

A silhouette of a person sitting on a bench, looking down, against a bright sunset background. The person is in the foreground, and the sun is low on the horizon, creating a strong backlight effect. Bare tree branches are visible at the top of the frame.

Lichttherapie bij werk gerelateerde chronische stress

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Werkgerelateerde chronische stress

Burnout:

- Opgebrand
- Geen energie
- Geen motivatie voor werk
- Geheel of gedeeltelijk verzuim



Werkgerelateerde chronische stress

Burnout kent drie hoofdkenmerken:

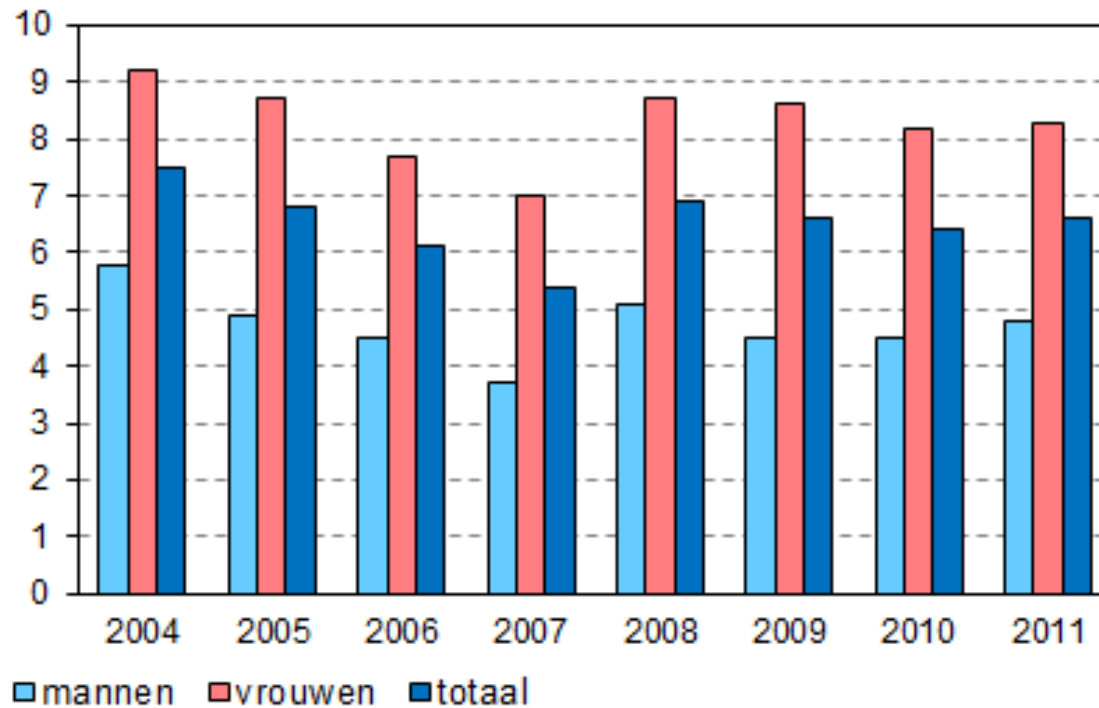
- Emotionele uitputting
- Cynisme, afstand tot het werk
- Verminderde bekwaamheid



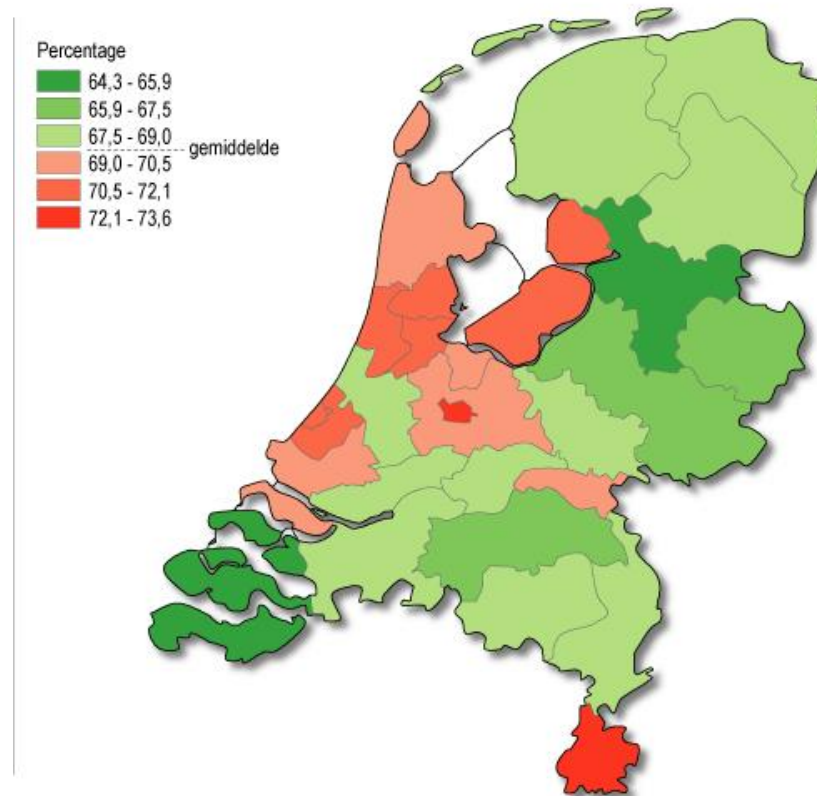
Mensen die burnout hebben komen tot niets, zijn uitgeput en niet meer in staat tot het verrichten van werkzaamheden

Prevalentie van burnout

jaarprevalentie (per 1.000 personen)



Prevalentie van burnout



Kosten van burnout

Een werknemer op HBO niveau met burnout kost ongeveer EUR 90.000,- per jaar

Een werknemer op MBO niveau met burnout kost ongeveer EUR 54.000,- per jaar



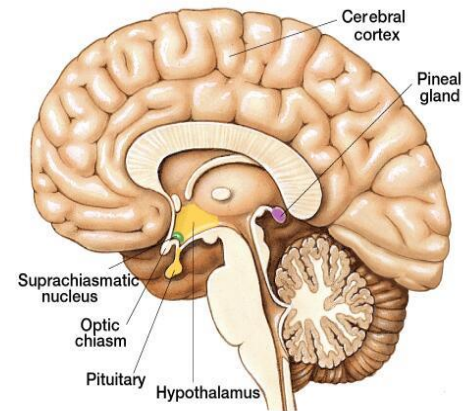
Behandeling van burnout

Cognitieve gedragsmatige aanpak
Coaching

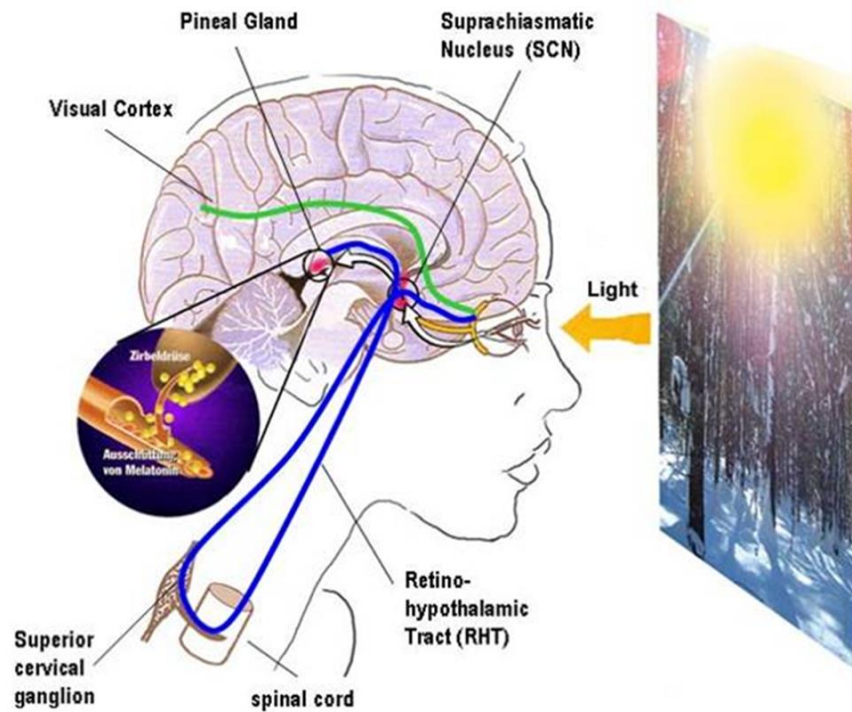


Circadiane ritmen en licht

Licht beïnvloedt directe hersenstimulatie en regulering van het slaap/waak via het netvlies. De biologische klok beïnvloedt cognitieve processen zoals: alertheid, concentratie, stemming en slaap



Circadiane ritmen en licht

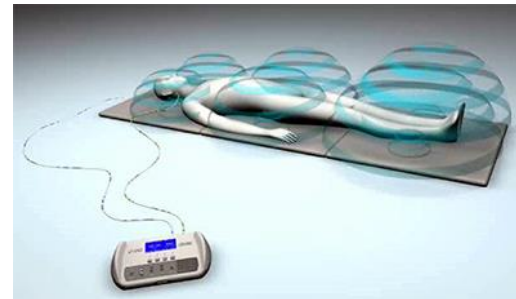


Lichttherapie



Pulsed Magnetic Field Therapy PEMF

Pulsed electromagnetic field therapy (PEMF) is a reparative technique most commonly used in the field of orthopedics for the treatment of non-union fractures, failed fusions, congenital pseudarthrosis and depression



Burnout and lighttherapy

- Studies of sufferers of seasonal affective disorders and of healthy people show that energy levels can be improved by exposing them to bright light.
- It is hypothesized that energy levels of patients with burnout complaints can similarly be improved by exposure to bright light.
- Patients' energy levels were seen to improve significantly according to the scores on two out of three instruments.

Design of a randomized controlled trial on the effect on return to work with light therapy / magnetic field therapy and coaching for workers with burnout

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Xentix

System for influencing the biological cellular structure to generate a therapeutic effect using a combination of light energy and magnetic energy.



Hypothesis

Combination of light therapy / magnetic field therapy and coaching can increase return to work by patients suffering from burnout

Research objective

Can the therapy improve return to work, reduce stress and fatigue and improve quality of life?

Proof of concept

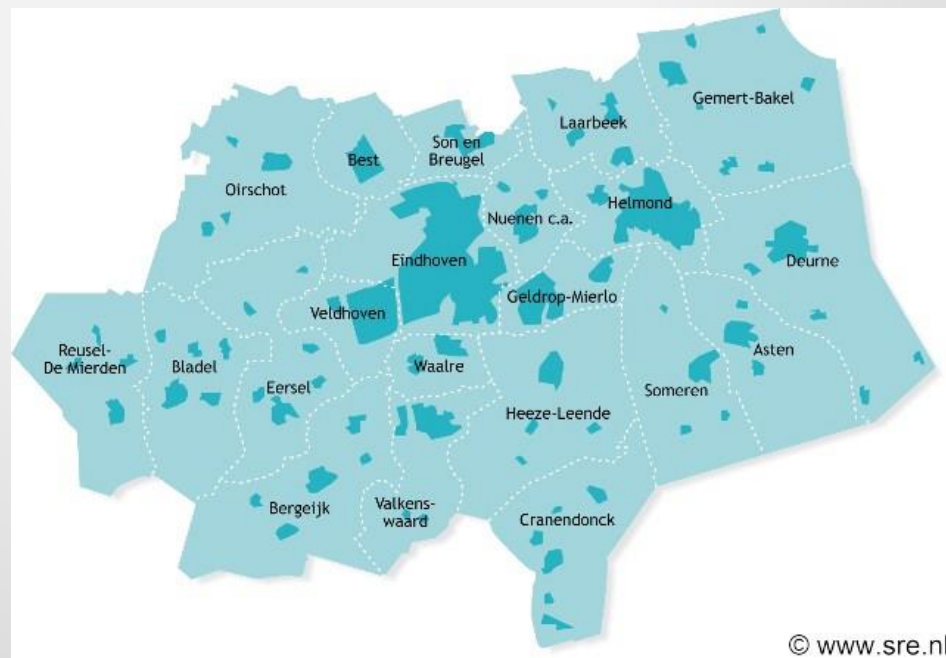
The intention is to implement the proven efficacy of the treatment within the care of people with burnout.



Therapy performed by Letec Life Enhancement BV Eindhoven

Study population

The population consists of employees (18yr -65yr) from the South of the Netherlands with burnout complaints with at least 50% absenteeism. Participants with the diagnosis of burnout are recruited from referrals, via social media or after an article in a local newspaper.



Return to work



Primary outcome

Return to work
score (in hours)
between
baseline (week
0) and endpoint
(week 12)

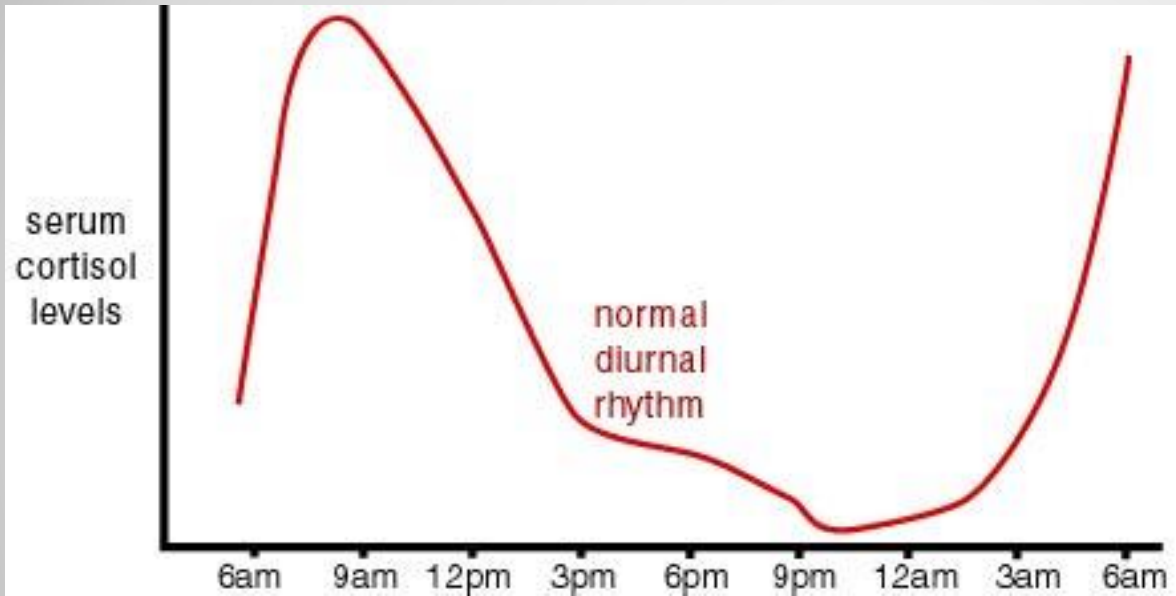
- Utrechtse Burnout Schaal UBOS (Maslach)
 - subscale emotional exhaustion
- Vigilance
- Need for recovery-scale (Meijman en Van Veldhoven, 1994)
- 4DKL
 - stress scale
- Analysis of cumulative hair cortisol
- SF36
 - vitality, social functioning, emotional role limitations

Secondary outcome

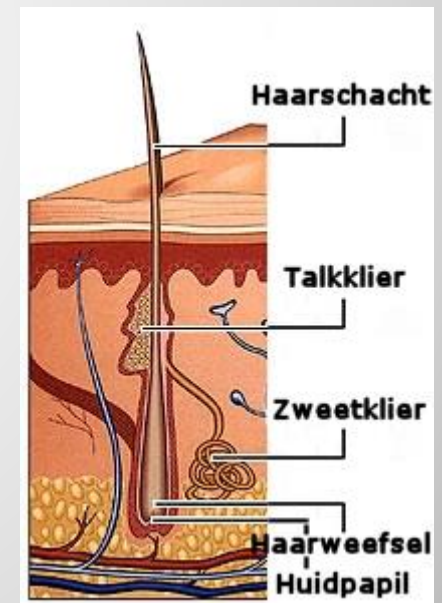
- **Fatigue**

- **Stress**

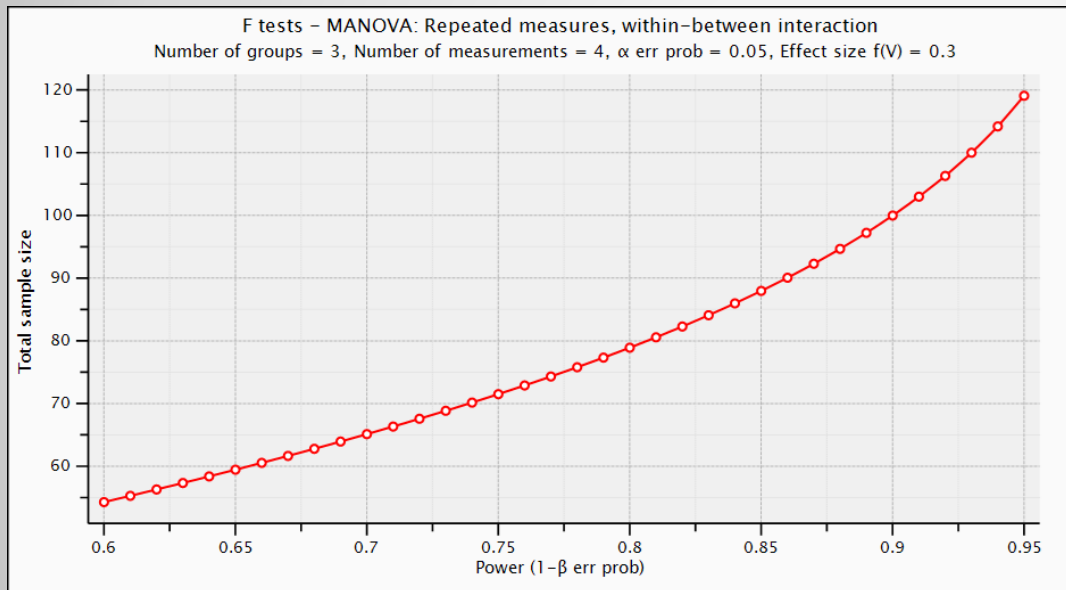
- **Quality of life**



Hair Cortisol



Power analyse



- Male / female
- Average age per seks with standard deviation
- $N = 79$ (90)

Inclusion criteria

- Employees with burnout symptoms between 18 and 65 years with at least 50% sickness absenteeism
- Diagnostic criteria for overstrain (symptoms 0-6 months)
- Not be able to perform total or part of daily work
- Speaking Dutch language

Exclusion criteria

- Pregnancy
- Serious somatic problems such as diabetes and epilepsy
- Serious ocular diseases
- Presumption of confusion or severe gloom
- Use of psychotropic drugs other than selective serotonin reuptake inhibitors SSRIs
- Pacemaker / neurostimulators

Selection of participants

recruitment of participants

- direct mailing to general practitioners and company doctors
- ad in local newspaper
- social media

organizing groups

- informed consent
- randomization



Groups

group 1 N=30

- Treatment platform with light therapy / magnetic field therapy / coaching

group 3 N=30

- Control group, coaching only

group 2 N=30

- Placebo group receives the same treatment which the light therapy / magnetic field therapy is not activated

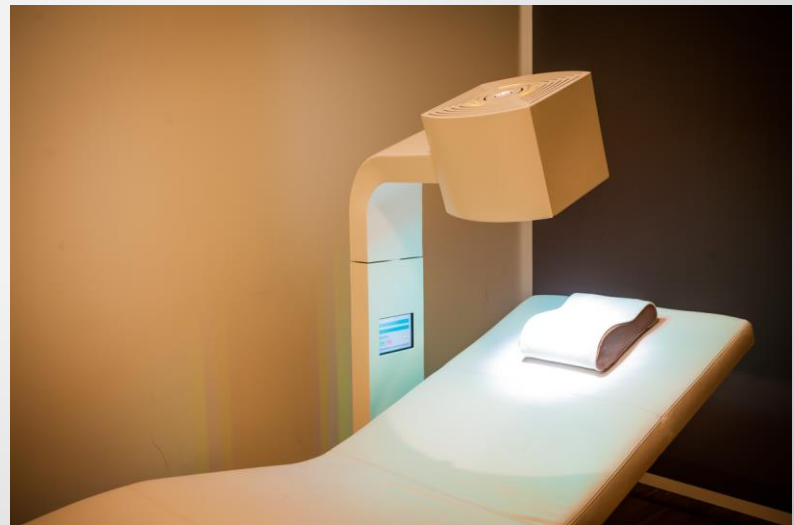
Interventions

Participants will be treated for 12 weeks, 2 times a week for 40 minutes in group 1 and 2.

The control group receives coaching only in 6 sessions every 2 weeks (group 3).

Light therapy 6000lux / 40 minutes

PEMF 300 milliTesla mT / 40 minutes



Planning

2014

- literature study
- developing research protocol
- assessment MEC
- start data collecting

2015

- data collecting
- analysis of the data
- reporting
- publication



Vragen?