

# The impact of work stress on health

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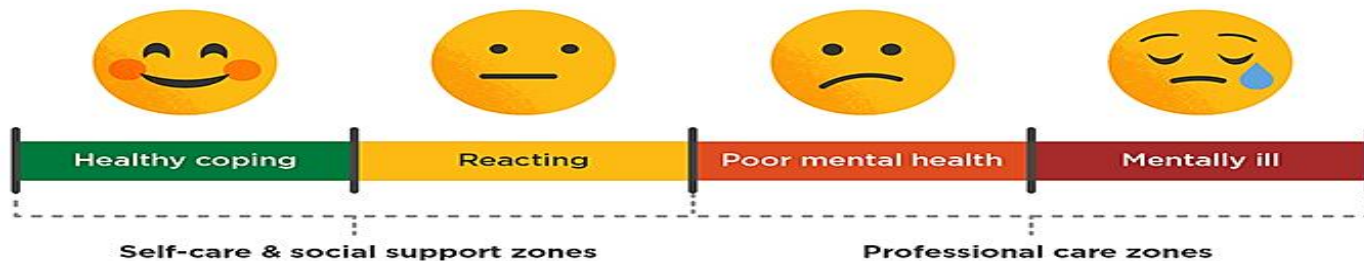
# World Health Organization

- Health is “a state of (complete) physical, mental and social well-being and not merely the absence of disease or infirmity.”
- Mental Health is “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.”

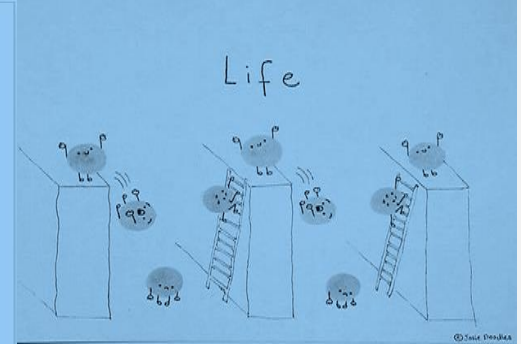


WHO

# Continuum of mental health and wellbeing



# STRESSED

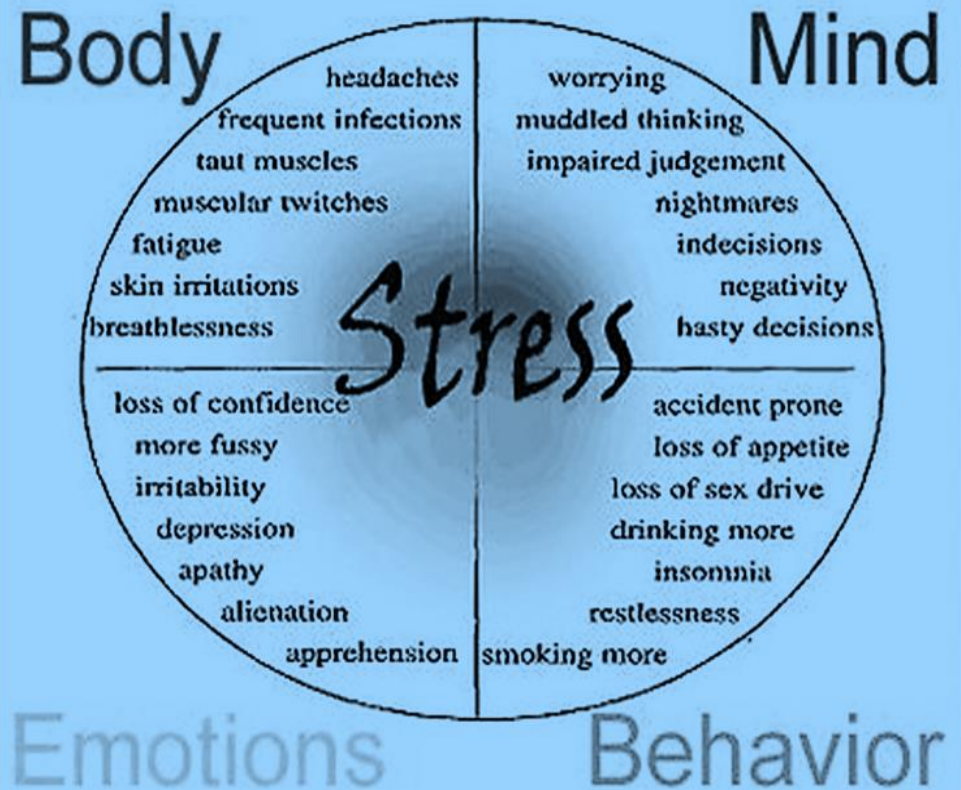


WHO: "The health epidemic of the 21st century"

There is no definition of stress that everyone agrees on, what is stressful for one person may be pleasurable or have little effect on others. We all react to stress differently.

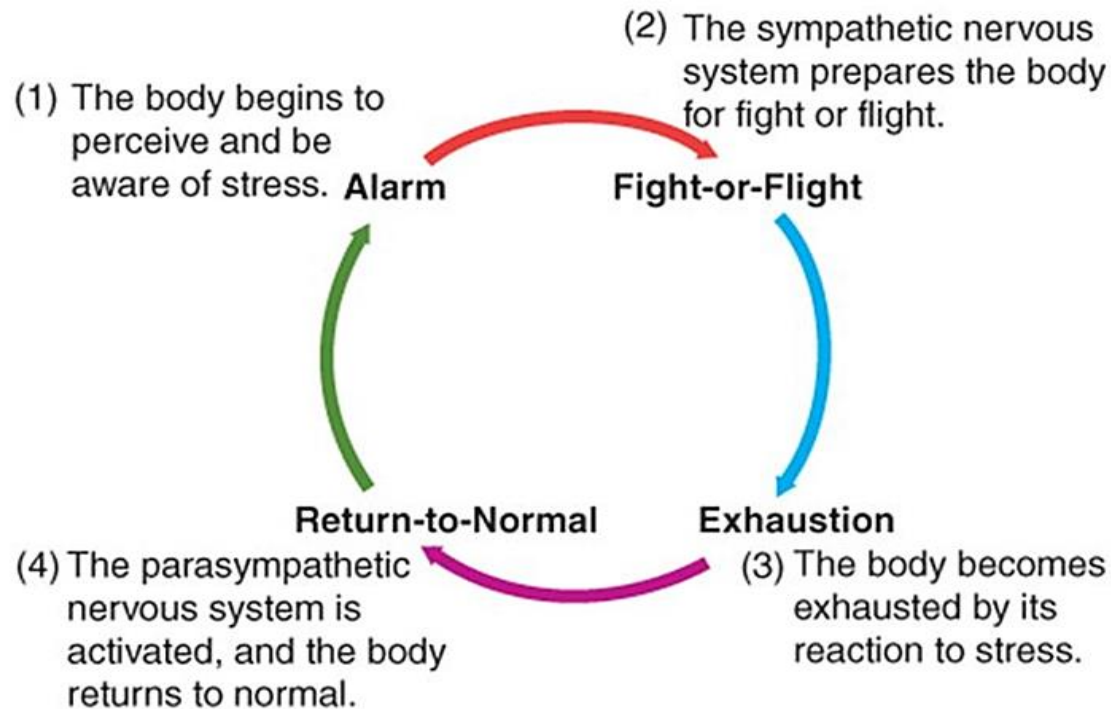
## What is Stress ?

It's the Gap Between Our  
Expectation & Reality.  
more the gap, more the Stress so  
Expect Nothing & Accept  
Everything.



Lazarus R. i sur, Stress, appraisal and coping,  
New York: Springer, 1984.

# Adaptation to Stress

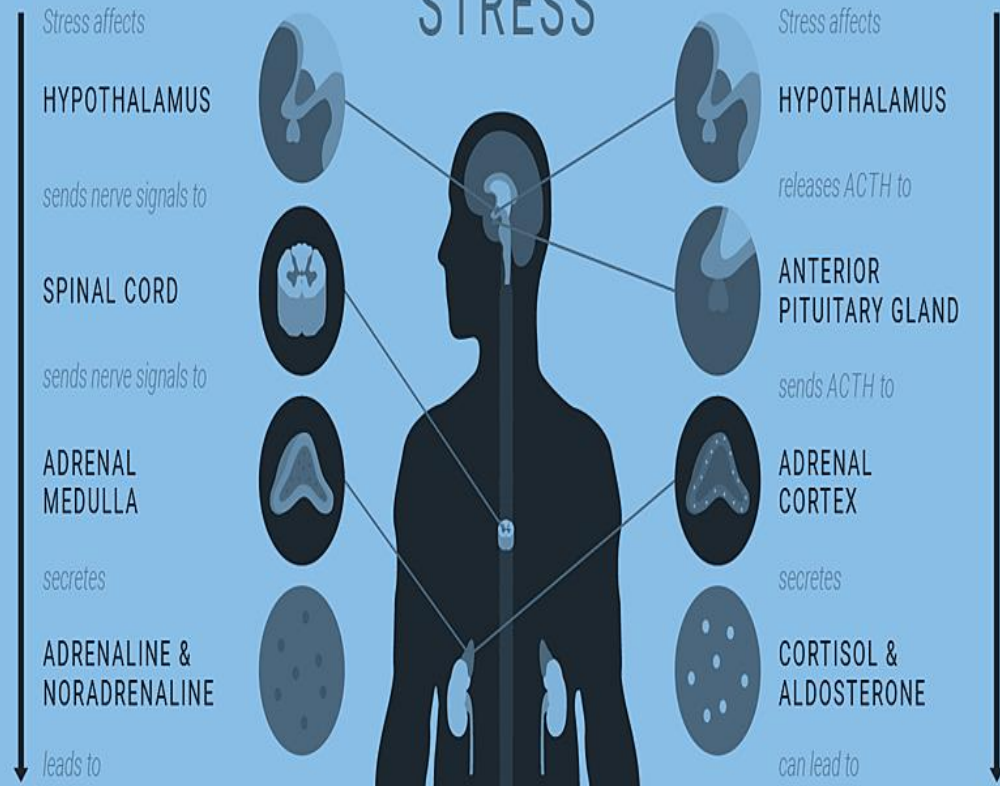


^^ Hans Selye's General Adaptation Syndrome (GAS) theory proposes that four stages are involved in adapting to stress.

## SHORT-TERM STRESS RESPONSE

# YOUR BODY on STRESS

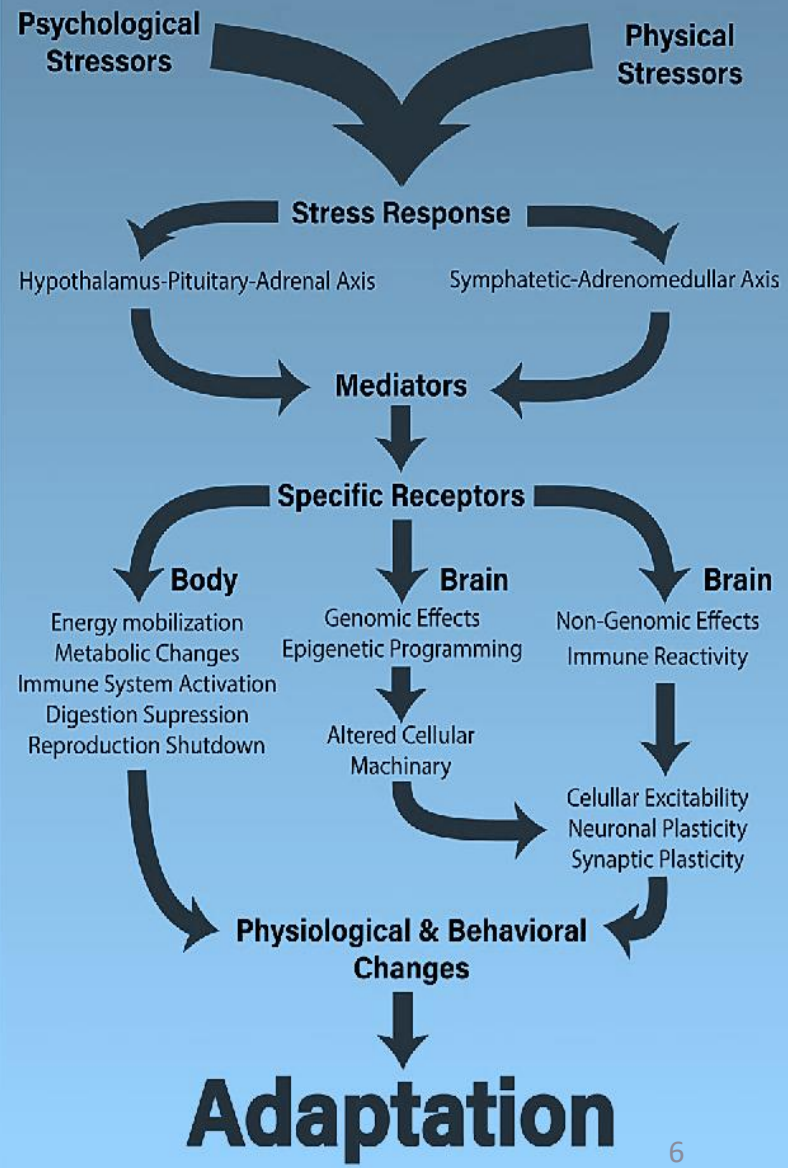
## LONG-TERM STRESS RESPONSE



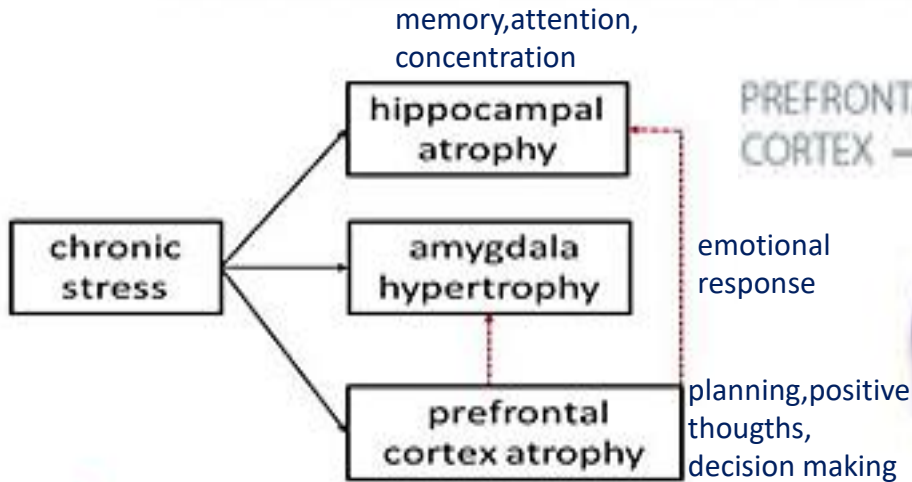
- Rising of blood sugar levels
- Higher blood pressure
- Faster breathing
- Faster metabolism
- Increased attention
- Slower digestion and lower kidney function

- Higher blood volume
- Higher blood pressure
- Processing of proteins and fat to glucose
- Higher blood sugar levels
- Immunosuppression
- Cardiovascular diseases
- Lower production of sexual hormones
- Kidney failure

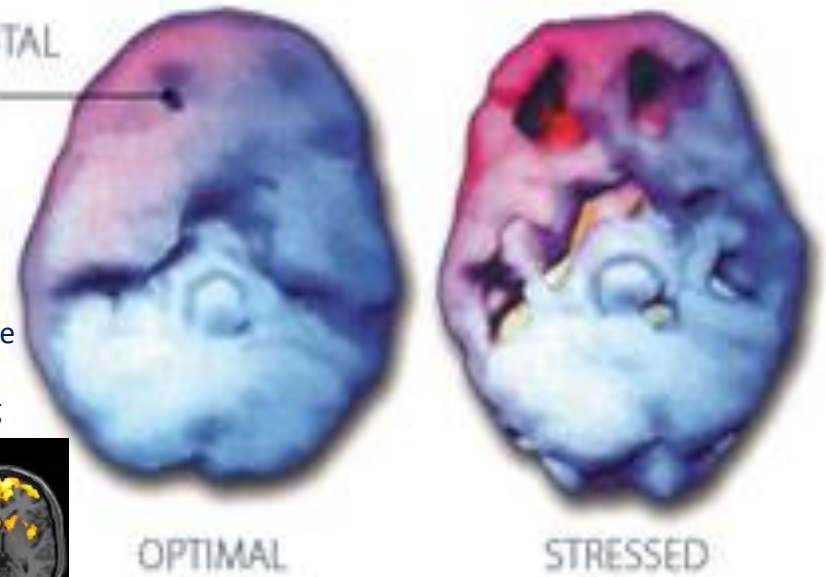
# The Stress System



# Chronic stress affects the brain

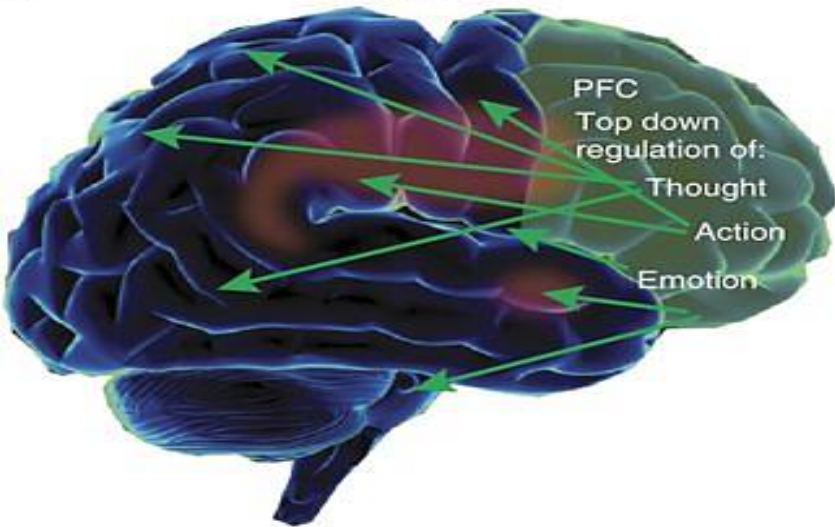


inhibition

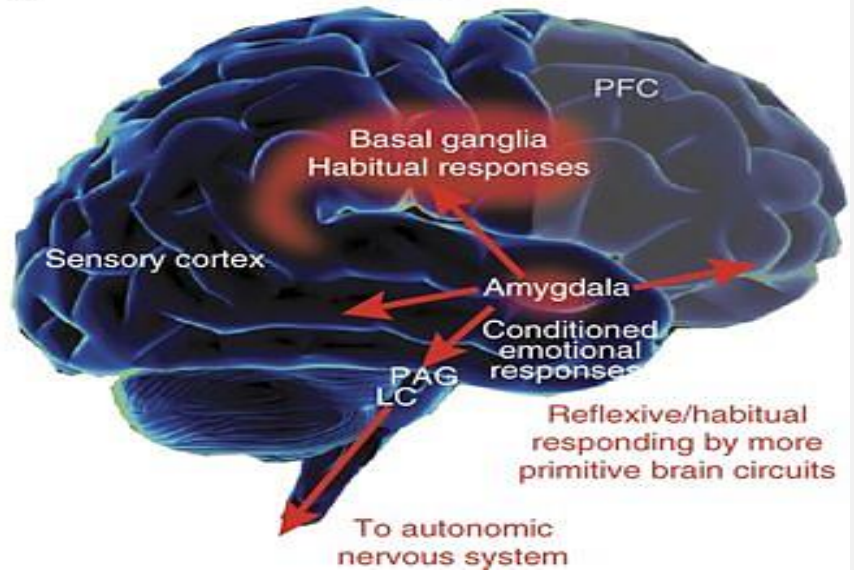


a

Alert



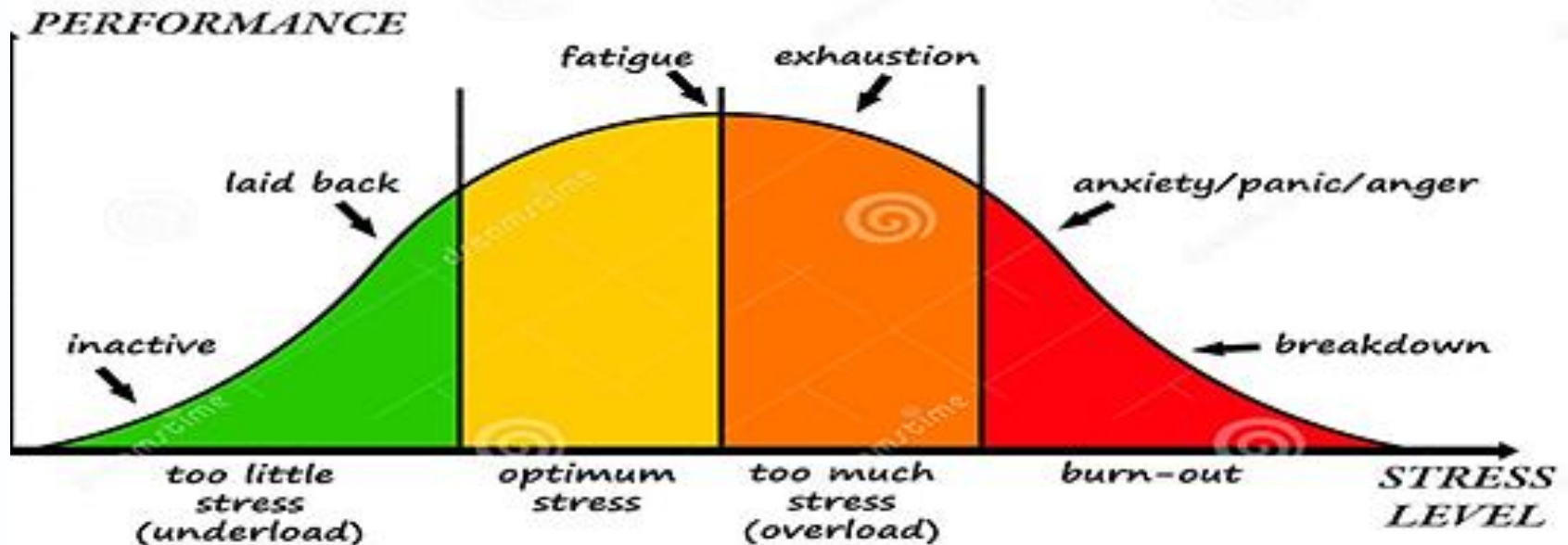
Stressed



# Job/work/occupational stress

„A condition arising from interaction of people and their jobs, adaptive response to an external situation characterized by changes (physical, psychological and/or behavioral) within people that force them to deviate from their normal functioning.”  
(Beehr and Newman)

## STRESS CURVE





Level of work stress	Causes of work stress
<b>Small everyday stress causes</b>	
<b>workplace conditions</b>	distance from home, equipment and space nonadequacy, low working resources, insufficient staff, shift work and overtime, low income, workplace insecurity
<b>processes in the workplace</b>	organizational changes, legal regulations and clinical protocols, administrative burdens and lack of digitization, poor work organization (no priorities, unequal delegation of tasks without clear deadlines), overload
<b>communication</b>	lack of information, vague communication, inappropriate content/tone
<b>interpersonal relationships</b>	role ambiguity, conflicts, disrespect, rivalry, lack of support and group cohesiveness, lack of teamwork or supervision
<b>mismatch between wishes and opportunities</b>	unrealistic expectations and perfectionism, lack of control due to lack of information, discouragement of creativity, lack of competences - inability and obligation of professional development, uncertainty in terms of business prospects, and opportunities for growth and development
<b>unwanted outcomes</b>	lack of co-operation and disrespect by patients, reduction of harm or recovery - no cure, violent incidents, deaths ...
<b>manager style</b>	organization and delegation of work, communication, support
<b>Great stress with suffering</b>	job loss or change
<b>Traumatic stress with longterm cosequences</b>	violent incidents, mobbing at work

# Burnout syndrome (BS)



- named by psychologist Herbert Freudenberger (1974.)
- ALARM SIGNAL - „Stop and change your life, if you continue this way you will die!”
- psychological syndrome (Z73.0) - 3 dimensions (emotional exhaustion, loss of empathy, feeling of personal failure) (ICD, WHO)
- responding to exposure to intense and long lasting stress
- the most prominent professions: students, teachers, doctors, nurses, psychologists, social workers, firefighters, soldiers, pilots, cops, managers, brokers, waitresses, actor, TV and radio speaker, journalist, reporter
- high prevalence (3-7% general population, 5% students, 25-75% doctors)
- subtypes (frenetic, underchallenged, worn-out) (Montero- Marin J i sur, PLoS One, 2014., BMC Psychiatry, 2012.)

# Etiology

- multifactorial - individual factors + job related factors



- protective factors - extraversion, stress coping skills + job satisfaction
- risk factors - neuroticism, inadequate stress coping skills, neglect own needs, unrealistic expectations (imbalance between effort and rewards), (Violanti JM i sur, Police Q, 2018., Maslach C i sur., World Psychiatry, 2016., Botha E i sur., JBI Database System Rev Implement Rep, 2015.)

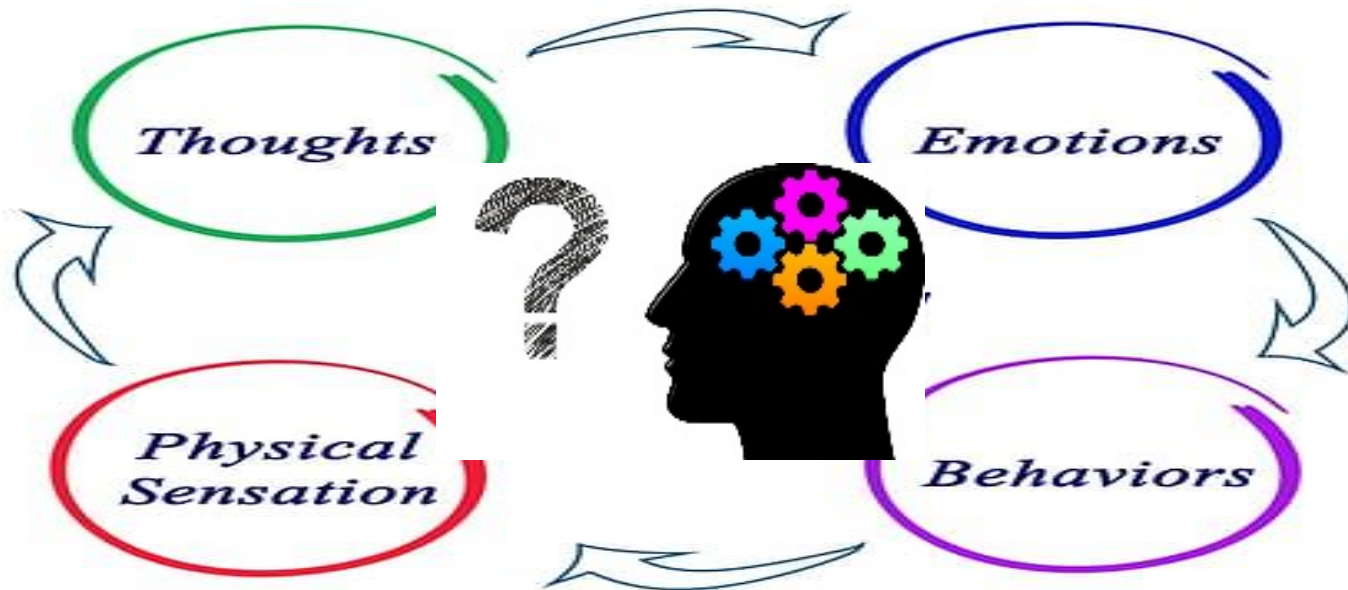
<b>Phase of BS</b> ----- <b>Symptoms</b>	<b>Honeymoon</b>	<b>Initial disappointment</b>	<b>The withdrawal</b>	<b>Depression of exhaustion</b>
<b>Cognitive</b>	optimism, good concentration, increase alertness, expectation of success, recognition or earnings	the loss of idealism because of the disappointment of unfulfilled expectations, decline in attention	decline in concentration and memory, self-neglect, pessimism	intellectual exhaustion with difficulty of concentration, creativity and learning, negativism, life seems rather unimportant
<b>Emotional</b>	delight, euphoria, motivation	hypersensitivity (sound, smell, heat, light ...), mood imbalance, insecurity, nervousness	irritability, frustration, intolerance, loss of empathy and cynicism	emotional exclusion, depression, feeling of helplessness, failure, despair, hopelessness, apathy
<b>Behavioral</b>	work hard	delay and postponement of jobs, prolonged breaks	non-acceptance of new work tasks, conflicts, more smoking, use alcohol and coffee	isolation from people, inability to change, excessive smoking, alcohol, coffee
<b>Somatic</b>	working elan	energy fall, fatigue, insomnia, daily drowsiness, loss of appetite and libido	energy conservation, headache, loss of immunity, infections, allergies, PMS	physical exhaustion with frequent absences due to illness

Paganin D i sur, Springerplus, 2015.,  
Paganin D i sur, Scad Psychiatry, 2014.,  
Maslach i sur., World Psychiatry, 2016.

Level	Consequences of BS in healthcare org.
Individual	<p><b>negative effects on persons health, productivity, relationships</b></p> <p><b>somatic</b> - headaches, migrains, infections, allergies, chronic back pain, fibromyalgia, obesity, diabetes, autoimmune disorders (rheumatoid arthritis, lupus, multiple sclerosis, thyroiditis), acne, psoriasis, neurodermatitis, infertility, dysmenorrhea, impotence, asthma, thyroid disease, gastritis and ulcer, irritable bowel syndrom, ulcerative colitis, hypertension, heart disease, myocardial infarction, stroke, carcinoma</p> <p><b>mental problems (17-52%)</b> - anxiety disor., depression, addiction, suicidality</p> <p><b>negative effects on professionalism</b> - work performance, negative workplace relationships (nonverbal and verbal affront, undermining activities, withholding information, sabotage, failure to respect privacy and broken confidences), career continuation (absenteeism, drop in work abilities), job turnover (leaving the profession prematurely, early retirement)</p>
Organizational	<p><b>reduced workplace productivity and efficiency, reduced practice revenue, affect quality of care</b> (delivery and emotional support of patients)</p>
Patients	<p>increased risk of patient <b>safety incidents</b> (medication, diagnostic, decision making) and suboptimal <b>attitudes</b> to patients (little attention to the social/ personal impact of an illness, increasing violence against patients), lower patient <b>satisfaction</b></p> <p><small>Panagioti M i sur., JAMA Intern Med, 2018., Bonnie AC i sur, Systematic Reviews, 2017., West CP i sur., Lancet, 2016., Fothergill A i sur., Int J Soc Psychiatry, 2004.,</small></p>

# Individual interventions for stress management

- tracking, recognizing and reducing stress - based on the connection of physical sensations, emotions, thoughts and behaviors (Baker K i sur, AMA J Ethics, 2016.)
- interventions improve the resilience (Harolds JA, Clin Nucl Med, 2018., 2019., Balch CM i sur, Adv Surg, 2010.)
- occupational hygiene - less work stress, more satisfaction (Koreki A. i sur, BMC Research Notes, 2015.)



# Individual interventions for stress management



- raising awareness of stress impact on health – better recognitions
- restructuring of **cognitive** distortions related to work – realistic expectations (Regehr C i sur, J Nerv Nent Dis, 2014., Regehr C i sur, J Affect Disord, 2013., Harolds JA, Clin Nucl Med, 2018., 2019.)

Cognitive distortions	Positive thoughts
catastrophizing - disastrous prediction of outcome	belief in itself without anticipating the future
compulsions (rules, unrealistic expectations)	not forcing (flexibility, forgiveness, unexpected)
reduction of positive (praise, forgiveness) and over-emphasizing negative (criticism)	dismissal (training of retention and dismissal of thought)
emotional thinking	patience (identification and emptying of emotions)
positive/negative thinking + labeling	nonconforming (do not react to everything, think in gray)

# Individual interventions for stress management



- by recognizing and empowering **emotions** we master new skills that result in the development of personality and resistance (applying existing skills to fit the environment into oneself - cognitive-affective assimilation)
  - suppressing emotions remain in consciousness as unwanted and recurrent thoughts, and unpleasant feelings resulting in cognitive and behavioral avoidance of causes of stress (changing the existing skills to fit into the environment - cognitive affective acomodation) (Lazarus R. et al., Stress, appraisal and coping, New York: Springer, 1984)
- **strenghtening self-control** by recognizing negative unpleasant emotions and developing positive emotions
  - understand the emotions you feel (if you ignore them you feel worse)
  - breathe slowly and deeply (so you direct attention)
  - replace emotions with positive activity (recreation, relaxation, conversation) OR change space (go to another room, outdoors)
  - create a list of activities that helped you for another time (write) (Ogbunya TC et al, Psychol Rep., 2018)



# Individual interventions for stress management



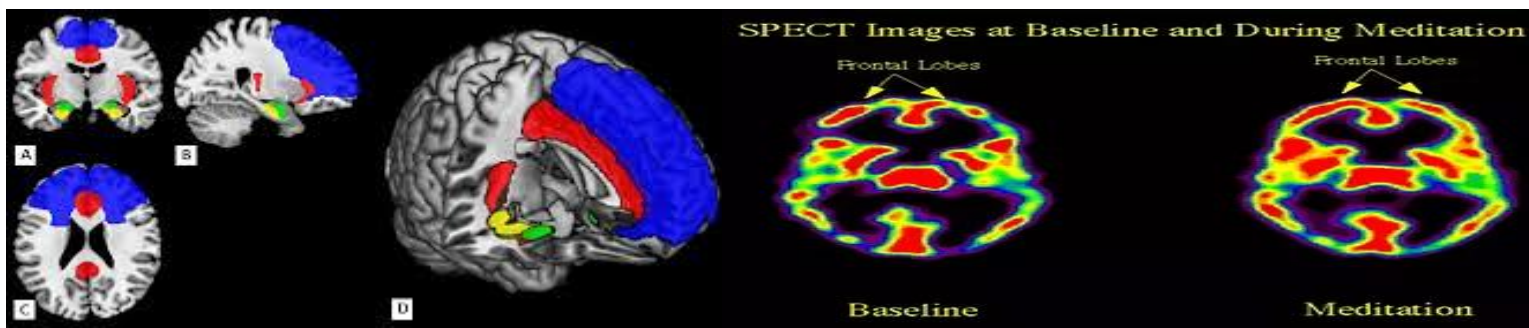
- **self care** - better whole health
  - enough sleep, healthy food, relaxation (meditation, yoga, spa, hobby, walk, nature, travelling, reading, music, dance, cinema, theater, friendship), **recreation** (Almasry M, Int J Med Educ, 2017., Kuhn CM i sur., Can J Anesth, 2017., Harolds JA, Clin Nucl Med, 2018., 2019.)
- developing and maintaining a friendships and good family **relationships** - better support system (Fares J i sur, J Epidemiol Glob Health, 2016., Ishak W i sur, Clin, Teach 2013.)
- **life skills training** – resilience promoting
  - **time management** (get more organized work day, keep balance between working and leisure time, prioritise tasks and solve problems, break big projects into steps, set deadlines and remainders)
  - **self-criticism and responsibility** (tidy your workplace and remove distractions, make decisions responsibly, set realistic goals geared to your abilities, be focused on work (rest 5 min/25 min of work))
  - **self-esteem and asertiveness** (say no and set limits, stop multitasking and delegate tasks)
  - **communication skills and conflict resolution** (Braun J i sur., Aktuelle Urol, 2019.)

# Individual interventions for stress management



## Mindfulness-Based Stress Reduction (MBSR) (Harolds JA, Clin Nucl Med, 2018., 2019.)

- increases activity and thickness of PFC (self-healing) and hippocampus, reduces amygdala activity (emotional response)
- better regulation of affect with more flexible psychological and behavioral responses to internal and external stimuli
- 8 weeks (2,5h per week) 4 types of formal practices (body scan awareness, yoga mindful movement, walking and sitting meditation, discussion about application of mindfulness at work) (Goodman MJ i sur., Int J Psyc Med, 2012.), **brief (4h)** (Gilmartin H. i sur., Am J Med, 2017.)
- focusing attention to "here" and "now,,, to ourselves (body, emotions and thoughts, thoughts are mind produced, evoke patterns of behavior, change habits, and make a more conscious decision) and to the world around us (explore the environment - sounds, smell, observe with attention, focus on touches) (Tang YY et al., Soc Cogn Affect Neurosci, 2013, Goyal M et al., JAMA Intern Med 2014)



# Individual interventions for burnout syndrom

- **recognize and change your stressors**
  - change your **view** of the situation (Harolds JA, Clin Nucl Med, 2018., 2019.)
  - change the **pattern** of work (less) and lifestyle (more vacations, adopting healthier lifestyle) (Lloyd C i sur, Ir Vet J, 2017.)
  - find **help**
    - no self - treatment with medicaments (bzo), alkohol, drugs, food
    - colleagues, friends, professional help (stigma, medical records) (Kuhn CM i sur., Can J Anaesth, 2017.)
- **treatment** - fundamental insight and changes in behavior

Adjustment	Strategies	Non adjustment
transforming expectations, seeking information, planning, focusing on positive aspects of the situation	cognitive	self-reliance, denial, neglect
seeking support, openly expressing emotions, learning to make a defeat	behavioral	escape in imagination
fostering good relationships, avoiding impulsiveness, taking action	emotional	avoiding action, binge eating, excessive smoking, medicaments, alkohol, coffee
enough sleep, healthy food, relaxation (meditation, yoga, spa, walk, nature, dance), recreation	physical	insomnia, obesity, self treatment

# Organizational interventions



- significantly **more effective** than individual interventions (Clough i sur., Systematic Reviews, 2017.)
- organizations have major role in causing, preventing and mitigating **burnout** (Panagioti M i sur, JAMA intern Med, 2018., 2017., Andolsek KM, FP Essent, 2018.)
- positive organizational cultures, appropriate business communication
- responsible resource management (people, space, time, finance)
- protocols, reducing administrative burdens, computerization
- improving the meaning of work and work satisfaction (good management for better working conditions and human relationships, continuous professional education, autonomy) (Koreki A i sur, BMC Research Notes, 2015.)
- practicing the leaders (Shanafelt TD i sur., Mayo Clinic Proc, 2015.)
- support groups
  - teamwork and supervision (van Wyk BE i sur., Cochrane Database Syst Rev, 2010.)

# Organizational interventions



- **organizations must invest** in efforts to improve staff (doctor) wellness
  - measurement and monitoring work stress
  - open conversations on issues and potential solutions
  - reducing the stigma related to seeking care
    - work digital mental health interventions (Axisa C i sur, Aust Health Rev, 2019., Carolan S i sur., J Med Internet Res, 2017.)
    - professional coaching (Gazelle G i sur, J Gen Intern Med, 2015.)
- **mind - body workplace stress reduction programs** (Wolever RQ i sur., J Occup Health Psychol, 2012., Joyce S i sur, Psychol Med, 2016.)
  - interventions based on cognitive or behavioural principles
    - stress management/coping, communication, cognitive reappraisal skills
    - mindfulness course (MBSR, MBSP, brief MP) (Pang D i sur., J Occup Health Psychol, 2019., McConville J i sur., Explore, 2017., Heckenberg RA i sur., J Psychosom Res, 2018.)
  - meditation or yoga asanas (Puerto Valencia LM i sur., Occup Med, 2019., Pascoe MC, J Psychiatr Res, 2017., Pascoe MC i sur., Psychoneuroendocrin, 2017.)
  - physical activities (Isoard-Gauthier S i sur., Workplace Health Saf, 2019., Chu AH i sur, Occup Med, 2014., Bhui KS i sur, J Environ Public Health, 2012.)
  - at work (or vouchers for free time)

# Conclusions

Engagement is defined by 3 Factors. How Employees...



„Factors at personal and organisational levels contribute to burnout and somatic/psychiatric morbidity, and so efforts made to counter these problems should target both levels.

## Burnout

- has reached epidemic levels in health care organizations so is system issue, rather than individuals
- is associated with significant costs to doctors, patients and healthcare systems

Interventions based on cognitive or behavioural principles have the greatest evidence base, are moderately effective and can be easily integrated.

Engagement is the positive antithesis of burnout characterized by vigor, dedication and absorption in work.

There is a strong business case for organizations to invest in efforts to reduce burnout and promote engagement.” (Shanafelt TD i sur., Mayo Clinic Proc, 2017., Imo UO, BJ Psych Bull, 2017.)