

## STRESS

The sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS) are two divisions of the autonomic nervous system, which controls involuntary processes in the body, such as heart rate, digestion, and respiratory rate. These systems work together to maintain a balance in the body's functions, and they play a crucial role in the body's response to stress, as well as in shaping our thoughts and feelings.

### 1. Sympathetic Nervous System (SNS):

The SNS is often referred to as the "fight or flight" system because it prepares the body for perceived threats or stressors. When you encounter a stressful situation or feel threatened, the SNS is activated, and it triggers a series of physiological responses to help you cope with the situation. Some of the key effects of SNS activation include:

- Increased heart rate and blood pressure: This helps to pump more blood to the muscles and organs, preparing the body for action.
- Dilation of the pupils: This improves vision, making it easier to detect potential threats.
- Release of stress hormones (e.g., adrenaline and noradrenaline): These hormones enhance alertness and energy levels.

- Inhibition of digestion: Blood flow is diverted away from the digestive system to conserve energy for the immediate response.

Overall, the SNS prepares the body to either confront the stressor or escape from it. This response is crucial for survival in challenging situations.

## 2. Parasympathetic Nervous System (PNS):

The PNS is often referred to as the "rest and digest" system because it promotes relaxation, recovery, and restoration of the body's resources after the stress response. When the stressful situation has passed, the PNS becomes dominant and works to bring the body back to a state of balance and calm. Some of the key effects of PNS activation include:

- Slowing heart rate and lowering blood pressure: This helps conserve energy and promote relaxation.
- Constriction of the pupils: This returns the vision to a more normal state after the dilation caused by the SNS.
- Stimulation of digestion: The PNS allows the body to resume normal digestive processes, absorbing nutrients from food.

## 3. Relationship to Stress, Thoughts, and Feelings:

The interaction between the sympathetic and parasympathetic nervous systems plays a significant role in how we experience and cope with stress. In stressful situations, the SNS activation can lead to the familiar

"fight or flight" response, which increases alertness and physical readiness. This can manifest as heightened anxiety, fear, or anger.

Conversely, the PNS activation helps to counterbalance the stress response once the threat has passed. It promotes feelings of relaxation, calmness, and well-being. When the PNS is dominant, people tend to feel more at ease and capable of managing stress effectively.

Chronic stress, where the SNS remains constantly activated, can have negative effects on the body and mind. It can lead to physical symptoms such as headaches, digestive issues, and muscle tension, as well as emotional symptoms such as irritability, mood swings, and difficulty concentrating.

Practices such as mindfulness meditation, deep breathing exercises, and other relaxation techniques can help activate the PNS and reduce the overall stress response. These techniques promote a sense of balance and improve the body's ability to cope with stress, leading to a more positive impact on thoughts and feelings.

Essential oils have been used for centuries to promote relaxation, reduce stress, and support overall well-being. While they can't directly alter the autonomic nervous system, certain essential oils have been shown to have calming effects on the mind and body, which can indirectly help reduce the fight-or-flight response and

encourage the parasympathetic nervous response. Here are some ways you can use essential oils to promote relaxation:

1. **\*\*Aromatherapy Diffusion\*\***: Use an essential oil diffuser to disperse the scent of calming oils into the air. Inhalation of these aromatic molecules can have a direct impact on the limbic system, which is involved in emotions and memory. Some relaxing essential oils include:

- Lavender: Known for its calming and soothing properties.
- Roman Chamomile: Helps to relax the mind and body.
- Bergamot: Uplifting and calming, can help alleviate anxiety.
- Ylang Ylang: Promotes relaxation and reduces stress.
- Vetiver: Grounding and calming, helps with emotional balance.

2. **\*\*Topical Application\*\***: Dilute essential oils with a carrier oil (such as coconut oil or almond oil) and apply them to specific areas of the body, like the wrists, temples, or the back of the neck. This can create a soothing effect and help you relax.

3. **\*\*Bath Soak\*\***: Add a few drops of your chosen essential oil to a warm bath. The combination of aromatherapy and the warm water can be incredibly relaxing and calming.

4. **Massage**: Mix a few drops of essential oil into a carrier oil and use it for a relaxing massage. The physical touch and scent of the oil can help release tension and promote relaxation.

5. **Inhalation**: You can also simply inhale the scent of the essential oil directly from the bottle. Keep it near you, and take a few deep breaths whenever you feel stressed or anxious.

Remember, individual responses to essential oils can vary, so it's essential to choose oils that resonate with you personally. Additionally, if you have any allergies or sensitivities, it's crucial to perform a patch test before using any essential oil topically.

While essential oils can be beneficial for promoting relaxation, it's essential to address the underlying causes of stress and consider other stress-reducing practices like mindfulness, meditation, exercise, and getting adequate sleep for a comprehensive approach to managing stress and supporting the parasympathetic nervous system.

We have been using essential oils for enhancing mood, uplifting the spirits, and as a remedy for pain for thousands of years. Each culture has their unique go-to remedy derived from plants and oils.

In modern day, we can use Aromatherapy to help balance the function of our Central Nervous System, and manage psychiatric disorders and also pain responses in the body.



Studies indicate that various oils such as Lavender, Lemon, and Bergamot can help relieve insomnia, reduce stress, ease anxiety, help with depression, calm mood swings, as well as fight chronic and acute pain.

We can use Aromatherapy in a variety of ways to aid the Central Nervous System to do its jobs. Some of the best ways to help this system function properly is through the use of **steam inhalation, diffusers, and bathing.**



We can make blends daily to help calm and soothe our delicate psychological balance. When we use essential oils, some important psychosomatic things happen as explained below.

We make a blend and either inhale or topically apply, these oils are in our blood stream within 15 seconds. So as these essential oils hit the blood brain barrier, the neurotransmitters modulate the body's stress response by affecting the hypothalamus, pituitary, adrenal, and vagus nerves, providing an anti-inflammatory response to the stress. This induces a hormone response in the parts of the brain and acts to send corticosteroids to the brain to stop over producing serotonin and dopamine, high levels of which can lead to anxiety and mood disorders.

Studies have shown certain essential oils to be better than others.

### **Essential oils that can help with Central Nervous System disorders:**

1. **Lavender:** Anxiety, stress, insomnia, pain, dementia, fear, unrest, uplifts, revives, mood swings
2. **Rose:** Anti-depressant, irritability, insomnia, anger, fear, anxiety
3. **Lemon:** Mental clarity, frustration, anger, negativity, depression, anxiety
4. **Chamomile:** Anxiety, depression, pain, tension, stress
5. **Bergamot:** Anxiety, depression, pain, tension, stress
6. **Frankincense:** Depression, nervous tension, anxiety, stress disorder, grief
7. **Ylang Ylang:** Insomnia, anxiety, low self-esteem
8. **Neroli:** Anxiety, insomnia, depression, mental fog, intense emotions

To calm the Central Nervous System, we can also develop a strategy to balance and control our symptoms. Some daily habits include:

- a well balanced diet
- regular massage
- adequate sleep
- meditation and relaxation techniques
- allied health practice including herbal and aromatherapy, acupuncture, etc.

Some common Central Nervous System disorders and associated conditions include: **Stress, insomnia, anxiety, depression, pain, headaches**





Common Central Nervous System Disorders and the Essential Oils that can help alleviate:

**Insomnia:** Bergamot, Chamomile, Lavender, Lemon, Marjoram, Sweet Orange, Sandalwood

**Stress:** German Chamomile, Clary Sage, Frankincense, Geranium, Lavender, Marjoram, Neroli, Sweet Orange, Rosemary, Ylang Ylang

**Anxiety:** Bergamot, Cedarwood, Chamomile, Frankincense, Jasmine, Lavender, Lemon, Marjoram, Rose, Neroli, Ylang Ylang, Sandalwood

**Depression:** Bergamot, Lavender, Lemon, Mandarin, Lime, Rose, Chamomile, Clary Sage, Geranium

**Pain:** Eucalyptus, Peppermint, Tea Tree, Black Pepper, Lavender, Rosemary, Thyme

**Headache:** Chamomile, Clary Sage, Lavender, Rosemary, Thyme, Eucalyptus



## **RECIPES TO BE USED IN DIFFUSER, BATH OR FOR MASSAGE**

### **Blend for Headaches:**

- 4 drops Lavender
- 4 drops Rosemary
- 2 drops Eucalyptus

### **Blend for Anxiety**

- 3 drops Chamomile

- 3 drops Lavender
- 2 drops Ylang Ylang

**Blend for Insomnia**

- 4 drops Bergamot
- 2 drops Sweet Orange
- 2 drops Sandalwood

**Blend for Depression**

- 4 drops Lemon
- 3 drops Lavender
- 2 drops Clary Sage
- 2 drops Chamomile