



 **Health effects of psychosocial strain**

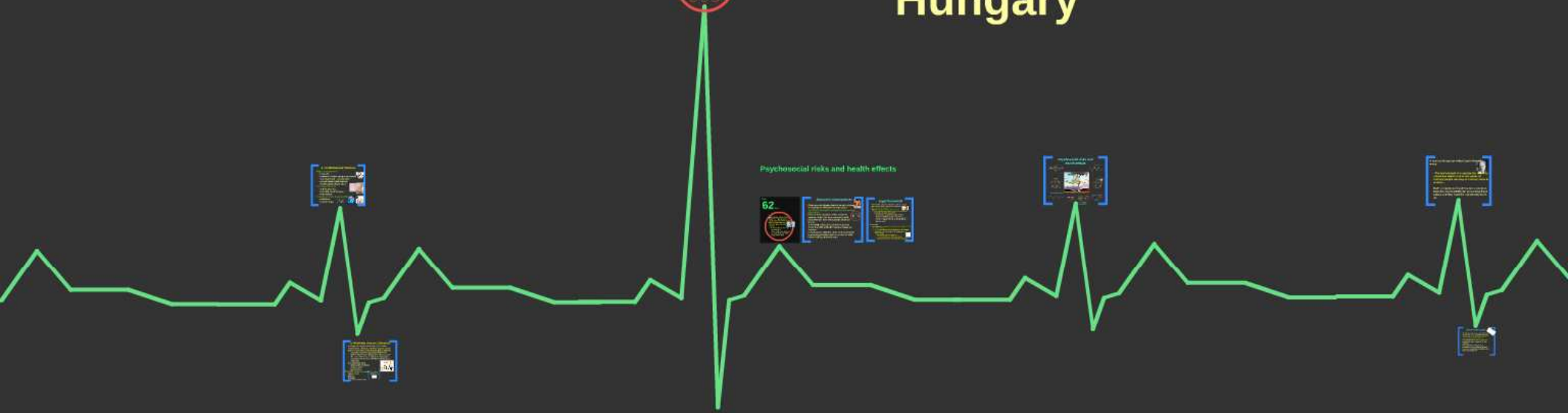
Sara Felszeghi
Hungary





Health effects of psychosocial strain

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Psychosocial risks and health effects

62

Introduction

János Selye (Hans Selye)



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 Hungarian scientist, the father of the theory of stress said:
 "without stress, there would be no life."
 "Stress prepares our body for the approaching danger: making to the principle of „fight or flight“"

By now the significance of stress has been demonstrated by numerous studies

Selye points out:
 "Everyone has it and everyone talks about it, yet still only few take the effort to look into what stress is really all about."

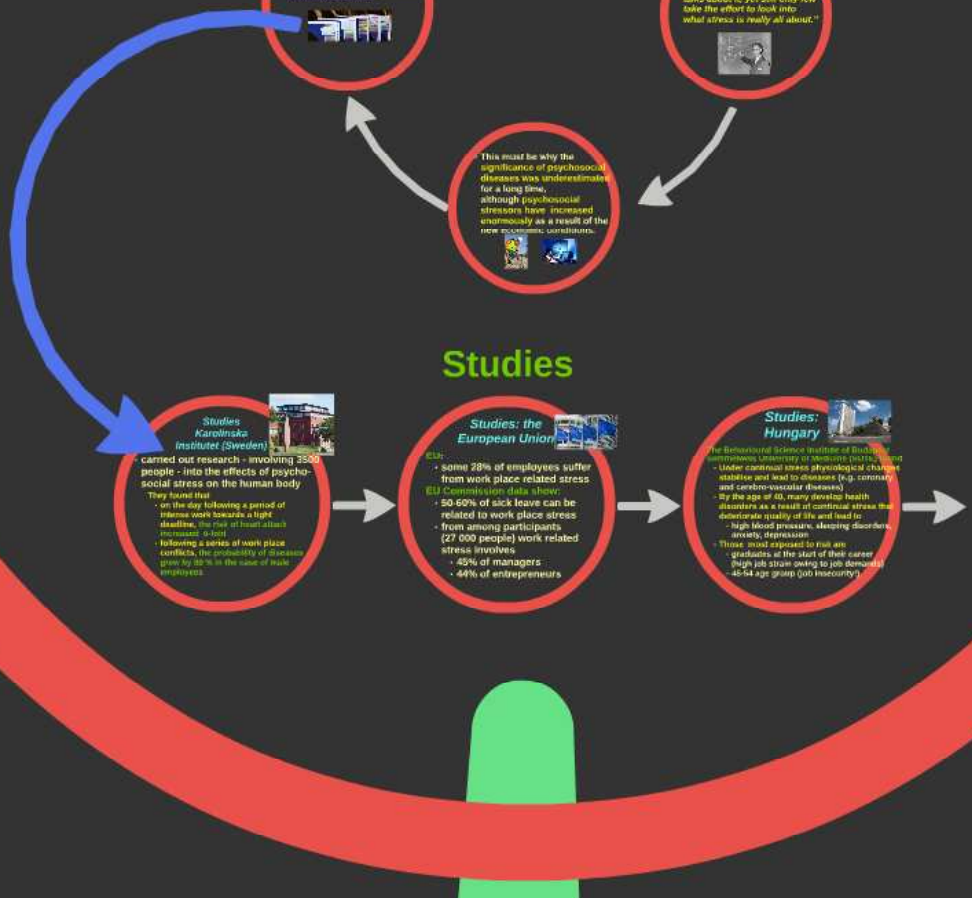
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Studies

Studies: Karolinska Institutet (Sweden)
 carried out research - involving 3500 people - into the effects of psychosocial stress on the human body
 They found that:
 - on the day following a period of intense work towards a tight deadline, the rate of heart attack increased 5-fold
 - following a series of work place conflicts, the probability of disease grew by 26% in the case of male employees

Studies: the European Union
 EU:
 - some 28% of employees suffer from work place related stress
 EU Commission data show:
 - 50-60% of sick leave can be related to work place stress
 - from among participants, (27 000 people) work related stress involves:
 - 49% of managers
 - 44% of entrepreneurs

Studies: Hungary
 The Behavioral Science Institute of Budapest
 Semmelweis University of Medicine (BUDAPEST, HUNGARY)
 - Under continual stress physiological changes stabilize and lead to diseases (e.g. coronary and cerebrovascular diseases)
 - by the age of 40, many develop health disorders as a result of continual stress the deteriorate quality of life will lead to:
 - High blood pressure, sleeping disorders, anxiety, depression
 - Those most exposed to this are graduates at the start of their career
 - High job strain owing to job demands
 - 45-54 age group (job insecurity)



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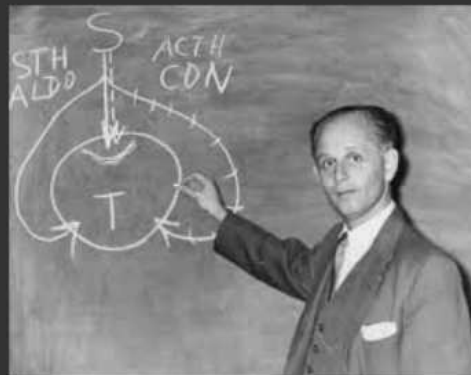


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Psychosocial risks and health effects

ECG

62 bpm

- Work related stress or job strain is a major problem of occupational health in the EU
- Only musculoskeletal diseases pose a greater problem
- In many cases, however, the causes of musculoskeletal diseases are psychosocial risks – more on this later



Economic consequences

- Psychosocial disease factors do not only lead to employees' ill health but also cause *significant damage to companies and national economies.*
- Prior to the expansion of EU, in the 15 member states the loss caused by work related stress was estimated as 20 billion Euros.
- According to ILO, this amount makes up 3% of the GDP of the EU member states on average.
- In Hungary in 2004 the costs of mental health problems (diseases) were in excess of 1000 billion HUF (33 billion Euros)



Legal framework

- The EU level legislative framework related to work place stress can be found in the framework directive No. 89/391/EEC
- The White paper of the EU Commission:
 - "The Second Programme of Community Action in the Field of Health 2008-2013"
 - underlines the economic costs of mental diseases (sicknesses and disorders)
 - makes recommendations for EU measures to preserve and promote the mental health of the workforce



In Hungary

- According to paragraph 1 section 54 of Act XCIII of 1993 on Labour Safety
- "In the interest of occupational safety and health, employers shall observe the following general requirements:
 - a) hazards shall be avoided; ...
 - d) the main factor shall be taken into consideration when setting up the workplace..."



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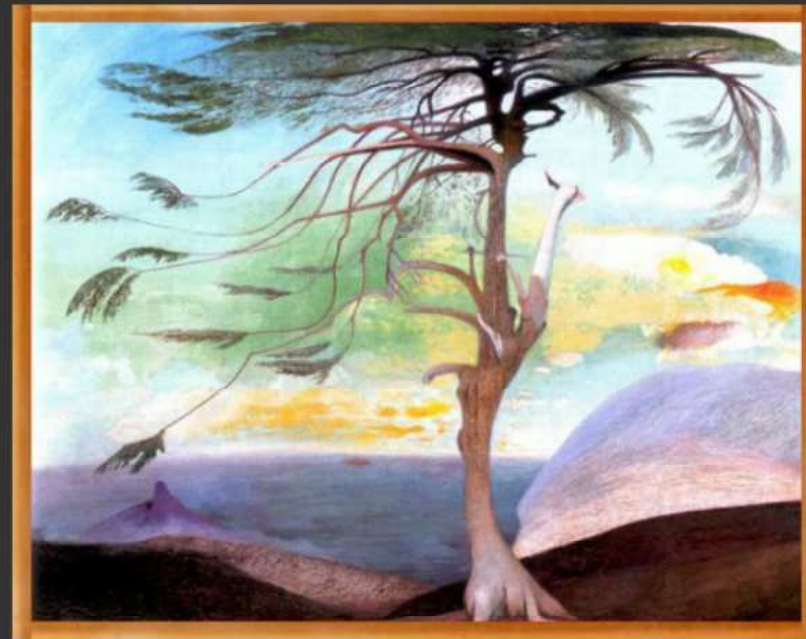


Psychosocial risks and health effects

Work related stress



Decree No. 33/1998 (VI. 24.) of the Minister of Welfare



Csontváry-Kosztka Tivadar THE LONELY CEDAR



Monday morning sickness /syndrome



Recommendation

Prevention of burnout
 - The most effective method of solution is prevention

Consequences of high psychological stress



Work related stress

Psychosocial risks inducing disease



- In the world of work there are numerous psychosocial stressors, consequently there is a variety of responses resulting in ill health
- It is the responsibility of occupational health specialists to diagnose which responses are real occupational diseases and which ones are inevitable diseases
- The diagnosis affects significantly the employee's life

European Commission: work related stress

“Work-related stress can be defined as a pattern of emotional, cognitive, behavioural and physiological reactions to adverse and noxious aspects of work content, work organisation and work environment. It is a state characterised by high levels of arousal and distress and often by feelings of not coping.” (Guidance on work-related stress, EU Commission 2002)

- The employee would like to escape but cannot and therefore they find they cannot cope with job demands.



Occupational diseases



- To this end, the criteria that may increase the psychological stressors of employees must be strictly defined
- EU member states adopt a common principle but also take national characteristics into consideration

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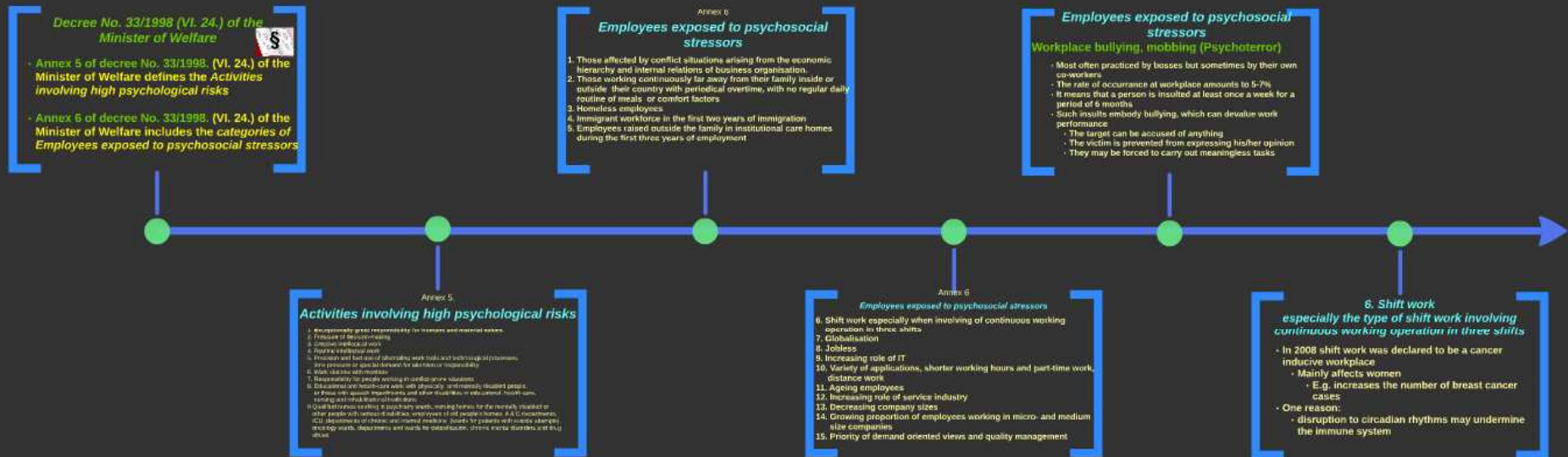
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- ***Annex 5 of decree No. 33/1998. (VI. 24.) of the Minister of Welfare defines the Activities involving high psychological risks***
- ***Annex 6 of decree No. 33/1998. (VI. 24.) of the Minister of Welfare includes the categories of Employees exposed to psychosocial stressors***

Annex 5.

Activities involving high psychological risks

1. **Exceptionally great responsibility for humans and material values**
2. Pressure of decision-making
3. Creative intellectual work
4. Routine intellectual work
5. Precision and fast use of alternating work tools and technological processes, time pressure or special demand for attention or responsibility
6. Work stations with monitors
7. Responsibility for people working in conflict-prone situations
8. Educational and health-care work with physically and mentally disabled people, or those with speech impediments and other disabilities in educational, health-care, nursing and rehabilitational institutions
9. Qualified nurses working in psychiatry wards, nursing homes for the mentally disabled or other people with serious disabilities; employees of old people's homes, A & E departments, ICU, departments of chronic and internal medicine (wards for patients with suicide attempts), oncology wards, departments and wards for detoxification, chronic mental disorders and drug abuse

Annex 6

Employees exposed to psychosocial stressors

1. Those affected by conflict situations arising from the economic hierarchy and internal relations of business organisation.
2. Those working continuously far away from their family inside or outside their country with periodical overtime, with no regular daily routine of meals or comfort factors
3. Homeless employees
4. Immigrant workforce in the first two years of immigration
5. Employees raised outside the family in institutional care homes during the first three years of employment

Annex 6

Employees exposed to psychosocial stressors

- 6. Shift work especially when involving of continuous working operation in three shifts**
- 7. Globalisation**
- 8. Jobless**
- 9. Increasing role of IT**
- 10. Variety of applications, shorter working hours and part-time work, distance work**
- 11. Ageing employees**
- 12. Increasing role of service industry**
- 13. Decreasing company sizes**
- 14. Growing proportion of employees working in micro- and medium size companies**
- 15. Priority of demand oriented views and quality management**

Employees exposed to psychosocial stressors

Workplace bullying, mobbing (Psychoterror)

- **Most often practiced by bosses but sometimes by their own co-workers**
- **The rate of occurrence at workplace amounts to 5-7%**
- **It means that a person is insulted at least once a week for a period of 6 months**
- **Such insults embody bullying, which can devalue work performance**
 - **The target can be accused of anything**
 - **The victim is prevented from expressing his/her opinion**
 - **They may be forced to carry out meaningless tasks**

6. Shift work

especially the type of shift work involving continuous working operation in three shifts

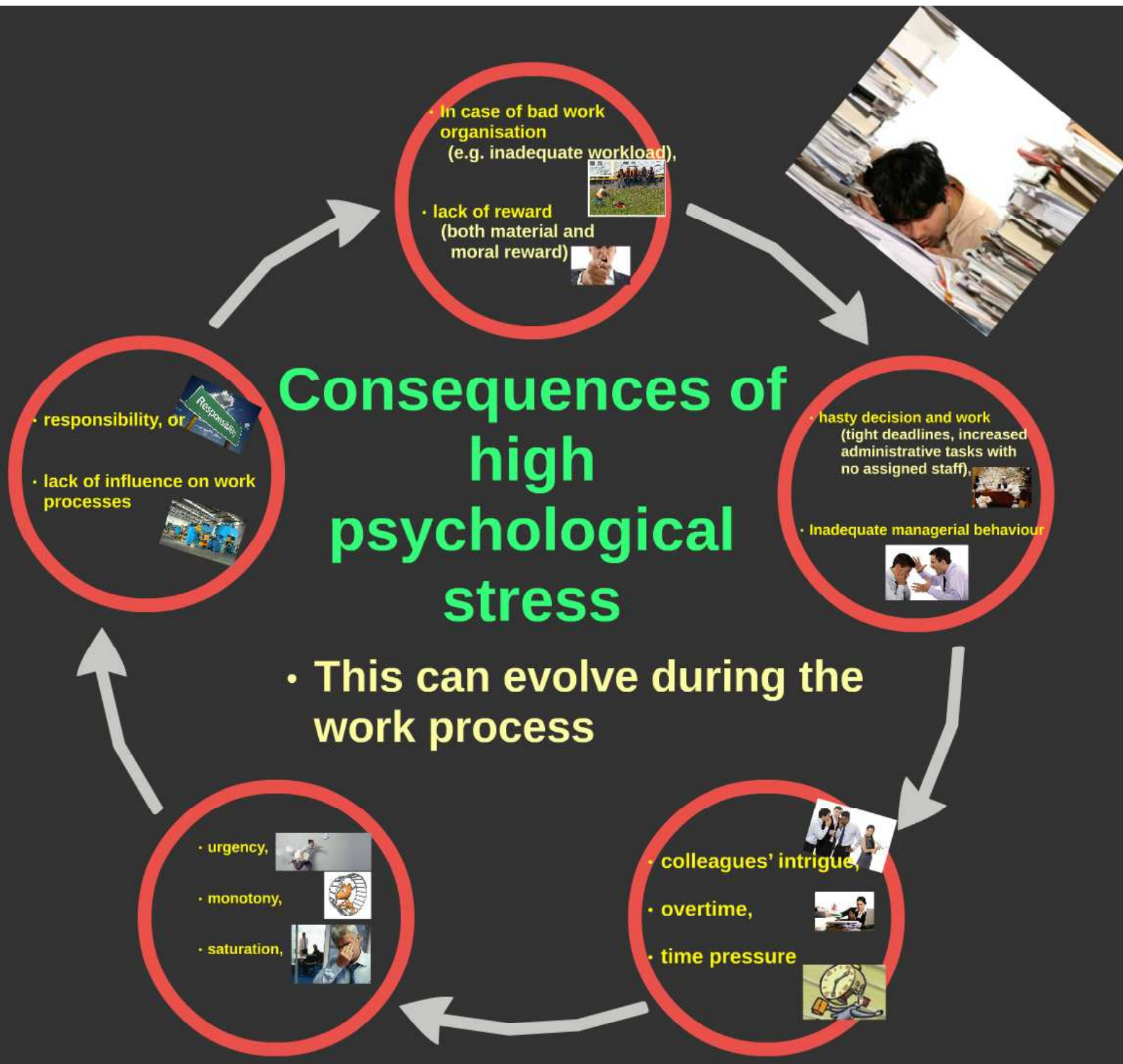
- **In 2008 shift work was declared to be a cancer inducive workplace**
 - **Mainly affects women**
 - **E.g. increases the number of breast cancer cases**
- **One reason:**
 - **disruption to circadian rhythms may undermine the immune system**

Stress can be positive

- This is the case when the individual makes efforts to cope with stressors
- *This makes the physiology of the human body more resistant*
- It is influenced **by stress tolerance abilities**, which is different for each individual
- It is imperative to create such atmosphere in the workplace which increases inventivity, creativity and, in the end, productivity



Consequences of high psychological stress



• This can evolve during the work process

- responsibility, or
- lack of influence on work processes



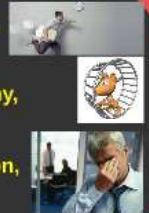
- In case of bad work organisation (e.g. inadequate workload),
- lack of reward (both material and moral reward)



- hasty decision and work (tight deadlines, increased administrative tasks with no assigned staff),
- Inadequate managerial behaviour



- urgency,
- monotony,
- saturation,



- colleagues' intrigue,
- overtime,
- time pressure



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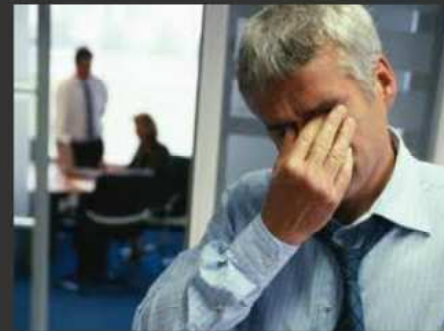
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Cc

Burnout syndrome

„a state of physical, emotional, and mental exhaustion caused by chronic emotional stresses resulting from intense, emotionally demanding involvement with people over long period of time“
(Pines & Kafry 1981, 139)

- e.g. nurses, doctors, social workers, teachers and pedagogical professionals, customer service assistants, etc..



Psychosomatic reactions

They are characterised by:

- deepening fatigue, disinterest, apathy
- the individual loses completely motivation
- overwhelming sense of frustration and hopelessness
- depression and various psychosomatic diseases may appear
- In the state of total burnout the individual may become unfit for work and may turn self-destructive
- both physical and psychological dangers exist



Consequences of high psychological stress

1. Nervous system diseases

Burnout evolves through a development cycle.

The phases can be differentiated easily:

- The phase of hopes
- The phase of love of work
- The phase of frustration
- The phase of apathy
- Psychosomatic reactions



The phase of apathy

Characteristic of this phase of burnout:

- recoiling of professional and public activity
- belligerence
- feeling senseless end exhausted his profession
- the person protecting himself against real or imaginary fiasco
- their initiative decrease
- their self-esteem troubles come into sight

The phase of hopes (period of idealisation)



Characteristic of this phase of burnout:

- The feeling of "I have no time for anything"
- overexcitement,
- increased energetic responses,
- lively relationship with colleagues
- intricate confusion of private life and working life,
- confusing private and working life roles,
- expecting immediate results from own work
- any failure in work is experienced as failure of their own personality
- compulsion of proving themselves

There are two ways out of this state:



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BURN OUT

- **Early recognition is important, it is the key to recovery**

- **Burnout is easily reversible in the first two phases, later it's very difficult**





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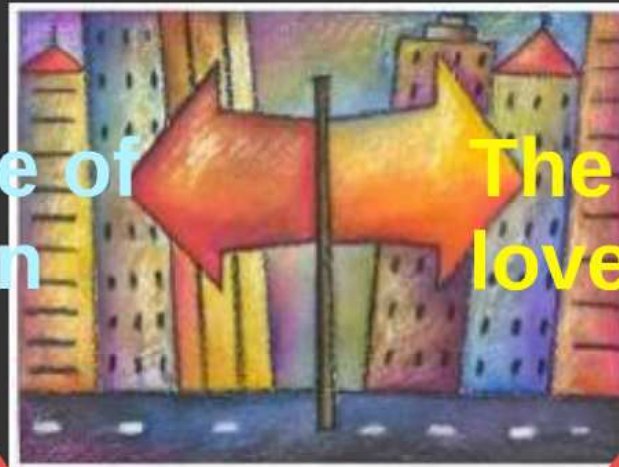
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The phase of frustration

The phase of love of work



The phase of frustration

This evolves when the individual :

- is unable to create a natural harmonious rhythm of work and private life
- feels "no control over his/her life"
- pursues performance which leads to fatigue, and frequent mistakes and errors
- private life is pushed into the background

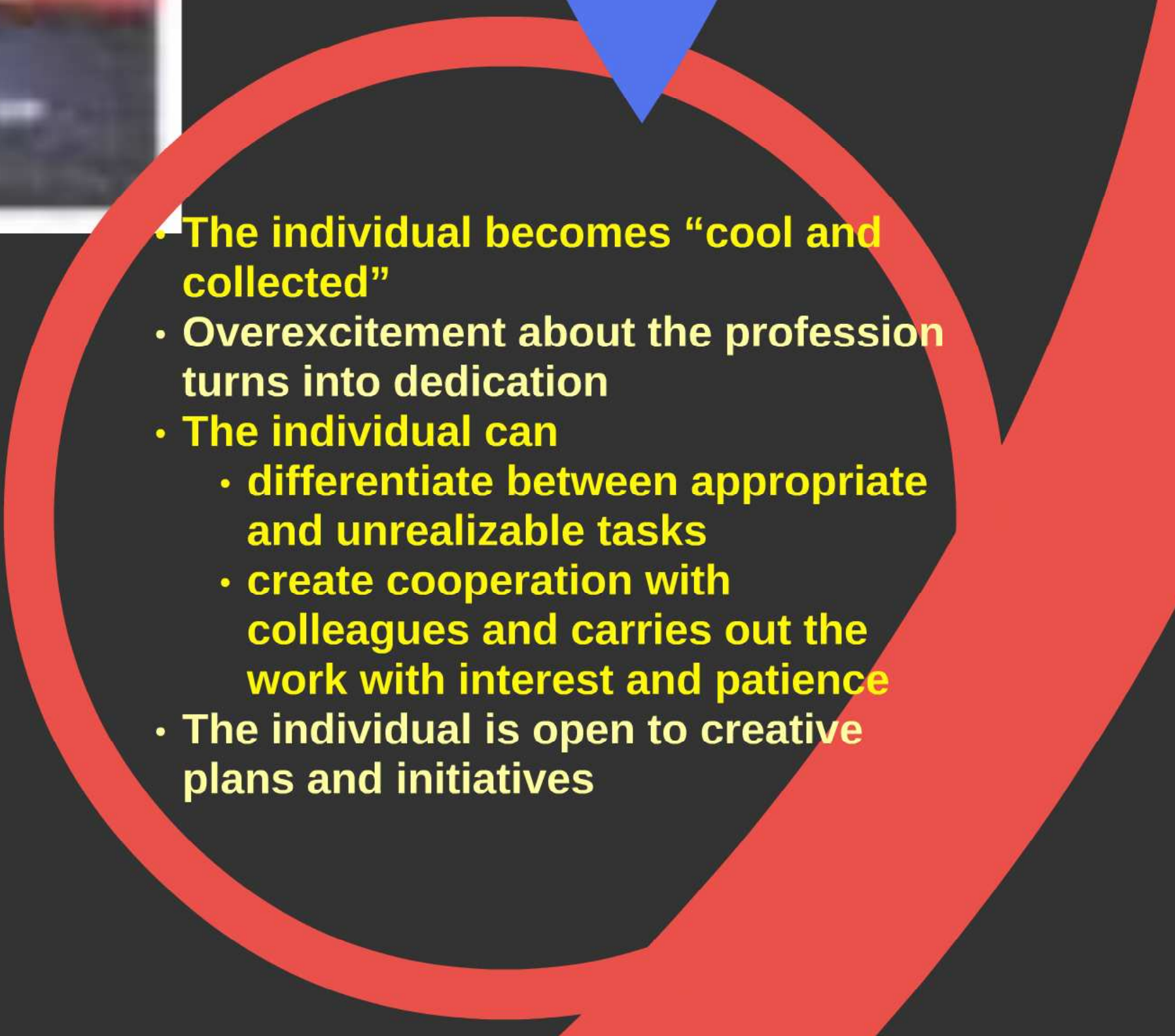
Main characteristics:

- The signs of physical exhaustion appear but the individual tries to hide these from their environment
- The response is often excessive performance (excessive sports activity, too much sleep)
- The individual's self-expectations diminish, which leads to decreasing
 - performance
 - dedication
 - and openness.
- The individual's self-esteem diminishes and simultaneously their sense of guilt increases.



The individual becomes "cool and collected"

- Overexcitement about the profession turns into dedication
- The individual can
 - differentiate between appropriate and unrealizable tasks
 - create cooperation with colleagues and carries out the work with interest and patience
- The individual is open to creative plans and initiatives

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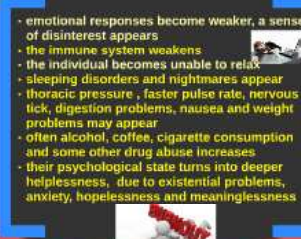
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- emotional responses become weaker, a sense of disinterest appears
- **the immune system weakens**
- the individual becomes unable to relax
- **sleeping disorders and nightmares appear**
- **thoracic pressure , faster pulse rate, nervous tick, digestion problems, nausea and weight problems may appear**
- **often alcohol, coffee, cigarette consumption and some other drug abuse increases**
- **their psychological state turns into deeper helplessness, due to existential problems, anxiety, hopelessness and meaninglessness**

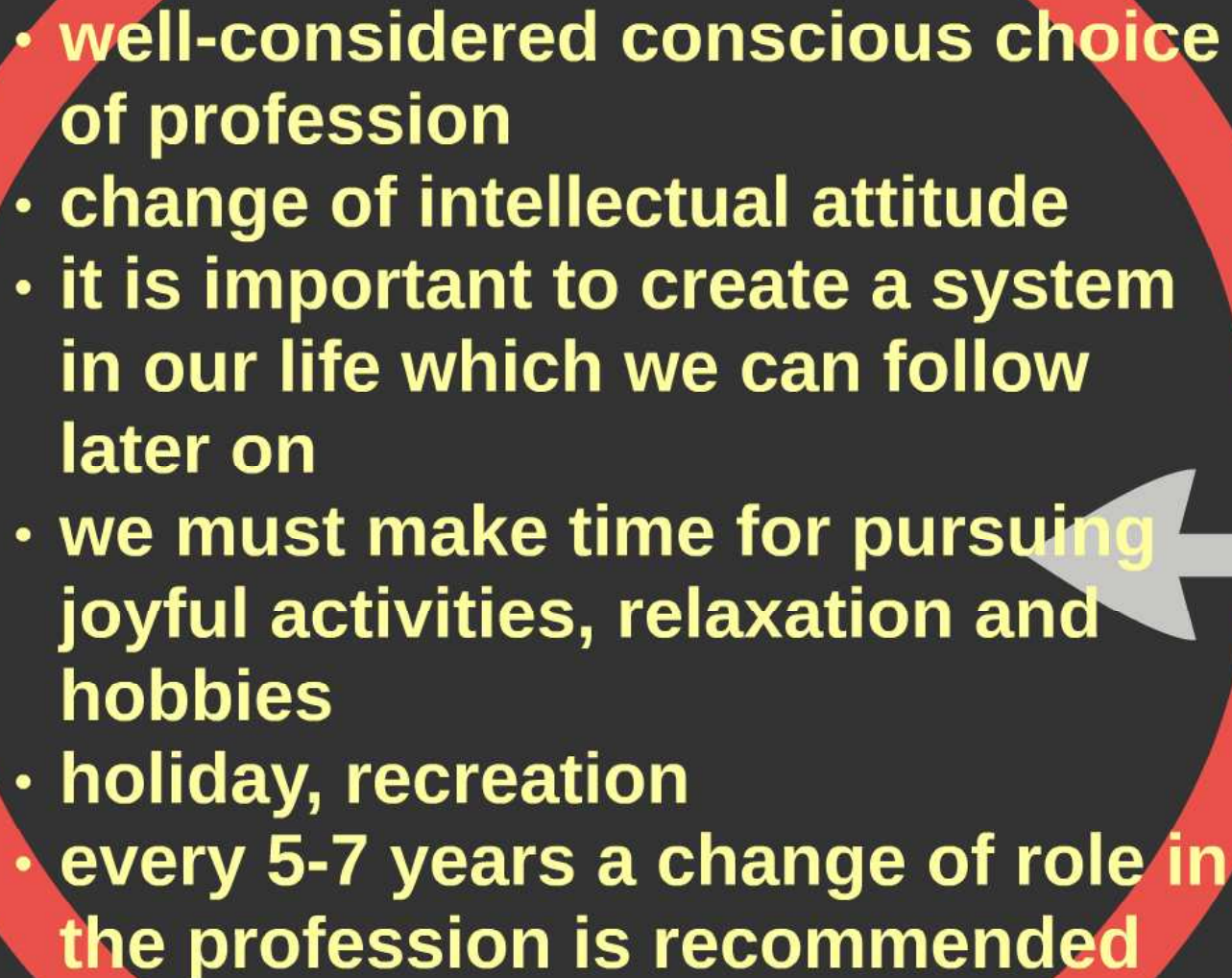


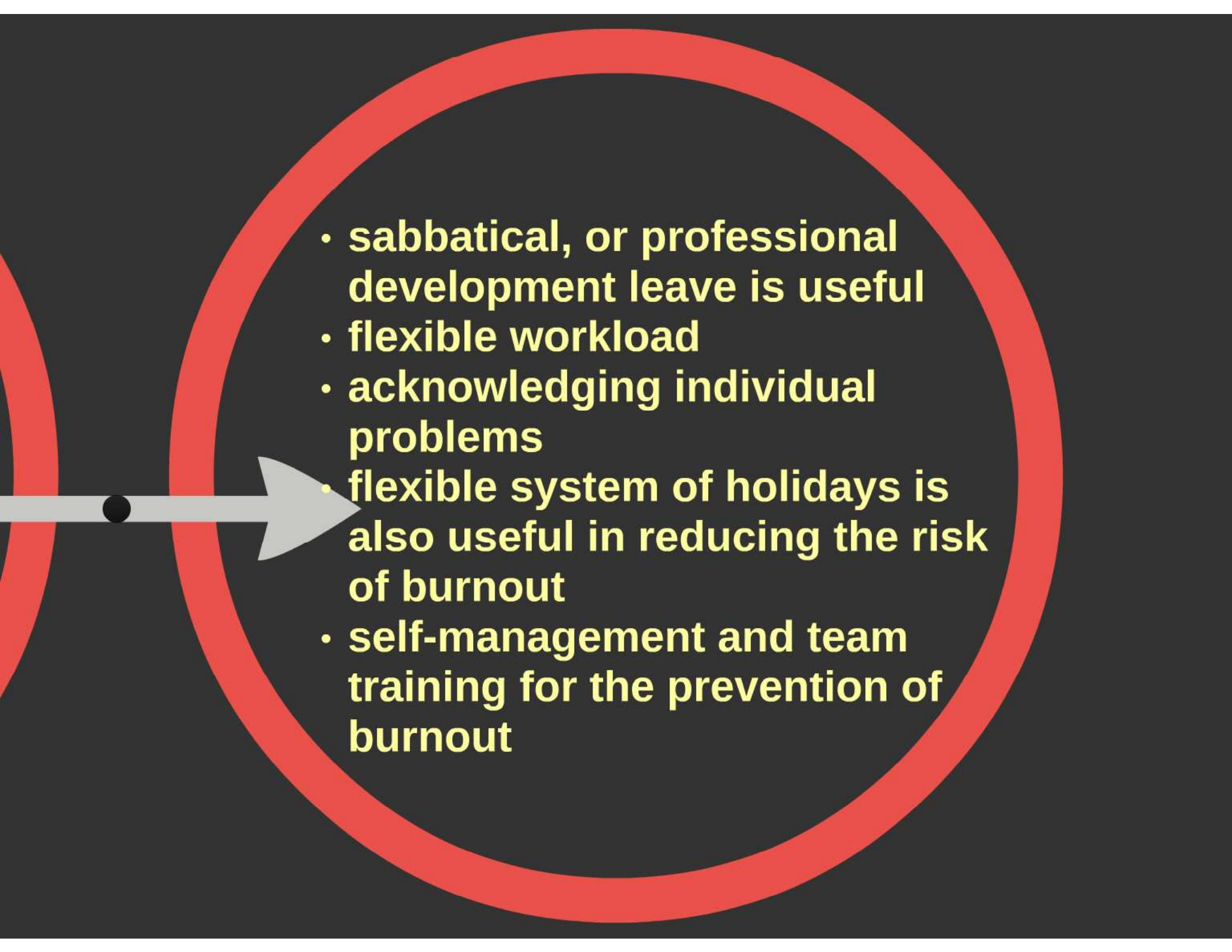
- well-considered conscious choice of profession
- change of intellectual attitude
- it is important to create a system in our life which we can follow later on
- we must make time for pursuing joyful activities, relaxation and hobbies
- holiday, recreation
- every 5-7 years a change of role in the profession is recommended

- sabbatical, or professional development leave is useful
- flexible workload
- acknowledging individual problems
- flexible system of holidays is also useful in reducing the risk of burnout
- self-management and team training for the prevention of burnout

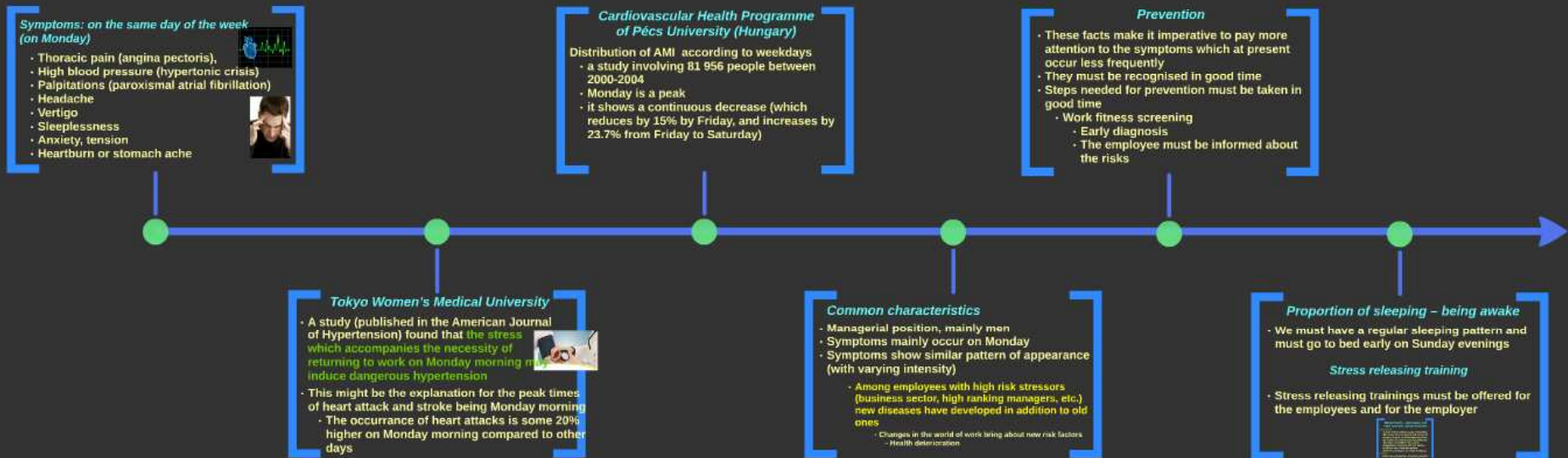
Prevention of burnout

- *The most effective method of solution is prevention*

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Monday morning sickness / syndrome



***Symptoms: on the same day of the week
(on Monday)***

- Thoracic pain (angina pectoris),
- High blood pressure (hypertonic crisis)
- Palpitations (paroxysmal atrial fibrillation)
- Headache
- Vertigo
- Sleeplessness
- Anxiety, tension
- Heartburn or stomach ache



Tokyo Women's Medical University

- A study (published in the American Journal of Hypertension) found that **the stress which accompanies the necessity of returning to work on Monday morning may induce dangerous hypertension**
- This might be the explanation for the peak times of heart attack and stroke being Monday morning
 - The occurrence of heart attacks is some 20% higher on Monday morning compared to other days



Cardiovascular Health Programme of Pécs University (Hungary)

Distribution of AMI according to weekdays

- a study involving 81 956 people between 2000-2004
- Monday is a peak
- it shows a continuous decrease (which reduces by 15% by Friday, and increases by 23.7% from Friday to Saturday)

Common characteristics

- **Managerial position, mainly men**
- **Symptoms mainly occur on Monday**
- **Symptoms show similar pattern of appearance (with varying intensity)**
 - **Among employees with high risk stressors (business sector, high ranking managers, etc.) new diseases have developed in addition to old ones**
 - **Changes in the world of work bring about new risk factors**
 - **Health deterioration**

Prevention

- **These facts make it imperative to pay more attention to the symptoms which at present occur less frequently**
- **They must be recognised in good time**
- **Steps needed for prevention must be taken in good time**
 - **Work fitness screening**
 - **Early diagnosis**
 - **The employee must be informed about the risks**

Proportion of sleeping – being awake

- We must have a regular sleeping pattern and must go to bed early on Sunday evenings

Stress releasing training

- Stress releasing trainings must be offered for the employees and for the employer

Mental health – depression and other common mental disorders

Depression

- is one of the leading causes of disability
- Job insecurity, low control and low social support at work, weekend working hours, job-related life events and dissatisfaction with work and with the boss were independent mental health risk factors, but there were important gender differences.[Kopp et al. (2008) Hungary]

Anxiety

- Insecurity, compulsion of proving oneself, sense of futility, lack of self-confidence

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Depression

- is one of the leading causes of disability
- Job insecurity, low control and low social support at work, weekend working hours, job-related life events and dissatisfaction with work and with the boss were independent mental health risk factors, but there were important gender differences.[Kopp et al. (2008) Hungary]

Anxiety

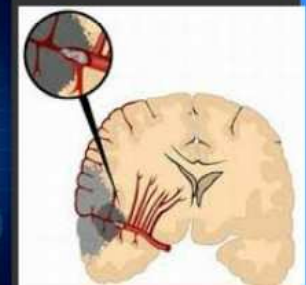
- Insecurity, compulsion of proving oneself, sense of futility, lack of self-confidence

2. Cardiovascular diseases

- **High blood pressure**
 - frequent,
 - because of silent symptoms mostly late diagnosed - usually with complications (retinopathy, nephropathy, stroke etc.)
- **Coronary diseases**
 - angina pectoris
 - ischemic heart disease,
 - heart attack
- **Vasculo-cerebral diseases (Stroke)**
 - embolism
 - haemorrhage



- can be accelerated by stress releasing agents, such as
- smoking
- alcohol abuse, together with
- inadequate diet
- sedentary work and
- obesity



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- **smoking**



- **alcohol abuse, together with**



- **inadequate diet**



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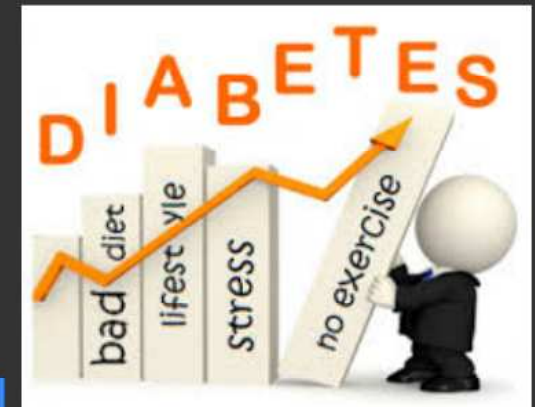


- **obesity**



3. Metabolic diseases (diabetes)

- A Hungarian saying: when someone is under mental strain, they say „*my blood sugar is rising*”
- **Stress is one cause of developing type 2 diabetes**
 - excessive overtime associated with 4-fold higher risk of type 2 diabetes in Japanese men
 - The rate of diabetes is higher among people suffering from burnout (Tel-Aviv University of Medicine)
- It is accompanied by
 - inadequate nutrition,
 - alcohol abuse
 - sedentarism



Metabolic syndrome

- hypertension
- obesity
- diabetes
- high cholesterol level

• Metabolic syndrome (MetS) is considered to be caused primarily by visceral fat accumulation and has been linked to increased risk of cardiovascular disease (Saito et al., 2009)



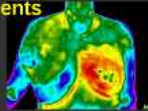
- **Metabolic syndrome (MetS) is considered to be caused primarily by visceral fat accumulation and has been linked to increased risk of cardiovascular disease (Saito et al., 2009)**



Consequences of high psychological stress

4. Tumours diseases

- Stress (long lasting stress) is one of the major causes of developing tumors, as long lasting stress affects the immunsystem, responsible for distroyng tumor cells.
- In tumor diseases long lastig stress increases metastasize
 - affecting more the introverted patients
- In addition to:
 - inadequate diet
 - smoking
 - alcohol abuse
 - weight problems, obesity



6. Diseases of the digestive system

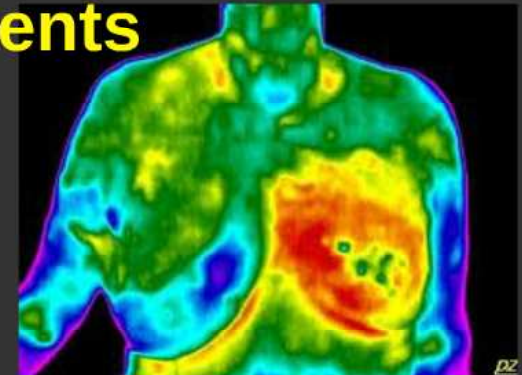
- The more the tension increases, the more stomach disorders , excessive gastric acidity and gastric ulcer symptoms appear
- In addition to distress,
 - inadequate diet
 - irregular eating habits
 - lack of quality food
 - often accompanied by
 - smoking
 - alcohol abuse resulting in
 - reflux esophagitis
 - stomach and colon ulcer
 - colitis,
 - haepatopathy (cirrhosis, tumor) etc.

5. Musculoskeletal diseases

- Besides ergonomic risks strain-effect caused by distress also lead to musculoskeletal diseases
- Mainly affect the muscles and tendons
- Consequence of stress followed by straining the
 - neck
 - shoulders
 - arms
 - back
 - eye moving muscles (diploplia)

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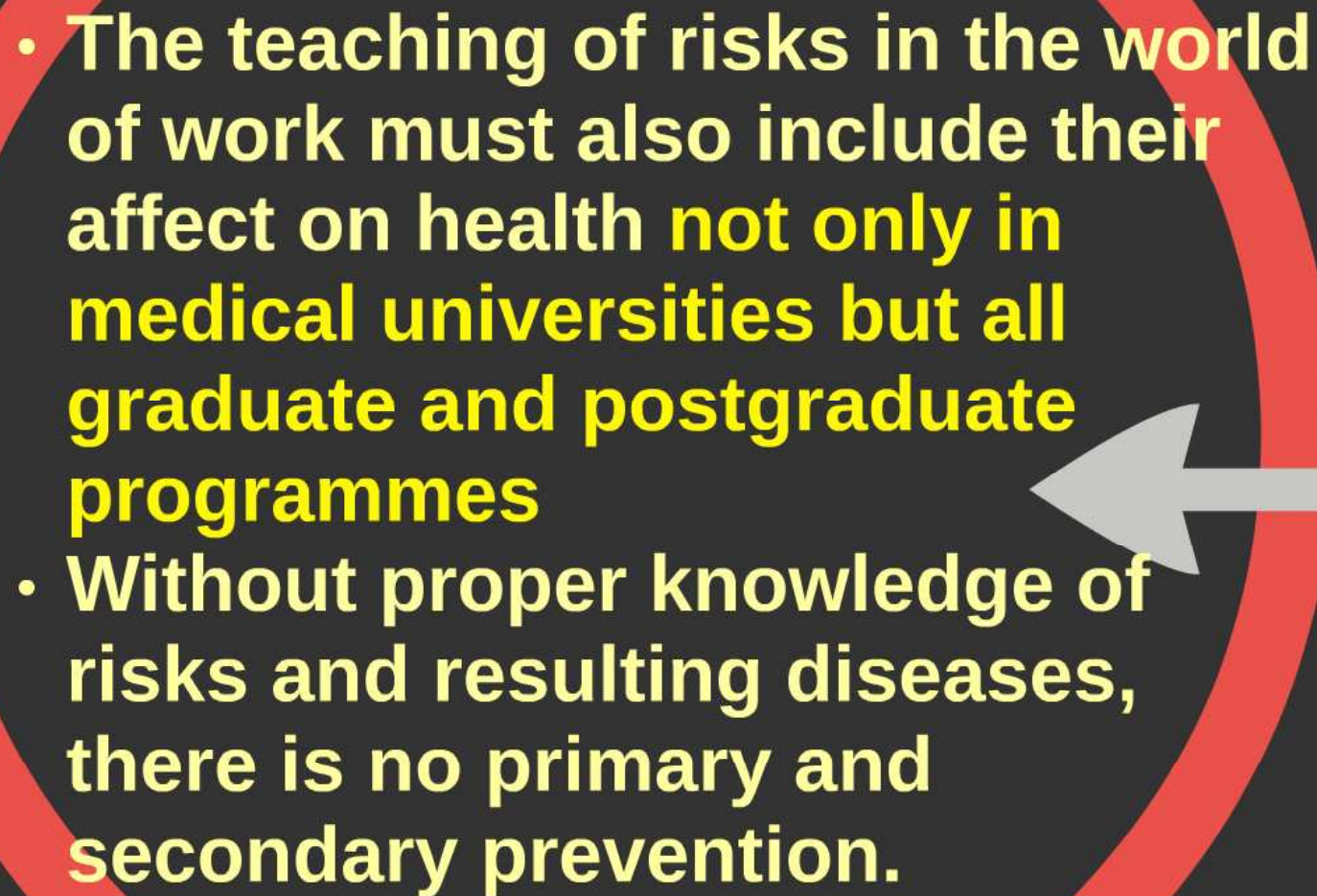
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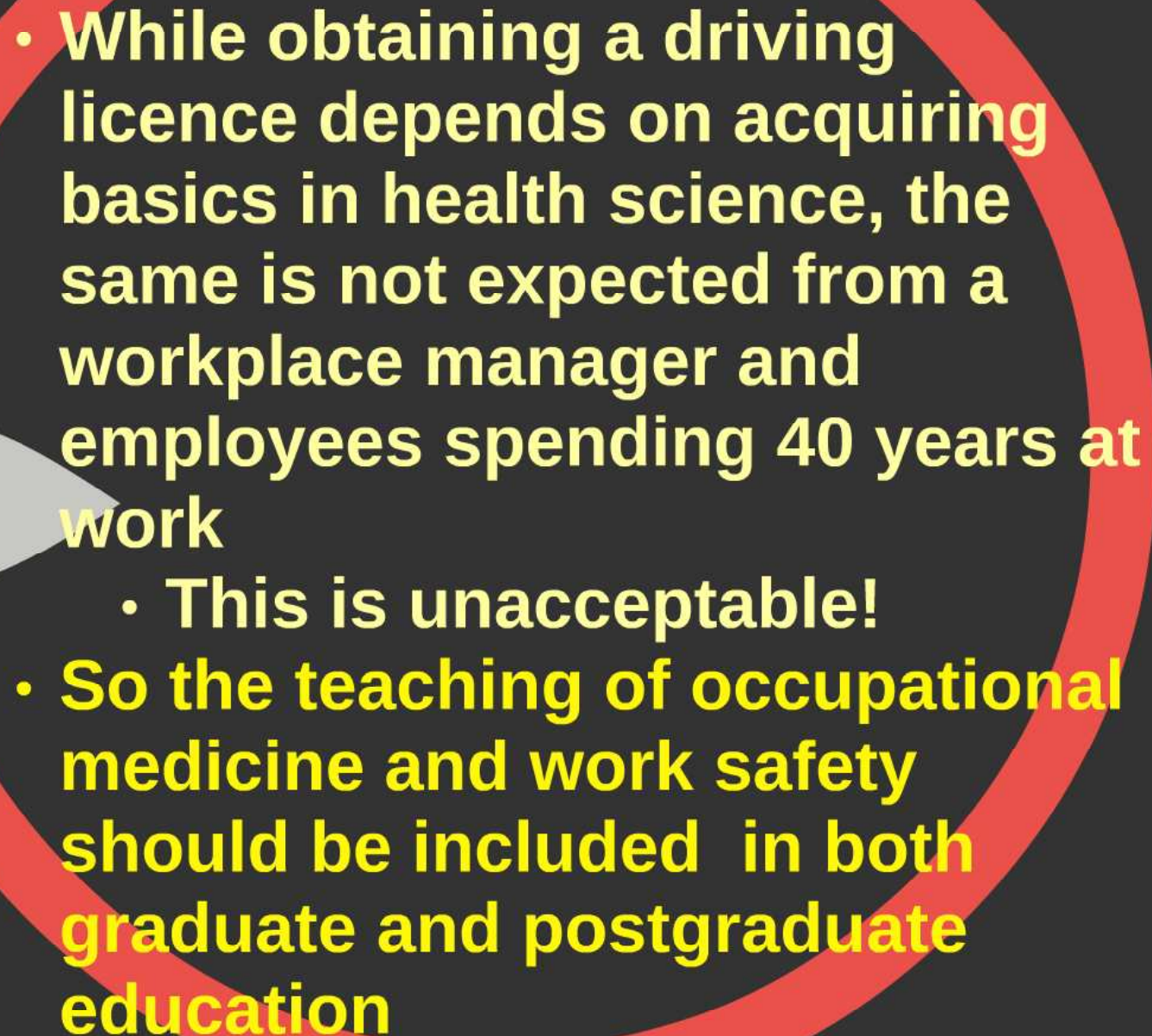
- The teaching of risks in the world of work must also include their affect on health **not only in medical universities but all graduate and postgraduate programmes**
- Without proper knowledge of risks and resulting diseases, there is no primary and secondary prevention.

- While obtaining a driving licence depends on acquiring basics in health science, the same is not expected from a workplace manager and employees spending 40 years at work
 - This is unacceptable!
- **So the teaching of occupational medicine and work safety should be included in both graduate and postgraduate education**

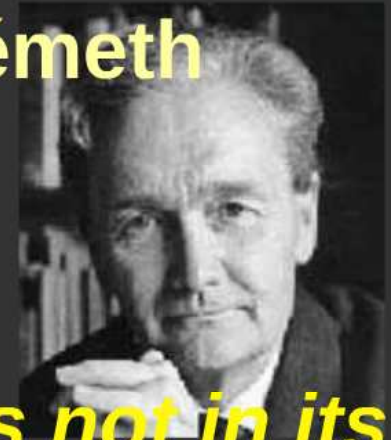
Recommendation

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A famous Hungarian writer László Németh wrote:



- *..The real strength of a society lies not in its rocket-like talents, but in the values of ordinary people working at ordinary tasks in society....,,*
- Both occupational medicine and education have the responsibility for preserving these values and they have the opportunity to do so.

Thank you for your kind attention!



Health effects of psychosocial strain

Sara Felszeghi
Hungary

