



HPA Axis Herbal Essentials: Part 1

Lee Carroll, BSc, BHSc (WHM)



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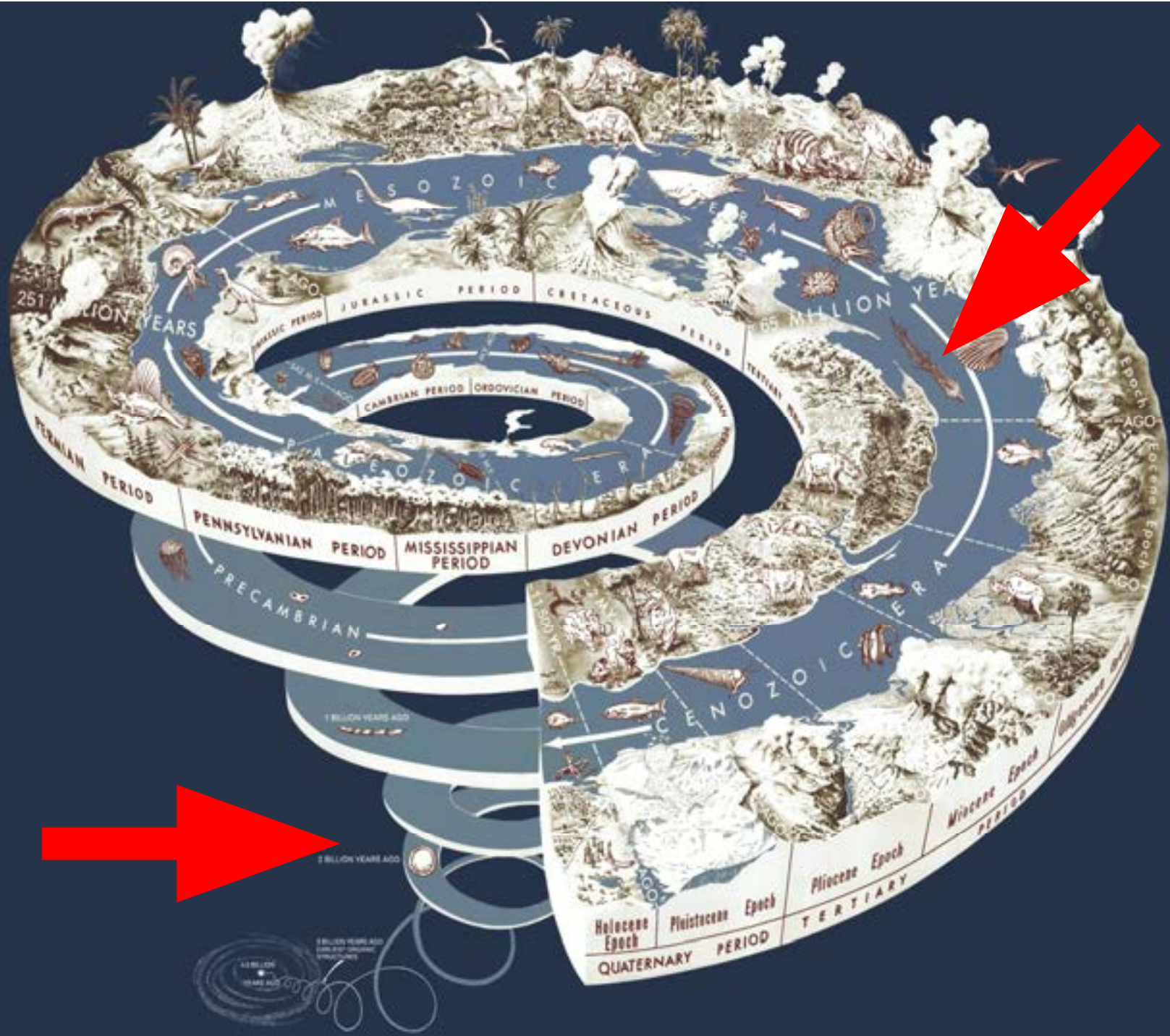
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Lee Carroll, BSc, BHSc (WHM)



Lee Carroll has over 24 years of experience working with MediHerb and 15 years with Standard Process. Working alongside one of the world's leading herbalists, Professor Kerry Bone at MediHerb, Lee has developed a unique insight into the clinical application of evidenced-based herbal medicine. Lee travels extensively throughout the United States, conducting informative and practical seminars on the clinical application of Western herbal medicine for health care professionals. Lee resides in Brisbane, Australia, with his wife and two children.





1. Public Domain - <http://www.public-domain-image.com/free-images/fauna-animals/insects-and-bugs/potato-bug-insect-eating-green-leaves/attachment/potato-bug-insect-eating-green-leaves>. 2. Public Domain - https://commons.wikimedia.org/wiki/File:Colorado_potato_beetle.jpg 3. Poplar hawk-moth caterpillar *Laothoe populi*. ...Possum at English Wikipedia... I own all the rights to this image as I took the photo myself. I hereby give permission to all who wish to use this image for informational purposes. https://en.wikipedia.org/wiki/Moth#/media/File:Poplar_hawk-moth.jpg 4. https://www.google.com.au/search?q=schisandra&biw=1682&bih=843&source=lnms&tbm=isch&sa=X&sqi=2&ved=0CAYQ_AUoAWoVChMlia_r46_FxwIVh46UCh2l1wLQ&dpr=0.9#bs=sur:fc&tbm=isch&q=grub+eating+a+root&imgcr=dW/mcb_L_6p3vwhM%3A

Broccoli



Image: Author Downtowngal Title: Sprouting broccoli, DeCicco variety. https://commons.wikimedia.org/wiki/File:Sprouting_broccoli_-_DeCicco_variety.jpg
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Turmeric



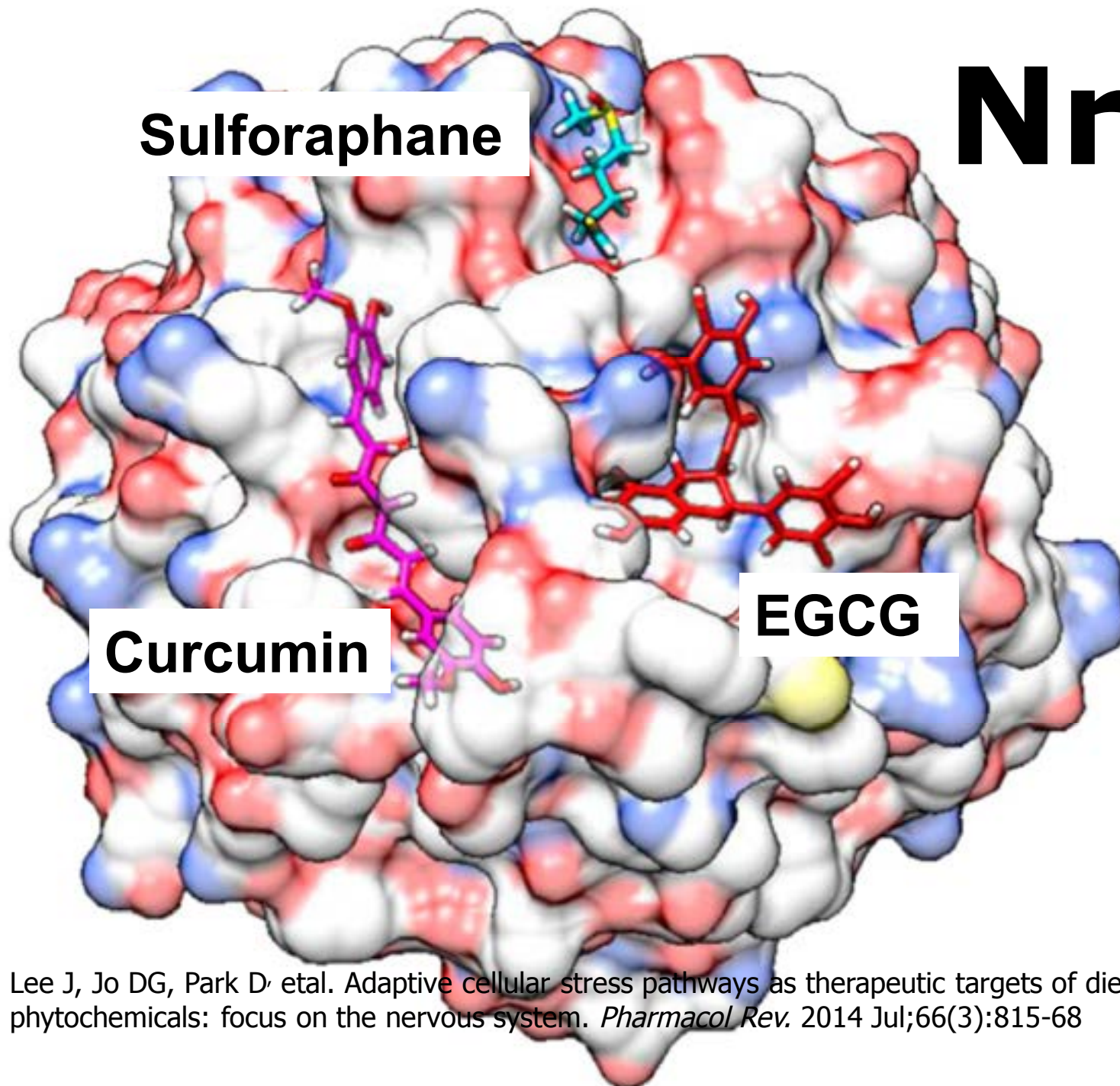
Author Thamizhpariithi Maari - A closeup of Turmeric
http://www.maletsky.com/index.php?title=File:A_closeup_of_Turmeric.JPG - Creative Commons Attribution-Share Alike 3.0 Unported license.



Green Tea

Image: Author Wilerson S Andrade - Fresh-Green-Tea-Leaves-Sunlight-1800x2880 https://www.flickr.com/photos/will_spark/8602965477
Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0)

Nrf2



Lee J, Jo DG, Park D et al. Adaptive cellular stress pathways as therapeutic targets of dietary phytochemicals: focus on the nervous system. *Pharmacol Rev.* 2014 Jul;66(3):815-68

Licorice



Image 1: Author Georges Seguin (Okki) - Français : Bâtons de réglisse sur le marché d'Aix-en-Provence (France). https://commons.wikimedia.org/wiki/File:Market_Aix-en-Provence_20100828_Licorice.jpg - Creative Commons Attribution-Share Alike 3.0 Unported, 2.5 Generic, 2.0 Generic



Rehmannia

Rhodiola



Image: Roseroot – Flickr. Randi Hausken <https://www.flickr.com/photos/randihausken/7421792744> - Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0)



Schisandra

Author: Vladmimir Kosolapov. Schisandra Chinensis. Creative Commons Attribution 3.0 Unported license.
https://commons.wikimedia.org/wiki/File:Schisandra_chinensis_2.jpg

**Nervous
System**

The diagram features a dark blue background with a white rounded rectangular border. Inside, there are four overlapping light blue rounded shapes. The top-left shape is labeled 'Nervous System', the top-right is 'Endocrine System', the bottom-right is 'Immune System', and the bottom-left is 'Adaptive Cellular Stress Pathways'. The shapes overlap in a way that suggests interconnectedness between these systems.

**Endocrine
System**

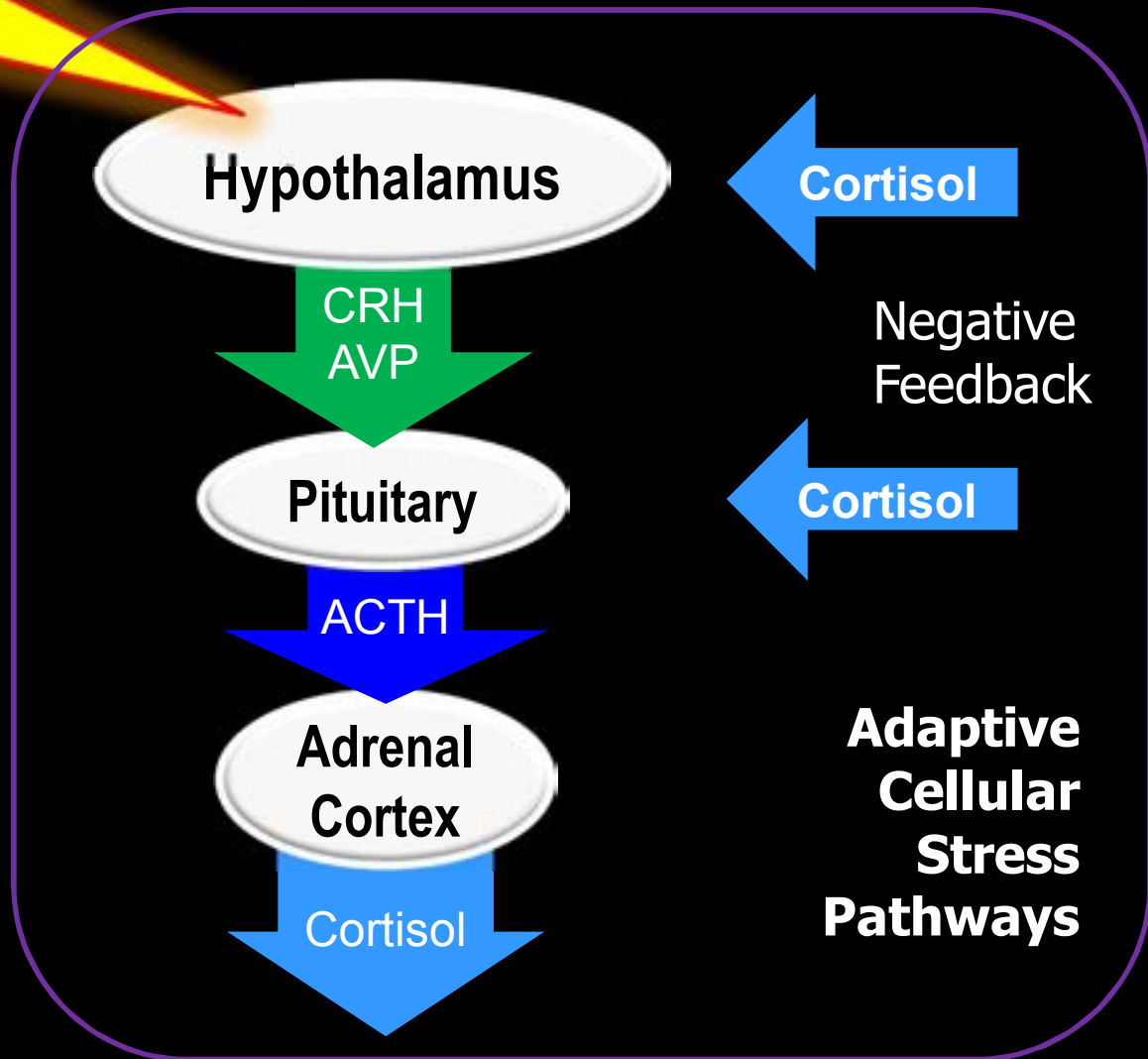
**Adaptive
Cellular
Stress
Pathways**

**Immune
System**

HPA axis



Stress
Diurnal rhythm
Cytokines
IL-1 β
IL-6
TNF- α
Vagus nerve
Peptides
Nutrient status



Cortisol Physiological Function



- **Stress response**
- Immune system and inflammatory responses
- Central nervous system
- Energy metabolism
- Cardiovascular tone
- Growth and reproduction

Chrousos GP, Kino T, Glucocorticoid Signaling in the Cell: Expanding Clinical Implications to Complex Human Behavioral and Somatic Disorders *Ann N Y Acad Sci.*2009 October ; 1179: 153–166

HPA Axis Cortisol Regulation



- Negative Feedback deactivates/restrains/switches off
 - Slow – Genomic (hours to days)
 - Intermediate – (30 to 60 minutes)
 - Fast – Non-Genomic (minutes)

Peripheral Cortisol Regulation



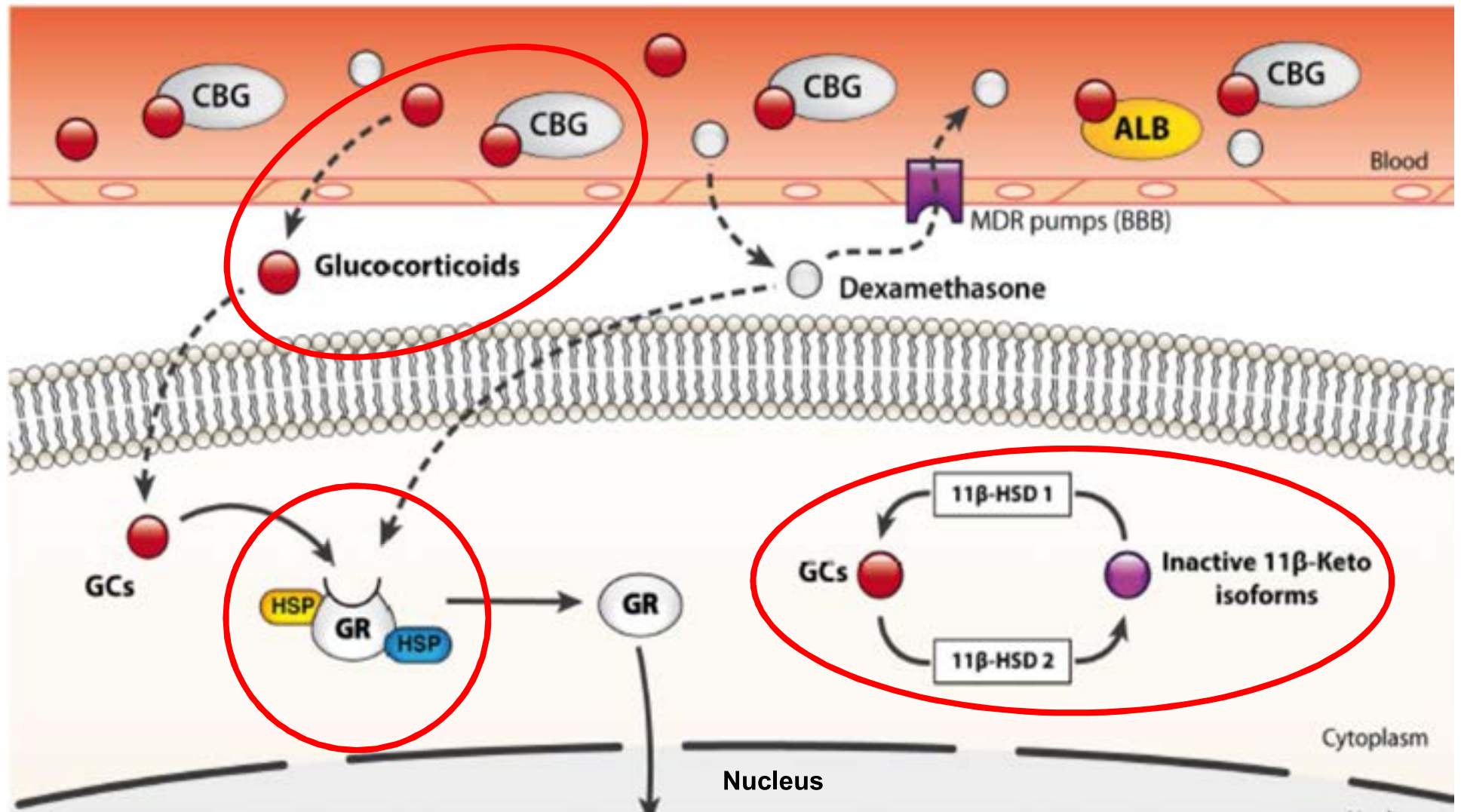
- Cortisol's effect at tissues/cells varies:
 - Intracellular regulation
 - Cortisol delivery/storage
- Intracellular regulators can increase or decrease cortisol levels to maintain balance
- Under normal and stressful conditions

Peripheral Cortisol Regulation



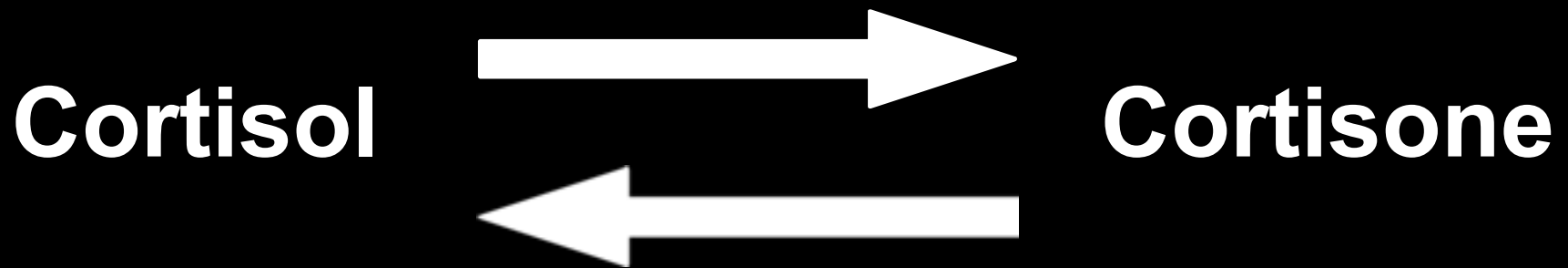
- 11β Hydroxysteroid dehydrogenase type 1 & 2 (11β -HSD1/2)
- Heat Shock Proteins 70 and 90
- Glucocorticoid receptors, GR α and GR β
- Cortisol binding globulin (CBG)

Silverman MN, Sternberg EM. Glucocorticoid regulation of inflammation and its functional correlates: from HPA axis to glucocorticoid receptor dysfunction. *Ann N Y Acad Sci.* 2012 Jul;1261:55-63.



Bellavance MA, Rivest S, The HPA - Immune Axis and the Immunomodulatory Actions of Glucocorticoids in the Brain. *Front Immunol.* 2014 Mar 31;5:136.

Cortisol regulation by 11 β -hydroxysteroid dehydrogenase



11 β -HSD1

Cortisol



Cortisone

Regulation of intracellular cortisol

- Liver
- Adipose tissue
- Muscle
- Lung
- Pituitary
- Adult brain
- Gonads
- Bone
- Eye
- Pancreatic islets
- Inflammatory cells

Quinkler M, Stewart PM, Hypertension and the cortisol-cortisone shuttle. *J Clin Endocrinol Metab.* 2003 Jun;88(6):2384-92.

Heat Shock Proteins



- Key elements of cellular maintenance and adaptive cellular stress defenses
- Cytoprotective
- Hsp70 and Hsp90 interact with the cortisol receptor (GR) to facilitate the action of cortisol

Cortisol Receptor GR α , GR β



GR α and GR β work together to regulate and maintain balance in cortisol signaling:

- GR α – promoter of cortisol signal
- GR β – repressor of cortisol signal

Cortisol Binding Globulin



- CBG manufactured in the liver
- Liver produces CBG in equal amounts to cortisol
- CBG binds cortisol and transports it in the blood stream
- CBG binds approx. 80-85% cortisol
- Albumin also binds cortisol, approx. 10-15%
- Free cortisol approx. 4-5%



Licorice



Image 1: Author Georges Seguin (Okki) - Français : Bâtons de réglisse sur le marché d'Aix-en-Provence (France). https://commons.wikimedia.org/wiki/File:Market_Aix-en-Provence_20100828_Liquorice.jpg - Creative Commons Attribution-Share Alike 3.0 Unported, 2.5 Generic, 2.0 Generic

Image 2: Autho Tila Monto - Licorice sticks in different colors - <https://commons.wikimedia.org/wiki/File:Liquorice4.jpg> - Creative Commons Attribution-Share Alike 3.0 Unported license.

Licorice



Image 1: Author Georges Seguin (Okki) - Français : Bâtons de réglisse sur le marché d'Aix-en-Provence (France). https://commons.wikimedia.org/wiki/File:Market_Aix-en-Provence_20100828_Liquorice.jpg - Creative Commons Attribution-Share Alike 3.0 Unported, 2.5 Generic, 2.0 Generic

Image 2: Autho Tila Monto - Licorice sticks in different colors - <https://commons.wikimedia.org/wiki/File:Liquorice4.jpg> - Creative Commons Attribution-Share Alike 3.0 Unported license

Licorice root: Syria 1900



Licorice: Key Actions

- Adrenal tonic and trophorestorative
- Inflammatory response function
- Mucoprotective
- Demulcent
- Hepatoprotective
- 11β -HSD enzyme inhibition

Licorice: Key Consituent



- Licorice contains glycyrrhizin
- Glycyrrhizin is converted to glycyrrhetic acid (GA) in the gastrointestinal tract
- GA is metabolically active

11 β -HSD2

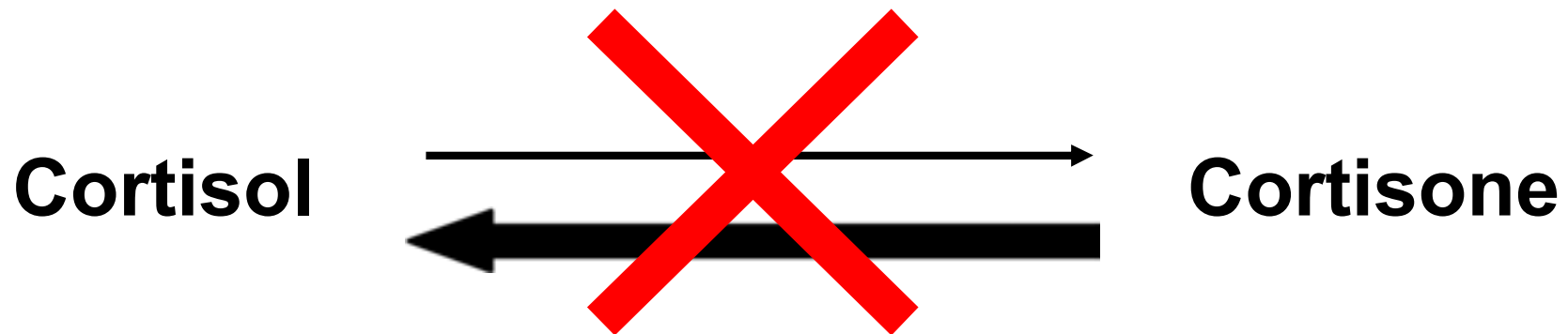
Protection from Cortisol



- Protection of the mineralocorticoid receptor
- Kidney (distal nephron), colon, salivary glands, placenta, fetus

Quinkler M, Stewart PM, Hypertension and the cortisol-cortisone shuttle. *J Clin Endocrinol Metab.* 2003 Jun;88(6):2384-92

11 β -HSD1



GA from Licorice

- Regulation of intracellular cortisol
- Organ specific enhancement of cortisol
- Liver, adipose tissue, muscle, lung, gonads, pituitary, adult brain, bone, eye, pancreatic islets and inflammatory cells

Quinkler M, Stewart PM, Hypertension and the cortisol-cortisone shuttle. *J Clin Endocrinol Metab.* 2003 Jun;88(6):2384-92.

Benefits of 11 β -HSD1 Inhibition



- Metabolic health
- Bone health

Bone KM, Mills SY, Principles and Practice of Phytotherapy 2nd edition, Elsevier, 2013, p 728-729

11 β -HSD1 Inhibition



Licorice

- Adrenals naturally produce Glycyrrhetic Acid-like factors, which like Licorice, inhibit the bidirectional activity of 11 β -HSD1
- If adrenal glands lose tone, perhaps they make reduced amounts of GA-like factors which is one of many issues impacting on cortisol homeostasis
- Does Licorice provide benefit by compensating for the lack of adrenal production??

Morris DJ, Latif SA, Hardy MP, et al, Endogenous inhibitors (GALFs) of 11beta-hydroxysteroid dehydrogenase isoforms 1 and 2: derivatives of adrenally produced corticosterone and cortisol. *J Steroid Biochem Mol Biol.* 2007 May;104(3-5):161-8. Epub 2007 Mar 23.

11 β -HSD1 Inhibition



- Green Tea¹
- Turmeric²
- Resveratrol³
- DHEA⁴ (Ashwagandha)

1. Hintzpeter J, Stapelfeld C, Loerz C, et al, *PLoS One*. 2014 Jan 3;9(1):e84468.

2. Hu GX, Lin H, Lian QQ, et al, *PLoS One*. 2013;8(3):e49976. Epub 2013 Mar 22.

3. Tagawa N, Kubota S, Kato I, et al, *J Endocrinol*. 2013 Aug 29;218(3):311-20.

4. McNelis JC, Manolopoulos KN, Gathercole LL, et al, *Am J Physiol Endocrinol Metab*. 2013 Nov 1;305(9):E1134-44. Epub 2013 Sep 10.

Licorice: Key Uses



- Adrenal depletion
- Physical stress
- Lowered cortisol

- GI health
- Healthy androgen levels (female)
- Respiratory health

Bone K, 2007, *Ultimate Herbal Compendium*, Phytotherapy Press



Rehmannia

Rehmannia: Key Actions



- Adrenal tonic (trophorestorative)
- Pituitary tonic
- Inflammatory response function
- Kidney tonic
- Mild laxative

Rehmannia: Key Uses



- Adrenal depletion
- Stress
- Altered immune system function

- Kidney inflammatory response function
- Lung support
- Skin health
- Temporary constipation

Bone K, 2007, *Ultimate Herbal Compendium*, Phytotherapy Press

Benefits of Licorice and Rehmannia



- HPA axis regulating
- Trophic and tonic to adrenal glands
- Improves negative feedback at the pituitary
- Immune system modulating
- Inflammatory response function

Echinacea angustifolia



Endocannabinoid System

Homeostatic signaling system

The diagram features three overlapping purple ovals on a black background. The top-left oval is labeled 'Nervous System', the top-right oval is labeled 'Endocrine System', and the bottom oval is labeled 'Immune System'. The ovals overlap in the center, suggesting a shared or interconnected function.

**Nervous
System**

**Endocrine
System**

**Immune
System**

Endocannabinoid System & HPA Axis Regulation



- HPA axis Fast Feedback
- Endocannabinoids suppress CRH
- Switch off hypothalamic stress response and stop cortisol production and release

Zajkowska ZE, Englund A, Zunszain PA. Towards a personalized treatment in depression: endocannabinoids, inflammation and stress response. *Pharmacogenomics*. 2014 Apr;15(5):687-98

***Echinacea angustifolia* root**



Echinacea and Stress



- *Echinacea angustifolia* root alkylamides support the function of the endocannabinoid system
- Mimic the actions of endocannabinoids and interact with endocannabinoid receptors
- Inhibit the enzymes that degrade endocannabinoids

Bone KM, Mills SY, Principles and Practice of Phytotherapy 2nd edition, Elsevier, 2013, p 530-531
Gertsch J. Immunomodulatory lipids in plants: plant fatty acid amides and the human endocannabinoid system. *Planta Med.* 2008 May;74(6):638-50. Epub 2008 Feb 14.

Echinacea Root



Dosage

- 2.5 to 3.8 g dry root per day (approx.)
- 8.0 to 12.0 mg alkylamides (approx.)
- Long term use is best

- Endocannabinoid system health
- Mood and feelings of well-being
- Immune system modulation

HPA Axis Regulation

Key Herbs



- Licorice
- Rehmannia
- *Echinacea angustifolia* root
- *Echinacea purpurea* root
- An herbal adaptogen

Rhodiola

Image: Roseroot – Flickr. Randi Hausken <https://www.flickr.com/photos/randihausken/7421792744> - Creative Commons Attribution-ShareAlike 2.0 Generic (CC BY-SA 2.0)



Schisandra

Author: Vladmimir Kosolapov. Schisandra Chinensis. Creative Commons Attribution 3.0 Unported license.
https://commons.wikimedia.org/wiki/File:Schisandra_chinensis_2.jpg

Adaptogen Definition



Herbs that exert their beneficial health effects by increasing the body's resistance and adaptation to stress are termed Adaptogens

Adaptogen Definition



“Adaptogens are herbs whose complex phytochemicals interact with cellular pathways to help maintain and support cells under normal and stressful conditions”



“Adaptogens mimic the effects of
beneficial stress”

Herbal Adaptogens

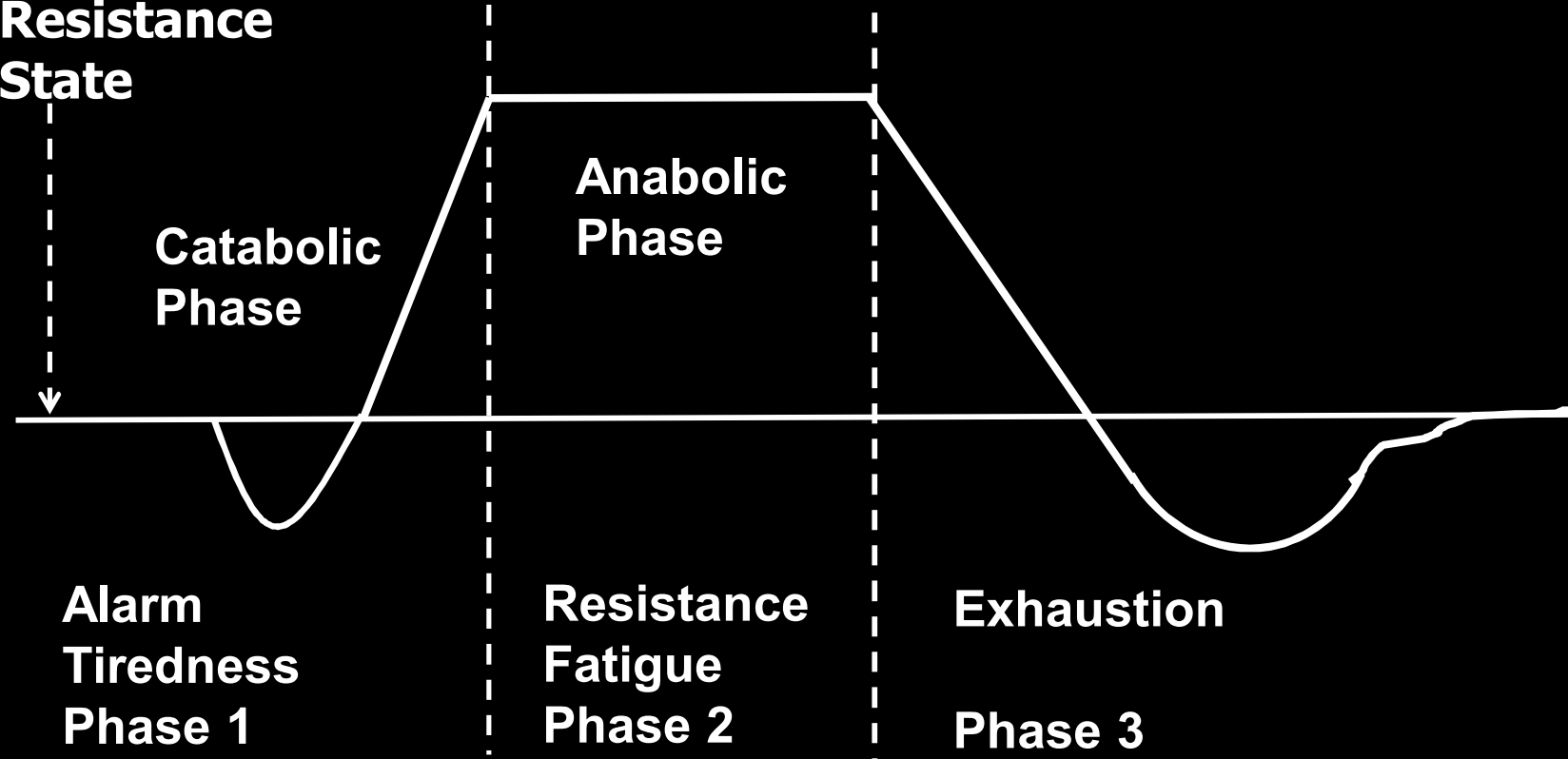
- Rhodiola
- Schisandra
- Korean Ginseng
- Ashwagandha (Withania)
- Eleuthero
- Astragalus
- Shatavari
- Echinacea root



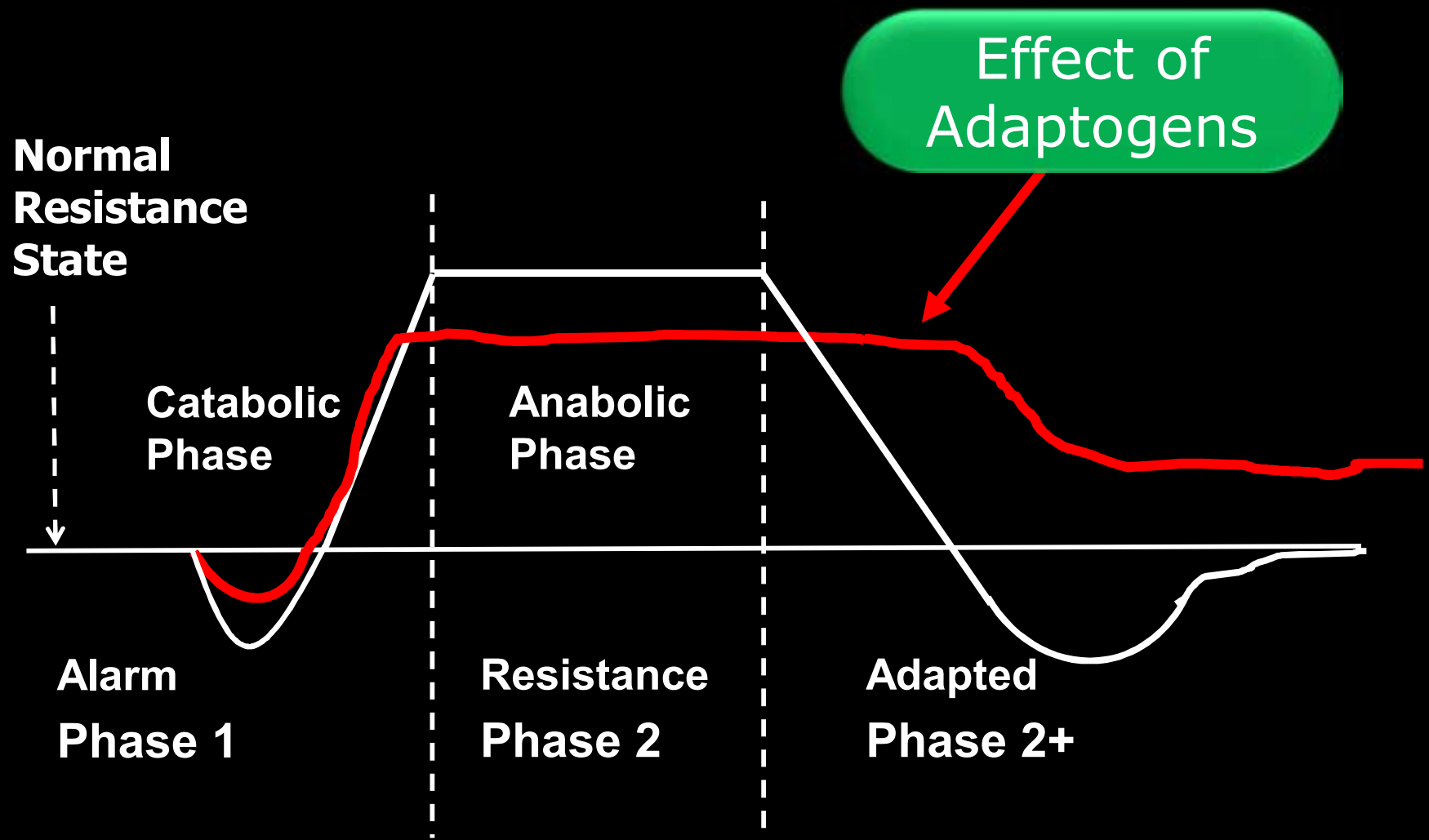
General Adaptation Syndrome

SELYE'S STRESS MODEL

Normal
Resistance
State



General Adaptation Syndrome



HPA Axis Regulation

Key Herbs



- Licorice
- Rehmannia
- *Echinacea angustifolia* and *Echinacea purpurea* root
- Rhodiola
- Schisandra



MEDI  HERB®

Rhodiola & Schisandra

For the challenges of everyday life

New
Product



MEDI HERB®

Rhodiola & Schisandra

For the challenges of everyday life

New
Product



Supplement Facts

Serving Size:	1 tablet	
Servings per Container:	40	
Amount per Serving		%DV
Calories	3	
Rhodiola root 20:1 extract from <i>Rhodiola rosea</i> root 3.0 g Containing salidroside 1.5 mg and rosavins 4.5 mg	150 mg	†
Schisandra fruit 6:1 extract from <i>Schisandra chinensis</i> fruit 660 mg	110 mg	†

†Daily Value (DV) not established.

Other Ingredients: Microcrystalline cellulose, hypromellose, magnesium stearate and silicon dioxide.

Suggested Use:

1 tablet 2 – 4 times daily, or as directed.

M1394

40 Tablets

Suggested List Price: \$23.50

MEDI  HERB

Need help with life's challenges?

Rhodiola & Schisandra helps improve your energy and vitality when experiencing temporary stress.*



*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.



Being challenged
in life is inevitable.

Being defeated
is optional.



Ask your health
care professional
today for more
information on
**Rhodiola &
Schisandra.**

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**Standard
Process**
Behavioral Health Solutions

www.standardprocess.com

For the Challenges of Everyday Life



Rhodiola & Schisandra

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Rhodiola & Schisandra

MEDIHERB

When animals are faced with a stressful situation, they go into "fight or flight" mode. The pulse quickens, muscles tense, the heart rate increases as emergency messages race through the body. Once the alarm is over, their equilibrium returns.

Humans, however, can sometimes hold on to stress. We find ourselves mentally replaying things that didn't go to plan, worrying about what's coming up at work next week, or feeling overwhelmed by emails or deadlines. When we are in a state of constant low level stress, the "off switch" that deactivates our response to life's challenges seems stuck in the "on" position.

MediHerb's Rhodiola & Schisandra is a gentle, effective formulation that may support the body during short term stress and help us adapt to the changes everyday life brings. Use it to nurture healthy emotional balance, reduce burnout and support strong mental performance.*

What is Rhodiola & Schisandra?

By normalizing and regulating your response to stress, MediHerb's Rhodiola & Schisandra may go a long way to helping restore your balance and well-being.*

The leaves of the *Rhodiola rosea* plant have been used for centuries in Europe and Asia. Chinese emperors sent expeditions to Siberia to bring back the "golden root" for medicinal use. The Vikings believed it enhanced their physical strength and endurance. In traditional Chinese medicine, Schisandra has long been considered a tonic that acts on all the organs.*

Get the benefits of this safe and synergistic supplement in a form that's easy to take.*

Being challenged in life is inevitable.
Being defeated is optional.

Compelling Benefits

MediHerb's Rhodiola & Schisandra is a powerfully effective formulation that may increase the body's ability to adjust to physical and emotional stress.*

It contains 4.5 mg of rosavins and 1.5 mg of salidroside per tablet to ensure optimal strength and quality. Rhodiola & Schisandra may help to:

- Maintain feelings of general well-being when experiencing temporary stress
- Assist the body to adapt to the changes of everyday life
- Support the body's natural defenses against emotional and environmental stressors
- Support healthy liver and nervous system function
- Support healthy cognitive function
- Maintain proper energy and support healthy physical performance
- Maintain healthy emotional balance
- Work as a tonic to benefit the entire body*

Ask your health care professional if MediHerb's Rhodiola & Schisandra is the right product for you. They will also inform you of any cautions to be aware of when taking this product.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

You Can Rely on Rhodiola & Schisandra



Quality is our Passion

Passion Flower (*Passiflora incarnata*)

MEDIHERB®

Rhodiola & Schisandra

M1394

Rhodiola & Schisandra

There are many species of Rhodiola, but it is only *Rhodiola rosea* that contains the important constituents: the rosavins and salidroside. The root of *Rhodiola rosea* has been used traditionally in Russia. Rhodiola and the fruit of *Schisandra chinensis* provide a tonic and stress supportive combination.*

How Rhodiola & Schisandra Helps Keep You Healthy

Supports the body during temporary stress, helps the body adapt to the changes of everyday life

Life exists by maintaining a complex dynamic equilibrium (homeostasis) that is constantly challenged by internal or external adverse forces (stressors). When faced with stress (physical or emotional) the body starts internal adaptive responses. These responses (involving the neuroendocrine and immune systems) take the body to a higher level of resistance to stress.^{1,2*}

The stress adaptive system of the body consists of many components. To name a few: the central nervous system (CNS), the hypothalamus-pituitary-adrenal (HPA) axis and the sympathoadrenal system (SAS). An

Supplement Facts

Serving size:	1 tablet	
Servings per container:	40	
Amount per Serving		%DV
Calories	3	
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† Daily Value (DV) not established.		

Other ingredients: Microcrystalline cellulose, hypromellose, magnesium stearate and silicon dioxide.

Caution: Not to be used during pregnancy and lactation unless otherwise directed by a qualified health care professional.

Product No	Content
M1394	40 Tablets



Rhodiola & Schisandra M1394

*These statements have not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

MEDI  HERB®

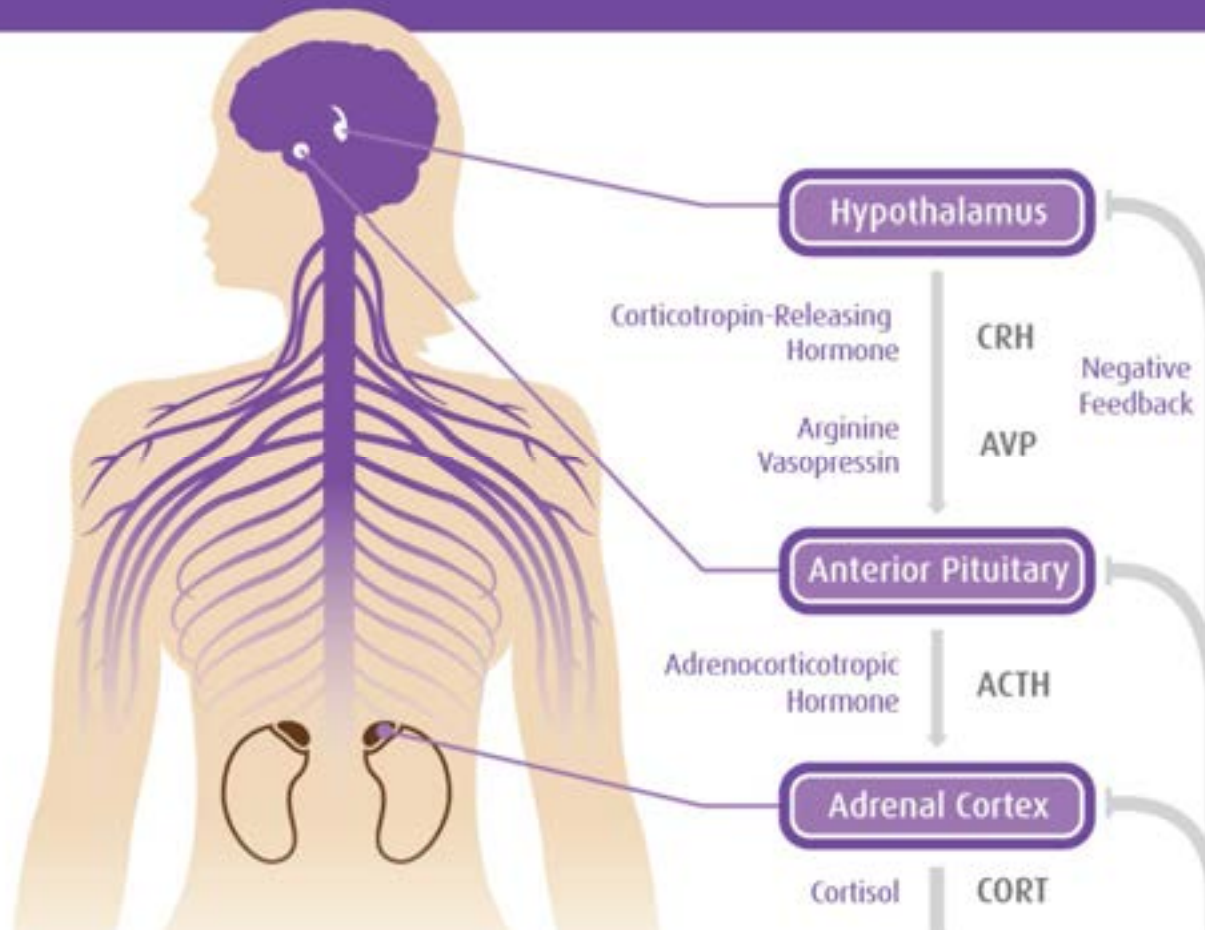
HPA Axis Essentials

Herbal Solutions for Stress Management

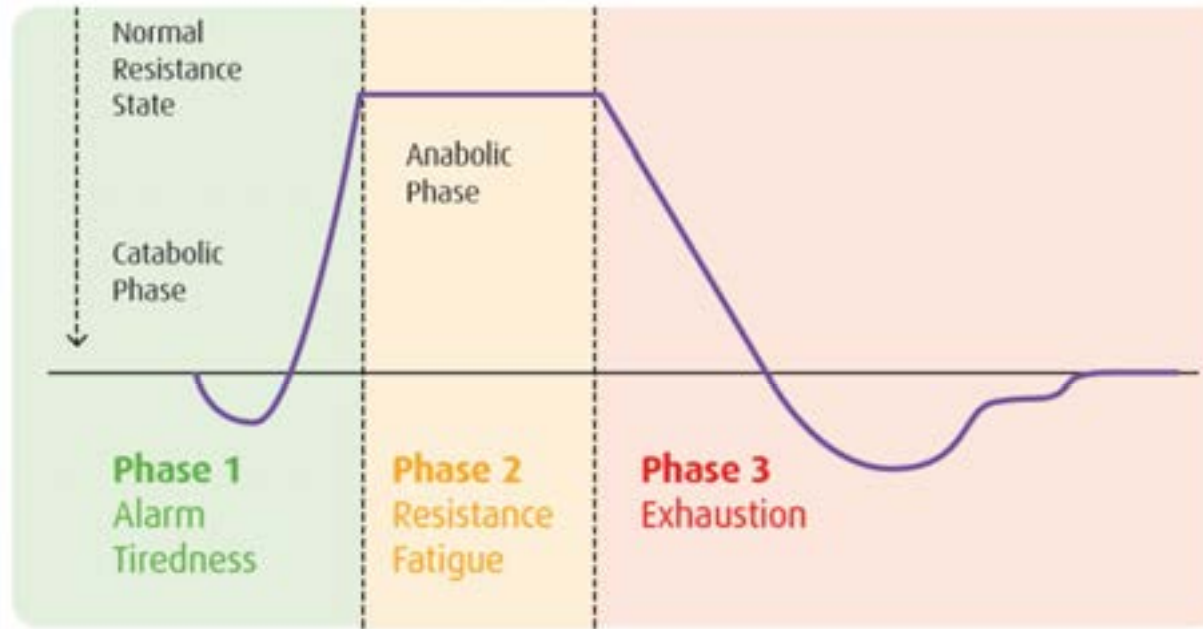


Hypothalamus-Pituitary-Adrenal (HPA) Axis and Stress

The hypothalamus, pituitary and adrenal glands and their complex interactions constitute the HPA axis. The HPA axis is the major part of the neuroendocrine system that controls the body's normal reactions to stress and regulates many body processes, including those of digestion, the immune system, mood and emotions, reproduction and the cardiovascular system as well as energy storage and expenditure. The HPA axis is also the primary mechanism for interactions that mediate the general adaptation syndrome (GAS).



Selye's Stress Model



Herbal Support for Stress

As health care professionals we have many herbs to help patients cope with the effects of stress. Below is a brief summary of the key herbal actions and herbs that support the stress response.*

Please note there is overlap in the categories and this table is only designed to indicate the major action of each herb.

Adaptogens	Tonic	Adrenal Tonics
Increases the body's resistance to physical, environmental, emotional or biological stressors*	Improves tone, vigor and function of the whole body. Tonics can give a boost in energy*	Improves the tone and function of the adrenal glands*
<ul style="list-style-type: none"> ■ Rhodiola ■ Schisandra ■ Withania ■ Eleuthero ■ Astragalus 	<ul style="list-style-type: none"> ■ Korean Ginseng 	<ul style="list-style-type: none"> ■ Licorice ■ Rehmannia



HPA Axis Essentials

Herbal Solutions for Stress Management

This guide summarizes the body systems each product supports to assist you in making the right decisions for each of your patients, depending on their specific needs.



	Adrenal	Brain	Nervous System	Liver	Digestive System	Whole Body	Immune System	Thyroid	Pancreas	Female Endocrine	Male Endocrine
Phase 1: Alarm											
Core Products											
Rhodiola & Schisandra	1	2	3	4							
Rhodiola & Ginseng Complex	1	2				1					2
Additional Considerations											
Silymarin					4						
Ginkgo Forte		2									
Nervaton®			3								
DiGest					4						
FerrCo										2	
Tribulus											2
Phase 2: Resistance											
Core Products											
Rhodiola & Schisandra	1	2	3	4							
Rhodiola & Ginseng Complex	1	2				1					2
Withania Complex	1		3								
Adrenal Complex	1										
Eleuthero	1										
Additional Considerations											
Echinacea Premium							2				
DiGest					4						
Thyroid Complex								2			
Kava Forte			3								
Nervaton®			3								
Ginkgo Forte		2									
Valerian Complex			3								
Livitor® Complex					4	4					
HerbalVital									2		
FerrCo										2	
Tribulus											2



RELIEVE STRESS
SUPPORT VITALITY

HPA Axis Legend		
● Adrenal	● Digestive System	● Pancreas
● Brain	● Whole Body	● Female Endocrine
● Nervous System	● Immune	● Male Endocrine
● Liver	● Thyroid	

Phase 3: Exhaustion

	Adrenal	Brain	Nervous System	Liver	Digestive System	Whole Body	Immune System	Thyroid	Pancreas	Female Endocrine	Male Endocrine
Core Products											
Rhodiola & Schisandra	●	●	●	●							
Rhodiola & Ginseng Complex	●	●				●					●
Withania Complex	●		●								
Adrenal Complex	●										
Nevaton®			●								
Kava Forte			●								
Astragalus Complex	●						●				
Additional Considerations											
St John's Wort 1.8g			●				●				
Echinacea Premium							●				
HPep					●						
Thyroid Complex								●			
Pohmannia Complex							●				
Ginkgo Forte		●									
Valerian Complex			●								
Livston® Complex				●	●						
Gynemma									●		
FemCo										●	
Tribulus											●





Rhodiola & Schisandra

- A synergistic herbal blend of *Rhodiola rosea* root and *Schisandra chinensis* fruit help the body during times of stress with specific support for the liver and nervous system.
- Each tablet is standardized to contain 4.5 mg of rosavins and 1.5 mg of salidroside to ensure optimal strength and quality.
- May support healthy liver function
- Supports healthy physical performance and maintains general well-being
- Supports healthy cognitive function and emotional balance*



Rhodiola & Ginseng Complex

- A synergistic herbal blend of *Rhodiola rosea* root and *Panax ginseng* root that works as a tonic to benefit the whole body and provide a quick energy boost
- Can significantly improve health and fitness
- Enhances mental clarity, boosts vitality and increases energy levels
- Supports physical endurance and promotes stamina
- Supports the body's natural defenses against emotional and environmental stressors*



Eleuthero

- Each tablet is standardized to contain 950 mcg of eleutheroside E to ensure optimal strength and quality.
- Enhances the body's natural ability to adapt to temporary stress
- Supports physical and mental endurance
- Promotes vitality
- Restores and enhances immune system function*



Astragalus Complex

- A strong tonic blend containing Astragalus, *Echinacea purpurea* root and Eleuthero that enhances immune system function
- Maintains feelings of general well-being and supports vitality
- Facilitates the body's normal response to occasional stress
- Promotes a healthy response to environmental stress*

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



Withania Complex

- Containing Ashwagandha, Licorice, Skullcap and Korean Ginseng, this formula increases vitality, maintains well-being and supports natural defenses.
- Supports and maintains the body as it ages
- Helps protect against fatigue
- Helps nurture general health and wellness
- Supports a healthy immune system and nervous system*



Adrenal Complex

- Combines Licorice root and Rehmannia rhizome, two powerful adrenal tonics that help the body adapt to the challenges of everyday life
- Each tablet is standardized to contain 25 mg of glycyrrhizin to ensure optimal strength and quality.
- Restores adrenal function to reduce the effects of stress on the body
- Supports adrenal gland health and energy production to help combat fatigue
- Promotes the body's normal resistance function and supports a healthy immune system*



Nevaton®

- A blend of St John's Wort, Schisandra, Damiana and Skullcap that offers nervous system and digestive support
- Calms the nerves and restores balance in temporary mood swings
- Encourages balance between the body and mind
- Eases the effects of occasional stress
- Provides support and maintenance of the liver*



Kava Forte

- A well-balanced herbal formulation that may help relieve anxious feelings and improve mood and mental well-being
- Each tablet is standardized to contain 50 mg of kavalactones per tablet to ensure optimal strength and quality.
- Made only from water-extracted noble cultivars of Kava, strictly regulated and carefully selected
- May help relax both body and mind, soothe nerves and induce sound sleep
- Supports the relief of muscular tension*

**Try them in your
clinic today!**

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Adrenal Health

Managing Patients' Stress and Energy Levels



Standard Process
Exclusive United States Distributor of MediHerb®

MEDIHERB®

A Quality Partnership

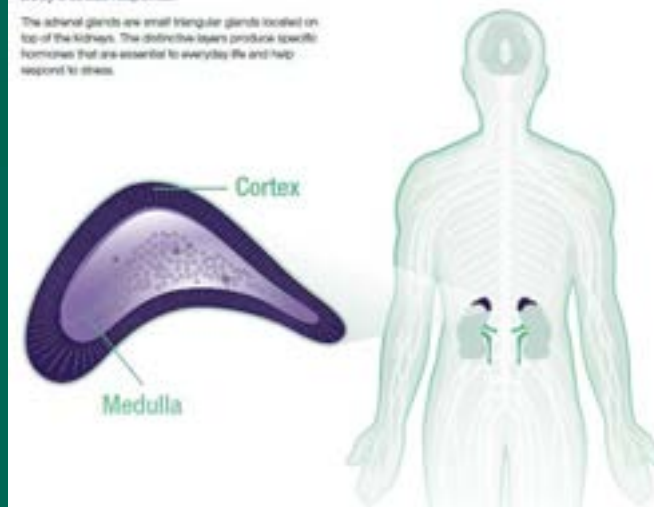


The body was designed to handle stress with a specific set of physiologic reactions. When we are faced with a stressful situation, we go into fight-or-flight mode. When the perceived threat is gone, systems are designed to return to normal. However, the chronic, prolonged stress often experienced in modern times tricks the stress-response system into constant action. This prolonged stress is taxing on the adrenal glands and doesn't allow them time to recover, which may be very harmful to one's health.

Adrenal Glands

Adrenal glands play an important role in the body's stress response.

The adrenal glands are small triangular glands located on top of the kidneys. The outer layer produces specific hormones that are essential to everyday life and help respond to stress.



Adrenal Health Products

This guide will assist you in determining which products may work best for your patients.

Phase 1: Alarm



Product	Dosage	Benefit
<i>Standard Process</i>		
Cellular Vitality	3 capsules per day	Contains B vitamins, the enzyme bromelain, coenzyme Q ₁₀ , Cordyceps sinensis, and RNA to support the body as a whole with specific emphasis on cellular processes*
Adrenal Health Daily Fundamentals	2 packs per day	A convenient pack containing Drenamin®, Panplex®, and Cataplex® A-C-P to support healthy adrenal function and emotional balance*
Drenamin®	3 tablets per meal	Contains a unique blend of ingredients to promote healthy adrenal gland function and maintain emotional balance while also being a good source of vitamin C*
<i>MediHerb</i>		
Rhodiola & Schisandra	2 tablets per day	A synergistic herbal blend of Rhodiola rosea root and Schisandra chinensis fruit that supports healthy cognitive function and emotional balance*
Rhodiola & Ginseng Complex	2 tablets per day	A synergistic herbal blend of Rhodiola rosea root and Panax ginseng root that works as a tonic to maintain feelings of general well-being when experiencing temporary stress*

Phase 2: Resistance



Product	Dosage	Benefit
<i>Standard Process</i>		
Drenamin®	3 tablets per meal	Contains a unique blend of ingredients to maintain energy production, support a balanced mood, and support immune system function while also being a good source of vitamin C*
Drenatrophin PMG®	1 tablet per meal	Contains bovine adrenal PMG™ extract which provides a unique profile of minerals, nucleotides, and peptides to support adrenal gland function*
<i>MediHerb</i>		
Rhodiola & Schisandra	2 tablets per day	A synergistic herbal blend of Rhodiola rosea root and Schisandra chinensis fruit to help the body during times of stress with specific support for the liver and nervous system*
Rhodiola & Ginseng Complex	2 tablets per day	A synergistic herbal blend of Rhodiola rosea root and Panax ginseng root that works as a tonic to enhance mental clarity, boost vitality, and increase energy levels*
Withania Complex	3 tablets per day	A tonic formula that contains Ashwagandha, Licorice, Skullcap, and Korean Ginseng to promote relaxation and help the body adapt to the changes of everyday life*
Adrenal Complex	2-3 tablets per day	Combines Licorice root and Rehmannia rhizome, two powerful adrenal tonics that help the body restore adrenal function to reduce the effects of stress on the body and help combat fatigue*



Phase 3: Exhaustion



Product	Dosage	Benefit
<i>Standard Process</i>		
Adrenal Desiccated	2 tablets per day	Contains bovine adrenal gland to provide powerful short-term adrenal support for immediate energy needs and support immune system function during times of increased demand*
<i>MediHerb</i>		
Rhodiola & Schisandra	4 tablets per day	A synergistic herbal blend of Rhodiola rosea root and Schisandra chinensis fruit that supports healthy liver function and physical performance and maintains general well-being*
Rhodiola & Ginseng Complex	4 tablets per day	A synergistic herbal blend of Rhodiola rosea root and Panax ginseng main root that works as a tonic to promote vitality and stamina while also supporting the body's natural defenses against emotional and environmental stressors*
Withania Complex	3 tablets per day	Contains Ashwagandha, Licorice, Skullcap, and Korean Ginseng to promote vitality and stamina and support the body's natural defenses against emotional and environmental stressors*
Nevaton®	3-4 tablets per day	A blend of St. John's Wort, Schisandra, Damiana, and Skullcap that offers nervous system and digestive support while encouraging balance between the body and mind*
Kava Forte	2-3 tablets per day	A well-balanced herbal formulation containing 50 mg of kavaactones that may help relieve anxious feelings, improve mood and mental well-being, and induce sound sleep*

Patient Assessment

The Standard Process Stress Assess™ questionnaire was designed to enhance your patient evaluation. Patients complete this questionnaire to help you evaluate their stress level and well-being. After adding up the response score, you'll see where a patient falls on the stress scale, enabling you to provide targeted recommendations for better health through diet, exercise, lifestyle modification, and supplement support.

Literature item number: L7127



STANDARD PROCESS **STRESS ASSESS**™

How well do you think you are handling stress? This assessment will help you and your health care professional design a personalized program to support your stress response and well-being.

Have you experienced any significant life events or changes in the last three months (illness, injury, job change, new baby, marriage, divorce, extreme training for a sporting event, major project at work, etc.)? If so, please list: _____			
Hours of sleep each night: 3-4 5-6 7-8 9+	Hours exercised per week: 0 1-2 3-5 6+	Alcoholic drinks per week: <small>(1 drink = 12 oz. beer, 5 oz. wine, 1.5 oz. liquor)</small> 0 1-2 3-7 8+	Meals eaten out per week: 0 1-2 3-5 6+
Do you have any downtime or participate in quiet mindfulness activities? (Pilates, yoga, meditation, quiet walks, personal hobbies)			Yes No

Please answer the following questions based on your experience within the last month.	Not at All	Little Bit	Somewhat	Quite a Bit	Very Much
1. How stressful would you say your life is?	1	2	3	4	5
2. Dealing with daily stresses is negatively affecting my daily tasks.	1	2	3	4	5
3. I have a high intake of sugar and/or processed foods.	1	2	3	4	5
4. I feel worn down and/or burnt out.	1	2	3	4	5
5. I need caffeine or other energy drinks in the morning or afternoon to give me energy.	1	2	3	4	5
6. I seem to have lower than usual energy during the day.	1	2	3	4	5
7. I experience body aches and pains.	1	2	3	4	5
8. I have periods of low moods.	1	2	3	4	5
9. I feel more irritable.	1	2	3	4	5
10. My weight and metabolism have changed.	1	2	3	4	5
11. I can't seem to focus or concentrate.	1	2	3	4	5

6. I seem to have lower than usual energy during the day.	1	2	3	4	5
7. I experience body aches and pains.	1	2	3	4	5
8. I have periods of low moods.	1	2	3	4	5
9. I feel more irritable.	1	2	3	4	5
10. My weight and metabolism have changed.	1	2	3	4	5
11. I can't seem to focus or concentrate.	1	2	3	4	5
12. I have feelings of anxiousness.	1	2	3	4	5
13. I feel totally exhausted most of the day and only have a few productive hours.	1	2	3	4	5
14. I find myself pushing through fatigue to get things done.	1	2	3	4	5
15. I seem to be sleeping a lot but never feel quite rested. I wake up feeling tired.	1	2	3	4	5
16. I have difficulty getting to sleep and/or wake up in the middle of the night.	1	2	3	4	5
17. I experience strong cravings for sweet or salty foods.	1	2	3	4	5
18. I feel overwhelmed with daily tasks and all that is on my plate.	1	2	3	4	5
19. I have a low sex drive.	1	2	3	4	5
20. I am unable to enjoy socializing with family and/or friends.	1	2	3	4	5

Add up your total score and mark where you fall on the stress scale below.

Total: _____

Low Stress

High Stress



Stress is fairly well managed in your life. It may be important to support your body to continue its healthy response.

Your body's response to stress may be getting in the way of normal activities quite frequently, leaving you feeling depleted. Consult your health care professional for an individualized program to achieve your health goals.

You may have experienced prolonged stress, and your body's stress response can no longer adapt or successfully cope. Consult your health care professional for targeted support and strategies for improvement.

Name: _____

Date: _____



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Questions?



Thank You