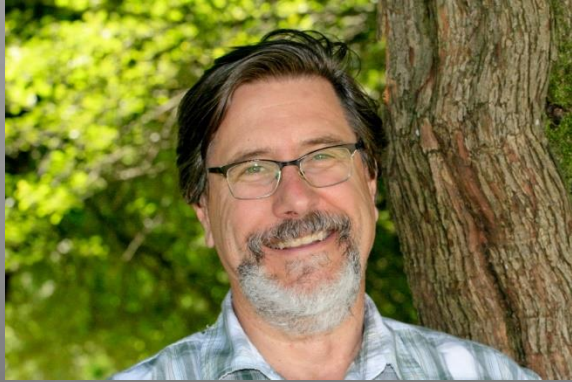


# Herbs for Stress and Anxiety



- Traditional Roots Class
- August 17<sup>th</sup> 2016
- By Glen Nagel, ND. RH (AHG)
- 2 Hour CE by OBNE

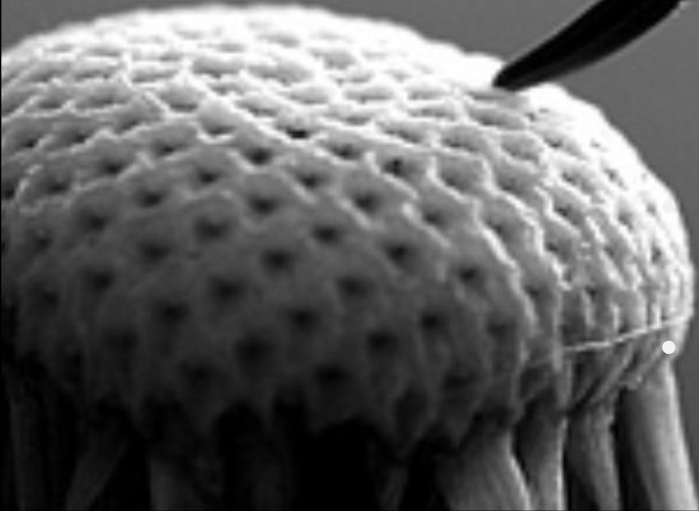
# Glen Nagel, ND, RH (AHG)



- Herbalist since 1984, Registered Herbalist with American Herbalist Guild.
- Former Associate Professor in Botanical Medicine at National University of Natural Medicine in Portland, Oregon, 10 years of teaching

Former Assistant Professor at Bastyr University, in Kenmore Washington

- Lead Naturopathic Physician with Herb Pharm LLC and adjunct professor at NUNM



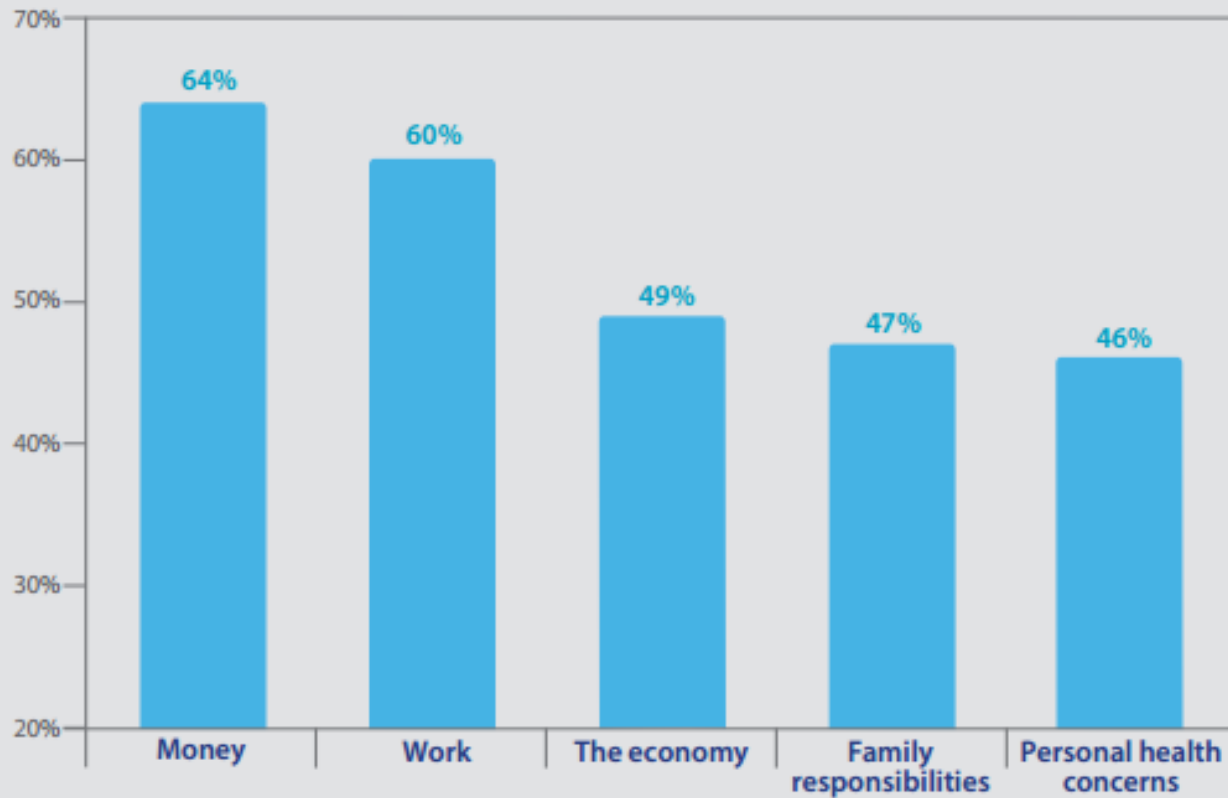
# Stress the Great Magnifier



for the  
**stress**  
on a new

## COMMON STRESSORS

*Very or somewhat significant source of stress*



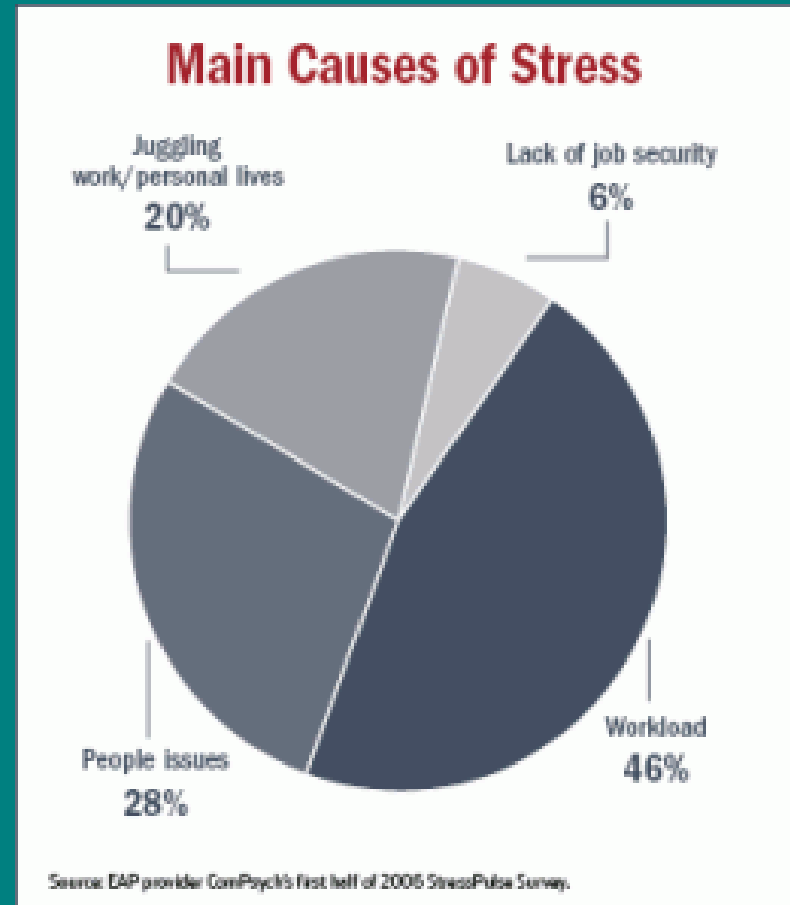
**BASE: ALL QUALIFIED RESPONDENTS 2014 (n=3068)**

**Q625** Below is a list of things people say cause stress in their lives. For each one, please indicate how significant a source of stress it is in your life.

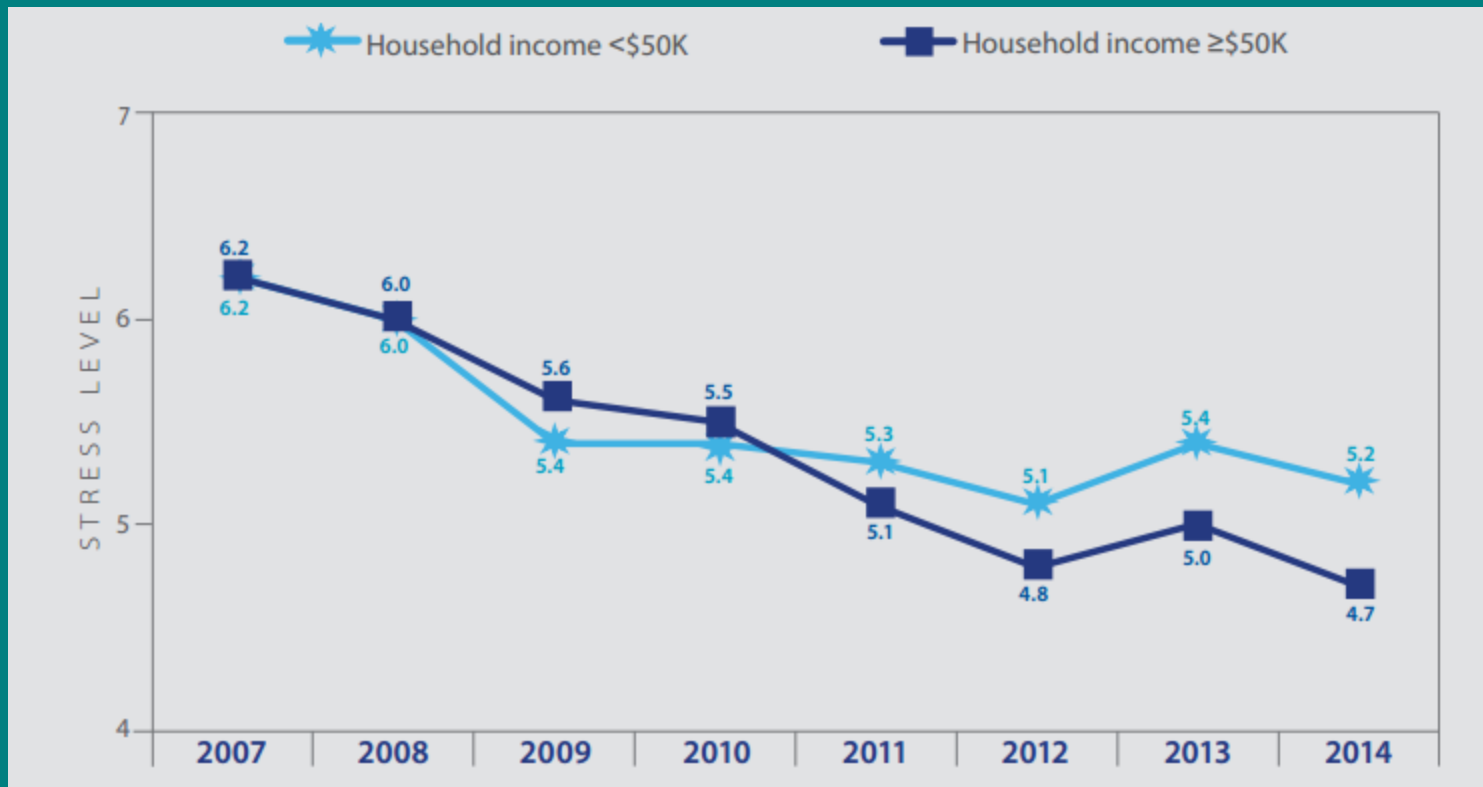
Source: American Physiological Associations survey: Stress in America 2015

# Job Stress

- 40% of workers reported their job was very or extremely stressful;
- 25% view their jobs as the number one stressor in their lives;
- Three fourths of employees believe that workers have more on-the-job stress than a generation ago;
- 29% of workers felt quite a bit or extremely stressed at work;
- 26 percent of workers said they were “often or very often burned out or stressed by their work”;
- Job stress is more strongly associated with health complaints than financial or family Source CDC website

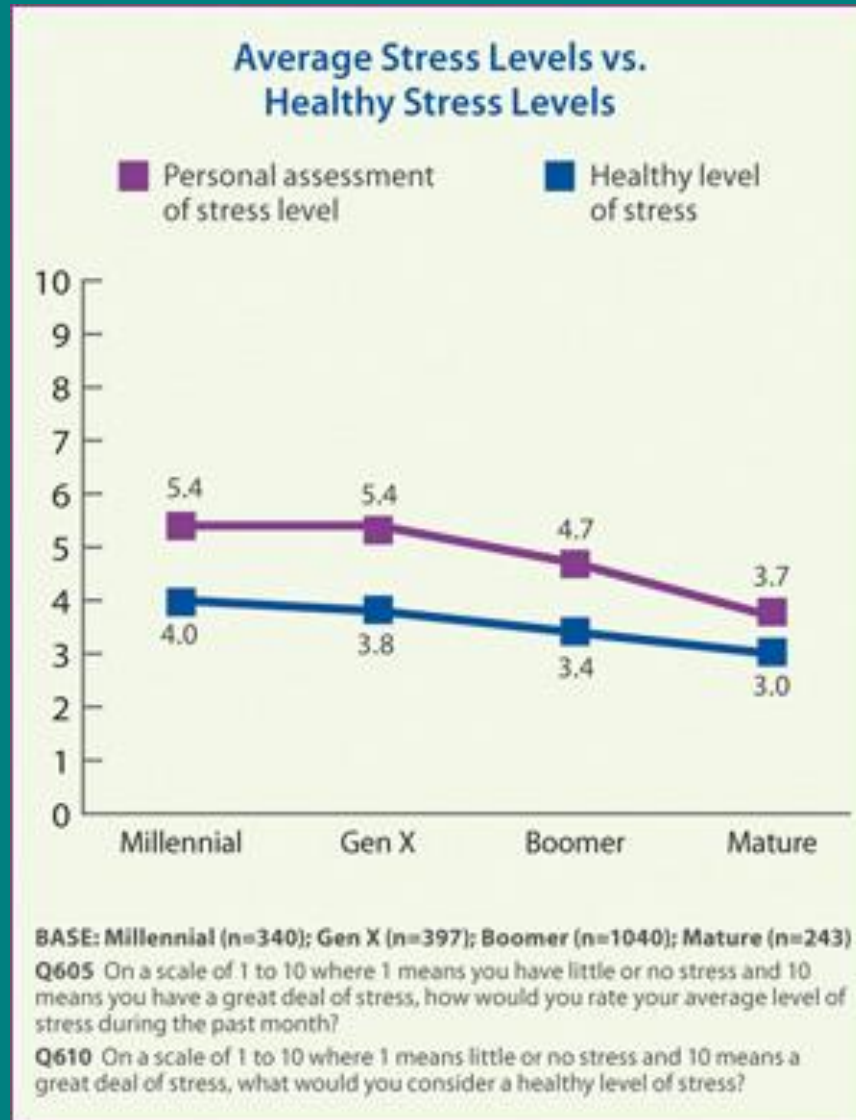


# Money Stress



Source: American Physiological Associations survey: Stress in America 2015

# Stress and Age



- Anxiety as Stress

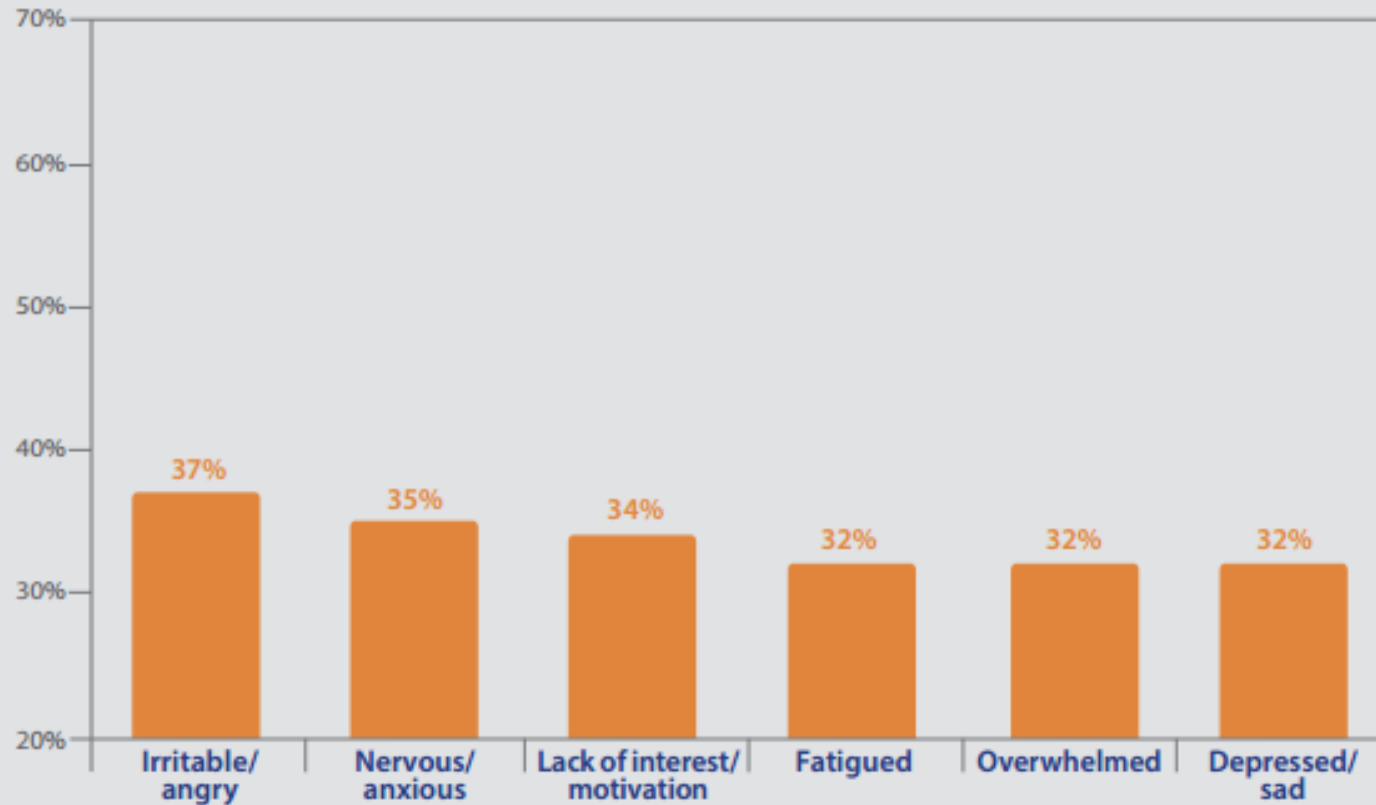
Anxiety disorders are the **most common mental illness in the U.S.**, affecting 40 million adults in the United States age 18 and older, or 18% of the population.

Approximately 40 million Americans 18 years or older have an anxiety disorder.

Source: [National Institute of Mental Health](#)



## SYMPTOMS OF STRESS



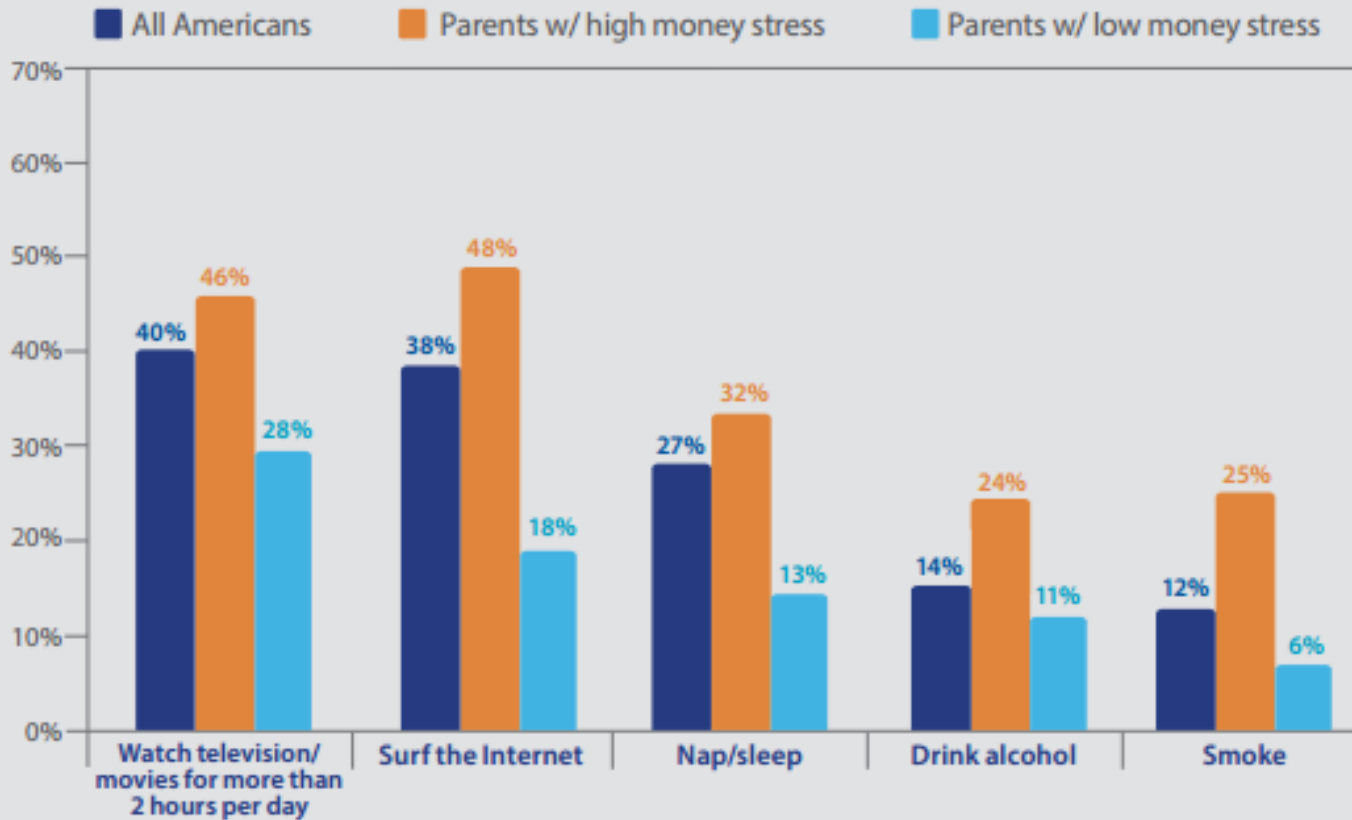
BASE: ALL QUALIFIED RESPONDENTS 2014 (n=3068)

Q810 Which of the following, if any, have you experienced in the last month as a result of stress? Please select all that apply.

Q7170 Which of the following, if any, have you experienced in the last month as a result of stress? Please select all that apply.

Source: American Physiological Associations survey: Stress in America 2015

# STRESS MANAGEMENT TECHNIQUES AMONG PARENTS



BASE: ALL RESPONDENTS (n=3068); Parents with high stress about money (n=219); Parents with low stress about money (n=111)

Q965 Do you do any of the following to manage stress?

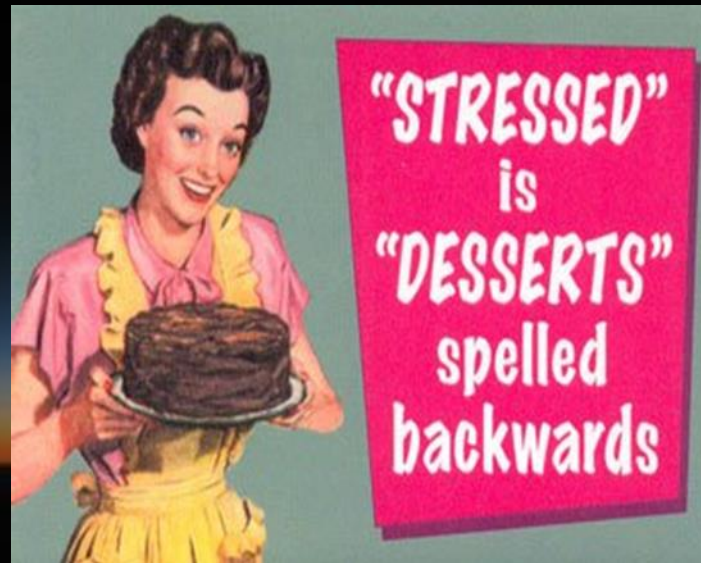


Take  
Adaptogens

Source G. Nagel

Source: American Physiological Associations survey: Stress in America 2015

In the darkest hour before dawn



We need an Attitude change or a good case of dyslexia !

# *What is an Adaptogen?*

The background of the slide features several anatomical models of the human muscular system. The most prominent is a large, light-colored model of a male torso and arms, showing detailed muscle fibers and structure. Behind it, there are other similar models, some appearing slightly more yellowed or aged, set against a dark, textured background that looks like a wall or a display case.

- An adaptogen produces a non-specific response to stress in an organism; i.e. An increase in power of resistance against multiple stressors including physical, chemical, or biological agents.
- An adaptogen has a normalizing influence on physiology, irrespective of the direction of change from physiological norms caused by the stressor.
- An adaptogen is relatively non toxic when taken internally.
- Brekhman, 1969

# Tonics



- Boost energy reserves by promoting health in a non specific manner, often by nutrition
- Tested by long term dosing and observations
- Tonics are similar to Alteratives
- All Adaptogens are tonics but not all tonics are adaptogens

# Resistogen better term for Adaptogen

- Brekhman coined term adaptogen, which can prevent disease by raising stressor resistance.
- In 1980 Baranov suggested the synonym resistogen instead of adaptogen
- More appropriate term, less confused meanings.

# Actions for Adaptogens

- Increase resistance to stress
- Improve fatigue
- Normalize endocrine function and hormones
- Calm nervous tension
- Normalize blood glucose levels
- Protect against toxins, radiation
- Improve wound healing
- Enhance sexuality, vision, hearing
- Reduce sleep issues and insomnia
- Enhance longevity
- Regulate and enhance immune system

# Cautions when using Adaptogens

- Long term use or high dosing with out periodic evaluation
- Rebound effect, after removing
- Use which masks underlying medical issues
  - Weakness, underlying anemia, hypothyroid, Deficiency: underlying chronic disease, cancer, auto immune, B-12 deficiency
  - Used in place of sensible diet, rest, stress reduction interventions



# Common Adaptogens

- Nutritional: Stinging Nettles (*Urtica* spp.), *Ocimum sanctum*, Oats (*Avena*)
- Liver Supporting: Milk Thistle (*Silybum*), *Schisandra*, *Glycyrrhiza*
- Classic : *Rhodiola rosea*, *Eleutherococcus*, *Oplopanax*, *Panax*, *Ashwagandha*, *Ganoderma*
- Energizing: *Rhodiola*, *Cordyceps*, Green tea

# Overview of Adaptogens

	Holy Basil	Eleuthero	Rhodiola	Ashwagandha	Green Oats
<b>Mood disorders</b>	X	XX	XX	XX	XX
<b>Fatigue</b>	X	XX	XXX	XXX	X
<b>Memory enhance</b>	XX	X	XXX	XXX	XX
<b>Immune enhance</b>	X	XX	XX	XX	
<b>Mild, Tonic Nervine action</b>	XXX				XXX

# Holy Basil: The mother of medicine



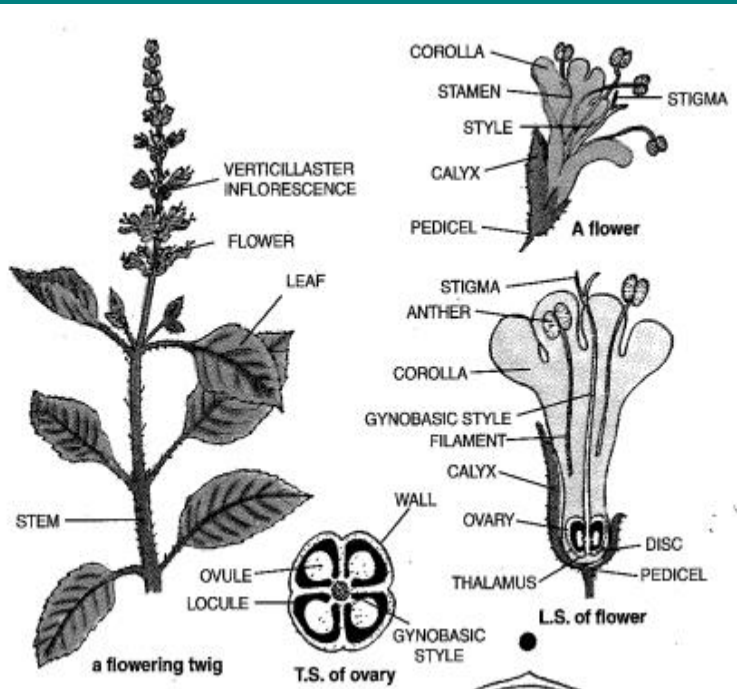
Its like putting a yoga session and meditation sitting in a bottle!

# Holy Basil : *Ocimum sanctum* *and Ocimum tenuiflorum*

- Queen or Mother of all herbs in Ayurvedic tradition
- Newly discovered in West
- Also as Tulsi or Tulasi
- Part Used: leaf and flower
- Dried and Fresh
- Extract and CO2 extract, capsule



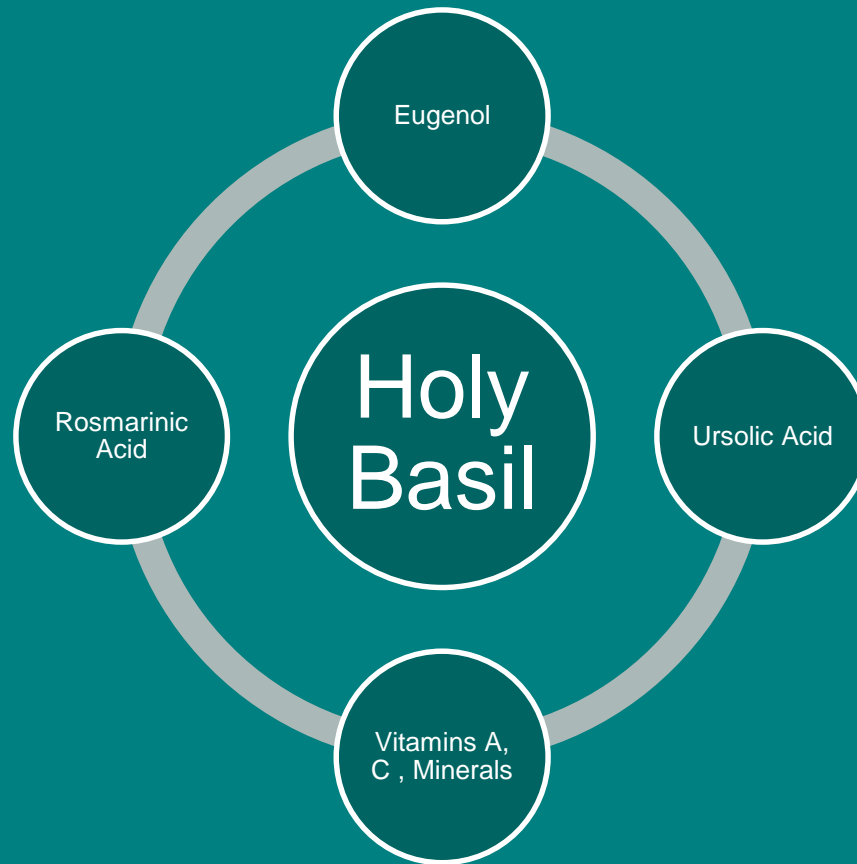
# Holy Basil : *Ocimum sanctum* and *Ocimum tenuiflorum*



- Mint Family;  
Lamiaceae
- 3 common varieties
- Rama – common  
green
- Krishna- purple
- Vana- O.  
gratissimum
- mixed together.

# Holy Basil : *Ocimum sanctum* and *Ocimum tenuiflorum*

- Key Constituents



# Holy Basil : *Ocimum sanctum* *and Ocimum tenuiflorum:*

## Clinical Use

- Adaptogen \*
- Anti Ulcer\*
- Physical /mental performance enhancement
- Liver protective \*
- Antioxidant \*
- Radiation protective \*
- Anti Diarrheal \*
- Supports health respiration
- Anti-inflammatory\*
- Supports normal glucose levels
- Anabolic effects\*
- Relaxing , calming
- Fertility enhancement\*
- Cardiovascular support\*
- Antiviral \*

# Studies on Holy Basil \*

<b>General Review</b>	<b>Tulsi - Ocimum sanctum: A herb for all reasons</b> <b>Journal of Ayurveda &amp; Integrative Medicine   October-December 2014   Vol 5   Issue 4</b>
<b>Abstract</b>	<p>There is mounting evidence that tulsi can address physical, chemical, metabolic and psychological stress through a unique combination of pharmacological actions. <u>Tulsi has been found to protect organs and tissues against chemical stress from industrial pollutants and heavy metals, and physical stress from prolonged physical exertion, ischemia, physical restraint and exposure to cold and excessive noise. Tulsi has also been shown to counter metabolic stress through normalization of blood glucose, blood pressure and lipid levels, and psychological stress through positive effects on memory and cognitive function and through its anxiolytic and anti-depressant properties. Tulsi's broad-spectrum antimicrobial activity, which includes activity against a range of human and animal pathogens,</u> suggests it can be used as a hand sanitizer, mouthwash and water purifier as well as in animal rearing, wound healing, the preservation of food stuffs and herbal raw materials and traveler's health.</p>
<b>Cognitive Enhancement</b>	<p>Effect of OS on parameters related to cognition and stress in humans was evaluated with administration of 300 milligram capsules of ethanolic leaf extracts of Ocimum sanctum (EtOS) or placebo per day, over 30 days. <u>OS leaf extract seems to have potential cognition-enhancing properties in humans.</u> Holy basil (Ocimum sanctum Linn.) leaf extract enhances specific cognitive parameters in healthy adult volunteers: A placebo controlled study.          Indian J Physiol Pharmacol. 2015 Jan-Mar;59(1):69-7</p>
<b>Cognitive Enhancement</b>	<p>Similarly, in human studies, tulsi has been observed to reduce stress, anxiety and depression,[1] with a 6-week, randomized, double-blind, placebo-controlled study reporting that tulsi significantly improves general stress scores, sexual and sleep problems and symptoms such as forgetfulness and exhaustion.[2]</p>
	<p>1)Bhattacharyya D, Sur TK, Jana U, Debnath PK. Controlled programmed trial of Ocimum sanctum leaf on generalized anxiety disorders. Nepal Med Coll J 2008;10:176-9.          2) Saxena RC, Singh R, Kumar P, Negi MP, Saxena VS, Geetharani P, et al. Efficacy of an extract of ocimum tenuiflorum (OciBest) in the management of general stress: A double-blind, placebo-controlled study. Evid Based Complement Alternat Med 2012;2012:894509.</p>

\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.



# Herbs to the Rescue!



- Kava Kava
  - *Piper methysticum*
- California Poppy
  - *Eschscholzia californica*
- Passion Flower
  - *Passiflora incarnata*
- Skullcap
  - *Scutellaria lateriflora*
- Lavender
  - *Lavandula angustifolia*
- Albizia
  - *Albizia julibrissin*
- Valerian
  - *Valeriana officinalis*

Herbs	Promotes Sleep	Lessens Anxiety	 Pain	Nervine Tonic	Other Actions
Kava	XX	XXX	XX		Fast acting, Caution with liver
Cal. Poppy	X	XX	XXX		Non addicting poppy
Passion Flower	XX	XX	X	X	Chronic illness, With weakness, def.
Skullcap	XXX	XX	X	XX	Gentle, safe Anti spasmodic
Albizia		XX	X	X	Improves moods
Lavender	XX	XXX	X	X	Safe, nice smelling
Valerian	XXX	X	XXX		Promotes sleep Strong, unpleasant smell



# Lavender

*Lavandula angustifolia*

# Lavender

*Lavandula angustifolia*

## Uses:

- Nervine – relaxing and calming to the spirit\*
- Nervous stomach\*
- Carminative\*
- Pleasant tasting

## Cautions/Interactions:

No known drug or supplement interactions



\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.

# Lavender

## *Lavandula angustifolia*

- Doses: : Take up to 40 drops in 2 oz. of water or juice, two to five times per day.
- Great for kids and Seniors
- Safe and no long term concerns
- Used as liquid extract, capsule, or inhaled are effective
- Great for mild stress, anxiety, Mood disorders, Digestive complaints, Bloating, Dyspepsia, Colic \*
- Supports healthy circulation\*
- Anti microbial topically \*

*\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.*

# Efficacy of Silexan in mixed anxiety-depression - A randomized, placebo-controlled trial



Siegfried Kasper<sup>a,\*</sup>, Hans-Peter Volz<sup>b</sup>, Angelika Dienel<sup>c</sup>,  
Sandra Schläfke<sup>c</sup>

<sup>a</sup>Department of Psychiatry and Psychotherapy, Medical University of Vienna, Vienna, Austria

<sup>b</sup>Hospital for Psychiatry, Psychotherapy and Psychosomatic Medicine Schloss Werneck, Werneck, Germany

<sup>c</sup>Dr. Willmar Schwabe GmbH & Co. KG, Karlsruhe, Germany

Received 13 August 2015; received in revised form 18 November 2015; accepted 1 December 2015

## KEYWORDS

Silexan;  
Lavender;  
Anxiety;  
Depression;  
Clinical trial;  
Treatment e

Compared to placebo, the patients treated with Silexan (80 mg) had a better over-all clinical outcome and showed more pronounced improvements of impaired daily living skills and health related quality of life. Eructation was the only adverse event with a substantially higher incidence under Silexan. The study thus demonstrates that Silexan is efficacious and safe in

the tre

decreased by  $10.8 \pm 9.6$  points for Silexan and by  $8.4 \pm 8.9$  points for placebo (treatment group difference:  $p < 0.01$ , one-sided; ANCOVA with factors for treatment and centre and the baseline value as covariate), and total score decreases of  $9.2 \pm 9.9$  and  $6.1 \pm 7.6$  points, respectively,

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tal score

# A Single-Blinded, Randomized Pilot Study Evaluating the Aroma of *Lavandula augustifolia* as a Treatment for Mild Insomnia

GEORGE T. LEWITH, M.A., D.M., F.R.C.P., M.R.C.G.P.,<sup>1-3</sup> ANTHONY DEAN GODFREY,<sup>1,\*</sup>  
and PHILIP PRESCOTT, B.Sc., D.I.C., Ph.D., A.R.C.S.<sup>1</sup>

## ABSTRACT

**Background:** Insomnia is the most common of all sleep complaints and is under-researched. The current treatments of choice are conventional hypnotics agents, but these have potential for serious adverse reactions. Uncontrolled and anecdotal evidence suggests that lavender oil is an effective treatment for insomnia, but this has not been formally investigated.

**Objectives:** The aims of this study were to evaluate the proposed trial methodology and the efficacy of *Lavandula augustifolia* (lavender) on insomnia.

**Interventions:** Interventions consisted of *Lavandula augustifolia* (treatment) and sweet almond oil as placebo/control. The aroma was supplied via an Aromastream device (Tisserand Aromatherapy, Sussex, UK).

**Design:** This was a pilot study with randomized, single-blind, cross-over design (baseline, two treatment pe-

**Conclusions:** The Methodology for this pilot study appeared to be appropriate. Outcomes favor lavender and a large trial is required to draw definitive conclusions. \*

and health beliefs.

**Results:** Ten (10) volunteers (5 male and 5 female) were entered and completed the 4 week study. Lavender created an improvement of  $-2.5$  points in PSQI ( $p = 0.07$ , 95% CI  $-4.95$  to  $-0.4$ ). Each intervention was equally credible and belief in CAM did not predict outcome. Women and younger volunteers with a milder insomnia improved more than others. No period or carry-over effect was observed.

**Conclusion:** The methodology for this pilot study appeared to be appropriate. Outcomes favor lavender, and a larger trial is required to draw definitive conclusions.



# Passionflower

*Passiflora incarnata*



Not This type of Passion Flower, Used for fruit and juice



*Passiflora edulis* var. *flavicarpa*: Lilikoi

# Passionflower

*Support for Mild & Occasional Anxiety\**

**Part Used:** Leaf

**Uses:**

- Anxiolytic\*
- Nervine sedative and cooling\*
- Antispasmodic\*

**Cautions/Interactions:**

No known drug or supplement interactions.



*\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.*

# Passion Flower: Medicinal Leaves

- *Passiflora incarnata* often used. Many other species
- Parts used:
- Leaves and whole aerial parts.
- Habitat:
- Native to Southern U.S. (Virginia, Texas, Tennessee) and Central and South America, Now cultivated extensively in Europe.



# Passiflora incarnata: Maypop

- It was introduced in the North American medicine in the mid 1800s, possibly reintroduced from Europe, possibly through Native and slave use in the South, and possibly through both of these.
- Blacks in the deep South used to use poultices of the bruised leaves for headache, bruises, and for pain. \*
- Either the dried leaves or the dried whole flowering tops are used, depending on the author.



# Passiflora incarnata: Maypop

- Constituents:
- Alkaloids: harmine, harman, harmol, harmaline, harmalol, passiflorine
- Flavonoids; apigenin, hormoorientin, isovitexin, kaenpherol, luteonin, orientin, quercitin, rutin, Shaftoside, vitexen



# *Passiflora incarnata*: Eclectic Use

- Passiflora's most powerful properties are hypnotic (sleep inducing) and antispasmodic \*. In insomnia, it does not force sleep, but supports normal sleep, without producing mental dullness or inefficient thinking.
- “The sleep produced is normal in all its characteristics. The patient goes to sleep naturally, can be awakened as usual at any time, to fall into a quiet natural slumber. He awakens at the usual time rested and refreshed, with no disturbance of the cerebral functions, no languor, dullness or other disagreeable sensations.” Ellingwood
- **It is indicated for restless and wakeful sleep, resulting from exhaustion, in the patient that fits its general picture.** \*

\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease

# Passiflora incarnata: Maypop

- **Spasm and Convulsion**
- According to the clinical uses by physicians in the last century, passiflora is a powerful antispasmodic. \* It was used in severe spasm such as accompanies tetanus, and to abort an epileptic attack Ellingwood says it is effective for “severe spasms even while the irritating causes yet remain.”
- The Eclectics used it in children for the spasmodic coughing of whooping cough \* and for spasms accompanying menstrual pain. In treatment for asthma\* with strong signs of spasm in children, the Eclectics gave 10 to 30 drops every ten minutes.

*\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease*

# Passiflora incarnata: Maypop

- Doses:
- Infusion: pour a cup of boiling water onto a teaspoonful of the dried herb and let infuse for 15 minutes. Drink a cup in the evening for sleeplessness, and a cup twice a day for the easing of other conditions.
- Extract: take 1-4 ml of the tincture and use the same way as the infusion.
- Tends to work slowly and must be repeated





# Valerian

*Valeriana officinalis*

Valerianaceae Family  
Valerio= to be healthy  
Widely Cultivated  
Root used

# Valerian

*Promotes Relaxation & Restful Sleep\**

## Uses:

- Mild sedative, sleep-promoting\*
- Relaxes smooth muscle\*
- Stressfulness; anxiety\*
- Nervousness, agitation, irritability\*
- Warming\*

## Cautions/Interactions:

No known drug or supplement interactions.



# Valerian Root

- Taste: Distinctive
- Sweet, Bitter, unpleasant
- The older the root the stronger the smell
- Cats and Rats love the smell
- Classic “Dirty Sock smell”



# Valerian: Constituents:

- Volatile Oils: .035 – 1 % in root and flower
- Iridoids: Know as Valepotriates decompose to give a characteristic smell.
- Sesquiterpenes: Valerenic, isovalerianic acid.
- Valerenic, isovalerianic acid.
- Alkaloids: .05-1%
- Phenolic acids, flavonoids, choline,
- B-Sitosterol, caffeic acid, fatty acids.

# Valerian's Chemical Activity

- The darker /older root more results in the liberation of isovaleric and hydroxy-isovaleric acid. The distinctive odor.
- Valepotriates are sensitive to humidity, and temperatures above 40 c. Generally not detected in commercial products after 60 days.
- Valerenic acids extract at 30-50% Etoh
- Valepotriates only above 70% Etoh



# Valerian: Clinical Actions

- Nervine \*
- Calming and Sedating \*
- Antispasmodic \*
- Hypnotic\* (Induces Sleep)
- Anodyne\*



# Valerian: Pharmacodynamics

- Data on main pharmacological and clinical action is unclear and confusing
- Clinical action due to combination of Valepotriates and decomposition products, volatile oil and valerenic acid
- No single pharmacologically active compound responsible for sedating effect
- Interaction with GABA-A receptors, H<sub>2</sub>O and Etoh extracts show activity in rat brains
- Melatonin receptor activity. Etoh extracts show effect not H<sub>2</sub>O extracts.
- 5 HTP receptor complex (Serotonin)

# Valerian: Clinical Indications

- Sleeplessness with anxiety, spasms with mental tension \*
- Pain with muscle tension \*
- Anti convulsive for tremors, spasms, palpitations, menstrual cramps \*
- Eclectic use in cases of depression, nervous debility. As a Stimulating nervine.\*





## Effect of valerian on sleep quality in postmenopausal women: a randomized placebo-controlled clinical trial.

Taavoni S<sup>1</sup>, Ekbatani N, Kashaniyan M, Haghani H.

 Author information

### Abstract

#### **METHODS:**

A randomized, triple-blind, controlled trial design was used for this study. Participants consisted of 100 postmenopausal women aged 50 to 60 years who were experiencing insomnia. A demographic data form and the Pittsburgh Sleep Quality Index were used to collect data. The women were randomly divided into two groups. Each group received either 530 mg of concentrated valerian extract or a placebo twice a day for 4 weeks. Descriptive and inferential statistics were used to analyze the data.

#### **RESULTS:**

A statistically significant change was reported in the quality of sleep of the intervention group in comparison with the placebo group ( $P < 0.001$ ). Also, 30% of the participants in the intervention group and 4% in the placebo group showed an improvement in the quality of sleep ( $P < 0.001$ ).

#### **CONCLUSIONS:**

Valerian improves the quality of sleep in women with menopause who are experiencing insomnia. Findings from this study add support to the reported effectiveness of valerian in the clinical management of insomnia.\*


*\* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease*

# Summary of Valerian Clinical Studies

- In general Valerian Root has demonstrated statistically significant decreases in sleep latency.
- Increases in sleep quality for poor sleepers
- No changes in night awakenings, dream recall or total sleep time.
- May cause tiredness or drowsiness at higher doses.
- Theoretical increase the effects of CNS depressants.
- Don't take with sedative drugs
- Simulating effect from American varieties
- Side effects of large dose (20 gm) cramps, dizziness.

# Herb Summary

Herb	Actions
<i>Piper methysticum</i>	Fast acting, in minutes, like a day at the Beach, Best anti anxiety with muscle tension Cautions with liver concerns
<i>Eschscholzia californica</i>	Best at pain with anxiety concerns, alkaloids likely responsible, Poppy family, no addiction issues
<i>Scutellaria lateriflora</i>	Best with anxiety and restlessness, Gentle and long term. Safe use.
<i>Lavandula angustifolia</i>	Best for children and Seniors, oral or inhalation Topical also
<i>Albizia julibrissin</i>	Ancient new medicine, happy bark, Improves moods, may effect neurotransmitters
<i>Valeriana officinalis</i>	Ancient sleep remedy , decreases sleep latency, Strong smell, can stimulate some awake
<i>Passiflora incarnata</i>	Best for weakness, and nervous system breakdown with anxiety. Safe long term

Herbs	Promotes Sleep	Lessens Anxiety	 Pain	Nervine Tonic	Other Actions
Kava	XX	XXX	XX		Fast acting, Caution with liver
Cal. Poppy	X	XX	XXX		Non addicting poppy
Passion Flower	XX	XX	X	X	Chronic illness, With weakness, def.
Skullcap	XX	XXX	X	XX	Gentle, safe Anti spasmodic
Albizia		XX	X	X	Improves moods
Lavender	XX	XXX	X	X	Safe, nice smelling
Valerian	XXX	X	XXX		Promotes sleep Strong smell