

Aromatherapy For Stress Reduction

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Objectives

- What is stress
- What are essential oils
- Methods of administrations
- The limbic system
- Aromatherapy in the hospital system
- The “M” Technique
- Studies
- Diffusers
- Best Essential oils to use for yourself and patients
- Cost guideline



Everyday Stressors



What is Stress?

- Stress is the nonspecific response of the body to any demand made upon it
 - Fight or flight response
 - Sympathomedullary Pathway (SAM)
 - Long term stress is regulated
 - Hypothalamic Pituitary-Adrenal (HPA)
 - Stimulates the pituitary gland to secrete ACTH(adrenocorticotrophic hormone)
 - ACTH stimulates the adrenal glands to produce cortisol
 - Stress can be external or internal



Common Symptoms of Stress

- Sweat (palms, pits, etc.)
- Increase in blood pressure, heart rate, and/or breathing rate
- “Butterflies in stomach”/nausea
- Shaking
- Bladder overdrive
- Headache/muscle tension
- Change in sleeping patterns (insomnia or hypersomnia)
- Change in appetite
- MOODY!
- Forgetful



Effects of long-term stress

- On your Cardiovascular System...
 - Increased risk of stroke and heart attack
- On your Immune System...
 - Increased susceptibility to infection and slower recovery/healing time (Psychoneuroimmunology)
- On your Brain...
 - Stress hormones affect memory
 - Anxiety, insomnia and depression



What Can I Do? (Holistically)

- Try a new relaxation technique:
 - Aromatherapy
 - Meditation
 - Yoga
 - Write in your journal
 - Do something you enjoy
 - Pets, hobby, gardening
 - Guided imagery



What are essential oils

- Aromatic volatile liquids found in shrubs, flowers, trees, roots, bushes, and seeds
- Extracted via steam distillation and cold pressed (citrus oils)
- Highly concentrated and far more potent than dry herbs
- Very complex molecules



Western medicine versus EO

- Caffeine- Camellia sinesis

- Codeine- Papaver somnifera (poppy)

- Digoxin-Digitalis purpurea (Purple foxglove)

- Camellia sinesis
 - Antibacterial
 - Antioxidant
 - Anti-inflammatory

- Papaver somnifera
 - Treat cancer tumors
 - Constipation
 - Insomnia

- Digitalis purpurea
 - Internal hemorrhage
 - Inflammatory diseases
 - Delirium tremens in epilepsy

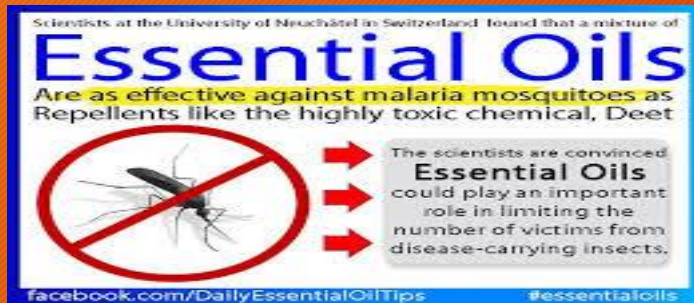


The Function of Essential Oils In Plants

- Attract animals and insects for pollination
- Protection from bacteria, fungi, and other micro organisms
- Act as an powerful antioxidant
- Repellent of predators (safe DEET)



How-to Make Homemade Essential Oil Insect Repellent Spray

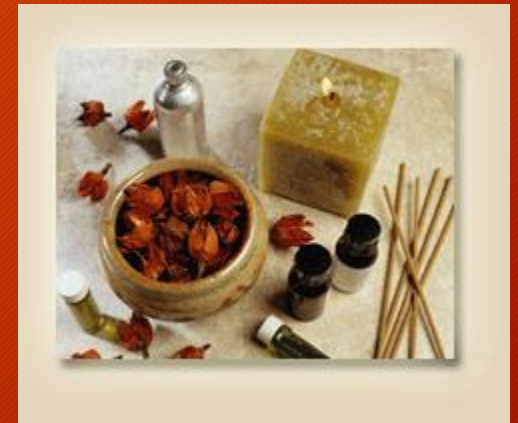


- 2 ounces distilled or boiled water
- 1.5 ounces vodka
- 30 drops citronella essential oil
- 25 drops peppermint essential oil
- 15 drops tea tree essential oil



3 Modes of Actions of Oils

- Pharmacological
- Physiological
- Psychological



Methods of administration

- Oral ingestion or internal application (tampon in yeast infections)
- Inhalation
- Olfaction
- Topical application



Oral administration

- Should not be undertaken by the lay person
- Equivalent to herbal medicine but much stronger
- France is the forerunner
- French aromatherapy doctors employ the aromatogram
- Dosage can vary from 3 - 20 drops three times a day
- Adulteration of essential oils is a common problem so great caution is advised



Evidence Based Aromatherapy Antibacterial

Aromatogramme

- Primary effects of EO is on bacterial cell membrane
- French chemist Rene Maurice Gattefosse
 - The Father of Aromatherapy
 - Burns and MRSA
- Lemongrass, Oregano, Savory, Red Thyme, and Cinnamon are ranked amongst the best antibacterial oils



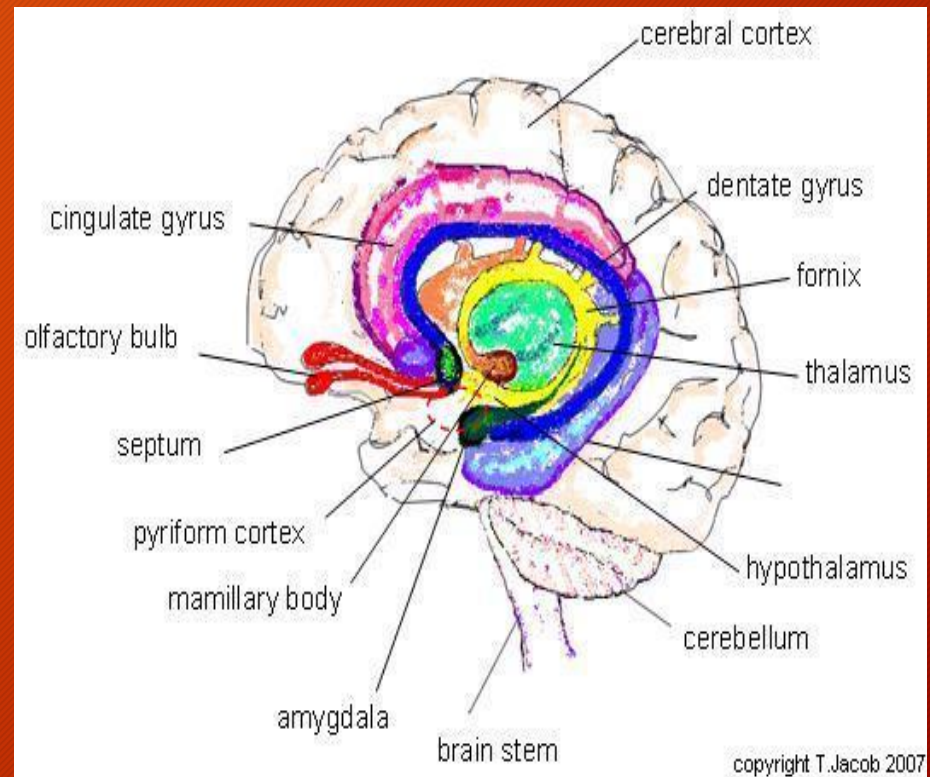
Inhalation of essential oils

- Enter through the respiratory tract and absorbed via the alveoli then transported to the blood stream
- Powerful physiologic response
- Eucalyptus oils
 - Clears the mind and focus concentration
 - Reducing swelling in the mucus membranes
 - Supporting respiratory problems



Anatomy of smell

- Wired directly into the brain so that the results is immediate
- Odor molecules travel through the nose and affect the brain through a variety of receptor sites
 - Think limbic system

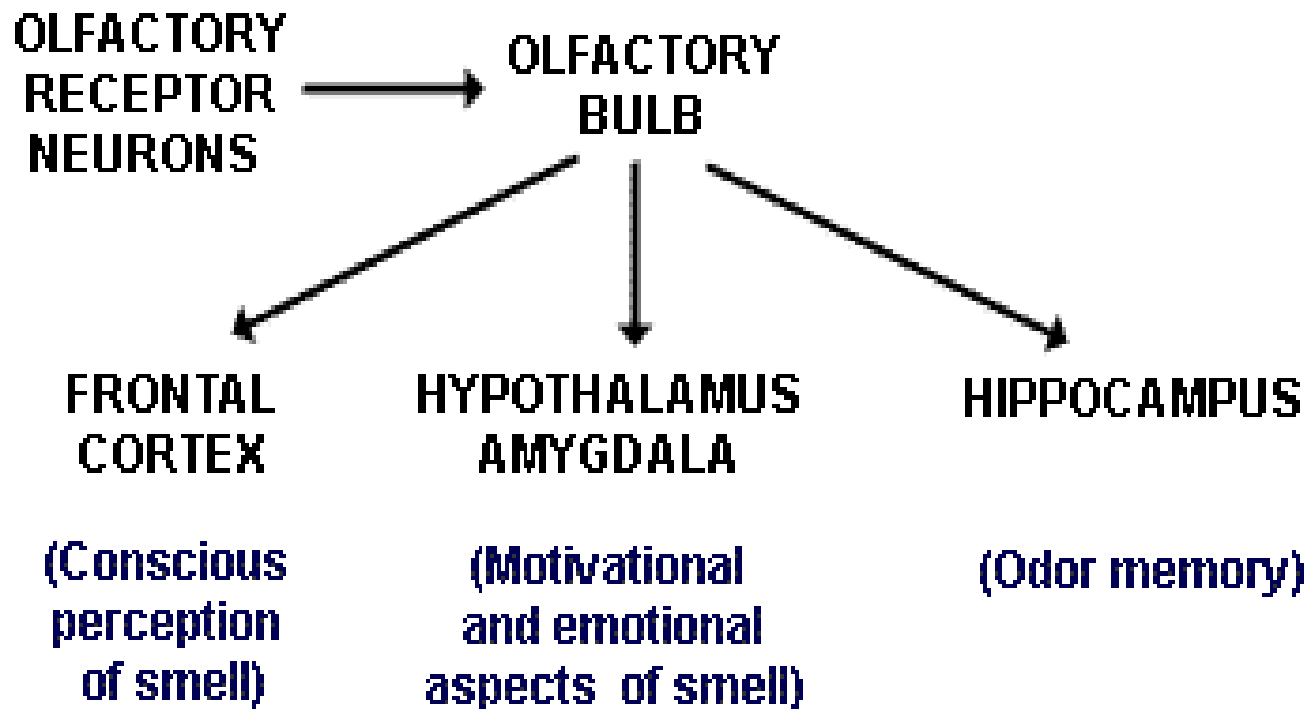


The limbic system and the sense of smell

- Limbic system or the emotional brain
- Developed first in humans before we developed speech
- Motivation, learning, and memory
- Survival part of ourselves
- Registers basic emotions such as pleasure, pain, fear, anger, sorrow, and sexual feeling



Transmission of smell signals to CNS



Topical application of EO and massage

- Direct and indirect physiological and psychological effects
- Massage combined with essential oils
- Strong evidence of reduction of stress and pain
- Improves blood flow and lymphatic drainage
- Stimulate the parasympathetic nervous system
- Psychological effect of touch therapy



Hospital using aromatherapy

- Benedictine Hospital, NY
- Beth Israel Complementary Care Center, NY
- Columbia Presbyterian Medical Center, NY
- Elk Regional Health Hospital, PA
- Englewood Hospital and Medical Center, Englewood, NJ
- Memorial Sloan-Kettering Cancer Center, NY
- Pinnacle Health, Harrisburg, PA
- St. Barnabas Healthcare System, Toms River, NJ
- St. John's Riverside Medical Center, Yonkers, NY
- The Valley Hospital, Ridgewood, NJ



The “M” Technique and RJ Buckle PhD, RN

- The ‘M’ Technique is a registered method of gentle, structured touch suitable developed by R.J. Buckle PhD, RN
- Anyone can learn the ‘M’ Technique
- Touch is one of the basic forms of communications which modern medicine has forgot
- The ‘M’ technique is simple to learn: each movement and sequence is done in a set pattern, at a set pressure and set speed, which never change. It is like a choreographed dance
- The M technique is different from massage and can be easily learned



The “M” Technique



The “M” Technique

The Hand ‘M’ Technique®
Demonstration by Beatrix Veal



Research Studies

- Anxiolytic Effect of Aromatherapy Massage in Patients with Breast Cancer
- Evaluating Effects of Aromatherapy Massage on Sleep in Children with Autism: A Pilot Study
- The Effect of Aromatherapy Abdominal Massage on Alleviating Menstrual Pain in Nursing Students: A Prospective Randomized Cross-Over Study
- Aromatherapy With Citrus Oil and Anxiety During the First Stage of Labor
- The Effect of Lemon Inhalation Aromatherapy on Nausea and Vomiting of Pregnancy: A Double-Blinded, Randomized, Controlled Clinical Trial
- The effect of inhalation aromatherapy on anxiety level of the patients in preoperative period
- Effect of aromatherapy on pruritus relief in hemodialysis patients
- The Effect of Inhalation of Aromatherapy Blend containing Lavender Essential Oil on Cesarean Postoperative Pain



Reducing the symptoms of lymphoedema: Is there a role for aromatherapy?

- Year of study-2006
- RCT
- Intervention-
 - (1) Aromatherapy and massage
 - (2) Massage therapy alone without EO
- Essential oil used was lavender
- Outcome-
 - Increase in patient-identified symptom relief and improved wellbeing



Effects of Aroma Hand Massage on Pain, State Anxiety and Depression in Hospice Patients with Terminal Cancer

- Year of study-2008
- RCT
- Intervention-
 - (1) Aromatherapy hand massage(Bergamot, Lavender, Frankincense)
 - (2) General oil hand massage 5 minutes for 7 days
- Outcome
 - Aromatherapy hand massage had positive effect on pain reduction and depression on scaled survey



The role of aromatherapy massage in reducing anxiety in patients with malignant brain tumors

- Year of study-2001
- RCT
- Intervention-
 - Aromatherapy massage and Enya music for 30 minutes (Lavender or Roman chamomile oil)
 - Simple massage with carrier oils only
- Outcome
 - Decrease in
 - Systolic and diastolic blood pressure
 - Heart and respiratory rate
 - One week after treatment revealed that patients felt more 'relaxed' and 'less tense' compared to control group



An evaluation of aromatherapy massage in palliative care

- Year of study-1999
- RCT
- Intervention
 - (1) Aromatherapy massage (Roman chamomile oil)
 - (2) Carrier oil massage
 - (3) Sessions for 3 weeks
- Outcome
 - Massage with or without essential oils reduced levels of anxiety
 - Improved physical and psychological symptoms on survey sampled participants using essential oils
 - Overall improvement in quality-of-life improvement



Fan and vaporizing diffusers

- Fan and Warm Pad Diffusion
 - Pad style diffusers are good for a brief release of an essential oil's fragrance but there will be very little therapeutic value
- Vaporizing Diffusion
 - Vaporizers are great for using modest amounts of essential oil and usually run very quietly while adding negative ions and humidity to the air. However, very little essential oil is vaporized



Atomized Diffusion

- Atomized diffusion has revolutionized the way that essential are used
- New technology uses a cold air pump to force essential oil molecules through an atomizer and are converted to extremely small particles
- These particles stay suspended in air and breathe in and thereby exerting therapeutic effect



Methods of delivery

Compresses

- Wet Compress - wonderful way to use Essential oils
- Cold Compresses
 - 1 cup water with 5-10 drops of essential oils
 - Headaches
 - 3-4 drops of Lavender oil
 - Sinus headaches
 - 3-4 drops of lavender and peppermint oil
- Warm compresses (antibacterial)
 - Thyme or oregano oil for skin infection (pus)



Carrier oils

- Essential oils need not be applied “neat” (or undiluted) for skin application
- Coconut Oil
 - It is odorless and colorless. It won't stain and easily washes out of clothing and sheets
- Grapeseed Oil
 - It offers regenerative and restructuring characteristics that offer quality skin moisturizing
- Olive Oil
 - It has a high vitamin and mineral count



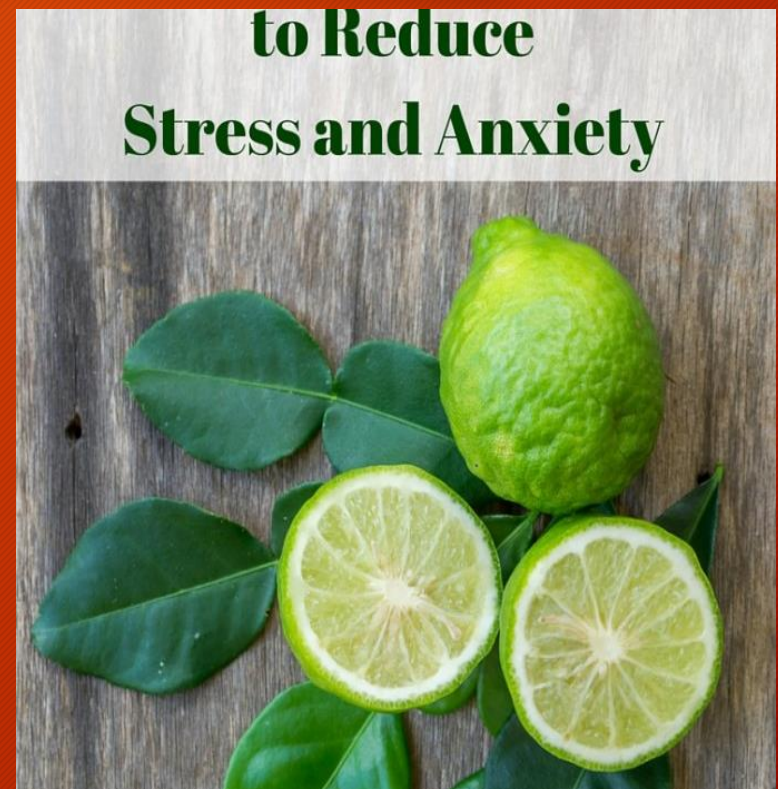
Dilution and Measurement Chart

- For one fluid ounce (600 drops) of carrier oil:
 - 1% dilution = 6 drops
 - 2% dilution = 12 drops
 - 2.5% dilution = 15 drops
 - 5% dilution = 30 drops or 1.5 ml
 - 10% dilution = 60 drops or 3 ml
- **Measurements / Conversions (Volume)**
- 1 fl oz = 600 drops = 30 ml = 2 tablespoons
- 1/2 fl oz = 300 drops = 15 ml = 1 tablespoon
- 1/6 fl oz = 100 drops = 5 ml = 1 teaspoon
- 1/30 fl oz = 20 drops = 1 ml = 1/5 teaspoon



What essential oils should I use FOR REDUCING STRESS?

- Bergamot
 - *Citrus bergamia*
 - Antidepressant, calming, relaxing, sedative
- Chamomile-Roman
 - *Chamomelum nobilis*
 - Analgesic, hypnotic, relaxing, sedative
- Jasmine
 - *Jasminum grandiflorum*
 - Antidepressant, aphrodisiac, euphoric, relaxing
- Lavender
 - *Lavandula angustifolia*
 - Analgesic, antidepressant, anticonvulsant, anxiolytic, calming, hypnotic, relaxing, sedative



What essential oils should I use FOR REDUCING STRESS?

- Marjoram
 - *Origanum majorana*
 - Analgesic, anxiolytic, aphrodisiac, comforting
- Rose (Egypt)
 - *Rosa damascene*
 - Antidepressant, aphrodisiac, relaxing, sedative, soothing, uplifting
- Vetiver
 - *Vetivera zizanoides*
 - Calming, nerve tonic, sedative
- Neroli (orange blossom)
 - *Citrus aurantium*
 - Stress reducing



Cost of essential oils (Stress)

- Bergamot
 - \$33.00 Oz.
- Chamomile-Roman
 - \$74.00 Oz.
- Jasmine
 - \$169.00 Oz.
- Lavender
 - \$19.00 Oz.
- Marjoram
 - \$30.00 Oz.
- Rose
 - \$574.00 Oz.
- Vetiver
 - \$29.00 Oz.
- Neroli
 - \$316.00 Oz.



Which one should I use?

- Lavender, Rose, Neroli, and Chamomile are the most commonly used in studies
- Rose and eucalyptus combination have been reported to be uplifting and decrease cross infection rates
- Price is a factor!
- Evidence for lavender is huge and the price is right



Summary

- Essential oils usage is on the rise
- Stress kills!
- New Studies are coming out day by day
- Essential oils work best when applied with gentle massage (M technique)
- The “ Caring Touch” is important for patients as well as ourselves
- Be kind to your self



References

- Boyce, V. J., & Natschke, M. (2019). Establishing a comprehensive aromatherapy program in patient care settings. *Pain Management Nursing, 20*(6), 532-540.
- Farrar, A. J., & Farrar, F. C. (2020). Clinical aromatherapy. *The Nursing Clinics of North America, 55*(4), 489.
- Li, H., Zhao, M., Shi, Y., Xing, Z., Li, Y., Wang, S., ... & Sun, J. (2019). The effectiveness of aromatherapy and massage on stress management in nurses: a systematic review. *Journal of clinical nursing, 28*(3-4), 372-385.
- Williams, L. (2020). Is Aromatherapy a Critical Care Intervention?. *AACN Advanced Critical Care, 31*(2), 198-202.

