September Distributor Training Event Are your patients burnt-outp







Learning Outcomes

- History of Burnout
- What is Burnout?
- Clinical presentation
- Impact on life
- Physiological impact of chronic stress
- HPA dysregulation
- Adrenal support
- Burnout interventions
- What this means to our clinic and client base?







What is burnout?

Burnout has multiple definitions and some may contradict each other.

The most common and accepted conceptualization of Burnout is a three dimensional clinical presentation, including:

- Emotional exhaustion (EE): the depletion of emotional energy by continued work-related demands.

- Depersonalization (DP): a sense of emotional distance from one's patients or job

- Reduced feelings of personal accomplishment (PA): reduced job performance and mental fatigue and procrastination.







Burnout discovery – First stage

In 1974, Herbert Freudenberger was the first to use the term *burnout* in a paper he published for a *psychology*-related journal.

The paper was based on his observations of the volunteer staff (including himself) at a free clinic for drug addicts.

"...what preventive measures clinic staff can take to avoid burn-out among themselves, and if unluckily it has taken place, then what measures may be taken to insure caring for that person and the possibility of his return to the clinic at some future time."

In this first phase, the work was exploratory and had the goal of articulating the phenomenon of burnout.



Freudenberger, Herbert J. "Staff burn-out." Journal of social issues 30.1 (1974): 159-165.





Burnout discovery – Second stage

In the 1980s the work on burnout shifted to more systematic empirical research.

A particular focus of this research was the assessment of burnout, and several different measures were developed. The scale that has had the strongest psychometric properties and continues to be used most widely by researchers is the Maslach Burnout Inventory (MBI) developed by Maslach & Jackson (1981).

The concept of burnout was extended to occupations beyond the human services and education (e.g. clerical, computer technology, military, managers). Second, burnout research was enhanced by more sophisticated methodology and statistical tools. The complex relationships among organisational factors and the three components of burnout led to the use of structural models in much burnout research.

Maslach, Christina, Wilmar B. Schaufeli, and Michael P. Leiter. "Job burnout." Annual review of psychology 52.1 (2001): 397-422.





Clinical picture

Freudenberger first characterised burnout with a set of symptoms that includes exhaustion resulting from work's excessive demands as well as physical symptoms such as headaches and sleeplessness, "quickness to anger," and closed thinking.

He observed that the burnt out worker "looks, acts, and seems depressed".







Symptoms

Emotional (and physical) Exhaustion	Depersonalisation	Reduced Personal Accomplishment
Chronic fatigue	Loss of enjoyment	Apathy
Insomnia	Pessimism	Reduced productivity
Decrease in concentration	Isolation	Increased procrastination
Headaches	Detachment	Reduced promotions
Increased illness	Cynicism	Decrease in
Anxiety about work	Not wanting to go into work	
Depression	Not connecting with clients	
Anger and irritability		





Multi-layered conditions



Which do you treat?

What to prioritise?

How to set it apart from other comorbidities?





DDx

Burnout is distinct from Depression, or Chronic Fatigue Syndrome, in that it is directly related to work.

While certain characteristics from comorbidities can overlap with a clinical presentation of Burnout – individuals find themselves feeling relief after time away from work itself.

CAUTION! – While sufferers can feel dramatically better while on annual leave or a break between jobs, they can often find themselves 'dramatically' worse in the first couple weeks when they return to work. This reported slump can be potentially worse than before, and highlights the need for an integrated treatment plan.







Depression controversy?

Some researchers campaign for Burnout to be solely classified as a "depressive condition" out of concern for its debilitating impact on people's lives and also as a way of accessing funding.

"Clarifying what burnout actually matters in terms of business and governments extreme unwillingness to spend money or use resources to improve health, theoretical integration, nosological consistency, interventional effectiveness and public health policymaking.

Understanding burnout as a depression condition is, in our estimation, a critical step toward clarification."



Bianchi R, Schonfeld IS, Vandel P, Laurent E. On the depressive nature of the "'burnout syndrome'": A clarification. Eur Psychiatry. 2017;41:109-110.





Risk factors

Annu, Rev, Psychol. 2001. 52:397-422 Copyright (© 2001 by Annual Reviews. All rights reserved

Maslach, Schaufeli and Leiter identified six risk factors for burnout in workplaces, but they can also be seen in homes and interpersonal relationships:

- Mismatch in workload
- Mismatch in control
- Lack of appropriate awards.
- Loss of a sense of positive connection with others in the workplace
- Perceived lack of fairness
- Conflict between values

JOB BURNOUT

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Key Words work stress, organizational behavior, job engagement, stress management, job-person fit

■ Abstract Burnout is a prolonged response to chronic emotional and interpersonal stressors on the job, and is defined by the three dimensions of exhaustion, cynicism, and inefficacy. The past 25 years of research has established the complexity of the construct, and places the individual stress experience within a larger organizational context of people's relation to their work. Recently, the work on burnout has expanded internationally and has led to new conceptual models. The focus on engagement, the positive antithesis of burnout, promises to yield new perspectives on interventions to alleviate burnout. The social focus of burnout, the solid research basis concerning the syndrome, and its specific ties to the work domain make a distinct and valuable contribution to people's health and well-being.





Demographics

Of all the demographic variables that have been studied, <u>age is the one that has been most consistently</u> <u>related to burnout.</u> Among younger employees the level of burnout is reported to be higher than it is among those over 30 or 40 years old.

There is little gender difference despite some arguments that burnout is more of a female experience. Some studies show higher burnout amongst women, some show higher scores for men, and others find no overall differences. The one small, but consistent, gender difference is that males often score higher on cynicism. There is also a tendency in some studies for women to score slightly higher on exhaustion.

Those who are unmarried (especially men) seem to be more prone to burnout compared with those who are married. Singles seem to experience even higher burnout levels than those who are divorced.

Some studies have found that those with a higher level of education report higher levels of burnout than less educated employees.





Can we get burnt-out ourselves?

How does Burnout impact empathy?

- This study found a significant difference between medical practitioners perceiving others' pain in a hospital and at home due to "work related stress".
- Work stress significantly influences individual's empathic processing.
- Perceiving rewards from patient care protects medical practitioners from burnout.
- Empathy is a flexible phenomenon and it can change depending on the situation.

frontiers in Behavioral Neuroscience

ORIGINAL RESEARCH published: 04 September 2017 doi: 10.3389/finbeh.2017.00165



How Situational Context Impacts Empathic Responses and Brain Activation Patterns

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Impacts in clinic?

Compassion fatigue among physicians has not received much attention, although medical specialties such as oncology may be especially at risk of compassion fatigue.

Although exhaustion reflects the stress dimension of Burnout, it fails to capture the critical aspects of the relationship people have with their work.

Exhaustion is not something that is simply experienced — rather, it prompts actions to distance oneself emotionally and cognitively from work, presumably as a way to cope with the work overload. Kleiner and Wallace BMC Health Services Research (2017) 17:639 DOI 10.1186/s12913-017-2581-9

BMC Health Service

RESEARCH ARTICLE

Oncologist burnout and compassion fatigue: investigating time pressure at work as a predictor and the mediating role of work-family conflict

Sibyl Kleiner and Jean E. Wallace*





Depersonalisation

Often the hardest part of Burnout to conceptualise, depersonalisation is a big part of the presentation.

Depersonalisation is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people. Their demands are more manageable when they are considered impersonal work objects.

Outside of the human services, people use cognitive distancing by developing an indifference or cynical attitude when they are exhausted and discouraged.

Distancing is such an immediate reaction to exhaustion that a strong relationship from exhaustion to cynicism (depersonalisation) is found consistently in burnout research, across a wide range of organisational and occupational settings.





Why so serious?

Burnout is also associated with adverse physiological changes that can increase the risk for CVD.

This study found reduced parasympathetic activity and a tendency for elevated cardiac output in patients with burnout, which points towards predominance of sympathetic activity. As basal systolic blood pressure was also elevated in males, further support was found for a sympathetic predominance specifically in males.

Further evidence for hypo-reactivity of the HPA axis was found.

Hindawi Publishing Corporation BioMed Research International Volume 2015, Article ID 431725, 13 pages http://dx.doi.org/10.1155/2015/431725

Research Article

Burnout Is Associated with Reduced Parasympathetic Activity and Reduced HPA Axis Responsiveness, Predominantly in Males

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Physiological Effects of Stress



- Chronic exposure to stress results in a homeostatic imbalance of the neuroendocrine and autonomic nervous system.
- Chronic dysfunction of the sympathoadrenomedullary and hypothalamic pituitary adrenocortical axis results in a variety of nonspecific yet debilitating symptoms – long term fatigue, difficulty with concentration and motivation, brain fog and insomnia.





HPA and Burnout

Burnout is associated primarily with an underfunctioning HPA axis, which is a neuro-endocrine characteristic of exhaustion, rather than of depression.

The symptoms of burnout are similar to those of depression on the one hand and chronic fatigue syndrome on the other hand. However, the neuro-endocrine correlates of these two syndromes are the opposite, the former is HPA hyperfunction, and the latter is HPA axis hypofunctioning.

However, further studies involving functional stress testing are needed in order to map the neuro-endocrine profile fully and to clarify the link with immune system dysregulation.



Verhaeghe J, Van Den Eede F, Van Den Ameele H, Sabbe BGC. [Neuro-endocrine correlates of burnout]. Tijdschr Psychiatr. 2012;54(6):517-526.





Severity of Burnout

There are significant relationships between endocrine values and symptom severity.

In this study, simultaneous assessments of endocrine values and burnout symptoms found the connection.

More severe burnout symptoms were consistently associated with a lower level and smaller increase of cortisol awakening response (CAR), higher dehydroepiandrosterone-sulphate (DHEAS) levels, smaller cortisol/DHEAS ratios and a stronger suppression after dexamethasone suppression test (DST).







Biological Psychology 75 (2007) 176-184

www.elsevier.com/lo

Exhaustion and endocrine functioning in clinical burnout: An in-depth study using the experience sampling method

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Sonnenschein, Mieke, et al. "Exhaustion and endocrine functioning in clinical burnout: an in-depth study using the experience sampling method." Biological psychology 75.2 (2007): 176-184.





HPA Axis Dysfunction

Adrenal Fatigue Syndrome May be Due to Kidney Deficiency The Journal of Acupuncture and Oriental Medicine | SUMMER 2017 By Harry G. Hong, PhD, MD

- There are two collective stress responding systems in the body—the autonomic nervous system (ANS) and the hypothalamic-pituitaryadrenal axis (HPA).
- These two systems are mediated by largely overlapping circuits in the brain.
- The ANS provides the most immediate response to stressor exposure through its sympathetic and parasympathetic branches.

- Adrenal fatigue syndrome (AFS) is a collection of signs and symptoms that result when the function of the HPA axis decreases below normal.
- It consists of many nonspecific but debilitating symptoms, such as fatigue that cannot be relieved by sleep, difficulty concentrating, insomnia, inability to lose weight, feeling anxious, allergies, or brain fog.





HPA Axis Dysfunction

Adrenal Fatigue Syndrome May be Due to Kidney Deficiency ncture and Oriental Medicine | SUMMER 2017 By Harry G. Hong, PhD, MD

- Activation of the HPA axis results in elevations in circulating epinephrine and cortisol.
- The hormonal mechanism of HPA induction is slower than the mechanisms that drive sympathetic activation, but it provides an amplified and prolonged systemic reaction.
- When under chronic stress in the early stage of HPA dysfunction, known as the stressed stage, the adrenal glands increase cortisol output but are unable to keep up with the body's demand.

- Dysfunction of the HPA system causes disruption of the cortisol circadian rhythms, where cortisol production starts to rapidly decline during the day and increase at night. This results in clinical symptoms, such as insomnia, fatigue, and mood disorders.
- In the later stage of HPA dysfunction, called the fatigued stage, the adrenals are exhausted due to dramatic reduction of total cortisol output.
- The HPA system is unable to maintain homeostasis, and cortisol circadian rhythm shows reduction to a flat line.
- Symptoms may include fatigue that is not relieved by sleep, brain fog, lethargy, hypoglycemia, and the inability to maintain sleep at night.





Physiological Effects of Stress

- Stress depletes the brain reserves of the catecholamine neurotransmitters norepinephrine and dopamine; and it appears that depletion, especially of norepinephrine, is closely related to stress induced performance decline.
- Administration of tyrosine, an amino acid precursor of catecholamines, alleviates both the depletion of brain catecholamines and the stress-induced decline in performance.
- Tyrosine supplementation appears to alleviate the stress-induced decline in nervous system noradrenaline and, subsequently, enhancing performance under a variety of circumstances including sleep deprivation, combat training, cold exposure, and unpleasant background noise.
- This is particularly relevant to Burnout due to its impact on fatigue and mood.
- 1. Kelly GS. Nutritional and botanical interventions to assist with the adaptation to stress. Altern Med Rev. 1999;4(4):249-265.
- 2. Panossian A, Wikman G. Effects of adaptogens on the central nervous system and the molecular mechanisms associated with their stress Protective activity. Pharmaceuticals. 2010;3(1):188-224. doi:10.3390/ph3010188.





Tyrosine Mental Performance



- The combination of tyrosine and salidroside (Rhodiola rosea), alleviates both stress-induced depletion of brain catecholamines (norepinephrine and dopamine) and reduces fatigue.
- A number of clinical studies suggest that supplementation of tyrosine might improve stressinduced (e.g., cold, noise, anxiety and fatigue) accuracy of mental performance

Panossian A, Wikman G. Effects of Adaptogens on the Central Nervous System and the Molecular Mechanisms Associated with Their Stress—Protective Activity. *Pharmaceuticals*. 2010;3(1):188-224. doi:10.3390/ph3010188.





Low Selenium Upregulates Tyrosine Hydroxylase

- Selenium deficiency decreases the brain antioxidant protection in experimental conditions by the decrease in glutathione peroxidase activity.
- The **dopamine and serotonin turnover increased** and noradrenaline and 5-hydroxy-3indoleacetic acid turnover decreased compared to experimental control animals.
- The increase of dopamine turnover in experimental rats was accompanied by an increase in tyrosine hydroxylase activity. These results suggest that reduced brain protection against oxidative damage could induce brain damage by disturbing the turnover rate of some monoamines.
- Se-deficient diets have also been reported to enhance brain susceptibility, especially dopaminergic nerve terminals, to oxidative damage and result in an increased turnover of DA in the substantia nigra.





Adaptogens - Structure

Currently, no systematic studies on the structurefunction activities of purified adaptogens with their targets are available. However, the principal active ingredients of plant adaptogens (as investigated thus far) can be divided into two main chemical groups (Fig. 6): (1) terpenoids, with a tetracyclic skeleton, such as cortisol and testosterone (ginsenosides, sitoindosides, cucurbitacines, and withanolides) and (2) aromatic compounds that are structurally similar to catecholamines or tyrosine, including lignans (eleutheroside E (E. senticosus) and schizandrin B (S. chinensis)), phenylpropane derivatives (syringin (E. senticosus), rosavin (R. rosea)), and phenylethane derivatives (salidroside (R. rosea)). A number of studies indicate direct inter-

The phenolic compounds: salidroside, rosavin, Eleutheroside B (syringin), and lignans, such as eleutheroside E are structurally similar to the catecholamines -the mediators of the sympathoadrenal system (SAS) involved in activation of the stress system in the early stages of stress response.

Eleutheroside A structurally resembles the corticosteroids that act as stress hormones involved in protective inactivation of the stress system and is therefore presumed to act via the hypothalamic–pituitary–adrenal (HPA) axis.





New Research

Understanding adaptogenic activity: specificity of the pharmacological action of adaptogens and other phytochemicals

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Panossian, Alexander. "Understanding adaptogenic activity: specificity of the pharmacological action of adaptogens and other phytochemicals." *Annals of the New York Academy of Sciences* (2017).

Adaptogens are stress-response modifiers that increase an organism's nonspecific resistance to stress by increasing its ability to adapt and survive. The classical reductionist model is insufficiently complex to explain the mechanistic aspects of the physiological notion of "adaptability" and the adaptogenic activity of adaptogens. Here, I demonstrate that (1) the mechanisms of action of adaptogens are impossible to rationally describe using the reductionist concept of pharmacology, whereas the network pharmacology approach is the most suitable method; and (2) the principles of systems biology and pharmacological networks appear to be more suitable for conceptualizing adaptogen function and are applicable to any phytochemical. Molecular targets, signaling pathways, and networks common to adaptogens have been identified. They are associated with stress hormones and key mediators of the regulation of homeostasis. In this context, the mechanisms of action of adaptogens are specifically related to stress-protective activity and increased adaptability of the organism. Consequently, adaptogens exhibit polyvalent beneficial effects against chronic inflammation, atherosclerosis, neurodegenerative cognitive impairment, metabolic disorders, cancer, and other aging-related diseases. Current and potential uses of adaptogens are mainly related to stress-induced fatigue and cognitive function, mental illness, and behavioral disorders. Their prophylactic use by healthy subjects to ameliorate stress and prevent age-related diseases appears to be justified. It is very unlikely that the pharmacological activity of any phytochemical is specific and associated only with one type of receptor, particularly adaptogenic compounds, which affect key mediators of the adaptive stress response at intracellular and extracellular levels of communication.





Evidence-Based Efficacy

Adaptogen	Indication for Use and/or Pharmacological Activity		Number of	Grade of Recommendation	
(Active Principle)		of Trials	Subjects	EMEA ^a	NSR ^b
Rhodiola rosea	Mental fatigue: Rhodiola can improve attention in cognitive function in fatigue after single and repeated administration.	3	257	А	А
	Fatigue syndrome: Rhodiola has anti-fatigue effect in physi- cal, emotional, and mental exhaustion.	1	60	А	В
	Mild depression: Rhodiola has an anti-depressive effect	1	89	А	В
	Stimulating effect: Rhodiola can improve mental perform- ance after single dose administration	3	419	в	В
(Rhodioloside)	Stimulating effect: Rhodioloside can improve mental per- formance after single dose administration	1	46	в	
	Fatigue syndrome: Eleutherococcus has-anti-fatigue effect in moderate fatigue after two months of treatment	1	96	А	В
Eleutherococcus senticosus	Mental fatigue: Eleutherococcus reduces mental stress in- duced blood pressure and heart rate	1	45	А	В
لــــــا	Single dose effect in mental fatigue	6	2191	В	В
	Tonic effect: Eleutherococcus can improve concentration and memory after repeated administration	3	729	В	В



Evidence-Based Efficacy of Adaptogens in Fatigue, and Molecular Mechanisms Related to their Stress-Protective Activity

Current Clinical Pharmacology, 2009, 4, 198-219

Alexander Panossian* and Georg Wikman



Salidroside-Dosage Amounts

TEST	SPECIFICATION	RESULTS		Southern Cross
	mg/cap	% w/w	mg/cap	Analytical Research Laboratory
Salidroside*	NLT 0.94	0.24	1.91	
Rosarin**		0.07	0.53	
Rosavin**	Not specified	0.24	1.91	
Rosin**		0.06	0.48	
Rosavins**	NLT 2.81	0.37	2.92	





Current Clinical Pharmacology, 2009, 4, 198-219

Evidence-Based Efficacy of Adaptogens in Fatigue, and Molecular Mechanisms Related to their Stress-Protective Activity

Alexander Panossian* and Georg Wikman



Clinical applications







How to spot burnout in others?

5 RED FLAGS TO SPOT



TURNOVER. If you're having a problem retaining team members then it may be time to evaluate your corporate culture.

ABSENTEEISM. When your team members are constantly calling in sick or arriving late or leaving work early, they may be burnt out.





NEVER TAKING A VACATION. The team member who never leaves the office is a team member who is going to crash.

CONFLICT. Getting into arguments can be constructive, but when they turn destructive is when you need to address them.





INEFFECTIVENESS. Team members exhibit burn out by being unproductive on the job.







Reducing Burnout in Clinic

Residents who were burnt-out reported significantly increased stress and poorer mental health, empathy, mindfulness, resilience, selfcompassion, and confidence in providing compassionate care. Recent educational assignments and schedules and poor patient outcomes did affect presence of burnout.

Residents who were burnt-out also had lower performance assessments by their teaching faculty.

A variety of educational interventions, such as educational sessions/workshops, support groups, mind-body skills training, individualized coaching and peer/superior mentorship programs were recommended.

Review

Burnout and interventions in pediatric residency: A literature review

ABSTRACT

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Despite an increase in interest in issues related to burnout in medical education the national residency accrediting body, available literature is sparse in pediatrics. that requires special empathy and compassion, as well as enhanced communication care for children and their families. Burnout prevalence ranges from 17 to 67.8% o in recent studies. There is little that details the pathogenesis of burnout in these res compares them with those in other medical disciplines. This comprehensive literat all that is published on burnout and burnout interventions since 2005 in pediatric care oriented specialty residents, as well as key papers from pre-2005. This revie the available information and evidence-based intervention strategies, identifies for future interventions and directions. It should serve as a useful resource to prograi educators and graduate medical education leadership who are committed to prever burnout in their residents and molding these young physicians to be able to maintain their careers. This review should also be useful to investigators exploring burnout professionals.

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Mindfulness

Lifestyle modifications







Relaxing

Prescribing Relaxation

• It's something that patients don't "take" like they do a supplement, but it is optimal for long term stress support.

Mindfulness, meditation, walking, playing with pets – find out what works best for your client. A recent study into nurses found that smartphone apps were very effective in reducing stress and decreasing burnout, partly due to the flexibility of time and on demand access.







Get outside!

Enrich your non-work life

• So important for patients to make time for themselves, away from the demands of work and family. Stress can be overwhelming, and 30 minutes a day just for them is essential. Could be a hobby, reading, fitness or volunteering; get them involved in something that makes their heart sing.

It's also important to get sunlight for the immune system. Parks and gardens are a fabulous de-stress!







Unplug

Minimise technology

• Work doesn't need you to email back at 11pm at night, or if it does, set strong boundaries for minimising stress. Patients' can reduce it eating into family time by delegating certain times to check email and muting the phone for dinner. This can also make you more productive in the times you ARE meant to be working!







Get a diary

Organisation is key

• Make activities for your patients to set priorities to delegate work to-do-lists.

Often, when people are burnt out, they spend a lot of time worrying that they'll forget to do something or that something important is going to slip through the cracks. This can cause extra anxiety and snowball procrastination.







Consciousness

Be aware

 It's vital for sufferers to be aware of physical signs that they might be under too much stress: more headaches, tight shoulders, a stiff neck or more frequent stomach upset. In terms of mental health, burnout affects depression, and if you're depressed, that can also affect your level of burnout—it goes both ways.







Take Home Message?

- What can you take home from this presentation?
- How can we support you?
- Any further feedback?





