion severely burned his hand, which he quickly plunged into a container of lavender oil. Afterward, he was surprised by how quickly his hand has been healed.



**Figure-1:** Aromatherapy

Aromatherapy is the practice of using volatile plant oils, including essential oils, for psychological and physical well-being. Essential oils, the pure **essence** of a plant, have been found to provide both psychological and physical benefits when used correctly and safely. The Essential Oil Profiles area details over 90 essential oils. Absolutes, CO<sub>2</sub>s and Hydrosols are also commonly utilized in aromatherapy. Although essential oils, CO<sub>2</sub> extracts and absolutes are distilled by different methods, the

term essential oil is sometimes used as a blanket term to include all natural, aromatic, volatile, plant oils including CO<sub>2</sub>s and absolutes. In addition to essential oils, aromatherapy encourages the use of other complementary natural ingredients including cold pressed vegetable oils, jojoba (a liquid wax), hydrosols, herbs, milk powders, sea salts, sugars (an exfoliant), clays and muds. Products that include synthetic ingredients are frowned upon in holistic aromatherapy. It is important to note that perfume oils also known as *fragrance oils* (and usually listed as "fragrance" on an ingredient label) are not the same as essential oils. Fragrance oils and perfume oils contain synthetic chemicals and do not provide the therapeutic benefits of essential oils. Buyer Beware: The United States does not regulate the use of the word *aromatherapy* on product packaging, labeling or in product advertising, so any product can be marketed as a product suitable for aromatherapy. There are quite a few products on the market that contain unnatural ingredients including fragrance oils and claim to be aromatherapeutic. It's important to look at the ingredient label when seeking true aromatherapy products. Also, use caution with marketing claims that state a product is "**Made with Essential Oils**" or "**Made with Natural Ingredients.**" Claims like these do not state that the product is only made with the ingredient(s) specified. Such products may contain heavy proportions of synthetic fragrance oils and only contain a minute quantity of essential oil to simply be able to profess the "**Made with Essential Oils**" claim. Don't let false marketing hype scare you away from the benefits of holistic aromatherapy. By exploring AromaWeb and other aromatherapy resources, you can learn how to safely use just a few essential oils and start gaining the benefits of aromatherapy. If you realize you hold an even deeper interest, you can learn to make your own products and control the exact ingredients included in your own personal aromatherapy products.<sup>1</sup>



**Figure-2:** Aroma from essential oils

**The Benefit of an Aroma ~ Inhaling Essential**

**Oils:** Essential oils that are inhaled into the lungs offer both psychological and physical benefits. Not only does the aroma of the natural essential oil stimulate the brain to trigger a reaction, but when inhaled into the lungs, the natural constituents (naturally occurring chemicals) can supply therapeutic benefit. Diffusing eucalyptus essential oil to help ease congestion is a prominent example. If not done correctly and safely, however, the use of essential oils can have severe consequences.

**The Benefit of Physical Application:**

Essential oils that are applied to the skin can be absorbed into the bloodstream. The constituents of essential oils can aid in health, beauty and hygiene conditions. **Since essential oils are so powerful and concentrated, they should never be applied to the skin in their undiluted form.** To apply essential oils to the skin, essential oils are typically diluted into a *carrier* such as a cold pressed vegetable oil, also known as a carrier oil. Common carrier oils include sweet almond oil, apricot kernel oil and grapeseed oil. A more detailed definition of Carrier Oils is found on the what are Carrier Oils page. A detailed list of carrier oils and their properties can be found on the Carrier Oils Used in Aromatherapy properties page.<sup>2</sup>

**Other Benefits:** In addition to therapeutic benefit at the emotional and physical level, essential oils are helpful in other applications. Essential oils can be

used in household and laundry cleaners. Some oils act as a natural insect repellent and pesticide. You may recall using citronella candles during the summer to keep mosquitoes away. Citronella essential oil is the ingredient in the candles that is responsible for repelling the mosquitos.

**Essential Oil Blends:** Essential oils can be blended together to create appealing and complex aromas. Essential oils can also be blended for a specific therapeutic application. Essential oils that are carefully blended with a specific therapeutic purpose in mind may be referred to as an *essential oil synergy*. A synergistic essential oil blend is considered to be greater in total action than each oil working independently. AromaWeb's Recipes area offers a variety of recipes and synergies.



**Figure-3:** Essence of essential oil from nature

**About Aromatherapy Products:** Not all ready-made aromatherapy products labeled with the word *aromatherapy* are pure and natural. Products that contain artificial ingredients do not provide true aromatherapy benefits. At worst, they provide no benefit or are harmful. At best, they provide only a fraction of the benefit that natural products supply. Buyers seeking true aromatherapy products must look at the ingredient label to ensure that the product does not contain fragrance oils or unpure (chemical) components. A general rule-of-thumb is to be wary of products that do not list their ingredients and those that do not boast of having pure essential oils. A note, however, is that some sellers of good-quality aromatherapy blends do not list their ingredients

because they are worried that others may copy their creation. By asking the seller more about the blend, and listening to how they respond, you should have a better idea about the quality of the blend being sold. Good suppliers should be happy to provide you with a list of the ingredients. They understand that some individuals must avoid particular oils due to health problems.



**Figure-4:** Essential oils in aromatherapy

**Aromatherapy** may have origins in antiquity with the use of infused aromatic oils, made by macerating dried plant material in fatty oil, heating and then filtering. Many such oils are described by Dioscorides, along with beliefs of the time regarding their healing properties, in his *De Materia Medica*, written in the first century. Distilled essential oils have been employed as medicines since the invention of distillation in the eleventh century, when Avicenna isolated essential oils using steam distillation. The concept of aromatherapy was first mooted by a small number of European scientists and doctors, in about 1907. In 1937, the word first appeared in print in a French book on the subject: *Aromathérapie: Les Huiles Essentielles, Hormones Végétales* by René-Maurice Gattefossé, a chemist. An English version was published in 1993. In 1910, Gattefossé burned a hand very badly in a laboratory explosion. The hand developed gas gangrene, which he successfully, and intentionally, treated with lavender oil.

A French surgeon, Jean Valnet, pioneered the medicinal uses of essential oils, which he used as antiseptics in the treatment of wounded soldiers during World War II.

### Modes of application

The modes of application of aromatherapy include:

- ❖ *Aerial diffusion*: for environmental fragrancing or aerial disinfection.
- ❖ *Direct inhalation*: for respiratory disinfection, decongestion, expectoration as well as psychological effects.
- ❖ *Topical applications*: for general massage, baths, compresses, therapeutic skin care.
- ❖ Materials
- ❖ Some of the materials employed include:
  - ❖ *Absolutes*: Fragrant oils extracted primarily from flowers or delicate plant tissues through solvent or supercritical fluid extraction (e.g., rose absolute). The term is also used to describe oils extracted from fragrant butters, concretes, and enfleurage pommades using ethanol.
  - ❖ *Carrier oils*: Typically oily plant base triacylglycerides that dilute essential oils for use on the skin (e.g., sweet almond oil).
  - ❖ *Essential oils*: Fragrant oils extracted from plants chiefly through steam distillation (e.g., eucalyptus oil) or expression (grapefruit oil). However, the term is also occasionally used to describe fragrant oils extracted from plant material by any solvent extraction.
  - ❖ *Herbal distillates* or hydrosols: The aqueous by-products of the distillation process (e.g., rosewater). There are many herbs that make herbal distillates and they have culinary uses, medicinal uses and skin care uses. Common herbal distillates are chamomile, rose, and lemon balm.

- ❖ *Infusions*: Aqueous extracts of various plant materials (e.g., infusion of chamomile).
- ❖ *Phytoncides*: Various volatile organic compounds from plants that kill microbes. Many terpene-based fragrant oils and sulfuric compounds from plants in the genus "*Allium*" are phytoncides, though the latter are likely less commonly used in aromatherapy due to their disagreeable odors.
- ❖ *Vaporizer (Volatized) Raw Herbs*: Typically higher oil content plant based materials dried, crushed, and heated to extract and inhale the aromatic oil vapors in a direct inhalation modality.



**Figure-5:** Aromatherapy for altering a person's mind, mood, cognitive function or health

### Theory

Aromatherapy is the treatment or prevention of disease by use of essential oils. Other stated uses include pain and anxiety reduction, enhancement of energy and short-term memory, relaxation, hair loss prevention, and reduction of eczema-induced itching. Two basic mechanisms are offered to explain the purported effects. One is the influence of aroma on the brain, especially the limbic system through the olfactory system. The other is the direct pharmacological effects of the essential oils.<sup>3</sup> While precise knowledge of the synergy between the body and aromatic oils is often claimed by aromatherapists, the efficacy of aromatherapy remains unproven. However, some preliminary clinical studies of aromatherapy in combination with other techniques show positive effects. Aromatherapy does not cure conditions, but helps the body to find a natural way to cure itself and improve immune response. In the English-speaking world, practitioners tend to emphasize the use of oils in

massage. Aromatherapy tends to be regarded as a complementary modality at best and a pseudoscientific fraud at worst.

### Choice and purchase

Oils with standardized content of components (marked FCC, for Food Chemical Codex) are required to contain a specified amount of certain aroma chemicals that normally occur in the oil. But there is no law that the chemicals cannot be added in synthetic form in order to meet the criteria established by the FCC for that oil. For instance, lemongrass essential oil must contain 75% aldehyde to meet the FCC profile for that oil, but that aldehyde can come from a chemical refinery instead of from lemongrass. To say that FCC oils are "food grade", then, makes them seem natural when, in fact, they are not necessarily so. Undiluted essential oils suitable for aromatherapy are termed *therapeutic grade*, but in countries where the industry is unregulated, therapeutic grade is based on industry consensus and is not a regulatory category. Some aromatherapists take advantage of this situation to make misleading claims about the origin and even content of the oils they use. Likewise, claims that oil's purity is vetted by mass spectrometry or gas chromatography have limited value, since all such testing can do is show that various chemicals occur in the oil. Many of the chemicals that occur naturally in essential oils are manufactured by the perfume industry and adulterate essential oils because they are cheaper. There is no way to distinguish between these synthetic additives and the naturally occurring chemicals. The best instrument for determining whether or not an essential oil is adulterated is an educated nose. Many people can distinguish between natural and synthetic scents, but it takes experience.<sup>4</sup>

Popular uses

- ❖ Lemon oil is uplifting and anti-stress/anti-depressant. In a Japanese study, lemon essential oil in vapour form has been found to reduce

stress in mice. Research at The Ohio State University indicates that Lemon oil aroma may enhance one's mood, and help with relaxation.

- ❖ Thyme oil

### **Efficacy**

Some benefits that have been linked to aromatherapy, such as relaxation and clarity of mind, may arise from the placebo effect rather than from any actual physiological effect. The consensus among most medical professionals is that while some aromas have demonstrated effects on mood and relaxation and may have related benefits for patients, there is currently insufficient evidence to support the claims made for aromatherapy.<sup>5</sup> Scientific research on the cause and effects of aromatherapy is limited, although *in-vitro* testing has revealed some antibacterial and antiviral effects. There is no evidence of any long-term results from an aromatherapy massage other than the pleasure achieved from a pleasant-smelling massage. A few double blind studies in the field of clinical psychology relating to the treatment of severe dementia have been published. Essential oils have a demonstrated efficacy in dental mouthwash products. Skeptical literature suggests that aromatherapy is based on the anecdotal evidence of its benefits rather than proof that aromatherapy can cure diseases. Scientists and medical professionals acknowledge that aromatherapy has limited scientific support, but critics argue that the claims of most aromatherapy practitioners go beyond the data, and/or that the studies are neither adequately controlled nor peer reviewed. Some proponents of aromatherapy believe that the claimed effect of each type of oil is not caused by the chemicals in the oil interacting with the senses, but because the oil contains a distillation of the "life force" of the plant from which it is derived that will "balance the energies" of the body and promote healing or well-being by purging negative vibrations from the body's energy field. Arguing that

there is no scientific evidence that healing can be achieved, and that the claimed "energies" even exist, many skeptics reject this form of aromatherapy as pseudoscience.<sup>6</sup>

### **Safety concerns**

In addition, there are potential safety concerns. Because essential oils are highly concentrated they can irritate the skin when used neat that is undiluted. Therefore, they are normally diluted with carrier oil for topical application. Phototoxic reactions may occur with citrus peel oils such as lemon or lime. Also, many essential oils have chemical components that are sensitizers (meaning that they will after a number of uses cause reactions on the skin, and more so in the rest of the body). Some of the chemical allergies could even be caused by pesticides, if the original plants are cultivated.<sup>7-8</sup> Some oils can be toxic to some domestic animals, with cats being particularly prone.

Two common oils, lavender and tea tree, have been implicated in causing gynaecomastia, an abnormal breast tissue growth, in prepubescent boys, although the report which cites this potential issue is based on observations of only three boys (and so is not a scientific study), and two of those boys were significantly above average in weight for their age, thus already prone to gynaecomastia. A child hormone specialist at the University of Cambridge claimed "... these oils can mimic estrogens" and "people should be a little bit careful about using these products." The study has been criticised on many different levels by many authorities. The Aromatherapy Trade Council of the UK has issued a rebuttal. The Australian Tea Tree Association, a group that promotes the interests of Australian tea tree oil producers, exporters and manufacturers issued a letter that questioned the study and called on the New England Journal of Medicine for a retraction (ATTIA). The New England Journal of Medicine has so far not replied and has not retracted the study. As with any bioactive substance, an

essential oil that may be safe for the general public could still pose hazards for pregnant and lactating women. While some advocate the ingestion of essential oils for therapeutic purposes, licensed aromatherapy professionals do not recommend self prescription due the highly toxic nature of some essential oil. Some very common oils like Eucalyptus are extremely toxic when taken internally. Doses as low as one teaspoon has been reported to cause clinically significant symptoms and severe poisoning can occur after ingestion of 4 to 5 ml. A few reported cases of toxic reactions like liver damage and seizures have occurred after ingestion of sage, hyssop, thuja, and cedar. Accidental ingestion may happen when oils are not kept out of reach of children. Oils both ingested and applied to the skin can potentially have negative interaction with conventional medicine. For example, the topical use of methyl salicylate heavy oils like Sweet Birch and Wintergreen may cause hemorrhaging in users taking the anticoagulant Warfarin. Adulterated oils may also pose problems depending on the type of substance used.<sup>9-11</sup>

**Aromatherapy Benefits: It Does More Than Just "Smell Good"**

Aromatherapy doesn't just smell good, it also benefits you in many ways. Some aromatherapy benefits that are more commonly known include:

- ❖ Relaxation and stress relief
- ❖ Mood enhancement, balance and well being
- ❖ Relief of minor discomforts
- ❖ Boosting the immune, respiratory and circulatory systems

Aromatherapy is a great, natural compliment or alternative to other health treatment options such as certain prescribed medications. But don't throw away those prescription bottles just yet.

Aromatherapy doesn't "cure" major illnesses but it is effective at alleviating many of the discomforts associated with them.

**Essential oils** are the heart of aromatherapy. They have been used to:

Heal wounds	Improve skin tone
Regulate hormones	Relieve menstrual cramps
Stimulate the immune system	Decrease sinus & lung congestion
Energize	Relax muscles
Improve sleep	Relieve tension headaches
Reduce inflammation	Aid blood circulation
Kill fungal & bacterial infections	Aid digestion

**Table-1:** Uses of aromatherapy

**The Smell Factor**

To better understand aromatherapy benefits, it helps to know how your body processes smells. The sense of smell is pretty powerful. In fact, the body can distinguish around 10,000 different scents! Amazing, isn't it? As scents are inhaled, the smell travels across the olfactory nerves located inside the nose and then up into the part of the brain that controls our moods, our memories and our ability to learn. This area is called the Limbic System and when stimulated it releases endorphins, neurotransmitters and other 'feel-good' chemicals. Wow! That's pretty scientific stuff... not to worry, in a nutshell, what all of that means is that smells have a subtle way of effecting your mind and emotions. Just think of the way you feel when you sniff the scent from a fresh bouquet of flowers versus your reaction when you smell something not so fresh like garbage or burnt toast. A big difference right?

**Essential Oil Absorption**

Aromatherapy also works by absorbing essential oils into the skin and blood stream. One of the advantages to topical application of diluted essential oils is that they can go directly to the spot where you need them the most. An **aromatherapy massage** is a great way to reap the benefits of topical application of essential oils along with the soothing therapeutic benefits of massage. If you have an aching muscle or a nasty

bruise, a little essential oil goes a long way to working it's healing magic! Why not treat yourself! In addition to other alternative health benefits, many **wellness retreats and spas** offer massage therapy also.

#### What are the benefits?

- ❖ The Benefits can be listed below:
- ❖ It reduces muscular aches and pains and increases muscle relaxation and tone.
- ❖ For women's problems like PMS or menopausal distress it is particularly helpful.
- ❖ Stress level or Blood pressure can be reduced.
- ❖ The immune system can be stimulated and infections can be fought with.
- ❖ Tension headaches can be relieved.
- ❖ Various emotions like anxiety, grief and depression can be alleviated.
- ❖ Digestion can be improved. Constipation and abdominal spasm can be decreased.
- ❖ The circulation and lymphatic drainage can be enhanced to eliminate cellulite and toxins from the body.
- ❖ Some essential oils are good skin care agents.
- ❖ The circulation of the scalp can be increased and dandruff can be prevented.
- ❖ Aromas can be used as a first aid measure for minor burns and cuts.
- ❖ Common problems like sore throat, stuffy or blocked noses can also be modified.
- ❖ Lavender Essential oil is a good relief to dry and inflamed skin.
- ❖ Tree Essential Oil is good to use for warts, rashes, insect bites, cuts and coughs.
- ❖ The discomforts of asthma, arthritis and allergies can be relieved.
- ❖ Nausea can be treated using aromas.
- ❖ The essential oils like lavender, marjoram and Roman chamomile help in relaxation and anxiety in palliative care.
- ❖ Irritable bowel syndrome can be assisted with the help of an oral intake of peppermint oil.

- ❖ The essential oils of Ylang ylang and Rosemary affect Alpha-wave activity.
- ❖ Linalool is a terpenoid constituent that interacts with cell membranes and suppresses cell action. It is mildly sedative in nature.
- ❖ The pulmonary function of children with asthma can be improved with a 20 minute massage routine each day.
- ❖ The treatment of acne, athletes foot and onychomycosis nail infections can be done by Tea Tree oil.
- ❖ Aromas can be used to facilitate communication, decrease difficult and self-stimulating behavior and provide very meaningful communication.
- ❖ Aromatic massage reduces cortisone levels in children having juvenile rheumatoid arthritis.
- ❖ **Should anyone avoid aromatherapy?**
- ❖ Women in the first trimester of pregnancy as well as people with severe asthma or a history of allergies should avoid all essential oils.
- ❖ People with a history of seizures should avoid hyssop oil.
- ❖ People with high blood pressure should avoid stimulating essential oils such as rosemary and spike lavender.
- ❖ Those with estrogen-dependent tumors (such as breast or ovarian cancer) should not use oils with estrogen-like compounds such as fennel, aniseed, sage, and clary-sage.
- ❖ Caution should be exercised when considering use of aromatherapy in cancer patients receiving chemotherapy.

Finally, something that must be cleared is that aromatherapy is an alternative complementary medicine and should not be used as the major treatment, but as an addition to the healing process of the standard medical care.

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