

Review Article

Aromatherapy: Art or science

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Abstract

Aromatherapy is categorized as a form of complementary and alternative medicine (CAM) and has been steadily gaining popularity in today's society. The word aromatherapy is used to describe the use of essential oils for aromatic inhalation, compresses and topical application through massage. 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. There are a wide number of essential oils available, each with its own healing properties. The present review focus on scenario of aromatherapy, modes of application, mechanism of action, types and health benefits.

Keywords: Aromatherapy, Aroma, Essential oils, Skin

1. Introduction

Form of alternative medicine that uses volatile plant materials, known as essential oils and other aromatic compounds for the Aromatherapy is a purpose of altering a person's mind, mood, cognitive function or health. Some essential oils such as tea tree have demonstrated anti-microbial effects, but there is still a lack of clinical evidence demonstrating efficacy against bacterial, fungal, or viral infections. Evidence for the efficacy of aromatherapy in treating medical conditions remains poor, with a particular lack of studies employing rigorous methodology, but some evidence exists that essential oils may have therapeutic potential¹.

2. History

Table 1: History of Aromatherapy^{2, 3, 4, 5}

11 th century	Something new happened, now the distillation of essential oils was done by coiled cooling pipe. This invention was done by Avicenna, before this straight pipe was used. His contribution is a great help in the field of aromatherapy.
12 th century	Hildegard grew and distilled the lavender for some medicinal purposes.
13 th century	A new pharmaceutical company had taken birth. This helped greatly in the distillation of different types of essential oils.
In 14 th century	Many people were killed due to Black Death (Bubonic plague). Many herbal preparations were used to

	fight with this problem.
15 th century	During, other plants like rose, sage and rosemary were also used for distillation and people came to know about the new power of healing through plants
17 th century	People started making perfumes from plants and it was considered as an art.
19 th century	The use of perfumes increased and so the industries related to perfumes increased.
20 th century	A French chemist Rene-Maurice Gattefosse started the use of essential oils for the medicinal purposes.

3. The modes of application ^{6, 7}

Essential oils can be inhaled, massaged onto the skin, diffused into the air, applied as a compress, or placed in a bath for soaking.

- Inhalation treatments are usually recommended for problems with respiration and can be done by dropping several drops of essential oil into bowl of steaming water. The vapours are then inhaled for a few moments, with the effect being enhanced by placing a towel over both the head and the bowl to form a tent to capture the humidified air and scent.
- Massage using aromatic essential oils combined with base oil can be either calming or stimulating, depending on the oil used. The essential oil massage can be applied to a specific problem area or to the entire body.
- Diffusion is normally used to calm or soothe nerves or treats some respiratory problems and can be done by spraying oil-containing compounds into the air in fashion similar to an air freshener. It can also be done by placing a few drops of essential oil in a diffuser and turning on the heat source. Sitting within three feet of the diffuser, a treatment normally lasts about 30 minutes.
- Hot or cold compresses containing essential oils can be used for muscle aches and pains, bruises or headaches.
- Soaking baths containing essential oils and lasting for 10-20 minutes are recommended for skin problems and for calming or soothing nerves.

Figure 1: The Modes of Application



4. Materials ^{8, 9}

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 effleurage epommades 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.

5. Theory ^{10, 11}

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. While precise knowledge of the synergy between the body and aromatic oils is often claimed by aroma therapists, 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.

5.1 Mechanism of action of aromatherapy: Aromatherapy is based on the theory that inhalation or absorption of essential oils triggers changes within the limbic system, the part of the brain associated with memory and emotion. This can, in turn, stimulate physiological responses of the nervous, endocrine or immune systems, affecting heart rate, blood pressure, breathing, brain wave activity and the release of various hormones throughout the body¹². Their effect on the brain can sedate or stimulate the nervous system, as well as possibly aid in normalizing hormonal secretions. Inhaling essential oils can ease respiratory symptoms, while localized application of diluted oils can be helpful for certain localized conditions. Massage combined with essential oils provides relaxation, as well as relief from pain and muscle stiffness and spasms. Some essential oils applied to the skin can have anti-microbial, antiseptic, anti-fungal, or anti-inflammatory properties. Although essential oils produce certain predictable effects, they also may affect different people in different ways¹³.

5.2 Types of aromatherapy: There are many kinds of aromatherapy but its types are divided according to the application and purposes of the essential oils. These essential oils are taken from the different parts of the plants and then it is distilled or purified. These extracted oils have therapeutic benefits of the plants from which they are extracted. It is really important to use these oils under the guidance of some experienced Aroma-therapist. These oils are very strong and also contain concentrated natural chemical compounds. There are different ways of application of these essential oils but all the ways come into or divided into few main types of Aromatherapy.^{14, 15, 16}

5.2.1 Cosmetic Aromatherapy : This type of aromatherapy is used for beauty purpose. These oils are added in creams to improve the texture and complexion of the skin. Cosmetic aromatherapy can be done through facials and showers. Few essential oils are used to treat different beauty problems. True essential oils have good effect in toning, cleansing and moisturizing of the skin. Essential oils like lavender and rosemary are used to increase the hair growth. Sometimes fragrance oils are used in place of essential oils in skin care products in order to save high cost of essential oils. But fragrance oils only have aroma and they have no healing property like essential oils¹⁷.

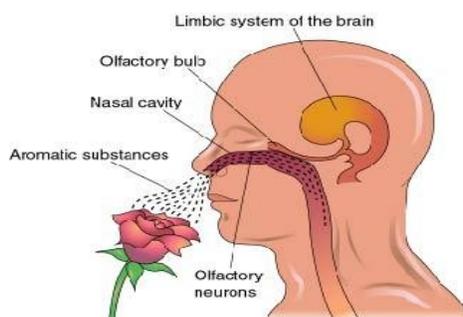
Figure 2: Cosmetic aromatherapy



5.2.2 Massage Aromatherapy: In this therapy, different essential oils are blended and massage is done with them by the expert masseur. This type of therapy is used to get relief from aches and pains. Massage is done on the area of pain. It soothes and helps in healing the joints. Before having massage, get a patch test done if you are allergic to few things. This will prevent you from any kind of itching and awful sensation in your skin after massage. Eucalyptus and ginger essential oils are used for massage on the affected area ¹⁸.

5.2.3 Clinical Aromatherapy or Olfactory Aromatherapy: Clinical aromatherapy is also known as medical aromatherapy. Essential oils are usually mixed with a carrier oil or lotion like sweet almond or apricot kernel. If you are going for clinical aromatherapy treatment, then choosing expert professional would be highly recommended. Clinical aromatherapy is closely related with massage aromatherapy as the essential oils may be massaged to the skin. It is the controlled use of essential oils to heal physical, mental and emotional health. Any kind of misuse of essential oils or massage technique, especially on the skin, can cause discomfort to a person. Use of essential oils in this therapy can also be seen in compresses, baths and inhalation. It is sometimes called as olfactory aromatherapy. In this type of therapy, diffusers and vaporizers are used to evaporate the essential oil in the atmosphere of the certain area. The molecules in the air are quickly absorbed by the blood stream and then they start their work. An aromatherapy candle, room spray, or sprinkle of a few drops on a handkerchief can also be used as the means of therapy. This kind of aromatherapy is helpful in healing the body, mind and spirit. It is a good treatment for the common cold or severe cough ¹⁹.

Figure 3: Clinical Aromatherapy or Olfactory Aromatherapy



5.2.4 Aromatology: Practice of Aromatology is mainly seen in France. This therapy is highly controversial. Practitioner must be well-adept with the technique of this therapy. The practice of this therapy is known as aromatic medicine. In this method of aromatherapy, it does not require any kind of massage. Instead, oils are poured on topically. The main controversy related to this aromatherapy is that it can be used in the vagina or rectum ²⁰.

5.3 Aromatherapy and healing: Healing process of Aromatherapy involves essential oil and carrier oil. While practicing Aromatherapy, using 100% pure essential oil is highly advisable. If used Chemical pesticides in the plant, then it should be assured that essential oil is totally free from pesticides. As these pesticides are harmful to inhale and use in skin. Essential oil has to be completely free from any chemical.

5.3.1 Limbic system of the brain: The limbic system of the brain perceives and responds to pleasure, memory and emotions. Limbic system is triggered by aromas and releases brain enhancing neuro-chemicals that helps in reducing pains. It also creates a feeling of well-being and calmness.

Figure 4: Limbic system of the brain



5.3.2 Heart and circulatory system: In heart and circulatory system, different health issues are seen related to heart and veins and arteries. The essential oils with sedative, hypo-tensive, antispasmodic and hypertensive properties can cure these problems. Massage blend or inhalation blend of essential oils are helpful to cure circulatory complaints and heart diseases²¹.

5.3.3 Digestive system: The function of digestive system is to ingest, digest and eliminate waste products. Problems related to digestive system are mouth ulcers, Halitosis and bacterial or fungal infection. The essential oils with fungicidal, antibacterial and cytophylactic (i.e., the property to increase white blood cell activity to fight off infection) properties. The essential oils with antispasmodic and calmative properties can cure problems like indigestion, nausea and stomach ulcers²².

5.3.4 Musculo-skeletal system: The most common problems related to musculo-skeletal system are muscle spasms, sore, overworked muscles, muscle cramping, tendonitis and bursitis. The musculo-skeletal system also has the joints, which can also be damaged by the overuse. With the overuse of joints, many problems may crop up like bursitis, arthritis and tendonitis. The essential oils with anti-rheumatics, anti-inflammatory, anti-spasmodic, relaxant and detoxifying properties can cure these problems. Use of these essential oils would be the best in the form of creams, salves, massage oils and ointments. But you should remember that you should not rub the oil because it can irritate the swollen joints or muscles. Just apply it lightly²³.

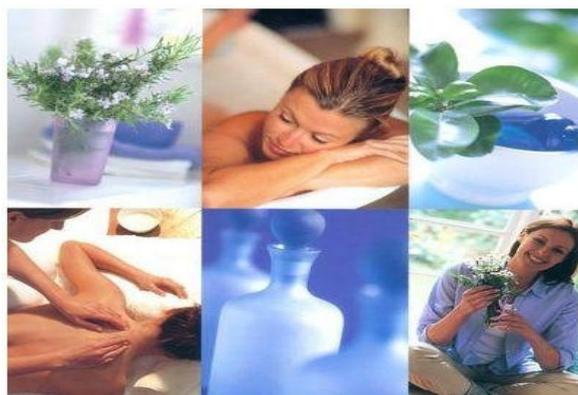
Figure 5: Musculo-skeletal system



5.3.5 Central nervous system: Our brain is responsible for different body functions. It manages all our thought processes, feelings and senses, heart functions, muscle movement, respiration and the endocrine system. Our spinal cord is attached to the base of the brain by the brain stem. Multiple nerve fibres are running from the spinal cord to all parts of the body. These fibres are responsible for our different senses. Different problems can arise from the brain or spinal cord. Few problems are headaches, traumatic brain injuries, mental fatigue, nervous exhaustion, or “burn-out”, stress, depression, anxiety, insomnia, multiple sclerosis and neuralgia. The essential oils with adrenal stimulating, antidepressant, sedative, stimulating, normalizing and hypnotic properties can cure these problems. These oils can be combined together to make massage oils or inhalation blends.

5.3.6 Integumental system: The integumental system is the largest sensory organ of the body. The function of the integumental system, or the skin, is to protect underlying tissues, prevent dehydration, regulate body temperature and eliminate toxic waste, produce vitamin D and work closely with the nervous system for sensory perception²⁴. Our skin can have different problems like acne, psoriasis, eczema, warts, boils, bacterial and fungal infections, chilblains, contact dermatitis, athlete's foot and cold sores. These skin diseases can be cured by using essential oils with anti-inflammatory, antiseptic, parasiticides fungicidal and cicatrisant (i.e., a stimulant for new and healthy skin cell growth) properties. Use of these essential oils would be best in the form of creams, sprays, massage oils and all natural talc free powders.

5.3.7 Female reproductive system: In female life-cycle, she has to go through many difficulties related to her health. During the menstrual period cycle, she might face problems like pain and cramp in the abdomen. Other problems related to menstrual period are loss of menstrual flow (menorrhoea), heavy menstrual flow (menorrhagia), painful menstruation (dysmenorrhoea) and premenstrual syndrome (PMS). Other female problems include vaginal infections, vaginal thrush, sexually transmitted diseases and endometriosis, cancer of the uterus or ovaries and childbirth complications. All these problems can be treated with the help of Aromatherapy. To cure female problems, essential oils with emmenagogues (normalizes menstrual flow), hormone influencing and anti-spasmodic properties are beneficial. But use of these essential oils will be in the form of creams, ointments, massage oils and vaginal bolus – suppository is highly recommended²⁵.

Figure 6: Female reproductive system

5.3.8 Asthma: Choosing the right blend of essential oils can help reduce the symptoms of asthma. People who suffer from mild asthma symptoms may find relief in adding rose, frankincense, or clary sage to the water in a dehumidifier. Essential oils can help to open up constricted airways that make breathing difficult. Be sure to consult with your physician first before using these or other essential oils. Do not discontinue any prescription medications unless advised by your medical provider. Your doctor will tell you if it is safe to combine aromatherapy with conventional medical treatment. While aromatherapy can combat the negative side effects of certain steroid medications used to treat asthma, the use of essential oils may not be safe for children under age five ²⁶.

5.3.9 Stress and Anxiety: A build-up of stress or anxiety can have a number of detrimental side effects, including elevated heart and blood pressure rates. If this is sustained over time this can have a cumulative effect which can result in more serious health implications. If you manage stress effectively it can be very beneficial to your world view and interaction on a personal level. The extended benefits include:

- Adapting to change more easily
- Increasing your energy levels
- Becoming more tolerant of challenging circumstances
- Being more open and relaxed; and
- Allowing you to enjoy improved sleep

Aromatherapy is a potentially relaxing and therapeutic remedy and has proven to be especially helpful in alleviating stress and anxiety. It has been shown to lower heart and breathing rates, blood pressure and restore hormonal balance.

5.3.10 Promotes Deep Sleep: A 2005 study published in the journal *Chronobiology International* found that lavender essential oil acts as a mild sedative and promotes deep sleep. In the study, 31 healthy sleepers spent three nights in a sleep lab: one to adapt to the study, the next with lavender oil administered into the air and the third with a control (distilled water) stimulus.

The lavender:

- Increased the percentage of deep or slow-wave sleep in men and women.
- Increased stage 2 (light) sleep.
- Decreased rapid-eye movement (REM) sleep.

5.3.11 Staph Infection: Three essential oils studied by researchers at the University of Manchester were able to kill, within two minutes of contact:

- MRSA (staph infection)
- *E. coli*
- Many other bacteria and fungi

They say the oils can be blended into soaps and shampoos that, if used by hospital staff, doctors and patients could eliminate the spread of these "super bugs." Patients could even simply inhale the oils to prevent being at risk. The particular oils used in the study will not be released until the researchers can find funding for a clinical trial ²⁷.

5.3.12 Benefits for Childbirth: According to a paper published in the August 2005 issue of *Complementary Therapies in Clinical Practice*, an aromatherapy service produced beneficial results for patients at a UK maternity unit. The aromatherapy was found to normalize childbirth and increase the satisfaction of mothers in regard to their labour experiences.

5.3.13 Improvement in Shingles Outbreaks: A case study of six hospice patients with shingles outbreaks found that a combination of three essential oils improved symptoms significantly. The patients sprayed a solution of 95 percent distilled water, 5 percent essential oil blend of Ravensara, Bergamot and Niaouli onto the rash at least three times a day. According to Noel Gilligan, the registered aromatherapist who ran the study, after 48 hours, all patients reported:

- A significant reduction in shingles pain.
- A scabbing and healing of the shingles pustules.
- Either a disappearance (one case) or reduction (five cases) or a "drying up" (three cases) of the pustules.

5.3.14 Toothache: While any toothache or gum irritation will likely require a trip to the dentist, when one is on holiday or unable to get an emergency appointment, there are essential oils which may help with the pain. One particular essential oil, known as clove oil, according to Harding is used within dentistry to provide antiseptic pain relief. Clove oil is not only a powerful disinfectant, but also is a natural form of analgesic. Another aromatherapy treatment for toothache, involves applying a hot compress to the outside of the face, near the affected area. Two forms of essential oils, namely Roman chamomile and German chamomile oil are recommended for this purpose.

5.3.15 Mononucleosis Cure: Aromatherapy has come up as one of the most effective alternative therapies for the treatment of mononucleosis. The use of aromatherapy in the treatment of mononucleosis concentrates on alleviating the symptoms. Essential oils can help reduce fever and malaise. The essential oils of eucalyptus, lavender and bergamot can be diffused into the air using a vaporizer. These vapors when inhaled can help reduce the malaise, increasing energy levels and reducing tiredness and fatigue. These oils can also be directly applied to the pulse points so that the aroma can keep diffusing. When applied on the pulse points, you can keep on inhaling the aroma as it diffuses into the air. You can also use tea tree oil, which is a powerful disinfectant. ²⁸

5.3.16 Arthritis: Aromatherapy is one form of arthritis treatment, using a variety of essential oils. They can be added to the bath, massaged into the skin, inhaled or applied as compresses. The right mixture of essential oils will help to relax, promote pain relief and alleviate fatigue. Essential oils can also provide psychological benefits like improving the mood and reducing anxiety. Some of the more suitable arthritis oils are Lavender, Juniper, Thyme, Rosemary, Benzoe, Eucalyptus, Camomile, Pine Scotch, Camphor, Angelica Root, Ginger, Origanum, Black Pepper and Lemon.

6. Essential oils for labour and post-natal use ^{29, 30, 31}

6.1 Lavender oil: Is highly versatile oil, emotionally calming, sedating, relaxing and pain-relieving. It is useful for easing the uterine pain of contractions. It is used for inhalation, massage and compresses and also in baths (when the membranes are intact). Note: The use of lavender oil is controversial in early pregnancy. It is advisable not to use it before the 36th week of pregnancy. It is best avoided by hay fever, asthma and allergy sufferers.

6.2 Eucalyptus: Is a cooling decongestant and antiseptic, useful for muscular aches and pains. It alleviates many symptoms of respiratory infections and is helpful in cases of asthma. Avoid eucalyptus if you are diabetic or epileptic and if you are using homeopathic remedies. Eucalyptus is useful for inhalation on a tissue or a diffuser.

6.3 Peppermint: Is useful for relieving sickness and headaches which occur in labour. It is also useful as an inhalation during labour. Peppermint is not to be used if the woman is already using homeopathic remedies.

6.4 Frankincense: Is good for calming anxiety and in cases of hyperventilation. It is also helpful for asthmatics. Useful as an inhalation in labour, it may also be used in baths, massages and as a compress.

6.5 Rose: Is a tonic to the whole body and assists the circulation, which in turn encourages deep and calm breathing. It is renowned for its anti-depressant properties. Rose has a lovely, uplifting aroma, which helps to calm nervous feelings.

6.6 Jasmine: Is an antispasmodic, which can help to dull uterine pain; it has a calming yet uplifting and energising effect on the emotions and also possesses anti-depressant properties. It is said to be useful on its own as a compress on the lower abdomen after birth, to help expel a retained placenta. JASMINE IS NOT TO BE USED BEFORE LABOUR.

6.7 Lemon and Mandarin: Both are refreshing and emotionally uplifting; they are often used with other oils to enhance their effects. Both oils are phototoxic - avoid exposure to the sun following their use.

6.7.1 For post-natal use^{32, 33}

- **Cypress:** Is a powerful astringent, being used locally for circulatory problems such as fluid retention, cramp and varicose veins. Its locally-constricting action on capillaries makes it invaluable for treating haemorrhoids. Cypress is reputed to be useful for coughs and respiratory problems.
- **Geranium:** Is a balancing oil and has a regulating action on hormonal balance. Its uplifting aroma can cheer and relieve depression and fatigue. Geranium stimulates the lymphatic system and relieves fluid retention.

7. Efficacy³⁴

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. 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. Mainstream literature suggests that aromatherapy is based on the anecdotal evidence of its benefits rather than proof that aromatherapy can cure diseases. 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 or that the claimed "energies" even exist, many skeptics reject this form of aromatherapy as pseudoscience.

7.1 Safety concerns : In addition, there are potential safety concerns. Because essential oils are highly concentrated they can irritate the skin when used in undiluted form. Therefore, they are normally diluted with carrier oil for topical application, such as jojoba oil, olive oil, or coconut oil. 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. 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 criticized on many different levels by many authorities. Oils both ingested and applied to the skin can potentially have negative interaction with conventional medicine.^{37, 38}

8. Research about aromatherapy³⁹

There is limited scientific research about aromatherapy and its use in individuals with spinal cord or brain injuries. Aromatherapy has demonstrated some results and promise in treating the following conditions and symptoms common among individuals with spinal cord injury:

- Pain: Numerous essential oils – German chamomile, lavender, lemongrass and black pepper – may reduce pain, either by numbing, producing heat or reducing inflammation.
- Bacterial Infections: Essential oils of bay laurel, cinnamon, oregano, savory and thyme, though potential skin irritants

have all shown some effectiveness in dealing with bacterial infections such as urinary tract infections. Milder essential oils such as bay rum, eucalyptus, lemon grass, or lavender may also be effective.

- Spasms and Muscle Stiffness: Essential oils of black pepper, lemongrass, Roman chamomile and bergamot all demonstrate effectiveness in reducing muscle stiffness and /or spasms.
- Using aromatherapy after traumatic brain injury can sometimes cause over-stimulation. Consult with your doctor before using aromatherapy.

9. List of essential oils affecting our overall well-being

There are few names of essentials which are affecting our overall well-being.^{35, 36}

Table 2: Essential Oils Affecting Overall Well-Being

Health issue	Essential Oil
Anger	Bergamot, Vetiver, Jasmine, Chamomile, Neroli, Orange, YlangYlang, Patchouli, Roman Rose, Petitgrain
Depression	Mandarin, Clary Sage, Bergamot, Frankincense, Geranium, Grapefruit, Jasmine, Helichrysum, Lavender, Orange, Lemon, Neroli, Rose, Roman Chamomile, YlangYlang, Sandalwood,
Anxiety	Bergamot, Clary Sage, Cedarwood, Frankincense, Lavender, Geranium, Neroli, Mandarin, Patchouli, Rose, Roman Chamomile, Vetiver, Sandalwood
Fear	Bergamot, Clary Sage, Cedarwood, Frankincense, Jasmine, Grapefruit, Lemon, Orange, Neroli, Vetiver, Roman Chamomile Sandalwood
Confidence	Bay Laurel, Cypress, Bergamot, Jasmine, Grapefruit, Rosemary, Orange
Fatigue, Exhaustion and Burnout	Basil, Bergamot, Clary Sage, Black Pepper, Cypress, Ginger, Frankincense, Helichrysum, Grapefruit, Jasmine, Patchouli, Lemon, Peppermint, Rosemary, Vetiver, Sandalwood
Insecurity	Bergamot, Frankincense, Cedarwood, Jasmine, Vetiver, Sandalwood,
Grief	Cypress, Helichrysum, Frankincense, Rose, Sandalwood, Neroli, Vetiver
Irritability	Lavender, Neroli, Mandarin, Sandalwood, Roman Chamomile
Stress	Benzoin, Clary Sage, Bergamot, Geranium, Frankincense, Jasmine, Grapefruit, Lavender, Neroli, Mandarin, Roman Chamomile, Patchouli, Rose, Vetiver, Sandalwood, YlangYlang
Panic Attacks	Frankincense, Lavender, Helichrysum, Rose, Neroli
Loneliness	Bergamot, Helichrysum, Clary Sage, Frankincense, Rose, Roman Chamomile
Memory and Concentration	Basil, Cypress, Black Pepper, Lemon, Hyssop, Rosemary, Peppermint
Happiness and Peace	Bergamot, Geranium, Frankincense, Grapefruit, Neroli, Lemon, Rose, Orange, YlangYlang, Sandalwood

10. Conclusion

Aromatherapy seems to produce some positive benefit as supportive treatment; however, evidence is limited at this time. If patients enjoyed the experience, then their quality of life may have been enhanced, even if it was just for the time they were receiving the therapy. In addition, aromatherapy appears harmless if used properly, producing minimal, if any, adverse effects. The most common side effect appears to be dermatitis. There is limited scientific research about aromatherapy and its use in individuals with spinal cord or brain injuries.

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