

# Burnout Syndrome in Physicians

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## INTRODUCTION

Burnout (BO) syndrome is defined as physical, mental and emotional exhaustion usually from long-term irresolvable job stress, a sense of being overwhelmed, depersonalization and a loss of a sense of personal accomplishment. It is usually a self-reported clinical condition. It is different from depression though it shares similarity. BO is commonly seen in practitioners in the care industries like Physicians, Nurses, Teachers, Counselors

etcetera. Prevalence figures may be as high 40%. Among Physicians, younger ones are more affected with a preponderance in females. The typical burned out physician is the 'overworked' and 'undervalued' Time honoured assessment tools are available to aid diagnosis of BO like the Maslach and Copenhagen BO inventories. It is chronic imbalance between any of the following in the Areas of Work Life Survey (AWS) of a physician.

**WORKLOAD** (amount of work done)

**CONTROL** (opportunities to make choices and be involved in decision making)

**REWARD** (salary or recognition)

**VALUES** (expectations)

**FAIRNESS** (colleagues and support staff and working environment)

**COMMUNITY** (quality of the social milieu or environment)

### Contrasting work overload from burnout

Though BO is stress induced, there is a nuanced difference between it and mere work overload. The merely overloaded and stressed knows that given time he can surmount the load and he is upbeat about it.

The burned out does not see the need to continue on the job he once cherished with a feeling of a mismatch between input and achievements or rewards.

The BO is overwhelmed and completely exhausted and wants to disengage, the merely stressed wants to engage more. The BO feels like nothing he does makes a difference and as if he is drowning in his responsibilities whereas the merely stressed counts his achievements and draws relief from them.

### Sources of stress in BO

Though frequently job related, sources of stress in BO could be one or a combination of the following subscales:

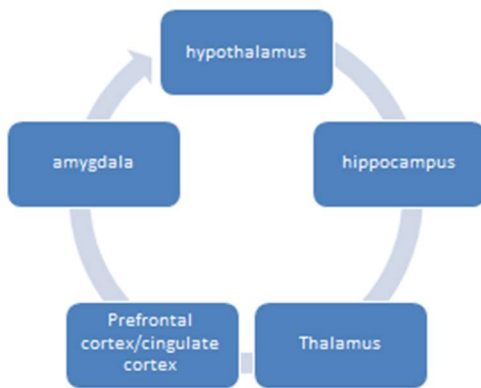


Figure 1: Neuronal circuit.

- Key terms:
- 1. Neuroplasticity- Ability of brain neurons to rewire, reconnect and reroute in response to stress or injury or stimulation.
- 2. Allostasis or stress-This is a generic term for every negative stimulus that forces an adaptive response from the brain.
- 3. Neurogenesis- Formation of new neurons in restricted areas like the hippocampus.
- 4. Brain derived nerve factor (BDNF)-Chemicals secreted by supportive brain cells that conduce to proper neuronal function

The body adapts to acute stress (allostatic load) of the typical fight and flight response in a protective manner. This response is powered via from the hypothalamus through the HYPOTHALAMIC-PITUITARY –ADRENAL AXIS (HPA AXIS) resulting in the secretion of glucocorticoids from the adrenal cortex. Recent evidence show that this process is triggered from the amygdala innervated from neurons in the locus cereulus. The hypothalamus is key and central to stress response because of its

Personal, Job related, Patients/client related  
Personal BO takes its toll on the productivity at work. It is usually from individual personality traits, lifestyle.

Job and client related are commoner.

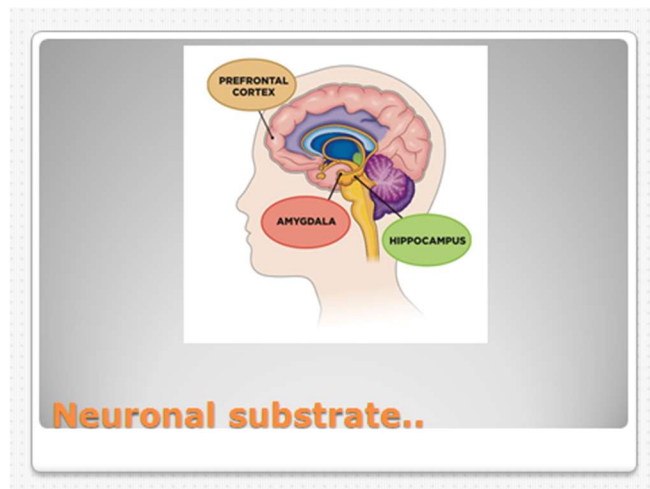
### Neuronal substrate for BO

As in every other biologic process, BO has a neuronal undertone.

A man is his brain, all actions have a neuronal imprimatur.

The brain controls all biologic processes.

BO is an example of a maladaptive response to a continuing allostatic load(stress) that overwhelms natural coping abilities in the neuronal circuit. This neuronal circuit is the hypothalamus, hippocampus, amygdala, thalamus, prefrontal/cingulate cortex circuitry (Figure 1).



robust connections. It connects with all other parts of the brain directly or indirectly. It controls and connects with cognitive (prefrontal network), emotional (amygdala), explicit memory (hippocampus), endocrine (pituitary) autonomic (brain stem nuclear substations) and sensory (thalamus) pathways. On a short term this is protective, but on a continuing basis (as in BO) the stress or allostasis keeps this pathway awash and the effect of glucocorticoids on the other components of

the neuronal circuitry of stress becomes deleterious with maladaptation. In BO as in depression, there is a continuing release of glucocorticoids as evidenced by higher serum levels compared to control subjects and a reduction in BDNF. Increased glucocorticoids and reduced BDNF attenuate neuroplasticity and neurogenesis in the hippocampus which are central to adaptation during allostasis or stress with reduction in hippocampal volume.

In summary, there is alteration in the HPA axis, neuroplasticity and neurogenesis of the hippocampus with resultant maladaptive response. These are the key neuronal substrates for BO and related conditions like depression and anxiety.

### Semiology (clinical features) of BO

#### Behavioural or Emotional or Physical symptoms:

- Depressed Mood (but does not satisfy criteria for major depressive disorders)
- Depersonalization (a subjective perception of viewing self-outside of the body) with or without derealization (a subject feeling of the environment being unreal or unnatural)
- Blunt cognitive (higher mental) abilities compared to what was particularly amnesia.
- Unforced errors that may be costly on the job.
- Physical fatigue for no apparent cause at work.
- Emotional and mental fatigue.
- Negative addictive behaviours like alcoholism.
- Cynicism and temper tantrums.
- Emotionalism with dacrytic (crying episodes) that may be incongruous.
- Feeling of underachievement compared with efforts.
- Withdrawing from responsibilities.
- Skipping work or coming late and leaving early.
- Procrastinating and taking longer to get things done.
- Isolating oneself from others
- Hypertension.
- Glucose intolerance/frank diabetes.
- Mild immune paresis and reporting ill too often.
- Poor sleep (difficulty falling asleep or enjoying enough sleep hours).
- Frequent muscle pains that are not exertional.

#### Consequences

- Negative feelings and resentments towards colleagues and patients.
- Low productivity in comparison to potentials
- Unforced errors.

- Emotional detachment and depression with feeling of worthlessness.

#### Red Flags of job-related BO

- Watch it if any of these describes you!
  - Every day at work is a bad day#
  - Feel exhausted all the time#
  - The majority of your time at work is spent on tasks that you consider dull and unexciting. #
  - Feel as if no matter what you do, it will not be appreciated. #

#### TREATMENT

- When a physician senses any of the red flag signs of BO, he should do the following:
- Assess himself with any of the well established Burnout inventory tools like **Maslach or Copenhagen Burnout tool kits. Vide references.**
- If you answer yes to the questions on the the inventory, then you need the following:
- **#1. Reverse by shutting down.**
- Take a break off the job and rest.
- Cut off calls, emails and social media temporarily. Sleep adequately for longer periods than you are used to until you feel rejuvenated.
- **#2 Retire temporarily into something that gives you pleasure.**
- **#3 Reconnect with people more by socializing outside your work environment.**
- **#4. Return back to work slowly.**
- Other measures include learning stress coping measures like physical exercises, meditations with yoga or Tai chi and behavioural therapy.
- Medications are hardly needed in BO. Because of similarity to depression some have advised use of mild tranquilizers/antidepressants.

#### CONCLUSION

BO is usually a job related physical, mental and emotional exhaustion with a sense of being overwhelmed by the job. The amygdala, the HPA and hippocampus are the main neuronal substrates involved with disturbed neuroplasticity and neurogenesis. Symptoms are behavioural, emotional and physical. Diagnostic tools include the Copenhagen and Maslach Burnout Inventories. Treatment is to Retreat and rest adequately with the mind and body directed differently in what the individual perceives as pleasurable. Other stress coping mechanisms like exercises, meditation and behavioural therapy could help. Reconnecting with

people outside the work place has been found to be useful. Though medications are often not needed, some have tried mild tranquilizers to enhance sleep for short periods. Though it shares similarity with depression, it is different and does not satisfy the criteria for depression by DSM V.

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#### **Conflict of interest**

The authors declare that they have no conflicts of interest.

#### **REFERENCES**

Chambers CN, Frampton CM, Barclay M, McKee M (2016). Burnout prevalence in New Zealand's public hospital senior medical workforce: a cross-sectional mixed methods study. *BMJ Open*; 6:e013947. doi: 10.1136/bmjopen-2016-013947

Copenhagen Burnout Inventory. Available at:<http://nfa.dk/da/Vaerktoejer/Sporgeskemaer/Sporgeskema-til-maalning-af-udbraendthed/Copenhagen-Burnout-Inventory-CBI>. Assessed on the 20<sup>th</sup> of November 2019

Lucila CP, Ana Carla GC, Eneluzia LC, Ana KG (2017). Burnout syndrome in health-care professionals in a University hospital. *Clinics (Sao Paulo)*; 72(5): 305-309.

Messias E, Gathright MM, Freeman ES, Flynn V, Atkinson T, Thrush CR, Clardy JA, Thapa P (2019). Differences in burnout prevalence between clinical professionals and biomedical scientists in an academic medical centre: a cross-sectional survey. *BMJ Open*; 9(2): e023506. doi: 10.1136/bmjopen-2018-023506

Ozen OS, Ibrahim TB, Ersin K, Aysin N, Emre Y, Hayriye EM (2008). The role of BDNF and HPA axis in the neurobiology of burnout syndrome. *Prog Neuropsychopharmacol Biol Psychiatry*; 32(6):1459-1465.