## Managing stress & anxiety with herbal medicine

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# How do stress and anxiety affect the body and mind?

#### What is stress?

- "Stress in America continues to escalate and is affecting every aspect of people's lives from work to personal relationships to sleep patterns and eating habits, as well as their health, -psychologist Russ Newman, PhD, JD, APA executive director for professional practice.
- "We know that stress is a fact of life and some stress can have a positive impact, however, the high stress levels that many Americans report experiencing can have long-term health consequences, ranging from fatigue to obesity and heart disease."

According to the American Psychological Association, "People under stress experience mental and physical symptoms, such as irritability, anger, fatigue, muscle pain, digestive troubles, and difficulty sleeping.

"Stress sets off a cascade of physical responses that affect immune function, our hormones, our cognitive function system, and our internal clock, called our circadian rhythm," Korn says. "If these stressors persist, this leads to chronic illness."

#### **Statistically speaking..**

- 28% of Americans say they are managing their stress extremely well.
- However, 77% of people report experiencing physical symptoms and psychological symptoms. 73% related to stress in the last month.

#### Physical symptoms of stress include:

- fatigue 51%
- headache 44%
- upset stomach 34%
- muscle tension 30%
- change in appetite 23%
- teeth grinding 17%
- change in sex drive 15%
- feeling dizzy 13%

- Psychological symptoms of stress include: experiencing irritability or anger 50%
- feeling nervous 45%
- lack of energy 45%
- feeling as though you could cry 35%

In addition, 48% of Americans report lying awake at night due to stress

#### What is anxiety?

- Anxiety, on the other hand, is defined by persistent, excessive worries that don't go away even in the absence of a stressor."
- 19% of the population has been diagnosed with an anxiety disorder according to the national allies for mental health (NAMI).
- Anxiety comes with many physical symptoms as well. These symptoms can vary from person to person and are often dependent on the severity of anxiety. Many people who struggle with chronic anxiety disorders can have more serious health problems

#### Stress and anxiety, on a chemical level..

During times of stress and anxiety, the body can release large amounts of hormones like cortisol and norepinephrine.

#### CORTISOL:

- Cortisol is nature's built-in alarm system. It's your body's main stress hormone.
- It works with certain parts of your brain control your <u>mood, motivation, and fear.</u>
- Your adrenal glands -- triangle-shaped organs at the top of your kidneys -- make cortisol.

#### The importance of cortisol

Cortisol plays an important role in a number of things your body does. For example, it:

- Manages how your body uses carbohydrates, fats, and proteins
- Keeps inflammation down
- Regulates your blood pressure
- Increases your blood sugar (glucose)
- Controls your sleep/wake cycle
- Boosts energy so you can handle stress and restores balance afterward

Your hypothalamus and pituitary gland -- both located in your brain -- can sense if your blood contains the right level of cortisol. If the level is too low, your brain adjusts the amount of hormones it makes. Your adrenal glands pick up on these signals. Then, they fine-tune the amount of cortisol they release.

Prolonged and frequent release of these hormones can lead to severe health problems if left untreated..

- heart problems like increase risk of heart disease
- various illnesses from a lowered immune system
- gastrointestinal disorders including irritable bowel syndrome
- memory problems
- frequent migraines

#### The role of Norepinephrine

Along with Cortisol, norepinephrine is the major contributor to how our bodies respond to stress on a chemical level.

Norepinephrine is a naturally occurring chemical in the body that acts as both a stress hormone and neurotransmitter (a substance that sends signals between nerve cells).

It is released into the blood as a stress hormone when the brain perceives that a stressful event has occurred As a neurotransmitter in the central nervous system, norepinephrine increases alertness and arousal, and speeds reaction time.

Norepinephrine has been shown to play a role in a person's mood and ability to concentrate.

#### The troubles that stress and anxiety cause

Stress can derail your body's most important functions. It can also lead to a number of health problems, including:

- Anxiety and depression
- Headaches
- Heart disease
- Memory and concentration problems
- Problems with digestion
- Trouble sleeping
- Weight gain

Generalized Anxiety Disorder is the most common type of anxiety disorder. The main symptom of GAD is excessive worrying about different activities and events. You may feel anxious a lot of the time if you have GAD.

#### What types of herbs help manage stress and anxiety?

#### <u>Nervines</u>

A nervine is a plant remedy that has a beneficial effect upon the nervous system in some way.

 Types of herbs intended to nourish and support the central nervous system. They restore balance and restfulness in the body. nervine tonics could help to restore a depleted, stressed, or anxious nervous system. To study them properly they must be differentiated into 3 major categories:

- nervine relaxants
- nervine stimulants
- nervine tonics



**Nervine Tonics** (or trophorestorative) are perhaps the most important contribution herbal medicine can make in the whole area of stress & anxiety, and in strengthening & "feeding" the nervous system. In cases of nervous debility, the nervine tonics strengthen and restore the tissues directly.

- Adaptogens should also be considered in this group due to their ability to aid the whole of the body and mind to cope with demands made upon it.

**Nervine Relaxants** are a group that has become increasingly important in our times of stress and tension. They are the closest natural alternative for the orthodox nerve tranquilizers, but should always be used in a broad holistic way. Too much tranquilizing, even that achieved through herbal medication, can in time deplete and weight heavily on the whole nervous system. However, the physical symptoms that can so often accompany the ill-ease of anxiety may be well treated with herbs that work on the anxiety itself. When the physical body is at ease, ease in the psyche is promoted. **Nervine Stimulants** cause a direct stimulation of the nervous system, and not very often needed in our times of hyperactivity. In most cases it is more appropriate to stimulate the body's innate vitality with the help of adaptogens, nervine or even digestive tonics, which work by augmenting bodily harmony and thus have a much deeper and longer-lasting effect.

Nervines are in some ways similar to adaptogens, which are herbs often used to treat stress. However, adaptogens often affect hormones in the body and not necessarily the central nervous system.

#### <u>Adaptogens</u>

- Adaptogens often affect hormones in the body and not necessarily the central nervous system.
- Adaptogens can help your body adapt to life's doozies. These herbs aid our bodies in reacting to or recovering from both short- and long-term physical or mental stress.

Adaptogens help us stay in the resistance phase longer, via a stimulating effect that holds off the exhaustion. Instead of crashing in the midst of a stressful moment, task, or event, we attain equilibrium and can soldier on.

#### Adaptogens continued..

Adaptogens work at a molecular level by regulating a stable balance in the hypothalamic, pituitary, and adrenal glands. These are involved in the stress response. They work by "hacking" the stress response in the body.

### **Nervine Herbs**

My personal top 5 (in no particular order)



# 1.0at Straw

Avena sativa

#### Facts about Oatstraw

A popular cereal grain that has been eaten for at least 3,000 years. Although this is one of the main uses for this plant, various parts of the plant, such as the young seed and the oatstraw, are nutritive and have nervine qualities,

*A. sativa* is a grass with erect stems and long blade-like leaves. Its flowers consist of inconspicuous spikelets, each floret containing 3 stamens, and a feathery stigma. This floret matures into the oat that is edible, and at the immature stage, exudes a white milky substance (referred to as 'milky oats') and harvested for its nutritive value. Oat descended from *A. sterilis* as a cross between wheat and barley, and spread as a weed from the Fertile Crescent to Europe. Believed to be domesticated around 3,000 years ago around the Tigris and Euphrates

Traditionally used as a mild relaxant and sleep aid.

It does carry a high nutritional value that shouldn't be overlooked. It's rich in calcium, potassium, iron, vitamin A, vitamin C, dietary fiber and antioxidants

#### Facts continued...

Loaded with polyphenols, it fights oxidative stress and offsets its harmful effects.

It appears to be particularly beneficial for the brain, sexual function and bone health.

These benefits are due to its high content of B-complex vitamins and calcium. In addition to B-complex vitamins,

oat straw tea is high in minerals like iron, phosphorus, magnesium and selenium. It also contains amino acids, such as tryptophan, lysine, leucine and arginine.



# 2. Lavender

Lavendula officinalis

#### Facts about Lavender

The word lavender comes from the Latin root "lavare," which literally means "to wash." The earliest recorded use of lavender dates back to ancient Egypt. There, lavender oil played a role in the mummification process.

During later times, lavender became a bath additive in several regions, including ancient Persia, Greece, and Rome. These cultures believed that lavender helped purify the body and mind. Lavender shares a terpene called <u>linalool</u> with cannabis. Linalool is largely responsible for the anti-depressant, muscle relaxing, mood lifting, and antioxidant properties of lavender.

While some plants can work to bring you "up out of the darkness and above normal," lavender is more regulating and neutral, hence its moniker, "plant for peace." Because of its balancing benefits.

#### Facts about Lavender

It is an effective herb for headaches, especially when they are related to stress.

It can be quite effective in the clearing of depression, especially if used in conjunction with other remedies.

As a gentle strengthening tonic of the nervous system it may be helpful for nervous debility and exhaustion. It can be used to soothe and promote natural sleep.



# **3.** Chamomile

Matricaria recutita

#### Facts about Chamomile

Chamomile has been used as an herbal remedy since the time of Hippocrates, the father of medicine, in 500 BC.

The list of conditions for which it's been used is extensive. It includes fever, headaches, digestive upset, anxiety, insomnia, inflammation, and menstrual disorders. The generic name, *Matricaria*, comes from the Latin *matrix*, meaning womb, because chamomile was used historically to treat disorders of the female reproductive system.

There are two types of chamomile. Roman and German. Of the two, the German variety is known to be more potent and is more widely known medicinally.

#### Facts continued..

Chamomile has both sedative and anti-anxiety effects.

One study reported that apigenin, a component of chamomile, binds at the same receptor sites in the brain as benzodiazepines like Valium.

Chamomile extract in 2009 found it may have a modest anti-anxiety effect in people with mild-to-moderate general anxiety disorder, one of the most common anxiety disorders. In addition to soothing anxiety, **Research shows chamomile extract may also** 

have antidepressant effects as well.

# 4. Lemon Balm

Melissa Officinalis



#### Facts about lemon balm

a lemon-scented herb that comes from the same family as mint. The herb is native to Europe, North Africa, and West Asia, but it's grown around the world.

a member of the mint family, it is considered a calming herb.

It was used as far back as the Middle Ages to reduce stress and anxiety, promote sleep, improve appetite, and ease pain and discomfort from indigestion lemon balm is often combined with other calming, soothing herbs, such as valerian, chamomile, and hops, to promote relaxation.

Several studies show that lemon balm combined with other calming herbs (such as valerian, hops, and chamomile) helps reduce anxiety and promote sleep

# 5. Skullcap

Scutellaria lateriflora

#### Facts about skullcap

Skullcap (sometimes spelled scullcap) is the common name for *Scutellaria*, a genus of flowering plants in the mint family.

The name is derived from the Latin word *scutella*, which means "little dish," as the small flowers of these plants have a dishor helmet-like shape.

\*\* Skullcap is not to be confused with death caps, which are a highly poisonous mushroom\*\*

\*\*Don't confuse skullcap with Baikal Skullcap. They aren't the same plant.\*\*

It relaxes states of nervous tension while at the same time renewing and reviving the central nervous system. It's thought that American skullcap positively impacts mood and reduces anxiety by stimulating gamma-aminobutyric acid (GABA), a neurotransmitter that helps calm nerves.

this plant was used in traditional medicine practices as a sedative and treatment for conditions like insomnia and anxiety.

Scutellaria can be used long-term for nervous tension with an underlying condition of nervous exhaustion.

#### Facts continued..

Skullcap is an herb that has multiple nervine actions.

It helps:

- reduce muscle tension
- calm worried thoughts
- also nourishes the nervous system.



### Herbal interactions

An herbal drug interaction is defined as, "Any pharmacological modification caused by herbal substances to another prescription medication (diagnostic, therapeutic or other action of a drug) in or on the body."

#### **Herbal Medicine/Supplement Interactions**

Herbal interactions occur when pharmaceutical drugs that are treating certain medical conditions are mixed with herbal medicine.

important interactions between an herbal supplement and a drug typically manifest as pharmacokinetic interactions, which affect a drug's concentration in the blood and pharmacologic action.

 Risk of a pharmacokinetic interaction occurs when an herbal supplement shares the same mechanism of absorption, distribution, metabolism, or excretion (ADME) as a coadministered drug. Less commonly, herb-drug interactions may manifest as pharmacodynamic interactions, which involve direct pharmacological actions of an herbal supplement that are unrelated to changes in blood concentrations.

Pharmacodynamic interaction occurs when an herbal supplement has a direct effect on the mechanism of action of a coadministered drug. Direct pharmacologic effects of an herbal supplement may antagonize or exacerbate the drug's clinical effects without changing the drug's concentration.

#### Interactions continued...

There are a number of herbs that cannot be combined with prescription medications and should be avoided.

There are also some herbal medicines that cannot be taken while pregnant, breastfeeding, and/or due to allergic reactions.

It is important to be mindful of these interactions prior to consuming herbs and/or especially when recommending them to others.



<u>Oatstraw interactions</u>: None reported though it is advised that those with allergies or gluten sensitivity should avoid using oatstraw.

<u>Lavender interactions:</u> Sedative medications (CNS depressants) interacts with lavender. It might cause sleepiness and slowed breathing. Taking lavender with sedative medications might cause breathing problems and/or too much sleepiness. <u>Chamomile interactions</u>: There are 53 herbal interactions in total. 1 considered to be moderate while the others are considered to be mild, according to Drugs.com. It could interact with sedatives, blood thinners, antiplatelet drugs, aspirin, NSAID painkillers like ibuprofen and naproxen, and other drugs.

<u>Lemon Balm interactions</u>: Lemon balm may interact with sedatives and thyroid medications. If you are taking sedatives (for insomnia or anxiety) or medications to regulate your thyroid, ask your doctor before taking lemon balm.

<u>Skullcap interactions</u>: Both American skullcap and Chinese skullcap can increase the effect of drugs that have a sedating effect, including:

Anticonvulsants such as phenytoin (Dilantin) and valproic acid (Depakote)

Barbiturates

Benzodiazepines such as alprazolam (Xanax) and diazepam (Valium)

Drugs to treat insomnia, such as zolpidem (Ambien), zaleplon (Sonata), eszopiclone (Lunesta), and ramelteon (Rozerem)

Tricyclic antidepressants such as amitriptyline (Elavil)

Alcohoi

Drugs for Diabetes -- Chinese skullcap can lower blood sugar, and could make the effects of drugs taken for diabetes stronger, leading to the risk of hypoglycemia (low blood sugar).

### **Herbal Concoctions**

Ways to prepare nervine herbs for medicinal use



#### Herbal Tea VS. Herbal Infusions

Herbal tea is made by taking a small amount of plant matter and steeping in water for a short amount of time.

• Typically between 5 and 15 minutes.

Herbal infusions are made by taking a larger amount of plant matter and steeping it in water overnight.

• Typically between 10 and 12 hours.

 Herbal infusions are more beneficial due to the amount of time the herbs have steeped. Soaking them overnight allows all of the vitamins and minerals to be absorbed into the water prior to consumption.

#### **Nervine Tinctures**

 Herbal tinctures, also known as hydroethanolic extractions, are the alcoholic extract of a plant. Tinctures offer an easy-to-use and fast-acting form of herbal medicine that allows us to extract both the water-soluble and alcohol-soluble constituents from plants for a strong, well-rounded medicine.

- Tinctures are made by taking one or more herbs and immersing them in an alcoholic substance, specifically a grain alcohol, like Vodka.
- Upon submerging the herbs in the liquid, it is then covered tightly and stored in a dark cool space for 6 weeks.

Not all tinctures have an alcoholic base.

 The most common non alcoholic liquid used for tinctures is apple cider vinegar.

#### <u>Tincture Tips..</u>

- For fresh herbs, use a 1-1 plant-to-alcohol ratio

- For dried herbs, use a 1-4 plant to alcohol ratio

 The concentration of alcohol depends on the plant's water-soluble ingredients.

. Those with more water-soluble components need alcohol with a proof of 80–100

. While those with fewer water-soluble components need 180-proof alcohol.

. After opening the jar, strain the plant parts from the liquid.

## **Anxiety Tincture**

- 0.5oz chamomile flowers (by weight)
- 0.5oz lemon balm (by weight)
- 0.5oz holy basil (by weight)
- 0.5oz cinnamon (by weight)
- 100 proof vodka (50% alcohol)

Blend all of the herbs and transfer them into a glass jar.

Add the Vodka to the herbs and seal the jar tightly.

Place the jar in a dark cool space for six weeks. Shaking daily.

After six weeks, remove the jar and strain the herbs using a cheese or nut cloth.

Funnel the liquid into tincture jars.

Safe enough to consume daily. Not using more than 2 dropperfuls at a time.

### Herbal Infusion Recipe for Stress and Anxiety

- 2 TBSP Skullcap
- 2 TBSP Lemon balm
  - 2 TBSP Lavender

Blend all of the herbs together in a tea bag

Boil a large pot of water (cool water is also an option)

Add the herbs to a large mason jar or pitcher

Submerge all of the herbs into the water

Allow the herbs to sit overnight

Remove the herbs from the liquid

Add honey to taste and enjoy!

### Thanks for listening!!

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