

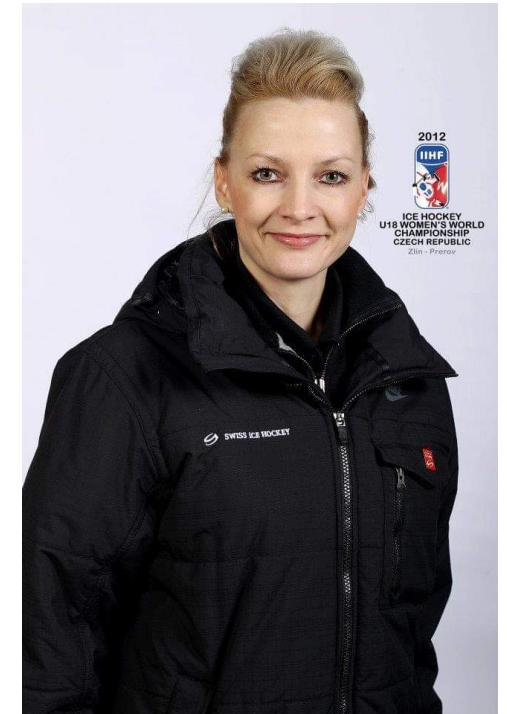
# INTERNATIONAL HEALTHCARE PERSPECTIVES

COMPARING SWEDEN, SWITZERLAND AND THE NETHERLANDS



# DR. ANNA ERAT MD/PHD - SHORT BIO

- Medical studies and internships at University of Zurich Medical School and Harvard Medical School, followed by post-doctoral biomedical research at Harvard Medical School.
- PhD in epidemiology and health systems management from University of Basel (Swiss Tropical And Public Health Institute) and executive management & corporate governance studies at Harvard Business School and INSEAD.
- Clinical specialization in preventive, sports and internal medicine.
- Currently medical director in the Longevity Center, national team doctor for Swiss Ice Hockey Federation, and Chief Medical Officer Central Europe for Hints Performance (Formula 1 coaching).
- Reviewer & peer for iQM and lecturer at the University of Zurich Medical School as well as various business schools.



# GENERAL HEALTH MECHANISM PROMOTING STRESS RESILIENCE AND REPAIR

- Stem cells
- Mitochondrial function
- Telomere stability
- DNA protection and repair
- Epigenetics: WHAT YOU CAN DO TO IMPROVE YOUR HEALTH!

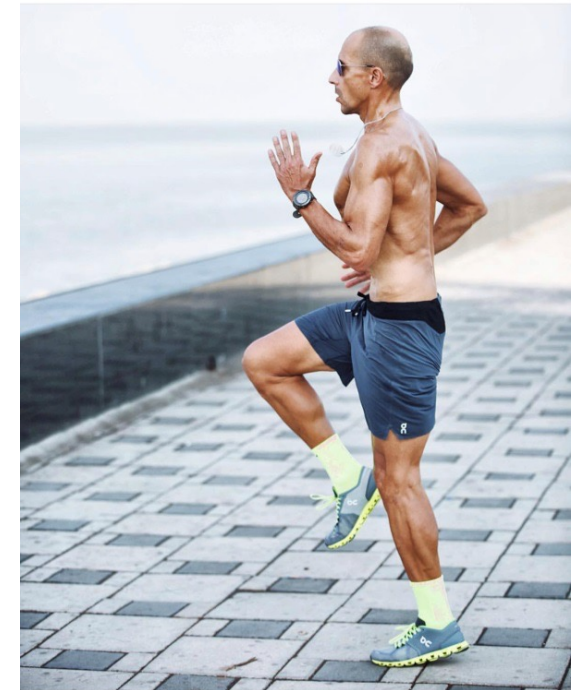


# HEALTH, RESILIENCE AND HIGH-PERFORMANCE

As opposed to the past, where the focus lay on curing disease and injury, today there is a global tendency to focus on improving health and preventing disease or further complications of illness.

Nutrition and sports are crucial for wellbeing, as insufficient physical activity is a key risk factor for non-communicable diseases such as depression, cardiovascular diseases, cancer and diabetes. In fact, inactivity increases the risk of early death by 20% - 30%.

In an organization, optimal employee health, leads to reduced absenteeism and presenteeism, higher engagement, and better retention, which all drive superior performance.



# PREVENTIVE MEDICINE?

- Primary prevention:
  - People are increasingly paying attention to improving their physical and mental well-being as well as performance, and they use check-ups to track their progress.
  - The aim of a check-up, however, is not only the prevention of disease, but also early diagnosis and treatment of a health condition such as cancer.
- Secondary prevention:
  - Many patients with chronic conditions such as arterial hypertension, dyslipidemia and cancer survivors seek regular check-ups to avoid disease progression - or complications - as part of secondary prevention.

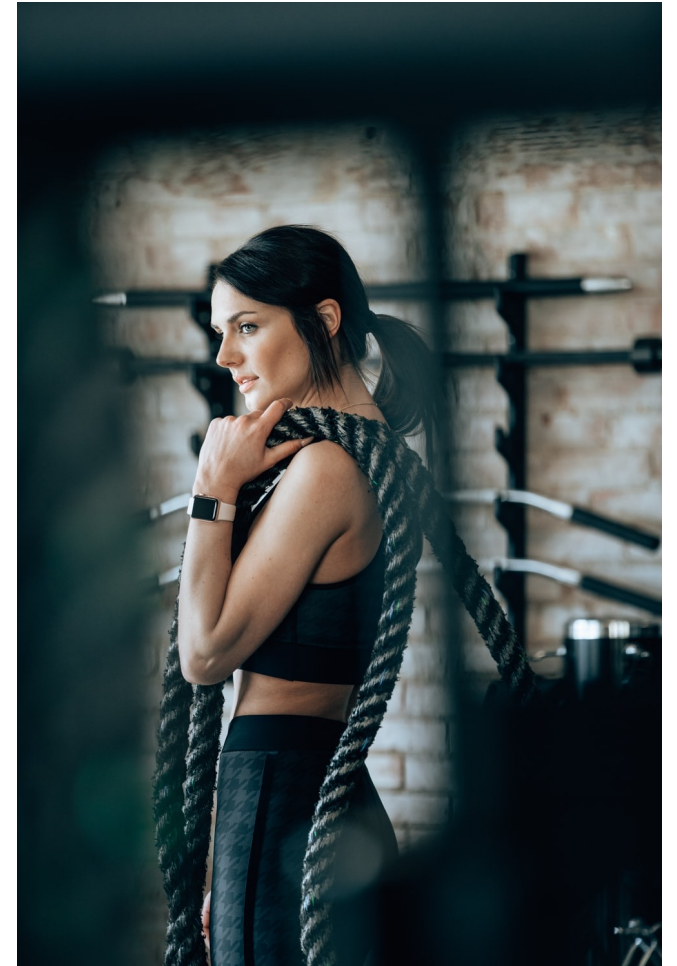


# THE IMPORTANCE OF SCREENING!

Taking patient history and further anamnesis - as well as empathetic communication - are crucial in the successful physician-patient interaction. It is well known that the correct diagnosis and consequent treatment, are largely based on a skillful medical interview or anamnesis.

Studies show that over 80 % of the diagnoses at a GP's office are based on the medical history.

But not only disease should be screened for. It is similarly important to screen for inactivity as two decades of a **sedentary lifestyle** is associated with a two times risk of premature death compared to being physically active (according to results from the HUNT study presented at ESC Congress in 2019).



# WHY IS EARLY DETECTION A KEY?

- Between 30–50% of **cancers can currently be prevented** by avoiding risk factors such as:
  - tobacco use including cigarettes and smokeless tobacco
  - being overweight or obese
  - unhealthy diet with low fruit and vegetable intake
  - lack of physical activity
  - alcohol use
  - sexually transmitted HPV-infection
  - infection by hepatitis or other carcinogenic infections
  - ionizing and ultraviolet radiation
  - urban air pollution
  - indoor smoke from household use of solid fuels (Source: WHO 2020).
- **Death due to cancers can be reduced when the pathological tumors are detected and treated early.**

# GENDER MEDICINE

- There is undeniably plenty of scientific evidence that sex and gender differences play a major role when it comes to resilience, mental health, disease risks and symptoms, injury patterns and frequency, and also in regards to response to treatments.
- Hence, while promoting gender equality, gender differences should be researched and considered while developing training and diet plans, and in promoting mental health and in the prevention and treatment of disease and injury.



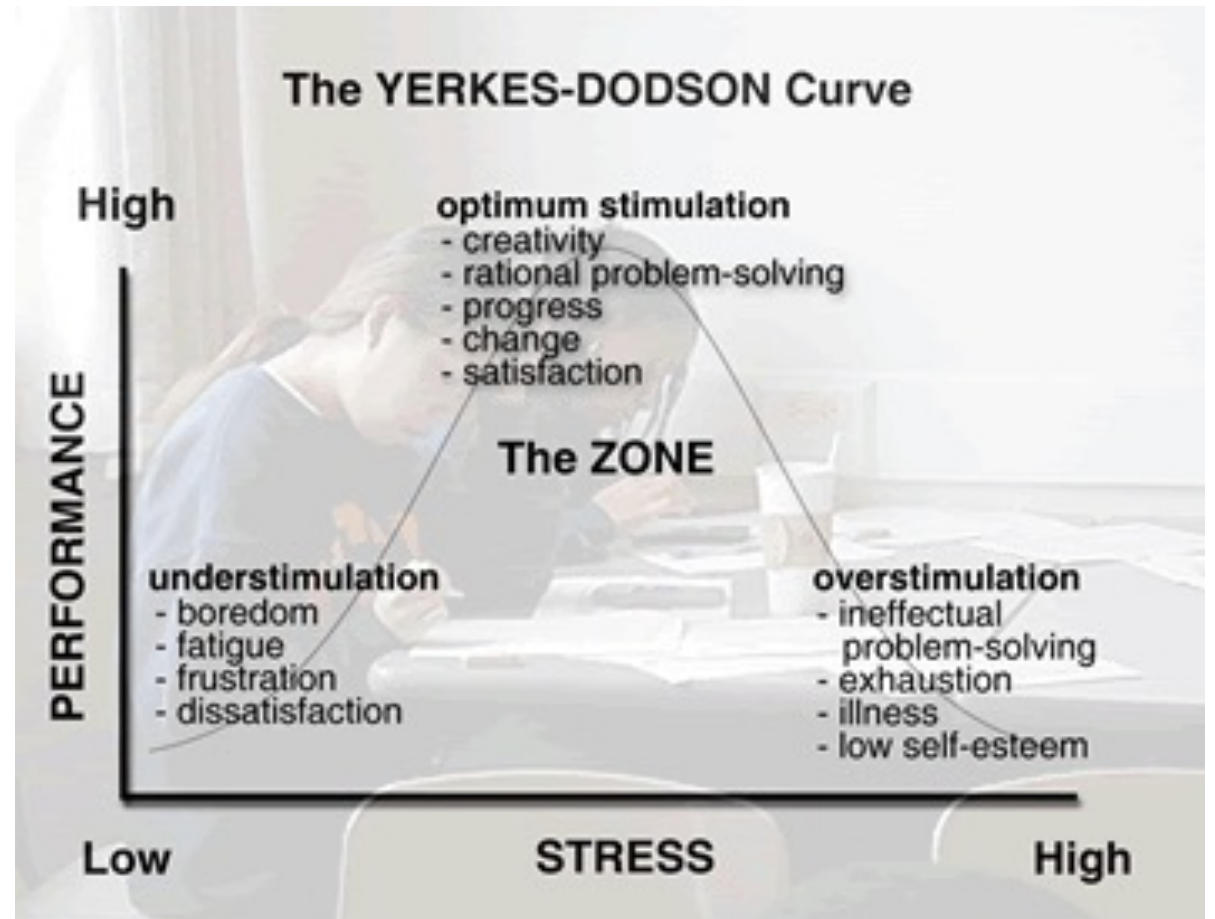


# EUSTRESS VERSUS DISTRESS

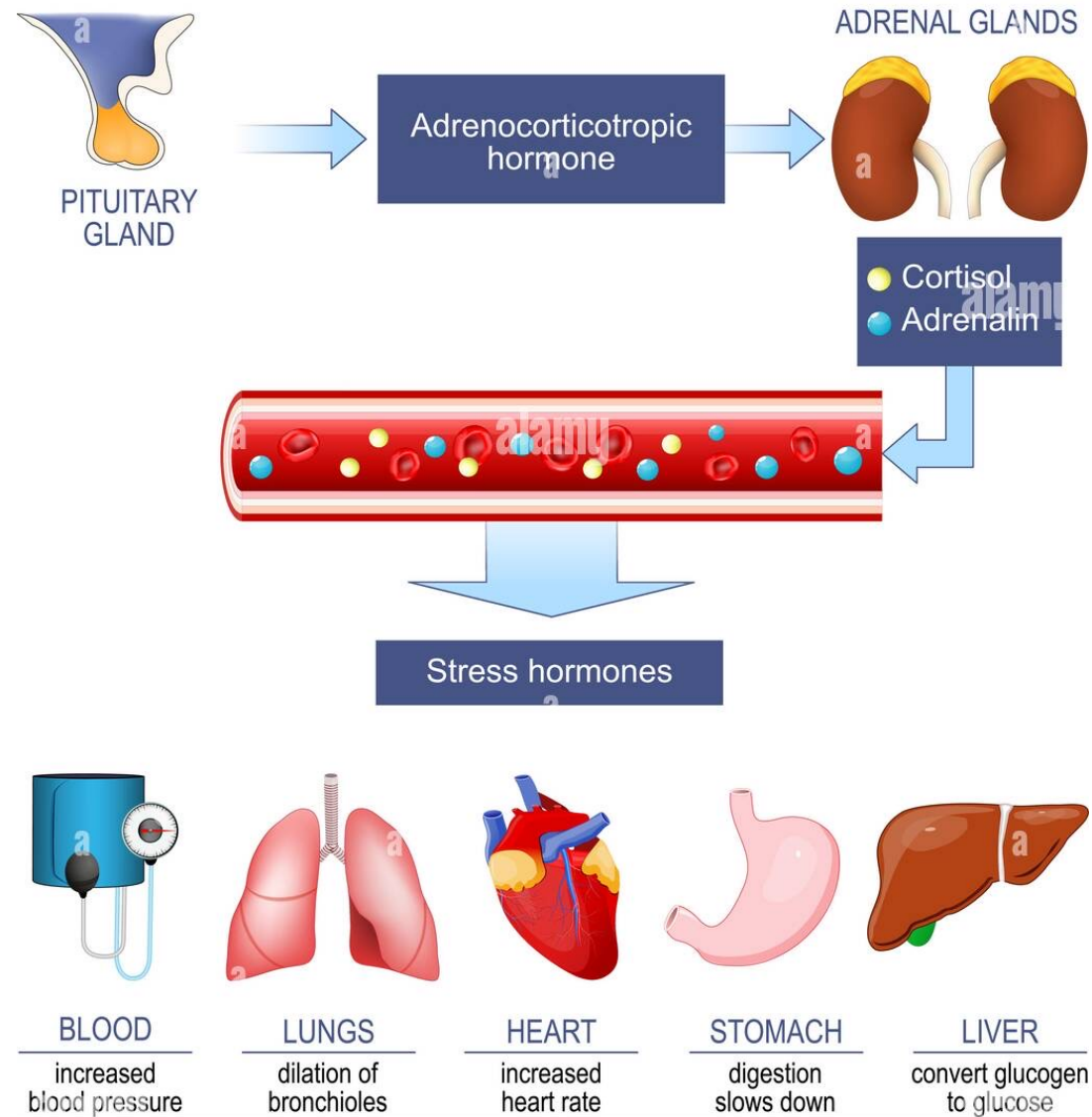
Transient stress is crucial for performance and survival.

When the level of stress becomes too high, performance decreases (HBR 2016).

When stress isn't transient but constant, it has a detrimental effect on health.



# FIGHT OR FLIGHT MODE



# EFFECT OF CHRONIC STRESS ON THE BODY



## SKIN:

Changes in Skin Texture, Loss of Skin Tone, Loss of Moisture, Thinner & More Delicate Skin



## IMMUNE SYSTEM:

Decreased Immunity



## HORMONES:

Hormonal Imbalances, Increased Cortisol



## BONES:

Decreased Calcium Absorption, Weakened Bones



## BRAIN:

Fatigue, Reduced Concentration, Decreased Mood



## HEART:

Increased Heart Rate, Elevated Blood Pressure



## GUT:

Decreased Nutrient Absorption, Alterations in Gut Motility, Changes in Microbiome, Leaky Gut



## MUSCLE:

Muscle Protein Breakdown



**76%** OF EMPLOYEES  
EXPERIENCE FEELINGS  
OF BURNOUT AT LEAST  
SOMETIMES

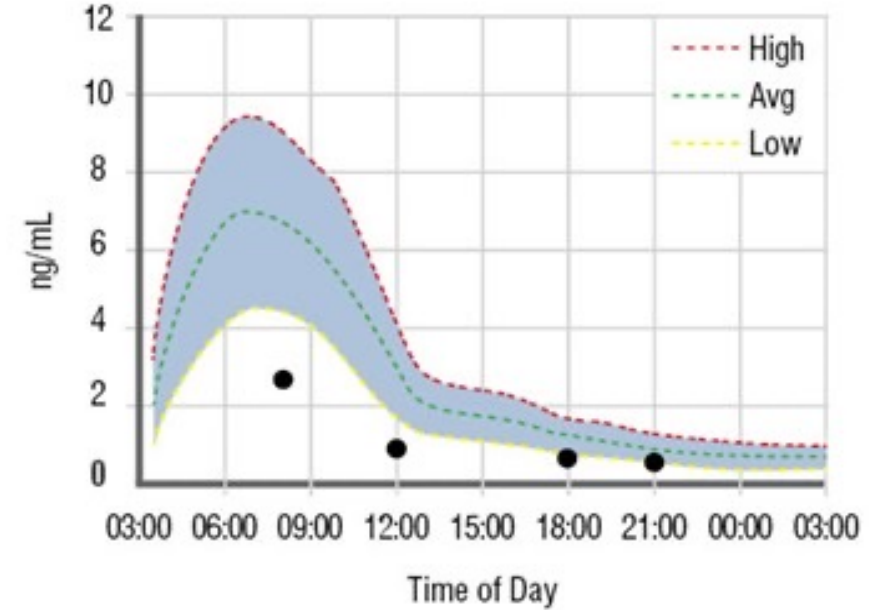
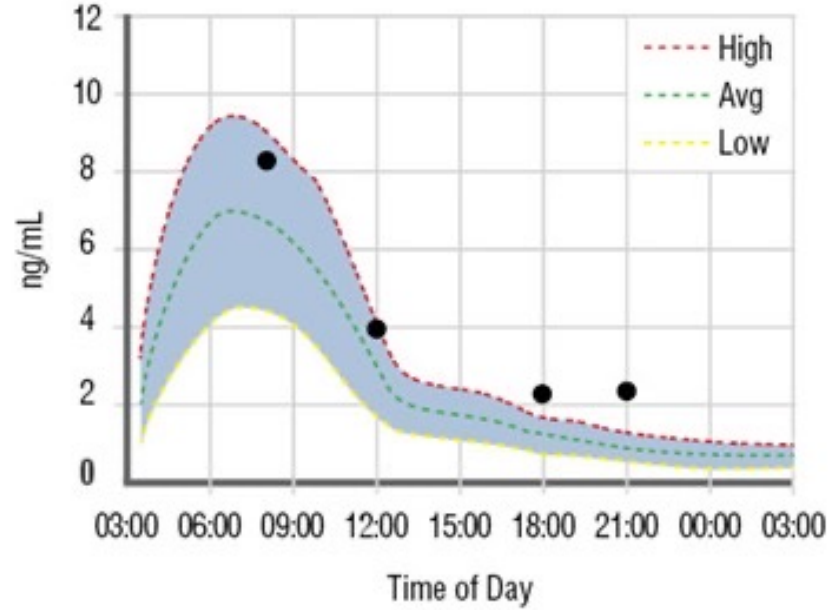
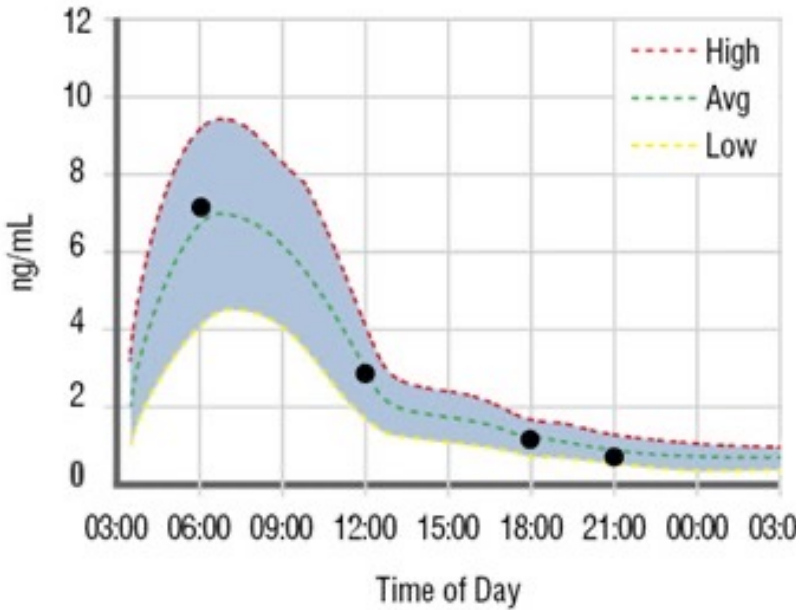
**GALLUP 2018**

# CORTISOL AND BURNOUT

## EUSTRESS

## CHRONIC STRESS

## BURNOUT



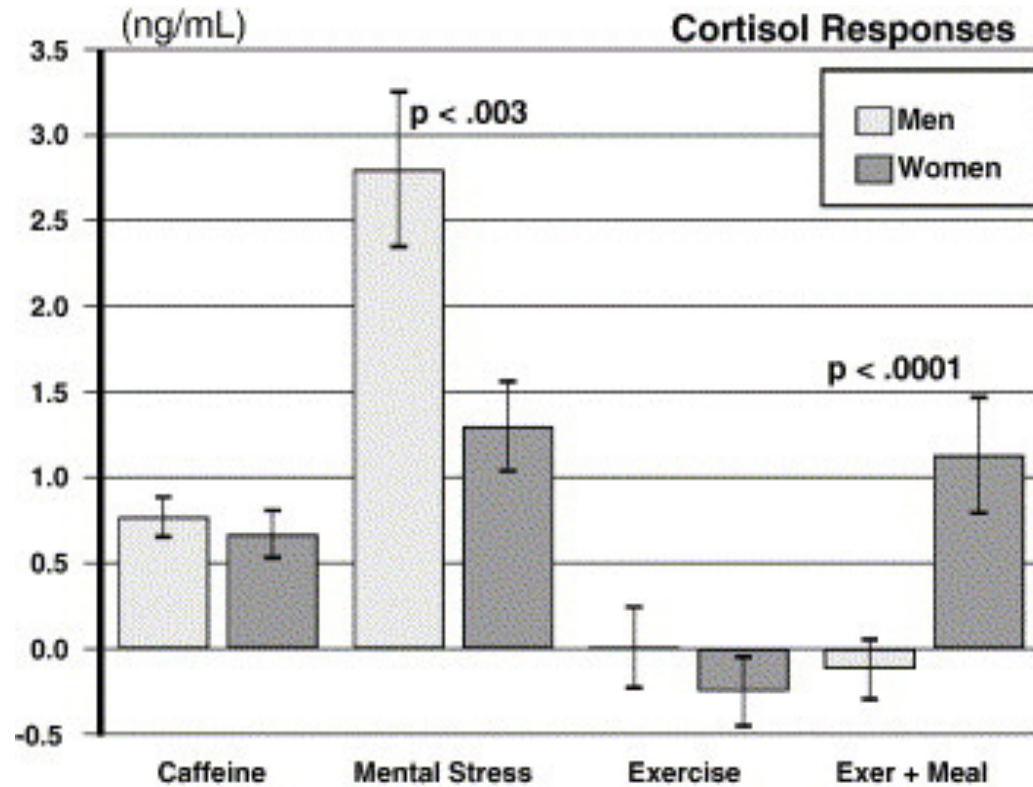
# HEART RATE VARIABILITY



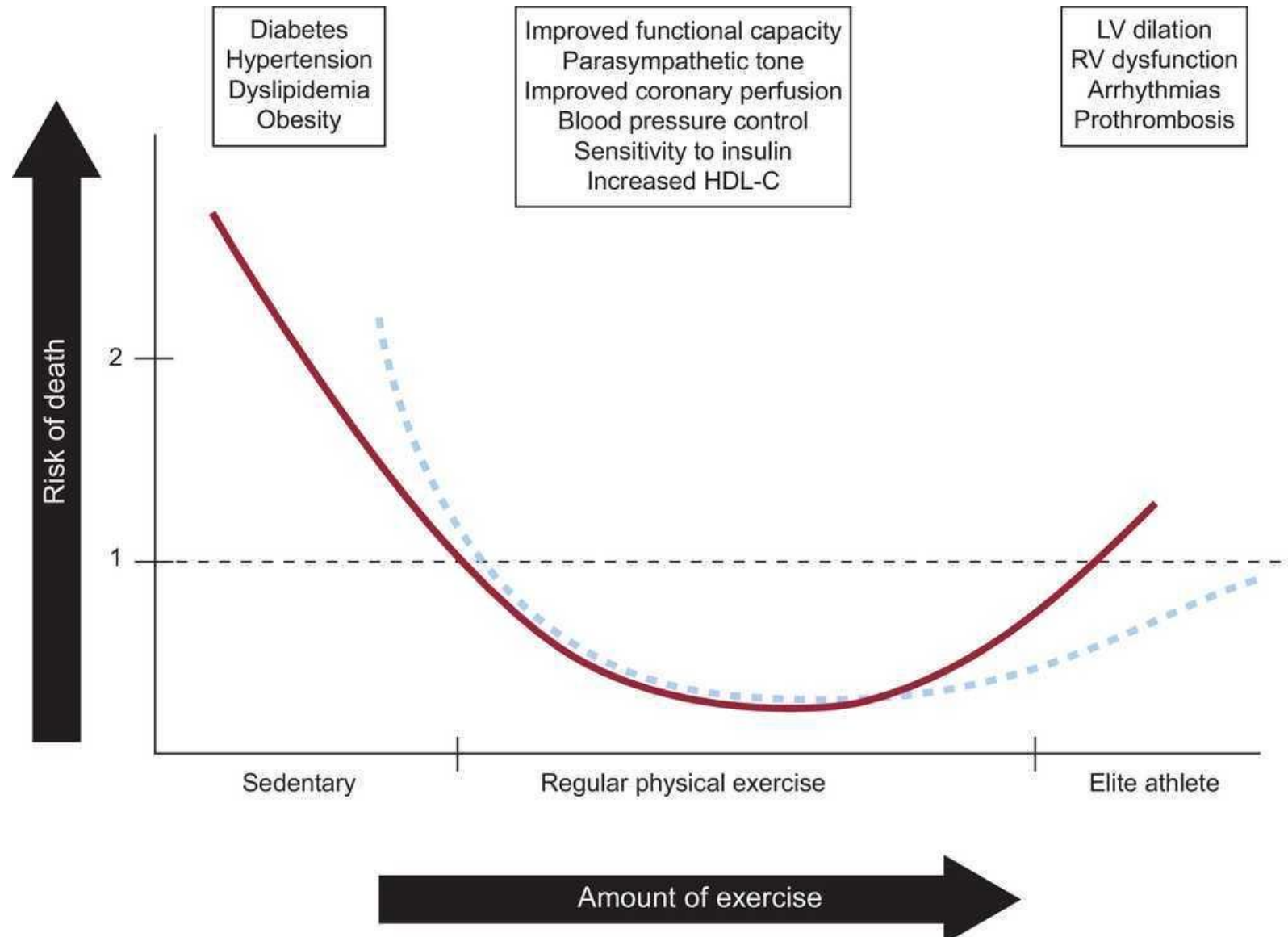
# BIOMECHANICS, STRESS AND RECOVERY



Physical activity significantly decreases cortisol levels and prevents burn-out...



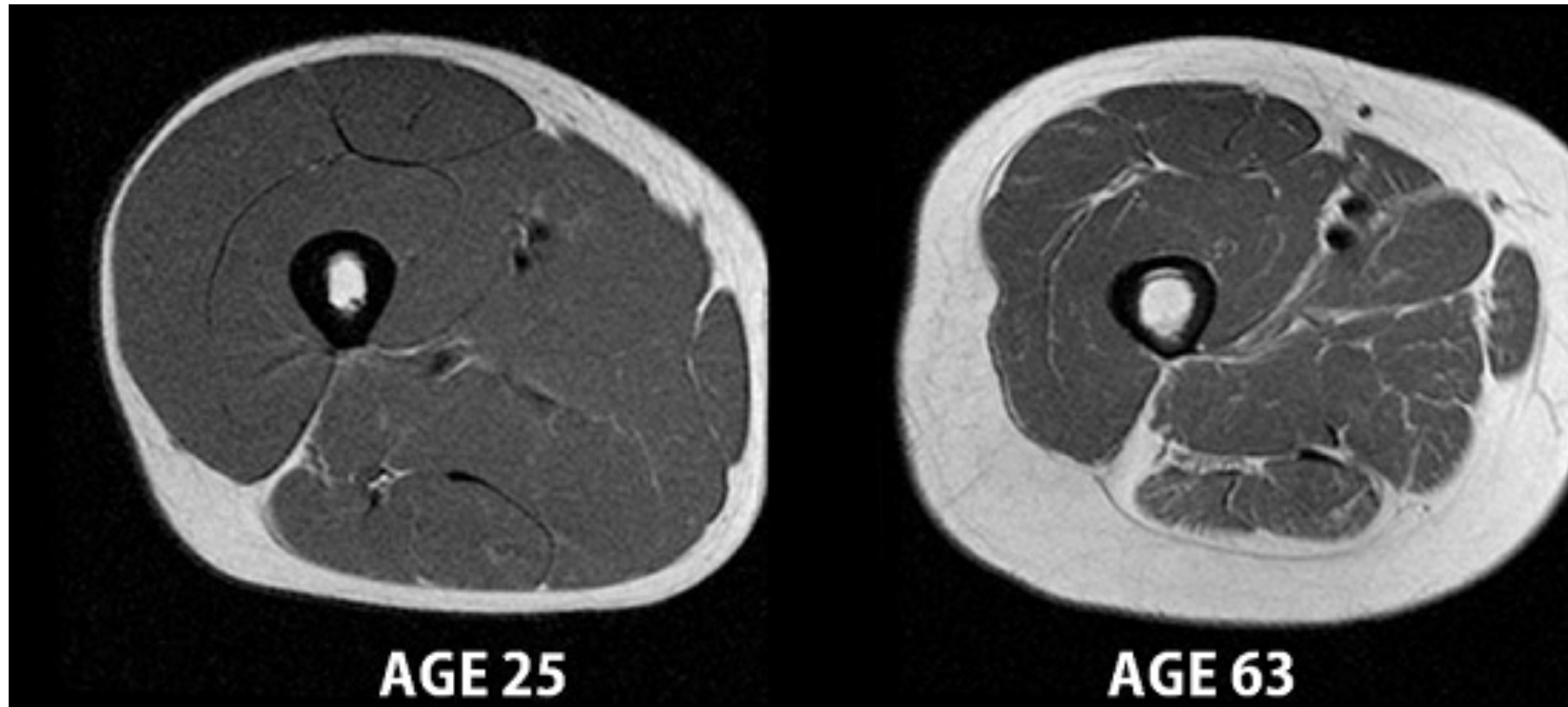




## Physical activity:

- decreases **stress** and the overall risk of mortality
- prevents onset of **cardiovascular disease, diabetes, dementia and cancers**

Without strength training muscle mass begins to decrease at the age of 30 yrs.



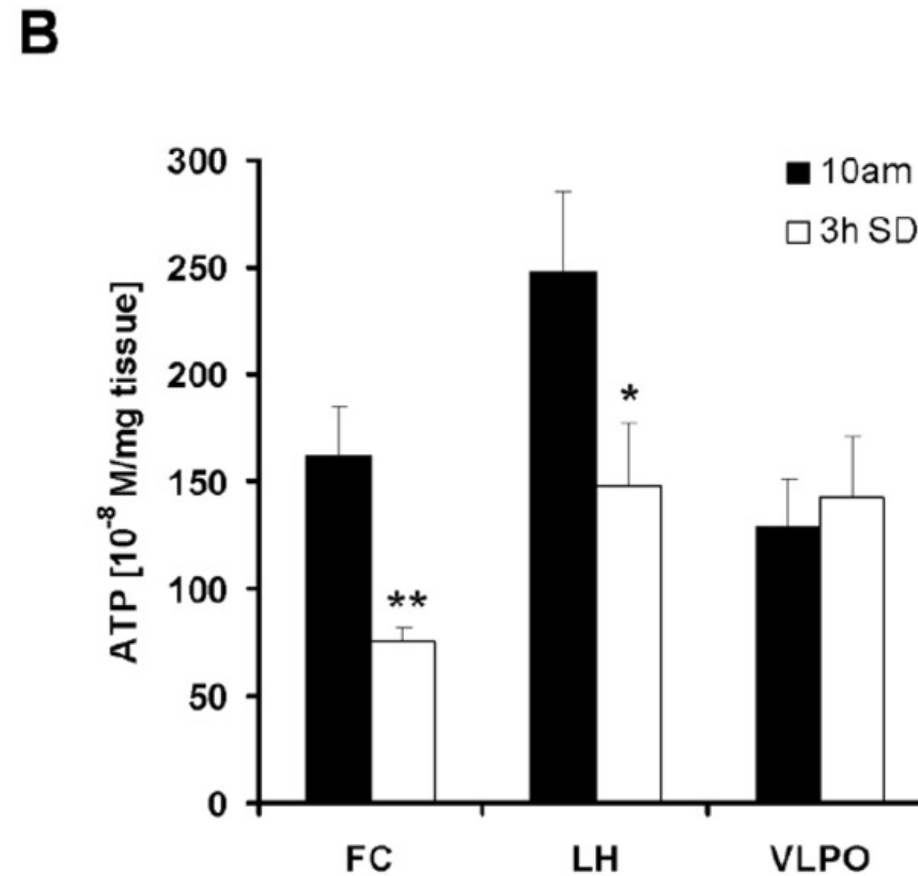
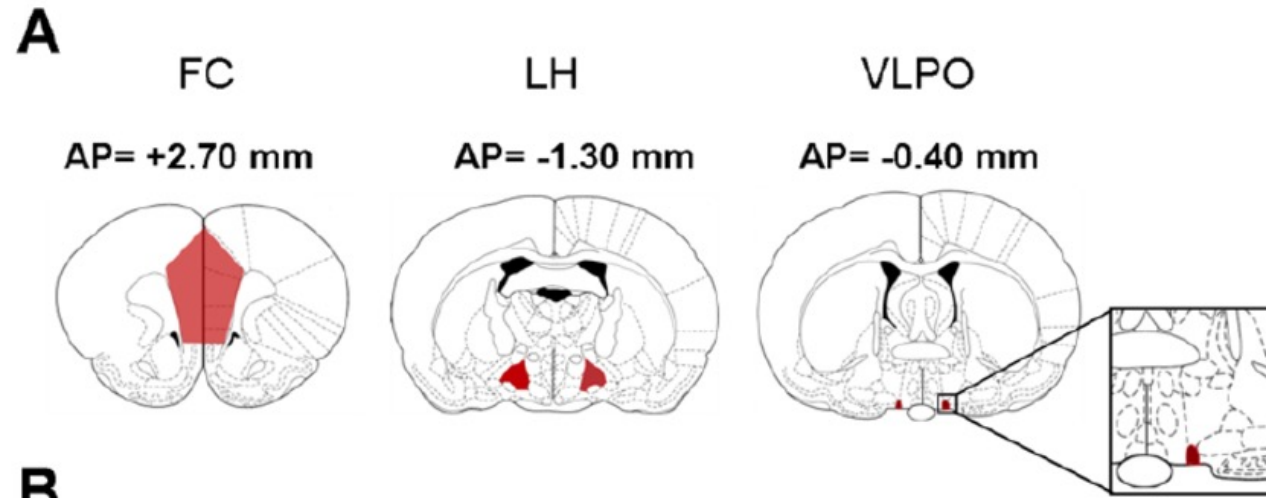
# SLEEP

**HIRSLANDEN**   
CHECK-UP ZENTRUM



## **WHY SLEEP?**

- Sleep is a highly conserved behavior across animal evolution and is a process in which the body alternates between two distinct modes: REM sleep and non-REM sleep.
- Sleep depends greatly on hormonal signals from the circadian clock and exposure to light.
- Most of the body is in an anabolic state during sleep, helping to restore the immune, nervous, skeletal, and muscular systems.
- The most pronounced physiological changes in sleep occur in the brain through the restoration of ATP supply (the principal energy transporter molecule).

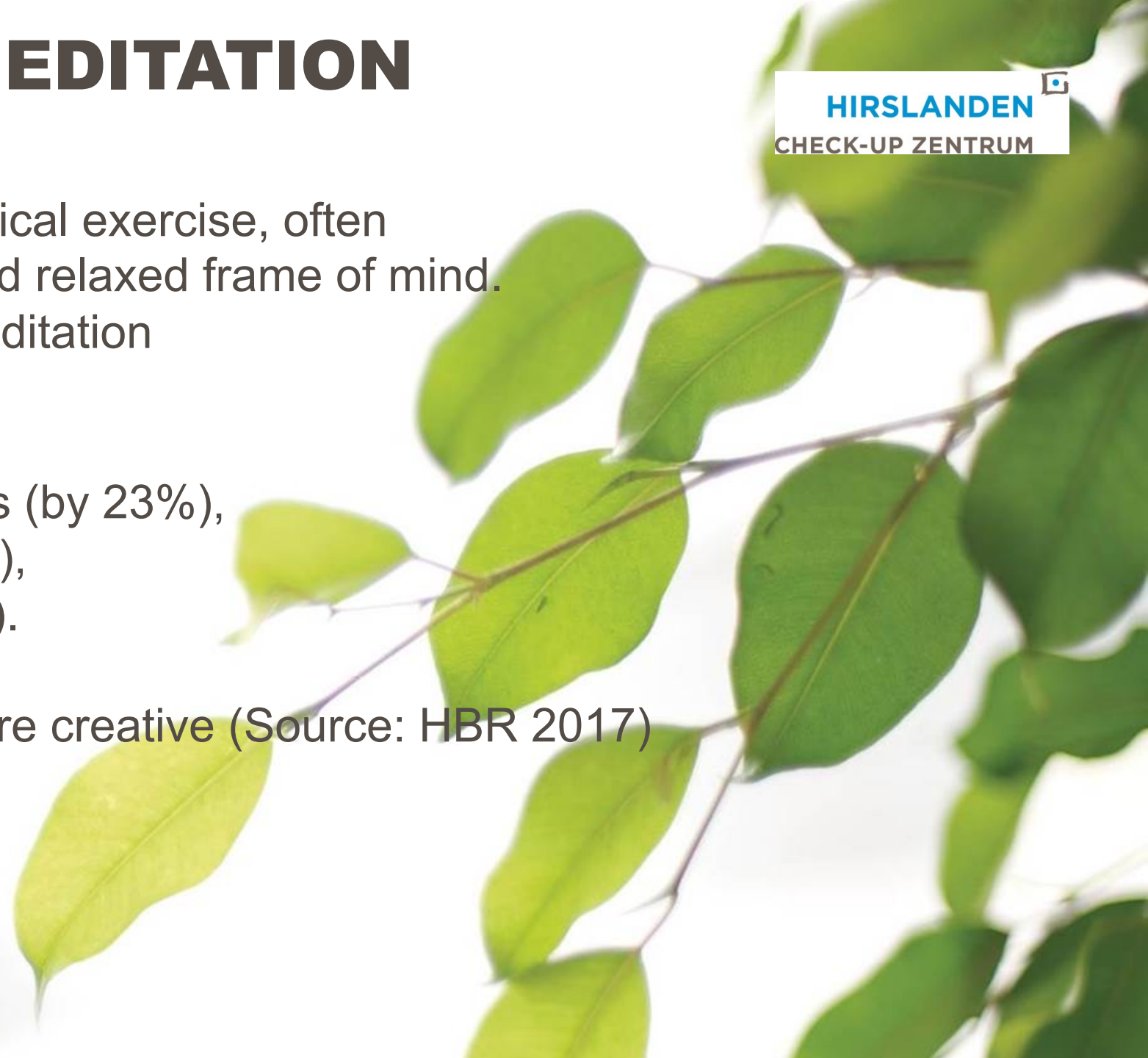


# 10 MINUTES OF MEDITATION

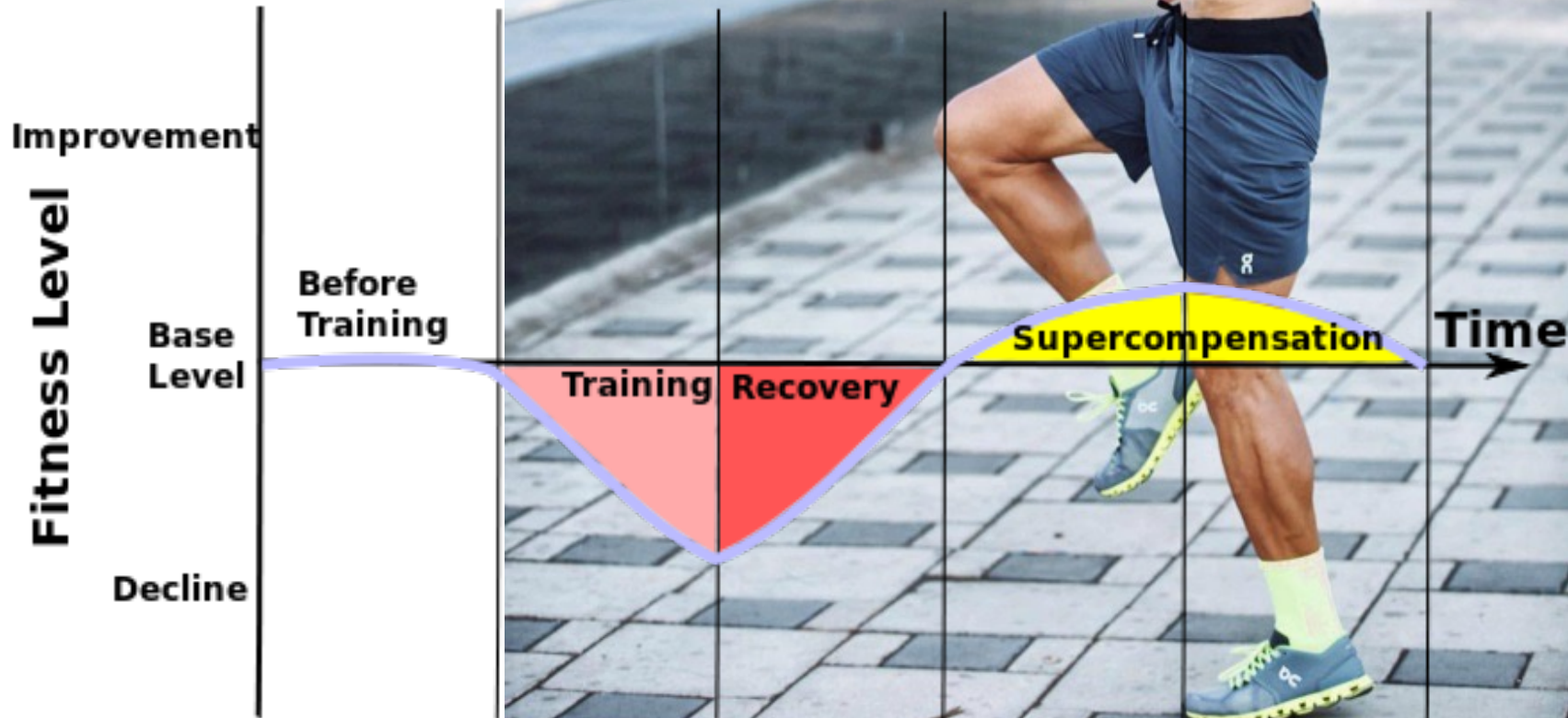
Short meditation, similar to physical exercise, often put people in a more positive and relaxed frame of mind. In a study published in HBR, meditation decreased

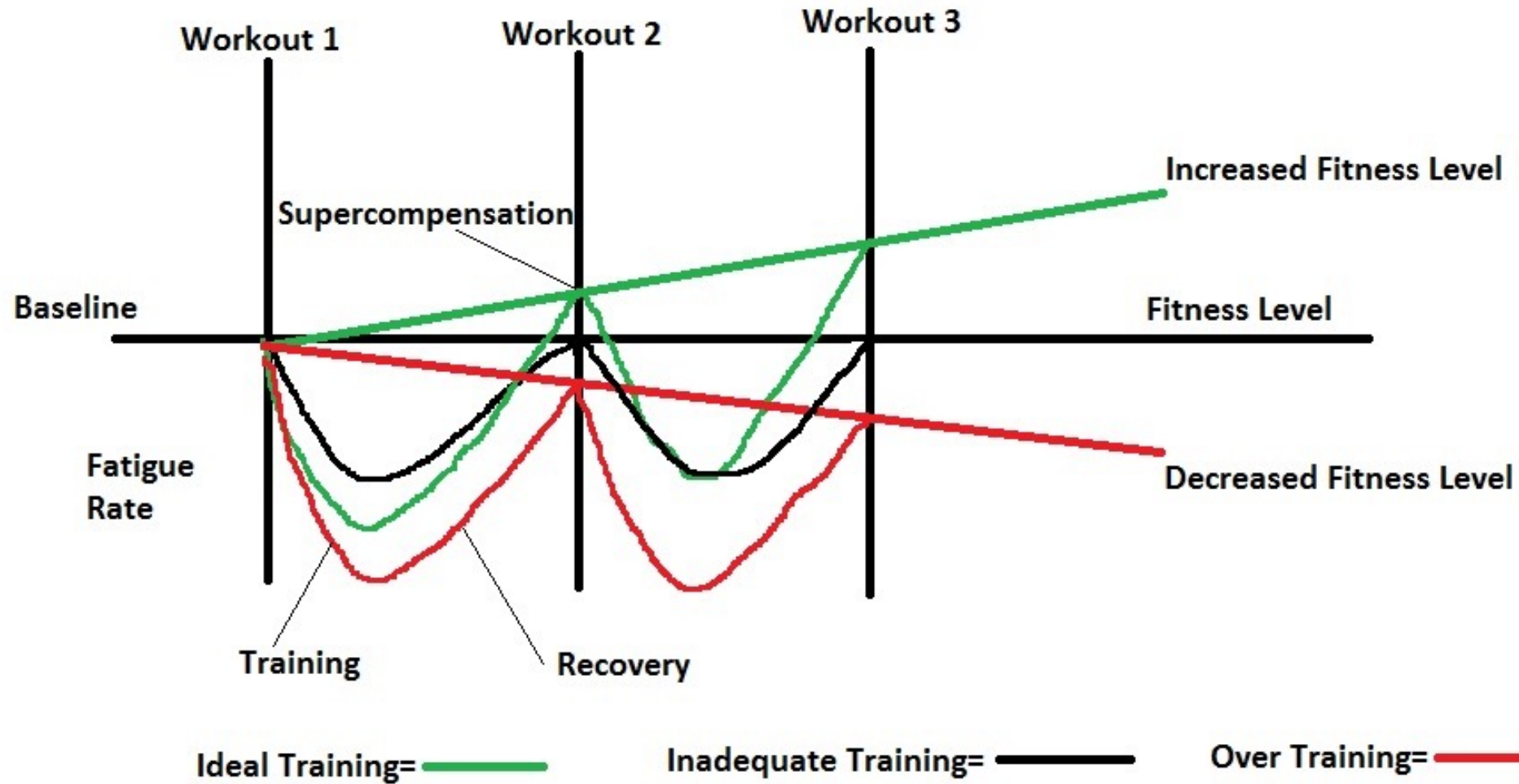
- feeling of restlessness (by 23%),
- nervousness (by 17%),
- and irritation (by 24%).

It also made the participants more creative (Source: HBR 2017)



# RECOVERY - WHY SUPERCOMPENSATION?









The key is to be aware – mentally and physically – when you have tipped into excessive stress, and plan [recovery phases](#),

# AIMING HIGHER THROUGH RECOVERY

The key is to be aware – mentally and physically  
– when you have tipped into excessive stress,  
and plan recovery phases!



# FAMILY AND SOCIAL CONNECTIONS



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**longevity**  
CENTER



# TOWER

REVUE

INSPIRATION AND LIFESTYLE FROM BADRUTT'S PALACE HOTEL

## HOBBIES



*A monobob athlete in action at the Olympia Bob Run St. Moritz-Celerina; IBSF/Girts Kehris*

## MONOBOB: THE LATEST WINTER SPORT

Dr Anna Erat, a monobob athlete and board member of the IMBC, is delighted that the sport is now reaching a wider audience. “As with any new sport it takes some time to get established,” she explains. “I have been driving a monobob for three years. The first time is scary on your own, but if you are prepared, you will find it absolutely thrilling.”



*Dr Anna Erat, a monobob athlete and board member of the International Monobob Club St. Moritz*

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**THANK YOU!**

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