

Incorporating Mindfulness into the Rehabilitation Setting

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**North Carolina Cardiopulmonary Rehabilitation Association-
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CENTERING

Take a moment to pause...



What do you notice?



Incorporating Mindfulness in the Cardiopulmonary Rehabilitation Setting

Agenda

- Center
- Stress Defined
- Stress Response Cycle / Chronic Stress
- Mindfulness Defined
- Outcomes of practices: physical, psychological, emotional
- Stress management techniques via Mind, Body, Heart
- Case studies / Examples
- Impact of mindfulness in patient care

Challenges

Changes

Demands



STRESS:

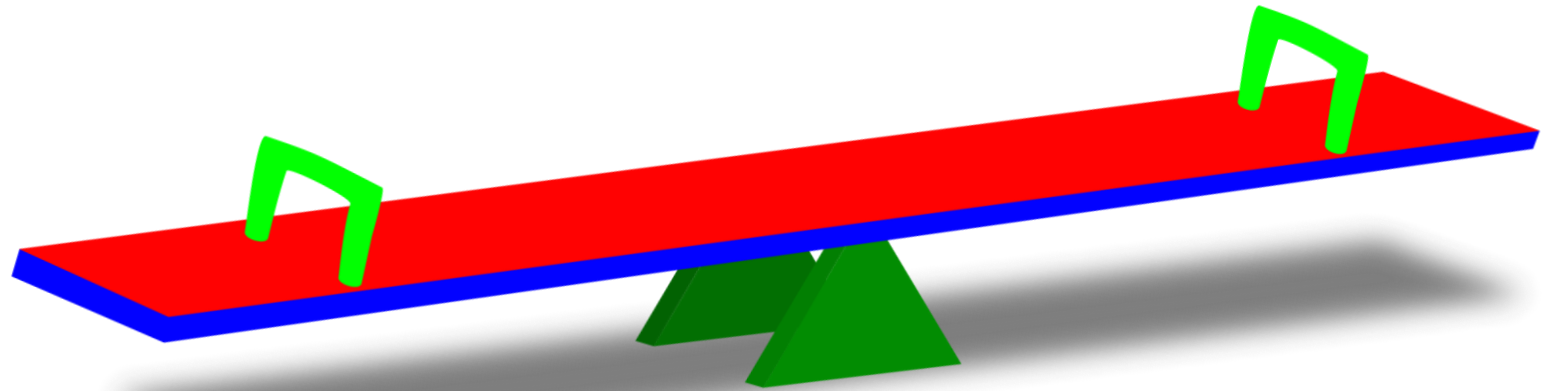
Internal and External

External Stressors

- Weather
- Traffic
- Work demands
- Family demands

Internal Stressors

- Decisions
- Frustration
- Worry
- Overwhelm
- Imposter Syndrome



STRESS RESPONSE CYCLE

DISRUPTS BODY'S PROCESSES in order to **PROTECT!**

STRESSOR HAPPENS



alamus sets off alarm

Activation of “fight or flight” stress response:

Release stress hormones: including adrenaline, epinephrine, and cortisol

Increase heart rate and blood pressure

Constriction of coronary blood vessels

Increase glucose (sugar) into bloodstream for energy

Increased oxygen demand on the body

Curbs non-essential functions: growth processes, immune system, digestive function, reproductive system

CHRONIC STRESS CAN LEAD TO DISEASE

- Hormone levels can increase blood cholesterol, triglycerides, blood sugar, and blood pressure.
- Promotes the buildup of plaque deposits in the arteries due to endothelial dysfunction.
- Decrease blood flow to the heart muscle.
- As inflammatory cytokines increase greater stress on immune function.
- Increases blood viscosity and increases the risk of stroke.
- Increased risk of arrhythmia including ventricular tachycardia, ventricular fibrillation, and atrial fibrillation due to electrical instability.

CHRONIC STRESS- PSYCHOSOCIAL SIDE

Depression, anxiety,
Overwhelm, fear, and
grief...

Lack of sleep,
inactivity, isolation

Headaches, GI issues

Negative Coping Skills:

Alcohol and/or
substance abuse,
unhealthy eating

Greater depression,
anxiety

Overwhelm, fear, and
grief, more isolation

Serious
Health
Problems:

Heart
Disease,
Diabetes,
Stroke,
Cancer, &
more..



Mindfulness:

Awareness that arises through paying attention, on purpose, in the present moment without judgment and with acceptance of the experience. -Jon Kabat-Zinn, PhD

Two Key Components of Mindfulness:

- **Maintaining attention on the immediate experience**
- **Maintaining an attitude of acceptance toward this experience**



Benefits of Stress Management: Body, Mind, and Heart



PHYSICAL BODY

- Decrease muscle tension
- Decrease pain
- Decrease headaches
- Increase flexibility and strength
- Improved sleep
- Decreased chest pains



MIND

- Creation of new neural pathways
- Develop greater compassion / happiness
- Decrease hostility, anxiety and depression
- Create more calm, focus, peace of mind, concentration, and clarity
- Become more responsive vs. reactive: “longer fuse”
- Improved sleep



HEART AND LUNGS

- Decrease heart rate & respiration rate
- Lowers oxygen consumption therefore, workload of the heart is reduced & increased hemoglobin
- Increases lung capacity
- Decreases oxygen demand
- Reduces blood pressure and cholesterol levels
- Greater potential for reversal of heart disease

Just as there are different ways into your house, there are different ways into the present moment. Your choice.



Stress Management Techniques / Tools

WAYS TO COMPLETE THE STRESS RESPONSE CYCLE

- **Meditation: Informal and Formal**
- **Grounding**
- **Breathing Techniques**
- **Stretching/Postures (yoga) with the breath**
- **Gratitude**
- **Body Scan**
- **Imagery: INDIRECT AND DIRECT**
- **Mantras / Positive Affirmations**
- **Relaxation**
- **Tracking**

Stress Management Training / Mindfulness Methods

ICR Model:

- Relaxation Techniques
- Breathing Techniques
- Imagery
- Stretching with the breath / Yoga postures
- Meditation

+ Group Support
1 hour 2X per week

C.O.R.E. Model:

- Same elements as ICR

30 minutes 1-2X per week

+ Group Support 1X per month

Other Models:

- MBSR
- Cognitive Restructuring
- Communication Skills
- Problem Solving
- TM

- Offered 1X month or week

PERCEIVED STRESS SCALE SCORES PRE / POST

COHORT	PRE	POST	DIFFERENCE
11	137	93	44
12	167	140	27
13	97	80	17
14	152	128	24
15	124	99	25
16	200	132	68
17	113	86	27
18	145	98	47
19	84	73	11

Case Study- “Cindy”

C.O.R.E. Patient

**PRE- WALKING: HR
(MINDFULNESS TOOL)**

HR

118-124

**POST-WALKING: HR
(MINDFULNESS TOOL)**

HR

102-110

What Does the Research Say?

STUDY	OUTCOME
1973- Benson & Wallace at Harvard Univ. meditation w/ healthy individuals	Decrease in body's O2 consumption Blood lactate levels dropped (anxiety) Increase in beat-endorphins (calm) Decreases in BP 146/93 to 137/88.9 (not during) Slow brain waves
<i>Retardation of coronary atherosclerosis with yoga lifestyle intervention.</i>	Fewer anginal episode Improved exercise capacity Weight loss Reductions in total Cholesterol, LDL, triglycerides Revascularization treatments less in yoga group 1:8 Coronary angiography less lesions progressed; more regressed

Dr. Dean Ornish Program for Reversing Heart Disease



Mindfulness in Patient Care

Mindfulness techniques help medical professionals deal with the demands of the profession.

- Door Handle: Pause and Breathe
- Mindfulness on the Go
- Labeling thoughts and feelings
- Find Your Feet
- Make Ordinary Tasks Extraordinary
- Body Scan
- Mirror Neurons

Disclaimer

This presentation is informational only. It does not constitute legal or professional advice.

You are encouraged to consult with professionals if you have specific questions relating to any of the topics covered in this presentation.

There are no disclosures or conflicts of interest to report.

Thank You.

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**Intensive Cardiac Rehab and C.O.R.E.
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