

# ESSENTIAL OILS & THE BRAIN

## Essential Oil Effects in the Brain

- Support healthy brain function<sup>37</sup>
- Neuroprotective<sup>46, 56, 74, 75, 88</sup>
- Penetrate bi-lipid cellular membrane<sup>8</sup>
- Sesquiterpenes able to surpass blood-brain barrier<sup>82</sup>
- Inhibit virus and bacteria growth<sup>8, 109</sup>
- Support dendritic growth and function<sup>37</sup>

## What Is an Essential Oil?

- Extract from plants
- Made of hundreds of concentrated natural compounds
- 50–70 times more powerful than the herb
- Easily metabolized by the body

## What Contributes to the Quality of an Essential Oil?

### Pure

- Free of toxins, pesticides, weeds, or fillers
- Proper extraction methods applied to each plant

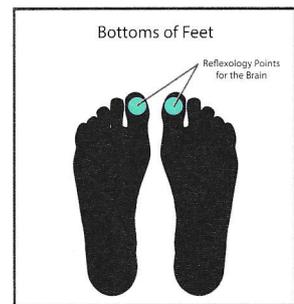
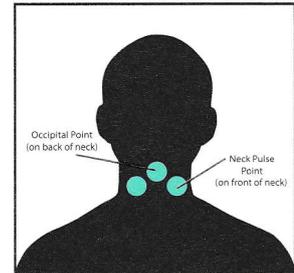
### Potent

- Plants grown and harvested in their natural habitat
- Higher in therapeutically beneficial compounds

### Testing

- Third-party testing
- Multiple analyses performed on each liter of oil
- Researchers testing health benefits of therapeutically beneficial compounds

## Pulse and Reflexology Points



## Aromatic Application

Diffuse, or breathe in from hands. Essential oils used aromatically affect the brain in the following ways:

- Bind to receptors through neural olfactory pathways and influence neurotransmitters in the limbic system<sup>82, 110</sup>
- Increase oxygenation in the limbic system, stimulating release of neurotransmitters<sup>4, 65</sup>
- Influence the amygdala in the limbic system of the brain for emotional trauma release<sup>4</sup>

## Topical Application

Apply directly to the skin on areas of concern. Apply to pulse points on the neck, the occipital point at the top of the spine, and reflexology points (center of big toe for brain). Essential oils applied topically affect the brain in the following ways:

- Increase circulation and oxygenation in the cells<sup>82</sup>
- Penetrate tissue to aid in repair

## Internal Application

Add to drink, food, or veggie capsules, or apply sublingually. Internal application can support intestinal tract health and positively aid in digestion. Essential oils taken internally affect the brain in the following ways:

- Influence nutrient absorption for brain health
- Influence neurotransmitter activity<sup>115</sup>

## DEPRESSION

Symptoms: Sad, Moody, Dysthymic, Down, Irritable, Angry, Low Energy, Loss of Interest

Primary Brain Areas Affected: Amygdala, Basal Ganglia, Hippocampus, Hypothalamus, Serotonin, Norepinephrine, Dopamine

### Essential Oils

Bergamot<sup>7, 82</sup>, Chamomile<sup>15, 82</sup>, Cilantro<sup>19</sup>, Citrus Oils<sup>82</sup>, Clary Sage<sup>100</sup>, Frankincense<sup>73, 74</sup>, Geranium<sup>82</sup>, Ginger<sup>84</sup>, Jasmine<sup>82</sup>, Lavender<sup>25, 27, 82</sup>, Lemon<sup>55, 61</sup>, Oregano<sup>68</sup>, Patchouli<sup>89</sup>, Rose<sup>42</sup>, Rosemary<sup>62, 63</sup>

### Also Try:

Invigorating Blend (Bergamot, Clementine, Grapefruit, Lemon, Mandarin, Tangerine, Vanilla, Orange), Joyful Blend (Elemi, Lavandin, Lemon Myrtle, Melissa, Osmanthus, Sandalwood, Tangerine, Ylang Ylang), Omega Essential Fatty Acid<sup>20</sup>

### Suggested Protocols

**Adults** (1–2 drops per application; oils are in order of typically most effective)

- **Frankincense** (A,T,I): Diffuse; apply to occipital point on base of skull; take 1 drop sublingually, 1–2 times a day
- **Bergamot** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Lavender** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Lemon** (A,I): Diffuse; take 3–5 drops in an 8 oz. glass of water 3–5 times a day
- **Citrus Oils** (A,T): Diffuse; apply to occipital point, pulse points on wrists, or brain points on bottoms of feet
- **DIY Blend** (A,T): Combine 2 drops rosemary, 5 drops frankincense, 5 drops clary sage, 5 drops patchouli, 10 drops lavender, 15 drops bergamot, 15 drops orange, and 15 drops fractionated coconut oil: apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet

# ANXIETY

Symptoms: Nervous, Panic, Fearful, Stress, Tense, Restlessness

Primary Brain Areas and Systems Affected: Amygdala, Increased Noradrenergic Activity, Increased Glutamate, Increased Cortisol, Low GABA

## Essential Oils

Basil<sup>113</sup>, Bergamot<sup>7, 78, 91</sup>, Chamomile<sup>82</sup>, Cilantro<sup>19</sup>, Citrus Oils<sup>110, 115</sup> (Support glutamate and GABA activity and attenuate cortisol effects), Clary Sage<sup>110, 33</sup>, Frankincense<sup>74, 95</sup>, Lavender<sup>13, 60, 64, 82, 96, 108, 110</sup>, Lemon<sup>17, 55, 61, 115</sup>, Marjoram<sup>82</sup>, Melissa<sup>50, 51, 82</sup>, Sandalwood<sup>110</sup>, Rosemary<sup>25, 64, 82</sup>

### Also Try:

Calming Blend (Lavender, Roman Chamomile, Sandalwood, Sweet Marjoram, Ylang Ylang, Vanilla), Grounding Blend (Blue Tansy, Frankincense, Ho Wood, Spruce)

## Suggested Protocols

**Adults** (1–2 drops per application; oils are in order of typically most effective)

- **Lavender** (A,T): Diffuse regularly in evening or during anxious mood; apply to pulse points on front of neck and on wrists; apply to heart for panic attack
- **Citrus Oils** (A,T): Diffuse regularly in the morning; apply to occipital point, pulse points on wrists, or brain points on bottoms of feet
- **Lemon** (A,I): Diffuse; take 3–5 drops in an 8 oz. glass of water 3–5 times a day
- **Melissa** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Frankincense** (A,T,I): Diffuse; apply to occipital point; take 1 drop sublingually 1–2 times a day
- **Rosemary** (A,T): Diffuse; apply to brain points on bottoms of feet
- **Clary Sage** (T): Apply to brain points on bottoms of feet
- **DIY Blend** (A,T): Combine equal parts of lavender, clary sage, sandalwood, and orange with fractionated coconut oil (for mind-racing): apply to occipital point, pulse points on neck and wrists, or brain points on bottoms of feet
- **Calming Blend** (A,T): Diffuse; apply to occipital point, pulse points, or bottoms of feet
- **Grounding Blend** (A,T): Diffuse; apply to occipital point, pulse points, or bottoms of feet

# STRESS

Symptoms: Overwhelmed, Irritable, Inability to Concentrate, Sleep Disturbance

Primary Brain Areas and Systems Affected: Limbic System, Hypothalamus, Changes in Structures, High Levels of Corticosteroids, Risk for Depression

## Essential Oils

Bergamot<sup>91</sup>, Citrus Oils<sup>110, 115</sup>, Clary Sage<sup>33, 110</sup>, Frankincense<sup>37, 73, 95</sup>, Lavender<sup>5, 28, 53, 110</sup>, Lemon<sup>17, 55, 115</sup>, Marjoram<sup>53</sup>, Rose<sup>29, 42</sup>, Rosemary<sup>5</sup>, Ylang Ylang<sup>40, 41, 53, 82</sup>

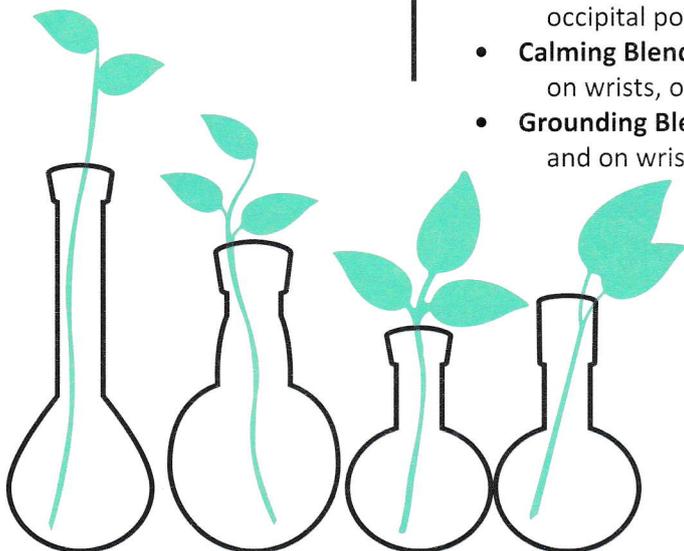
### Also Try:

Calming Blend, Grounding Blend, Invigorating Blend

## Suggested Protocols

**Adults** (1–2 drops per application; oils are in order of typically most effective)

- **Lavender** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Frankincense** (A,T,I): Diffuse; apply to occipital point on base of skull; take 1 drop sublingually 1–2 times a day
- **Lemon** (A,I): Diffuse; take 3–5 drops in 8 oz. water 3–5 times a day
- **Ylang Ylang** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Citrus Oils** (A,T): Diffuse regularly in the morning; apply to occipital point or to brain points on bottoms of feet
- **Clary Sage** (A,T): Diffuse; apply to occipital point or to bottoms of feet at brain points
- **DIY Blend** (A,T): Combine 5 drops clary sage, 10 drops lavender, 10 drops ylang ylang, 10 drops lemon, 10 drops orange, and 10 drops fractionated coconut oil: apply to occipital point, pulse points on neck and wrists, or brain points on bottoms of feet
- **Calming Blend** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Grounding Blend** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet



Scan this QR code or go to <http://bit.ly/1GtpuB> to find the list of references.

# ADDICTIONS

Types: Alcohol, Nicotine, Drug, Gambling, Overeating, Sexual/Pornography

Primary Brain Areas Affected: Frontal Lobe, Dopamine, Epinephrine, Norepinephrine, Serotonin, GABA, Glutamate

## Essential Oils

Black Pepper (nicotine)<sup>22, 86</sup>, Citrus Oils<sup>55, 112, 115</sup>, Clary Sage<sup>100</sup>, Oregano<sup>66, 68, 116</sup>, Patchouli<sup>89</sup>, Thyme<sup>68, 116</sup>

### Also Try:

Calming Blend, Chamomile, GI Cleansing Formula (Oregano, Melaleuca, Thyme, Lemon, Lemongrass, Peppermint, Caprylic Acid), Invigorating Blend, Lavender, Rosemary

## Suggested Protocols

**Adults** (1–2 drops per application)

- **Black Pepper** (A): Diffuse regularly to help with smoking addiction
- **Citrus Oils** (A,T,I): Diffuse orange or grapefruit (limonene) during withdrawals; apply to occipital point or to brain points on bottoms of feet; take 3–5 drops of citrus in 8 oz. water 3–5 times a day
- **GI Cleansing Formula** (I): Take 1 capsule with meals 1–2 times a day for 10 days max
- **Invigorating Blend** (A,T): Diffuse regularly; apply to occipital and pulse points as needed
- **Clary Sage** (A,T): Diffuse; apply to occipital point, pulse points, or bottoms of feet at brain points
- **Patchouli** (A,T): Diffuse; apply to occipital point, pulse points, or bottoms of feet at brain points

# HEAD INJURY

Symptoms: Loss of Consciousness, Head Pain, Throbbing, Shift in Mood/Personality, Damage to Tissue

Primary Brain Areas Affected: Neuronal Communication, Cell Death, Intracranial Hemorrhaging

## Essential Oils

Arborvitae<sup>46</sup>, Basil<sup>12</sup>, Frankincense<sup>37, 75, 105</sup>, Helichrysum<sup>85, 92, 93</sup>, Rose<sup>69</sup>

### Also Try:

Anti-Aging Blend (Frankincense, Sandalwood, Lavender, Myrrh, Helichrysum, Rose), Myrrh

## Suggested Protocols

**Adults** (1–2 drops per application)

- **Helichrysum** (T): For bleeding and inflammation, apply 1 drop to the injury site and to brain points on bottoms of feet
- **Frankincense** (T,I): For inflammation, cell protection, or pain, apply 1 drop to injury site and to brain points on bottoms of feet; take 1 drop sublingually 1–2 times a day
- **Arborvitae** (T): For cell protection, apply 1 drop to injury site and to brain points on bottoms of feet
- **Anti-Aging Blend** (T): For skin and tissue repair, apply 1 drop to injury site

# MEMORY & LEARNING

Symptoms: Forgetful, Difficulty Remembering Details, Speech/Memory Challenges, Difficulty with Remembering Instructions

Primary Brain Areas Affected: Acetylcholine, Dentate Gyrus, Hippocampus

## Essential Oils

Basil<sup>94, 113</sup>, Cilantro<sup>18, 19</sup>, Clary Sage<sup>70, 99</sup>, Clove<sup>35, 36</sup>, Dill<sup>106</sup>, Frankincense<sup>37, 45</sup>, Lemon<sup>114</sup>, Melissa<sup>51</sup>, Peppermint<sup>23, 72</sup>, Rose<sup>26, 69</sup>, Rosemary<sup>9, 52, 71, 81</sup>

### Also Try:

Cedarwood (A,T only), Focus Blend (Amyris, Frankincense, Lime, Patchouli, Roman Chamomile, Sandalwood, Ylang Ylang), Grounding Blend, Lemongrass, Omega Essential Fatty Acid<sup>10, 107</sup>

## Suggested Protocols

**Adults** (1–2 drops per application; oils are in order of typically most effective)

- **Rosemary** (A,T): Diffuse; apply to brain points on bottoms of feet
- **Frankincense** (A,T,I): Diffuse; apply to occipital point; take 1 drop sublingually 1–2 times a day
- **Clary Sage** (A,T): Diffuse; apply to occipital point or to bottoms of feet at brain points
- **Peppermint** (A,T): Diffuse; apply to occipital point or to brain points on bottoms of feet
- **Clove** (A,T): Diffuse; apply to brain points on bottoms of feet
- **Focus Blend** (T): Apply at occipital point, pulse points on neck, or brain points on bottoms of feet
- **Omegas** (I): Take natural source as directed
- **DIY Blend** (A,T): Combine 10 drops clary sage, 20 drops clove, 20 drops frankincense, 10 drops rosemary, and 10 drops fractionated coconut oil: diffuse; apply at occipital point, pulse points on neck and wrists, or brain points on bottoms of feet

# HYPER/IMPATIENT/AGITATED

Symptoms: Hyperactive, Agitated, Short Tempered, Impatient, Unable to Sit Still, Outbursts, Interruptive, Speaks Out of Turn  
Primary Brain Areas and Systems Affected: Frontal Lobe, Right Parietal Lobe, Dopamine, Norepinephrine, Serotonin, GABA

## Essential Oils

Bergamot<sup>44, 82</sup>, Cedar<sup>47, 82, 111</sup>,  
Chamomile<sup>79, 82</sup>, Clary Sage<sup>110</sup>,  
Cilantro<sup>1, 11, 48, 90</sup>, Lavender<sup>25, 44, 60,</sup>  
<sup>82, 96, 110</sup>, Marjoram<sup>82</sup>, Melissa<sup>51, 82</sup>,  
Patchouli<sup>82</sup>, Rose<sup>42</sup>, Rosemary<sup>25</sup>,  
Sandalwood<sup>110</sup>, Vetiver<sup>82</sup>, Ylang  
Ylang<sup>40, 41, 70, 72, 82</sup>

### Also Try:

Calming Blend, Geranium,  
Grounding Blend, Joyful Blend

## Suggested Protocols

**Adults** (1–2 drops per application; oils are in order of typically most effective)

- **Ylang Ylang** (A,T): Diffuse; apply to occipital, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Lavender** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Cilantro** (A,T,I): Apply to brain points on bottoms of feet; add 1–2 drops to food
- **Chamomile** (A,T,I): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet; take 1 drop in warm water as tea
- **DIY Blend** (A,T): Combine equal parts lavender, ylang ylang, cedar, chamomile, vetiver, and bergamot: diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Calming Blend** (A,T): Diffuse; apply to occipital point, pulse points, or brain points on bottoms of feet
- **Grounding Blend** (A,T): Diffuse; apply to occipital point, pulse points, or brain points on bottoms of feet

# ATTENTION/CONCENTRATION

Symptoms: Difficulty Focusing, Inability to Concentrate, Easily Distracted, Difficulty Listening  
Primary Brain Areas and Systems Affected: Dopamine, Norepinephrine, Right Parietal Lobe, Frontal Lobe

## Essential Oils

Bergamot<sup>82</sup>, Chamomile<sup>79, 82</sup>,  
Clary Sage<sup>70, 99</sup>, Jasmine<sup>43</sup>,  
Juniper<sup>82</sup>, Lavender<sup>25, 82</sup>,  
Peppermint<sup>72</sup>, Rosemary<sup>25, 82, 97</sup>,  
Sandalwood<sup>38</sup>, Ylang Ylang<sup>40</sup>

### Also Try:

Basil, Focus Blend, Invigorating  
Blend, Lemon

## Suggested Protocols

**Adults** (1–2 drops per application; oils are in order of typically most effective)

- **Ylang Ylang** (A,T): Diffuse; apply to occipital point, pulse points on neck and wrists, or brain points on bottoms of feet
- **Peppermint** (A,T): Diffuse during the day with orange; apply to occipital point
- **Rosemary** (A,T): Diffuse; apply to brain points on bottoms of feet
- **Clary Sage** (A,T): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet
- **Lavender** (A,T): Diffuse; apply to pulse points on wrists and neck or brain points on bottoms of feet
- **Jasmine** (A,T): Diffuse; apply to occipital point, pulse points, or brain points on bottoms of feet
- **Chamomile** (A,T,I): Diffuse; apply to occipital point, pulse points on front of neck and on wrists, or brain points on bottoms of feet; take 1 drop in warm water as tea
- **Focus Blend** (T): apply to pulse points on neck, occipital point, or brain points on bottoms of feet



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Clinical Psychology student researching the effects  
aromatic compounds have on the brain.

The information provided here is not intended to treat, cure, or heal disease or illness nor to replace medical counseling. Please do not discontinue prescription use without first consulting with your doctor. There are multiple causes for mental health symptoms. This reference is designed to give you the most common findings; however, it is not limited to these influential factors. Please seek advice from a licensed mental health professional for further treatment. Follow all bottle label instructions for application methods. With suggested protocols, try a regimen of 2 oils max for a 2–3 week period of time, observing the results of each oil. Implement other protocols as needed for support.

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