



TRÄNING I MEDVETEN NÄRVARO

FRIHET & GLÄDJE – Är det möjligt vid hjärtsvikt?



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Disposition

- Mindfulness vad är det i praktiken?
- Mindfulness-baserade interventioner – Här & Nu
- Mindfulness vid hjärtsvikt forskning & erfarenheter
- Fallbeskrivningar
- Möjligheter
- Sammanfattning



Vad är medveten närvaro?

Att beskriva medveten närvaro med ord är inte så lätt

Det handlar om medvetenhet eller sinnesnärvaro

Att VARA i direktkontakt med erfarenheten som den är via våra sinnen – egentligen INNAN vi sätter ord på erfarenheten



Vad är INTE medveten närvaro?

Ibland kan det vara lättare att beskriva motsatsen –

Vad som kan känneteckna en person som

INTE är medvetet närvarande i nuet –

Någon som INTE är MINDFUL utan MINDLESS ...



Vad som kan känneteckna en person som INTE är medvetet närvarande?

- Omedveten
- Frånvarande
- Stressad
- Splittrad
- Disträ
- Känslostyrd
- Enkelspårig
- Dömande
- Arrogant
- Impulsstyrd
- Rastlös
- Kategorisk
- Fördomsfull
- Intolerant



Vad är MEDVETEN NÄRVARO?

- Inget nytt
- EGENSKAPER och FÖRMÅGOR som vi har tillgång till
- Att VARA i direkt kontakt med erfarenheten som den är (inte göra)
- Att VARA uppmärksam och närvarande i nuet i sin kropp
- Ett sätt att LUGNA SINNET
- Ett sätt att TRÄNA och forma sin HJÄRNA
- MEDITATION – koncentrerad träning



Mindfulness - medveten närvaro

Definition – den mest använda och som beskriver hur vi kan träna

- **Att vara uppmärksam på ett särskilt sätt ...**
 - med avsikt
 - i ögonblicket
 - utan att värdera det

(Jon Kabat-Zinn 2003)

**Medveten närvaro är med andra ord
en form av träning som består i att:**

- rikta uppmärksamheten på det vi vill och behåll den...

(Ola Schenström 2007)



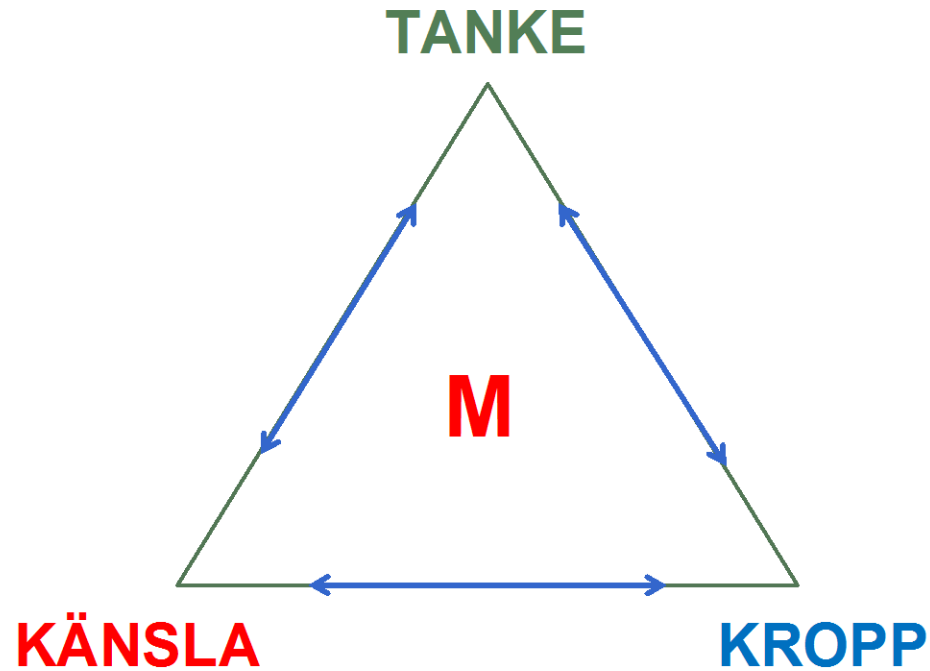
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Mindfulness





Triangeln visar en modell för hur vi kan träna

Bara observera det här ögonblicket,
utan att försöka ändra på någonting alls

Vad är det som händer just nu?

Vad känner du?

Vad ser du?

Vad hör du? ...

Vilka tankar kommer upp i sinnet, försök att **bara observera** dem
som mentala händelser, som moln som dyker upp och passerar
och sen försvinner bort ...

Ola Schenströms ljudbok – "Mera mindfulness i vardagen" - CD 1

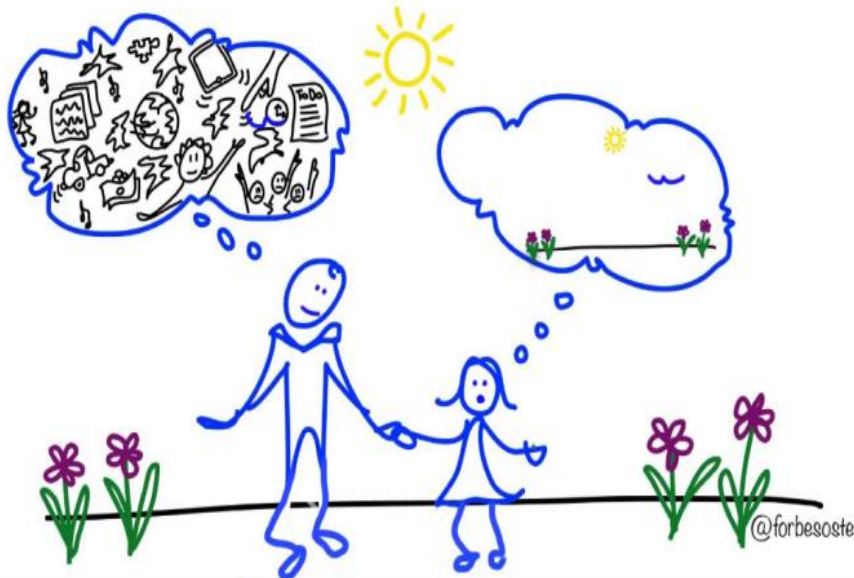
Viktiga förhållningssätt vid träning i medveten närvaro



- **Inte döma**
- **Tålamod**
- **Nybörjares sinne**
- **Tillit**
- **Inte sträva**
- **Acceptans**
- **Släppa taget**

Vad är inte och vad är mindfulness?

Mind Full, or Mindful?

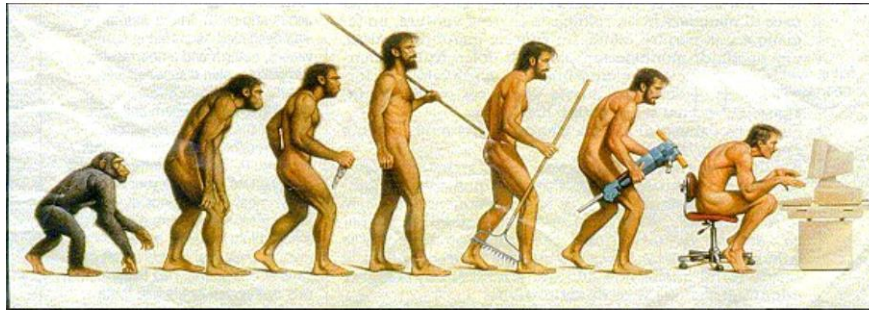


Då, nu och sedan ...

*Mfc*TM

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Somewhere, something went terribly wrong

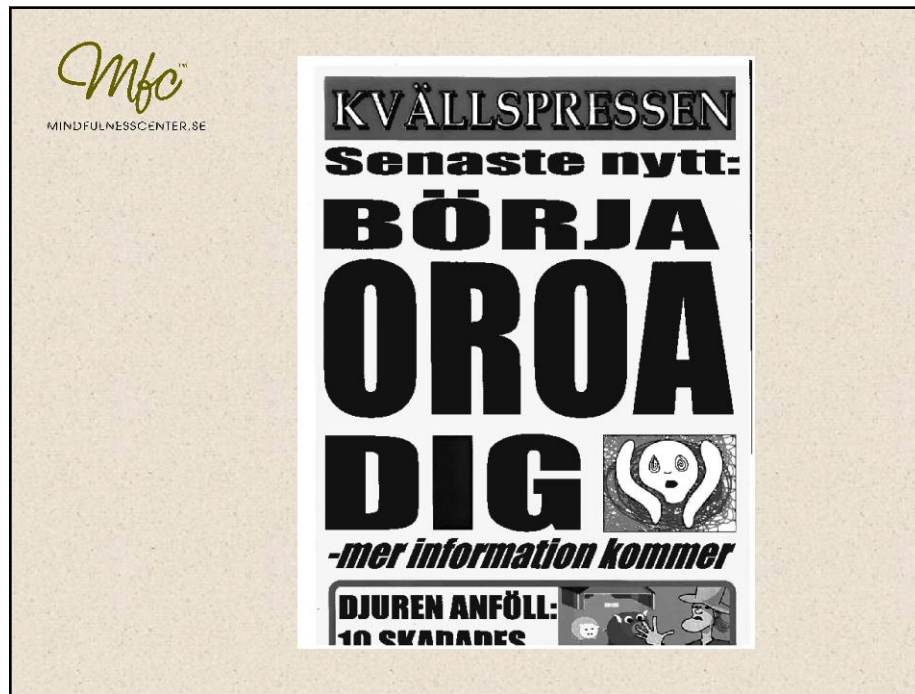




Å vart är vi på väg ???



Stress – kamp och flykt





Vad händer i kroppen vid hjärtsvikt?



Vad kan kronisk hjärtsvikt innebära för personen?

Symtom:

Trötthet
Andfåddhet
Svullna ben
Sömnsvärigheter
Aptitlöshet
Illamående
Smärtor



Biofysiska begränsningar

Existentiella begränsningar

Identitets och rollförlust
Självkänsla
Hopp och framtidstro

Intellektuella begränsningar

Koncentrationsförmåga
Inlärningsförmåga

Emotionella begränsningar

Nedstämdhet
Depression

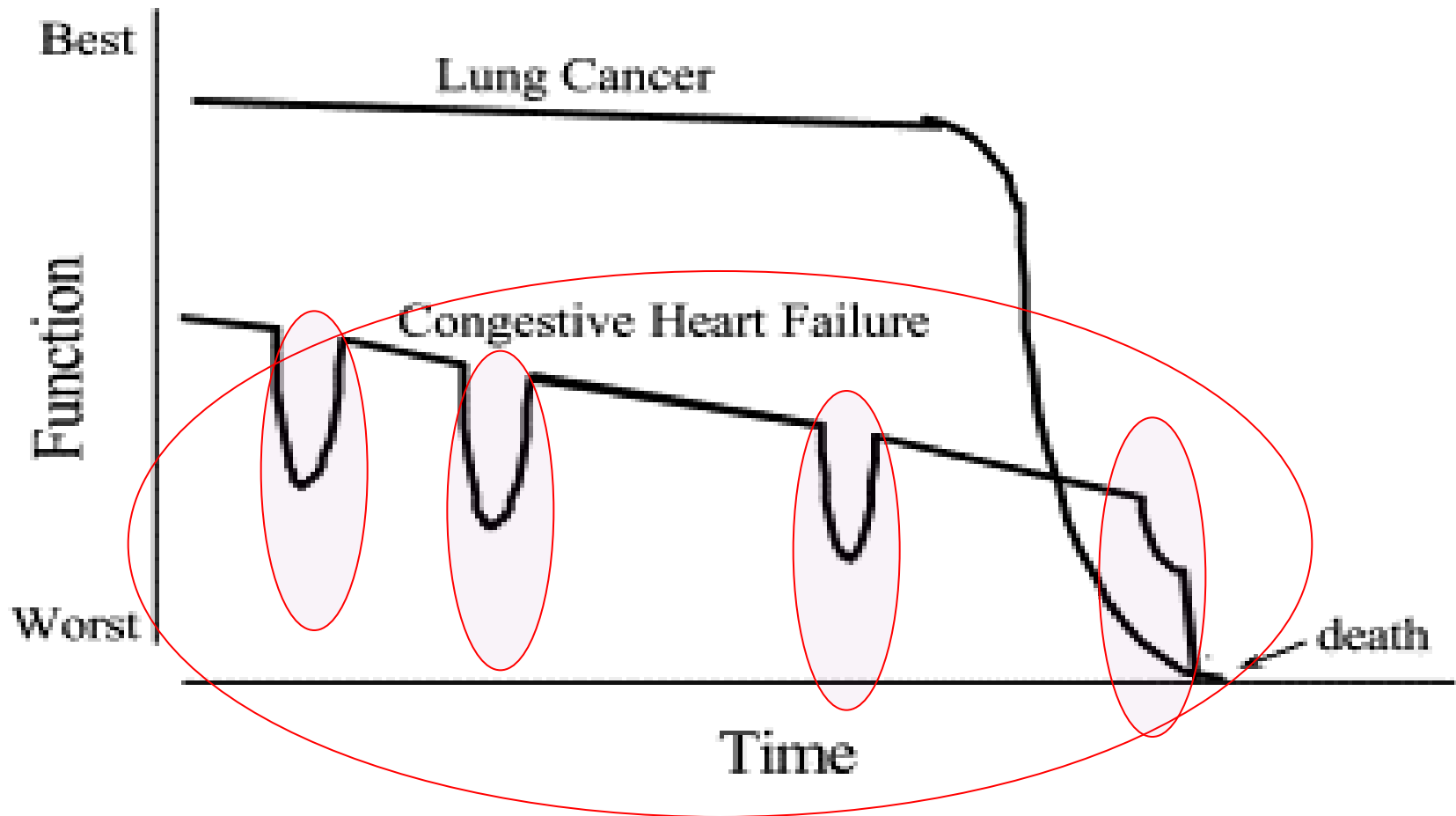
Sociala begränsningar:

Sociala aktiviteter
Fritidsaktiviteter

(Mårtensson J. 2002)

Patientbild: Anna Strömberg
Integrerade symtom: Jonna Norman

Sjukdomsförloppet lungcancer - hjärtsvikt



Musik vid hjärtsvikt / RespeRate (DGBE)

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Impact of device-guided slow breathing on symptoms of chronic heart failure: a randomized, controlled feasibility study

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Aims	In many patients with chronic heart failure (CHF) even normal daily life activities cause dyspnoea and fatigue, well-being might be considerably improved by even a modest decrease in such symptoms. The aim of this study was to investigate if lowering breathing rate with the help of a respiratory modulation (RM) device could improve symptoms in patients with CHF.
Methods and results	Stable CHF patients with symptoms of dyspnoea were randomized to twice-daily 20 min sessions using an RM device or to music listening (ML) using a CD player, for a 4-week study period. Respiratory modulation guides the user to achieve a slow breathing rate (<10 breaths/min) while increasing exhalation time (Tex) relative to inhalation time (Tin). Lower breathing rate was accomplished by synchronizing respiratory movements with musical tones generated in response to breathing movements monitored with a belt-type sensor. Endpoints were reduced breathlessness and New York Heart Association (NYHA) class. Seventy-two patients (52 male, age 73 ± 11 years, NYHA 3.1 ± 0.9) were randomized and 65 completed the study (30 RM and 35 ML, respectively). There was no in-between group improvement in breathlessness and NYHA class. Patients in the RM group who displayed an average increase in Tex/Tin of >0.2 and a reduction in the average respiration rate during 30 sessions were considered responders. Responders reported reduced breathlessness (−0.86 ± 0.23 units, P < 0.005) and improved NYHA class (−0.64 ± 0.20, P < 0.01) compared with non-responders.
Conclusion	Device-guided RM might have the potential to relieve symptoms of heart failure in outpatients by changing their breathing pattern.
Keywords	Chronic heart failure • Breathlessness • Respiratory modulation • Sympathetic activity

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Chronic heart failure patients experiences of Device-Guided-Breathing-Exercise and/or Music listening

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Purpose and Presentation Objectives

The aim of this interview study was to describe how patients with chronic heart failure (CHF) experience Device-Guided-Breathing-Exercise (DGBE) and/or Music listening (ML) that are used in a study aiming at symptom relief.

Methods

This interview study is within the frame of a larger randomized study. A trained nurse carefully informed and instructed the patients at inclusion about the treatment they had been randomized to; A) controlled slow breathing exercises with DGBE (RESPeRATE, InterCure Ltd., Israel, Fig. 1) or B) ML with CD-player (Fig. 2).

56 patients (age 52–91, average 72 years) with CHF and dyspnea used the DGBE (n=28) / CD-player (n=28) 20 min twice a day, morning and evening, during four weeks, at home. After 28–30 days the patients were interviewed and asked about their symptoms and experiences of breathing with DGBE or ML. The interviews were tape-recorded and transcribed word by word. The text was analysed using content analysis.

Results

Tentative findings from the analysis indicate that a majority of patients reported that DGBE 'was easy to use and relaxing', but at the same time data downloaded from the devices showed that most of them did not follow the guiding tones the way they were supposed to do.

Some patients using the DGBE with voice instruction became 'too adherent' and followed the guiding tones down to a very slow breathing, not feeling comfortable. A few patients found it quite stressful in the beginning not being able to breathe in pace with the DGBE. But after a few days they managed to find the rhythm and described experiences of 'a balance in the whole' and 'feelings of relaxation'. On the other hand some patients in the DGBE-group found a new awareness of their breathing, learned a new way of breathing and was able to better manage symptoms in daily life.

The ML also turned out to be an intervention with patients reporting 'calming and relaxing' effects. Some patients learned to listen to the music in a different way and reported experiences of mindfulness.

Fig. 1



Fig. 2





Doktorandprojekt:

Träning i medveten närvaro för personer med diagnosen kronisk hjärtsvikt

- Doktorand:

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Institutionen för Vårdvetenskap och hälsa, GPCC,
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Diplomerad Steg 2 instruktör Mfc enligt Här&Nu-programmet

- Huvudhandledare:

Kristin Falk , docent, sjuksköterska, Inst. Vårdvetenskap och hälsa, SA,GU

- Bihandledare:

Michael Fu, professor, kardiolog, SU/Ö, avd. Molekylär o klinisk medicin/SA,GU

Lena Björck, docent, lektor GU, SU/Ö, avd. Molekylär o klinisk medicin/SA,GU

Inger Ekman, professor, sjuksköterska, Centrum föreståndare GPCC, SA,GU



Projektfinansiering

- Göteborgs centrum för personcentrerad vård GPCC
- Adlerbertska forskningsstiftelsen
- Trygghetsstiftelsen
- Kardiologstiftelsen SU/Östra sjukhuset



Rationalen för projektet – vid studiestart 2010

- Människor med hjärtsvikt berättar om besvärande symtom och sänkt livskvalitet trots medicinsk behandling enligt gällande riktlinjer (ESC Guidelines 2012; Socialstyrelsen 2008)
- Personer med hjärtsvikt använder redan metoder som liknar meditation för att lindra symtom av trötthet (Falk K., et al 2007)
- Symtom vid hjärtsvikt kan lindras genom andningsövningar i långsamt takt med guidning av musiktoner (Ekman I., et al 2011) *RESPeRATE*
- Metaanalyser och forskningsöversikter visade att mindfulness-baserad meditation kan fungera vid flera kroniska tillstånd (Baer R. 2003)
- Det saknades studier av mindfulness-baserad meditation vid hjärtsvikt

Här&Nu - utbildnings programmet

Ola Schenström:



O.S. är läkaren som har utvecklat Här&Nu, grundade Mfc 2007, mindfulness utbildare

- 8-veckorsprogram
- Gruppträffar 1,5 h/v med diplomerad instruktör
- Självträning formell – lyssna på CD:n grundövningar
20-30 min/dag 6 av 7 dagar/v
- Vardagsövningar 5-10 min/dag

Mfc

www.mindfulnesscenter.se



Formella träningsövningar

- Kroppsskanning
- Andningsankaret
- Andrum
- Medvetna rörelser (i sittande)
- Sittande meditation



Jon Kabat-Zinn utvecklade det västerländska **MBSR – Mindfulness Based Stress Reduction**

- Massachusetts – Medical Center, Worcester 1979
- 8 veckors program
- Gruppträff ca 3 h/v
- En heldag vecka 6 (med 5 h i tystnad)
- 40-45 min formell träning / 6 dagar / vecka
 - Kroppskänning
 - Mindful yoga
 - Sittande meditation

(Kabat-Zinn J., et al: 1984,1986,1990,1992,2003, 2017)

<https://www.umassmed.edu/cfm/>

Umass medical school – Center for Mindfulness in Medicine, Health Care and Society



UNIVERSITY OF GOTHENBURG
CENTRE FOR PERSON-CENTRED CARE

Jon Kabat-Zinn molekylärbiologen som började meditera och utvecklade MBSR och har ägnat sitt liv åt att göra praktiken tillgänglig för människor – utbildare, praktiker och professor i medicin



Grundare av Center for Mindfulness in Medicine, Health Care and Society

Bild: YouTube föredrag: "Jon Kabat-Zinn and mindfulness and health", 2016



Mindfulness-based Cognitive Therapy (Teasdale John, Segal Zindel, Williams Mark, et al 2000)

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Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy.

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[Teasdale, John D.](#) [Segal, Zindel V.](#) [Williams, J. Mark G.](#) [Ridgeway, Valerie A.](#) [Soulsby, Judith M.](#) [Lau, Mark A.](#)

Citation
Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology*, 68(4), 615-623.
<http://dx.doi.org/10.1037/0022-006X.68.4.615>

John D. Teasdale Zindel V. Segal Mark Williams





Här&Nu – MBI bygger både på MBSR+MBCT

MBSR – Mindfulness-Based Stress Reduction

(Jon Kabat-Zinn 1985,1986,1992,2003, 2005 2017)

+

MBCT – Mindfulness-Based Cognitive Therapy

(JohnTeasdale, Zindel Segal, Mark Williams et. al 2000; 2017)

=

MBI – Mindfulness-based intervention

(Gotink 2015, 2017; Young 2015; Sundquist J. 2015,2017 ; Norman J., et. al. 2017)



Aktuella forskningsresultat om signifikanta effekter av MBI inom hälso- och sjukvård

Systematisk forsknings översikt och metaanalys – 115 RCT och 8683 pat.

- Depressiva symtom
- Ångest
- Stress
- Livskvalitet
- Fysiskfunktion
- Prevention hos friska vuxna och barn

(Gotink RA et al. 2015)



Aktuella forskningsresultat med Här & Nu-programmet som intervention i randomiserade och kontrollerade studier (RCT:s)

Sundquist Jan och medarbetare genomförde en studie på 16 vårdcentraler i Skåne och jämförde effekten av att träna enligt Här&Nu-programmet i grupp med traditionell vård, främst individuell kognitiv beteende terapi (KBT) och kunde visa att det var ingen skillnad mellan grupperna, dvs Här&Nu-programmet var lika effektivt som KBT för att behandla tillstånd av depression och ångest (2015) och även i att lindra en hel rad psykiatriska och stressrelaterade symtom (2017)

(Sundquist J., et al 2015; 2017)

Kenne Sarenmalm Elisabeth och medarbetare genomförde en "3-armad" RCT på psykologiska och biologiska MBI effekter för kvinnor med bröstcancer. Resultaten visade att deltagare som lärt sig och tränat 8 v med Här & Nu-programmet kände sig mindre deprimerade, mådde bättre, kunde hantera sin sjukdom bättre, upplevde en ökad känsla av sammanhang och mening i livet och de fick även förbättrat immunsvär jämfört med kontrollgruppen. Allra bäst mådde de som tränat i grupp med instruktör, bättre blev även patienter som tränat på egen hand med "Här & Nu", jämfört med kontrollgruppens deltagare.

(Kenne Sarenmalm E., et al 2017)



Doktorandprojektets SYFTE

Att utforska genomförbarhet och effekter av träning i medveten närvaro på symtom och tecken, hälsa och välbefinnande hos stabila patienter med kronisk hjärtsvikt i öppenvård



Vilka fick vara med?

- Diagnostiserad hjärtsvikt
- NYHA-funktionsklass II-IV
- Symtom av andfåddhet och/eller trötthet
- Stabil fas – ingen försämring av symtom eller nystartad hjärtsviktsmedicin senaste 4 v
- Optimal medicinskbehandling enligt riktlinjer



Vilka fick inte vara med?

- Psykisksjukdom (behandlingskrävande psykiatrisk diagnos ex. depression)
- Allvarligt missbruk (dokumenterat i journal)
- Allvarlig somatisk sjukdom (med kort förväntad överlevnad eg. cancer)
- Kommunikationssvårigheter (nedsatt syn, hörsel eller tolkbehov svenska)
- Kognitiva eller följsamhetssvårigheter (dokumenterat i journal)
- Instabil angina
- Post-partum Kardiomyopati
- Ovilja att delta eller medverkan i annan studie (RCT)



Studiedesign och datainsamling

- Prospektiv och kontrollerad pilotstudie genomfördes i två faser: 2010-2011, 2013 med före och eftermätning
- Datainsamling med validerade mätinstrument, fysiologiska mätningar (AF, BT, P, BMI, + 6-min gångtest 2013) intervjuer och träningsdagböcker



Description of the weekly teams and formal training and homework in the 8-week MBI program

Table 1 Description of the weekly teams and formal training and homework in the 8-week MBI program

Period	Team of the week	Formal training and homework
Week 1	LEAVE AUTO PILOT – feel your body	Body scanning, guided on CD track 1
Week 2	OBSERVE YOUR BREATHING – train your breathing anchor	Breathing anchor, guided on CD track 2
Week 3	BE PRESENT IN BREATHING AND BODY MOMENT	Breathing space, guided on CD track 3 + Mindful yoga (sitting position), guided on CD track 4
Week 4	JUST SIT – here and now	Sitting Meditation, guided on CD track 5
Week 5	ACCEPT AND LETTING GO Walking meditation additional at group session	Sitting Meditation + Breathing space Stop-Observe-Accept → (Solve) or Letting go
Week 6	DEALING WITH DIFFICULTIES Love and kindness meditation additional at group session	Sitting meditation + Breathing space dealing with difficulties
Week 7	THOUGHTS ARE NO FACTS – taking care of yourself in the best way	Building your own training program Body scanning/Mindful yoga/Sitting meditation +Breathing anchor/Breathing space (free choice) guided on CD track 1–5. Confirm and consolidate your own mindfulness workout practice
Week 8	ACCEPT AND CHANGE – HERE & NOW – possibilities and the future mindfulness workout perspectives	Practice/develop your own program Body scanning/Mindful yoga/Sitting meditation +Breathing anchor/Breathing space (free choice) guided on CD track 1–5. Confirm and consolidate your own mindfulness workout practice

MBI, Mindfulness-based intervention; CD, compact disc



Article

Effects of a mindfulness-based intervention on symptoms and signs in chronic heart failure: A feasibility study

Jonna Norman^{1,2}, Michael Fu³, Inger Ekman^{1,2}, Lena Björck^{1,3}
and Kristin Falk^{1,2}

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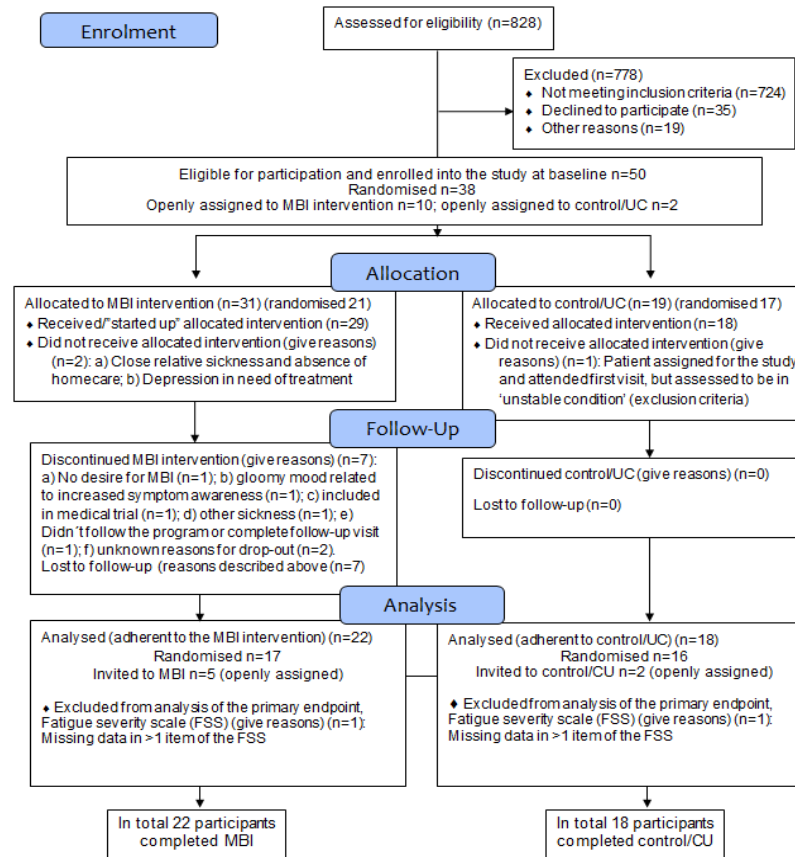


Abstract

Aims: Despite treatment recommended by guidelines, many patients with chronic heart failure remain symptomatic. Evidence is accumulating that mindfulness-based interventions (MBIs) have beneficial psychological and physiological effects. The aim of this study was to explore the feasibility of MBI on symptoms and signs in patients with chronic heart failure in outpatient clinical settings.

Methods: A prospective feasibility study. Fifty stable but symptomatic patients with chronic heart failure, despite

FLOW DIAGRAM for the feasibility study MBI-CHF





Deltagare

- Totalt inkluderades 50 patienter i studien och av dem var det
- 40 deltagare (17 kvinnor), medianålder 76 år, NYHA-klass II-III, som fullföljde studien
- MBI $n=22$ och kontroll $n=18$
- Ingen skillnad mellan grupperna avseende karaktäristiska vid *baseline*:
- Samsjuklighet:
 - Drygt hälften hade även hjärt- och kärlsjukdom
 - Högt blodtryck och/eller förmaksflimmer (2/5)
 - Klaffsjukdom, kardiomyopati och diabetes (1/4)
 - Njursvikt (1/10)
 - Obstruktiv sömnapné hade 4 patienter fått diagnostiserat
- Symtom: Vanligast förekommande symtomen andfåddhet (95%) och trötthet (92%) följt av ostadighet/yrsel (82%)
- Läkemedel: ACE/ARB (92%); B-blockerare (98%); MRA (48%); diuretika (50%)
(enligt gällande riktlinjer vid studiens genomförande)



Resultat

- **Minskade besvär av trötthet (effektmått -8.0; $p=0.0165$)**
- **Minskade besvär yrsel/ostadighet ($p=0.0390$)**
- **Förbättrad fysisk funktion (NYHA-klass) ($p=0.0087$)**
- **Inga negativa sidoeffekter observerades**
- **God genomförbarhet – med aktiva deltagare som träffades och lärde i grupp på klinik och tränade självständigt hemma**

Table 4. MBI effects on median sum-change in outcome variables at 10 weeks compared with baseline in control group versus MBI group participants who completed the study

Table 4. MBI effects on median sum-changes in outcome variables at 10 weeks compared with baseline, in control group versus MBI group participants who completed the study.

Outcome variables sum-change median (range)	Control group n=18	MBI group n=22	Z-score (p value)
FSS ^a	0.0 (-16.0, 11.0)	-8.0 (-20.0, 12.0)	-2.513 (0.0165)
KSQ-sqi	0.5 (-4.0, 4.0)	0.0 (-7.0, 9.0)	0.428 (0.672)
Unsteadiness/dizziness ^{b,c}	0.0 (-10.0, 9.0)	0.0 (-6.0, 0.0)	-2.138 (0.039)
Breathlessness ^d	0.0 (-1.0, 1.0)	0.0 (-1.0, 1.0)	-1.578 (0.123)
Tiredness ^d	0.0 (-1.0, 2.0)	0.0 (-2.0, 1.0)	-0.787 (0.436)
NYHA class	0.0 (-1.0, 2.0)	0.0 (-2.0, 0.0)	-2.762 (0.0087)
6MWT, completed walking distance, m ^e	-4.0 (-102.0, 70.0)	25.8 (-49.0, 91.5)	1.647 (0.112)
Heart rate, beats/min	0.0 (-20.0, 35.0)	-2.0 (-21.0, 16.0)	-1.076 (0.289)
Respiratory rate, breaths/min	0.0 (-4.0, 6.0)	0.0 (-9.0, 6.0)	-0.589 (0.559)

^an=2 missing, due to missing data in >1 item in the FSS (control, n=1; MBI, n=1).

^bn=1 missing, due to missing data in >1 item (control, n=0; MBI, n=1).

^cSymptom degree patient self-rated on 11-point scale (0–10).

^dSymptom degree patient self-rated on five-point scale (1–5).

^en=14 missing, due to participants completed the study in 2010 to 2011 (control, n=6; MBI, n=8) not tested.

MBI: mindfulness-based intervention; FSS: Fatigue severity scale; KSQ-sqi: Karolinska Sleep Questionnaire sleep quality index; NYHA class: New York Heart Association functional classification; 6MWT: six-minute walk test.



Begränsningar och styrkor med studien

Studien har flera begränsningar varav de viktigaste är:

- Genomfördes på bara ett forskningscenter
- Relativt liten grupp av patienter
- Kort uppföljningstid
- Karaktären på studien gjorde det inte möjligt "att blinda" interventionen

Studiens styrkor är å andra sidan:

- En välbeskriven och representativ hjärtsviktspopulation med verifierad diagnos
- Väldefinierad samsjuklighet och symtombedömning och medianålder 76 år
- Systematisk applicering av den mindfulness-baserade interventionen på ett i huvudsak randomiserat och kontrollerat sätt, även om inte alla deltagare randomiserades verkade grupperna jämförbara vid studiestart ("pat.krakteristika")
- Frågeformulären FSS och KSQ besvarades i hemmet och skickades till universitetet
- Instruktorsutbildningen och MBI-programmet är strukturerat, praktiskt & tillgängligt för hjärtsviktssjuksköterskor, såväl som andra professionella: kuratorer, psykologer, sjukgymnaster/fysioterapeuter och arbetsterapeuter (personlig lämplighet viktigast)

Studie med en Web-baserad mindfulness intervention vid hjärtsjukdom och uppföljning efter 3 och 12 mån

(Younge J., et al 2015; Gotink R., et al 2017)



RESEARCH ARTICLE

Web-Based Mindfulness Intervention in Heart Disease: A Randomized Controlled Trial

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Abstract

Background

Evidence is accumulating that mindfulness training has favorable effects on psychological outcomes, but studies on physiological outcomes are limited. Patients with heart disease have a high incidence of physiological and psychological problems and may benefit from mindfulness training. Our aim was to determine the beneficial physiological and psychological effects of online mindfulness training in patients with heart disease.

Methods

The study was a pragmatic randomized controlled single-blind trial. Between June 2012 and April 2014 we randomized 324 patients (mean age 43.2 years, 53.7% male) with heart disease in a 2:1 ratio (n = 215 versus n = 109) to a 12-week online mindfulness training in addition to usual care (UC) compared to UC alone. The primary outcome was exercise capacity measured with the 6 minute walk test (6MWT). Secondary outcomes were other physiological



RESEARCH ARTICLE

Online mindfulness as a promising method to improve exercise capacity in heart disease: 12-month follow-up of a randomized controlled trial

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Abstract

There is increasing evidence that mindfulness can reduce stress, and thereby affect other psychological and physiological outcomes as well. Earlier, we reported the direct 3-month results of an online modified mindfulness-based stress reduction training in patients with heart disease, and now we evaluate the effect at 12-month follow-up. 324 patients (mean age 43.2 years, 53.7% male) were randomized in a 2:1 ratio to additional 3-month online mindfulness training or to usual care alone. The primary outcome was exercise capacity measured with the 6 minute walk test (6MWT). Secondary outcomes were blood pressure, heart rate, respiratory rate, NT-proBNP, cortisol levels (scalp hair sample), mental and physical functioning (SF-36), anxiety and depression (HADS), perceived stress (PSS), and social support (PSSS12). Differences between groups on the repeated outcome measures were analyzed with linear mixed models. **At 12-months follow-up, participants showed a trend significant improvement exercise capacity (6MWT: 17.9 meters, p = 0.055) compared to UC.** Cohen's D showed significant but small improvement on exercise capacity (d = 0.22; 95%CI 0.05 to 0.39), systolic blood pressure (d = 0.19; 95%CI 0.03 to 0.36), mental functioning (d =



Studie med Web-baserad MBI vid hjärtsjukdom och uppföljning efter 3 respektive 12 månader

En Holländsk forskargrupp i samarbete med forskare från Boston, USA kunde påvisa lovande positiva resultat för yngre hjärtsjuka patienter med en 12-veckors Web-baserad mindfulness intervention

- 3 månader MBI-gruppen
 - Längre gångsträcka 6 MWT (13.2 m; $p=0.05$)
 - Lägre hjärtfrekvens (-2,8, 95%CI: -5,4; -0,02, $p=0,033$)
(Younge J., et al 2015)
- 12 månader gick deltagare i MBI-gruppen
 - Ännu lite bättre (17.9 m; $p=0.055$) jämfört med kontrollgruppen.
(Gotink R., et al 2017)



The Support, Education, and Research in Chronic Heart Failure Study (SEARCH): A mindfulness-based psychoeducational intervention improves depression and clinical symptoms in patients with chronic heart failure

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- Prospektiv studie där deltagarna geografiskt tilldelades sin studiegrupp
- EF ≤ 40 % - Uppföljning: efter 3, 6 och 12 månader
- Intervention: Mindfulness-baserad psykologisk utbildning
 - Mindfulness-baserad meditation - MBSR
 - Förmågor att hantera psykologiska svårigheter
 - **Stödgruppsdiskussioner**
 - + **Närstående bjöds in att delta (33 %)**

Deltagare: 208 patienter, medelålder 61 år, medel EF: 26 %

Resultat: MBI-gruppen

- Ångest ↓
- Depression ↓
- Symtom ↓ 12 mån (KCCQ) (Sullivan M.J. et al 2009)



Fallbeskrivning

Henrik 68 år



Mätinstrument för mätning av psykologiska effekter

HADS - 14 items

HADS-A: Anxiety subscale

HADS-D: Depression subscale

Hospital anxiety and depression scale

- Normal, (0-7)
- Doubtful borderline cases, (8-10)
- Definite cases, (11-21)

PGWB - 22 items

Psychological and general wellbeing

- Positive well-being, (95-132)
- Moderate distress, (83-94)
- Severe distress

SOC-13 - 13 items

Sense of coherence

- High sense of coherence, (76-91)
- Moderate sense of coherence, (61-75)
- Low sense of coherence, (30-60)

SF-36 GH – 5 items

Short form health survey – General health index



Fallbeskrivning

Anna 61 år



Det finns klara samband mellan stress och utveckling av hjärtkärlsjukdom

(Tawakol Ahmed; et al, the Lancet 2017)

Relation between resting amygdalar activity and cardiovascular events: a longitudinal and cohort study



Ahmed Tawakol*, Amorina Ishai*, Richard AP Takx, Amparo L Figueroa, Abdelrahman Ali, Yannick Kaiser, Quynh A Truong, Chloe JE Solomon, Claudia Calcagno, Venkatesh Mani, Cheuk Y Tang, Willem JM Mulder, James W Murrough, Udo Hoffmann, Matthias Nahrendorf, Lisa M Shin, Zahi A Fayad†, Roger K Pitman†

Summary

Background Emotional stress is associated with increased risk of cardiovascular disease. We imaged the amygdala, a brain region involved in stress, to determine whether its resting metabolic activity predicts risk of subsequent cardiovascular events.

Methods Individuals aged 30 years or older without known cardiovascular disease or active cancer disorders, who underwent ¹⁸F-fluorodeoxyglucose PET/CT at Massachusetts General Hospital (Boston, MA, USA) between Jan 1, 2005, and Dec 31, 2008, were studied longitudinally. Amygdalar activity, bone-marrow activity, and arterial inflammation were assessed with validated methods. In a separate cross-sectional study we analysed the relation between perceived stress, amygdalar activity, arterial inflammation, and C-reactive protein. Image analyses and cardiovascular disease event adjudication were done by mutually blinded researchers. Relations between amygdalar activity and cardiovascular disease events were assessed with Cox models, log-rank tests, and mediation (path) analyses.

Findings 293 patients (median age 55 years [IQR 45–65·5]) were included in the longitudinal study, 22 of whom had a cardiovascular disease event during median follow-up of 3·7 years (IQR 2·7–4·8). Amygdalar activity was associated with increased bone-marrow activity ($r=0\cdot47$; $p<0\cdot0001$), arterial inflammation ($r=0\cdot49$; $p<0\cdot0001$), and risk of cardiovascular disease events (standardised hazard ratio 1·59, 95% CI 1·27–1·98; $p<0\cdot0001$), a finding that remained significant after multivariate adjustments. The association between amygdalar activity and cardiovascular disease events seemed to be mediated by increased bone-marrow activity and arterial inflammation in series. In the separate cross-sectional study of patients who underwent psychometric analysis ($n=13$), amygdalar activity was significantly associated with arterial inflammation ($r=0\cdot70$; $p=0\cdot0083$). Perceived stress was associated with amygdalar activity ($r=0\cdot56$; $p=0\cdot0485$), arterial inflammation ($r=0\cdot59$; $p=0\cdot0345$), and C-reactive protein ($r=0\cdot83$; $p=0\cdot0210$).

Interpretation In this first study to link regional brain activity to subsequent cardiovascular disease, amygdalar activity independently and robustly predicted cardiovascular disease events. Amygdalar activity is involved partly via a path that includes increased bone-marrow activity and arterial inflammation. These findings provide novel insights into the mechanism through which emotional stressors can lead to cardiovascular disease in human beings.

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Det har börjat komma studier som visar fysiologiska effekter av träning i medveten närvaro (kroppskänning) som torde vara gynnsamma för människor med hypertoni och/eller hjärtsvikt

May, W. R., et al 2016



Understanding the physiology of mindfulness: aortic hemodynamics and heart rate variability

Ross W. May, Mandy Bamber, Gregory S. Seibert, Marcos A. Sanchez-Gonzalez, Joseph T. Leonard, Rebecca A. Salsbury & Frank D. Fincham

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To link to this article: <http://dx.doi.org/10.3109/10253890.2016.1146669>



Nyligen har forskare inom ramen för en stor befolknings-baserad studie kunnat visa på positiva mätbara effekter i hjärnan av att träna meditation och yoga (Gotink R.A et. al 2018)

Brain Imaging and Behavior
<https://doi.org/10.1007/s11682-018-9826-z>

ORIGINAL RESEARCH



Meditation and yoga practice are associated with smaller right amygdala volume: the Rotterdam study

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Abstract

To determine the association between meditation and yoga practice, experienced stress, and amygdala and hippocampal volume in a large population-based study. This study was embedded within the population-based Rotterdam Study and included 3742 participants for cross-sectional association. Participants filled out a questionnaire assessing meditation practice, yoga practice, and experienced stress, and underwent a magnetic resonance scan of the brain. 2397 participants underwent multiple brain scans, and were assessed for structural change over time. Amygdala and hippocampal volumes were regions of interest, as these are structures that may be affected by meditation. Multivariable linear regression analysis and mixed linear models were performed adjusted for age, sex, educational level, intracranial volume, cardiovascular risk, anxiety, depression and stress. 15.7% of individuals participated in at least one form of practice. Those who performed meditation and yoga practices reported significantly more stress (mean difference 0.2 on a 1–5 scale, $p < .001$) and more depressive symptoms (mean difference 1.03 on CESD, $p = .015$). Partaking in meditation and yoga practices was associated with a significantly lower right amygdala volume ($\beta = -31.8 \text{ mm}^3$, $p = .005$), and lower left hippocampus volume ($\beta = -75.3 \text{ mm}^3$, $p = .025$). Repeated measurements using linear mixed models showed a significant effect over time on the right amygdala of practicing meditation and yoga ($\beta = -24.4 \text{ mm}^3$, SE 11.3, $p = .031$). Partaking in meditation and yoga practice is associated with more experienced stress while it also helps cope with stress, and is associated with smaller right amygdala volume.

Keywords Cohort · Meditation and yoga · Neuroimaging · Population · Stress reduction



MBI som NY hälsobefrämjande psykologiska livsstilsfaktor som potentiellt kan skydda mot/förebygga hjärtkärlsjukdom

Eric B. Loucks, 2015

Curr Cardiol Rep (2015) 17:112
DOI 10.1007/s11886-015-0668-7



PSYCHOLOGICAL ASPECTS OF CARDIOVASCULAR DISEASES (A STEPTOE, SECTION EDITOR)

Mindfulness and Cardiovascular Disease Risk: State of the Evidence, Plausible Mechanisms, and Theoretical Framework

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AHA Scientific statement Meditation and Cardiovascular Risk Reduction - 2017

AHA SCIENTIFIC STATEMENT



Meditation and Cardiovascular Risk Reduction A Scientific Statement From the American Heart Association

Glenn N. Levine, MD, FAHA, Chair; Richard A. Lange, MD, MBA, FAHA, Vice Chair; C. Noel Bairey-Merz, MD, FAHA; Richard J. Davidson, PhD; Kenneth Jamerson, MD, FAHA; Puja K. Mehta, MD, FAHA; Erin D. Michos, MD, MHS, FAHA; Keith Norris, MD; Indranil Basu Ray, MD; Karen L. Saban, PhD, RN, APRN, CNRN, FAHA; Tina Shah, MD; Richard Stein, MD; Sidney C. Smith, Jr, MD, FAHA; on behalf of the American Heart Association Council on Clinical Cardiology; Council on Cardiovascular and Stroke Nursing; and Council on Hypertension

Abstract—Despite numerous advances in the prevention and treatment of atherosclerosis, cardiovascular disease remains a leading cause of morbidity and mortality. Novel and inexpensive interventions that can contribute to the primary and secondary prevention of cardiovascular disease are of interest. Numerous studies have reported on the benefits of meditation. Meditation instruction and practice is widely accessible and inexpensive and may thus be a potential attractive cost-effective adjunct to more traditional medical therapies. Accordingly, this American Heart Association scientific statement systematically reviewed the data on the potential benefits of meditation on cardiovascular risk. Neurophysiological and neuroanatomical studies demonstrate that meditation can have long-standing effects on the brain, which provide some biological plausibility for beneficial consequences on the physiological basal state and on cardiovascular risk. Studies of the effects of meditation on cardiovascular risk have included those investigating physiological response to stress, smoking cessation, blood pressure reduction, insulin resistance and metabolic syndrome, endothelial function, inducible myocardial ischemia, and primary and secondary prevention of cardiovascular disease. Overall, studies of meditation suggest a possible benefit on cardiovascular risk, although the overall quality and, in some cases, quantity of study data are modest. **Given the low costs and low risks of this intervention, meditation may be considered as an adjunct to guideline-directed cardiovascular risk reduction by those interested in this lifestyle modification, with the understanding that the benefits of such intervention remain to be better established.** Further research on meditation and cardiovascular risk is warranted. Such studies, to the degree possible, should utilize randomized study design, be adequately powered to meet the primary study outcome, strive to achieve low drop-out rates, include long-term follow-up, and be performed by those without inherent bias in outcome. (*J Am Heart Assoc.* 2017;6:e002218. DOI: 10.1161/JAHA.117.002218.)

Key Words: AHA Scientific Statements • cardiovascular disease • cardiovascular risk • meditation • primary prevention • secondary prevention



Potentiell NYTTA av meditation på kardiovaskulär risk

- **Neurofysiologiska och Neuroanatomiska studier** visar att meditation har:
 - Långvariga effekter på hjärnan som biologiskt kan vara viktiga för CVD risk
- **Inkluderat studier om meditativa effekter på**
 - psykologiska effekter på stress
 - Rökstopp
 - Blodtryck
 - Insulinresistens och metabola syndrom
 - Endotelfunktion
 - Inducerbar myokardischemi
 - Primär och sekundärprevention av kardiovaskulär sjukdom

(AHA Scientific statement 2017)



Potentiell NYTTA av meditation på kardiovaskulär risk

Övergripande resultat:

- Studier på meditation indikerar möjliga positiva effekter på kardiovaskulär risk
- Men övergripande kvalitet, och ibland kvantitet av studier, är blygsam
- Men med tanke på den låga kostnaden och låga risken R/T interventionerna
- Meditation kan övervägas som ett tillägg till konventionell behandling enligt riktlinjer för de patienter som är intresserade i den här typen av träning/ livsstilsförändring, ...

med förståelse för att nyttan av meditation behöver etableras ytterligare
Det är motiverat med fler studier på meditation och kardiovaskulär risk

(AHA Scientific Statement 2017)



Välgrundade hypoteser kring möjliga nyttoeffekter av Mindfulness-baserade interventioner – MBI – CVD

Gabriel Zieff , Medical hypotheses 2017

Medical Hypotheses 108 (2017) 57–62



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Ancient roots – Modern applications: Mindfulness as a novel intervention for cardiovascular disease



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ABSTRACT

Cardiovascular disease (CVD) has been associated with chronic psychological stress. Unremittent psychological stress causes dysregulation of the sympathetic nervous system (SNS) and hypothalamic–pituitary–adrenal (HPA) axis, which collectively promotes inflammation, atherosclerosis, and subsequent CVD risk. Stress reduction techniques, such as mindfulness meditation, have been shown to improve some markers of HPA and SNS function at rest and in response to acute stressors, suggesting that such techniques, over time, may be cardioprotective. Therefore, it may be hypothesized that eight weeks of daily mindfulness meditation, compared to a non-mindful relaxation control, may provide a novel strategy to buffer stress responses in healthy and at-risk populations, thereby lowering the risk of chronic psychological stress and the associated CVD risk as measured by arterial stiffness. The current paper outlines methodological considerations for testing this hypothesis, including appropriate acute stressors, and measurement of SNS, HPA axis and cardiovascular function. If the hypothesis is correct, mindfulness meditation would complement healthy lifestyle techniques such as exercise and diet to prevent CVD risk.

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Mindfulness instruktörsutbildning – Steg 1

- Introduktions dag
- Starta upp egen träning i medveten närvaro
- 4 utbildningsdagar uppdelat på två tillfällen
- Examination med diplomering
- Utbildningen omfattar totalt 6 kursdagar

Mfc

www.mindfulnesscenter.se



KONKLUSION: Förvånansvärt få studier!!!

Mindfulness potentiellt till nytta även vid hjärtsjukdom

- Kan lindra symtom av trötthet vid hjärtsvikt
- Innebär låg risk, fungerar kliniskt och hemma för personer som vill träna

Hälso- och sjukvård:

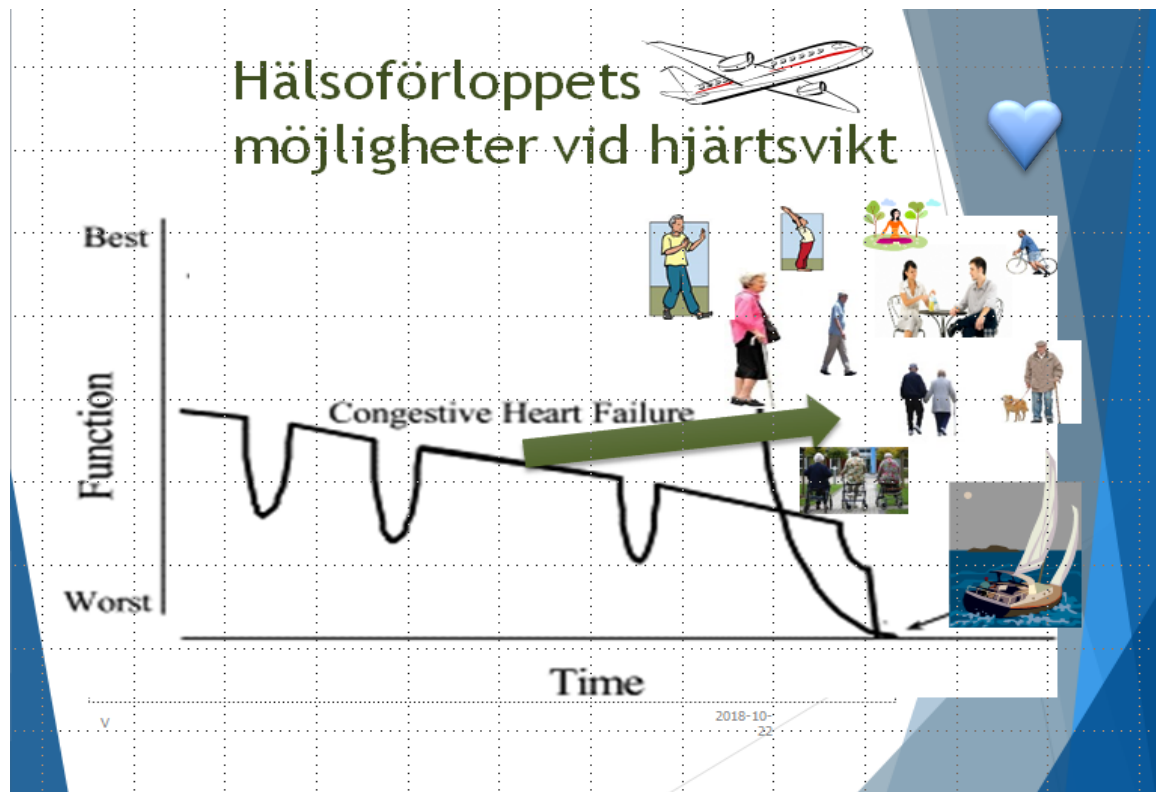
- Minska ångest och depression
- Minska stress
- Förbättra livskvalitet och fysisk funktion

Hypotetiskt:

- Är mindfulness meditation till nytta vid hjärtsjukdom - fysiologisk stress ↓
- Ett verktyg till symtomhantering och hälsofrämjande levnadsvanor, fungera som komplement till andra friskfaktorer, ex fysisk träning och kost

**Vi behöver: Forskningsmedel till flera studier både
 RCT:er med aktiva kontroller och kvalitativa**

Det är visst möjligt med GLÄDJE och FRIHET vid hjärtsvikt med träning i medveten närvaro





Molnen skingra sig och solen kom fram igen TACK FÖR ER UPPMÄRKSAMHET



Jonna Norman E-post: jonna.t.norman@gmail.com