

# The Mind Body Connection of Heart Care

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## The “big three” of Psycho-Cardiac Rehabilitation

- Negative psychological and social effects of myocardial infarction can be evident up to 7 years after the event.
- Cardiac rehabilitation must include the “big three”:
  1. Modification of risk behaviors
  2. Reduction of anxiety and depression
  3. Skills in managing stress and anger including the use of relaxation technique

Langosch, Wolfgang (1994), Irish Journal of Psychology, vol.15 (1), 84-95.

Coping with a Heart Attack

- In a substantial number of heart attack survivors, quality of life after discharge from CCU was less than “optimal.”
  - When you try to rehabilitate heart attack patients, their anxiety and depression pose a greater problem than does the severity of their heart disease.
  - Most commonly reported problems:
    1. Anxiety about their illness
    2. Problems and worries re. Present functioning
    3. Concerns about future and the quality of relationships
- \*Identify at-risk individuals as early as possible for optimal rehabilitation

Sykes, Donald H. (1994), Journal of Irish Psychology, Vol. 15 (1), 54-66.

## Life-Style Changes and Heart

- Heart disease can be halted or even reversed by Dr. Ornish's program.
- This program, among others, emphasizes the following:
  - Life style changes
  - Changes in one's emotional responses
  - Managing stress better in every-day situations
- 1 year follow up: most reported cessation of chest pains
- 4 to 5 year follow up: 8% reported improvement in their coronary artery blockages while 28% in control group experienced worsening.

Source:

Dean Ornish (1990) "Reversing the Heart Disease," Ballantine Books, New York, N.Y.

Hope and heart Connection

Subjects: 942 middle ages male heart patients

A four-year follow up

- Measures:
  1. Ultra-sound readings of narrowing of the arteries
  2. Feelings of hopelessness
- Results:
  - Those who reported lower levels of hopelessness had 20% less narrowing of the arteries compared to the ones with higher levels of hopelessness

Source: American Heart Association's August 1997, Journal of Arteriosclerosis, Thrombosis, and Vascular Biology.

(Positive)

Heart

Stress Management Reduces Cardiac Risk

- 107 heart patients in 3 groups, a standard care group, exercise group, and a stress management group.
- Follow-ups 2 to 5 years
- Measures: incidence of heart attacks, by-pass surgery, and angioplasty

Source: Mindbody Health Newsletter 4, 1997 Reducing Stress Reduces Heart Disease

Stress Management reduced cardiac risk by 75%

- Weekly group sessions
- Educational info on heart disease and stress
- Muscle relaxation and biofeedback
- Monitoring the automatic irrational thoughts
- Positive interpretation of a situation
- Recognizing signs of stress
- Managing anger, anxiety, and depression

Source: Mindbody Health Newsletter 4, 1997 Reducing Stress  
Reduces Heart Disease

Faith and Heart

- Subjects: 232 patients 55 years and older who had open heart surgery

Observations 1:

- Those who derive some strength and comfort from their religious faith were three times more likely to survive than those who don't

Observations 2:

- Those who were strong in faith and also took part in a n organized community group (e.g. church group, local govt., club) had ten times higher survival rate than those who didn't.

Source: Thomas Oxman at Dartmouth Medical School in New Hampshire.

Comments:

1. Deriving support and comfort from faith was more beneficial than simply attending church.
2. Participation in an organized community group was more beneficial than just visiting friends and relatives.

Prayer and Heart

- D. Randolph Byrd, heart specialist S.F. General hospital
- 400 patients admitted to cardiac intensive care
- Double blind study
- Control group received regular medical care
- Prayer group received prayer and medical care
- In the prayed group
  - Lower incidence of congestive heart failure and pulmonary edema
  - 5 times less usage of antibiotics
  - Fewer patients used ventilator
  - Fewer patients developed pneumonia
  - Fewer patients had cardiac arrests

All results were statistically significant

Comment: 132 studies on prayer's positive effects as per Larry  
Dossey

Immune Function

- Immune function is supported by:
  - Will to live
  - Connectedness
  - Experience of joy/pleasure
  - Ordinary happy events (e.g. a visit by a friend)
  - Contentedness
  - Positive self-image, “I’m healthy (strong).”
  - Personal well-being
  - Spiritual well-being
  - Personal satisfaction (work and relationships)
  - Sense of personal control (internal locus)
  - Feeling of being loved, needed, or respected by others

(Positive)

Heart

## Pleasure, Stress & Immune Function

### Daily events influence immune function

- Subjects: 100 married men
- Studied for 3 months
- Measure: sigA (protection against cold)
- Saliva tested every day

### Sig A was lowered for 24 hours by

1. Desirable events of the day (e.g. joyous occasion, family celebration, having friends over)
2. Positive emotions (positive excitement, enthusiasm, pride, etc.)

\*Fluctuations in the mood and feeling were associated with fluctuations in the sigA levels

(Positive)

Heart

Relationship and Health

Subjects

Medical Patients

	W/O a partner/ <u>close friend</u>	With a partner/ <u>close friend</u>
• Death in 5 years	50 %	17%
• # of illness episodes	higher	lower
• Duration of illness episodes	higher	lower
• Cholesterol level	higher	lower

COMMENTS:

1. Intimacy and emotional bonding is associated with a greater sense of well-being
2. Negative relationships can hurt more than what positive relationships can heal.
3. More women (than men) develop emotional and physical disorders in response to family stress

How wise are your food choices?

Based upon the total value of grocery store sales, the five top foods in America are, Coke, Pepsi, Kraft processed cheese, Campbell's soup, and Budweiser beer. The nutritious value of these five top foods is atrocious—they're pure junk food and adulterated with unhealthy chemicals.

The Power of Exercise

- Exercise remains the single most powerful anti-aging medication known to humankind
- Men, who walk at least 30 minutes six days a week can cut their mortality rate in half compared with sedentary men.

Study by Cooper Institute of Aerobic Research

Are you lonely or connected? It makes a difference to your health.

- Women who felt isolated were 3 ½ times as likely to die of breast, ovarian, or uterine cancer over a 17-year period than those who didn't
- Men, who said that their wives didn't show them love, suffer 50% more angina over a 5 year period than those who said their wives did
- Male medical students, who felt close to their parents, were less likely to develop cancer or mental illness in later years than those who didn't
- Heart patients, who felt "least loved," had 50% more arterial damage than those who felt "most loved."
- Unmarried heart patients who had a "confidant," were 3 times less likely to die in the following 5 years than the ones who didn't

DEPRESSION AFTER HEART ATTACK

(Findings from Montreal Heart Institute Study)

Following heart attack:

- Almost 1 out of 2 patients (45%) get depressed (Out of which, (18%) have severe depression, while 27% have mild to moderate depression)
  - First two months are crucial for depression
  - Highest level of depression is observed between 6 to 60 days
- \*They need to be screened for depression right away.

PSYCHOLOGICAL SUPPORT CRUCIAL AFTER HEART  
ATTACK

(Findings from Montreal Heart Institute Study)

Following heart attack:

- Increased risk of heart attack or death in the following year.
- Patients with severe stress anxiety and depression are more likely to die of heart-related problems in 5 years.
- Patients who become depressed had 3 to 4 times greater risk of dying within 6 months than those who did not develop depression

\*Psychological support is crucial in the six months for survivors who are depressed

IS DEPRESSION A SIGNIFICANT RISK AFTER  
HEART ATTACK?

(Findings from Montreal Heart Institute Study)

- Depressed and no-depressed heart attack survivors had similar history of heart problems.
- Receive similar medications.
- Only difference was depression.
- Depression may be as serious a health risk as the history of previous heart attacks.
- Depression is a greater risk than high cholesterol, smoking, high blood pressure, or lack of exercise.

# Co-Morbid

# Heart

## Is heart a blood pump or an emotional organ?

- What do you think of the sayings such as:
  - My heart “bleeds”
  - It “tears” my heart
  - My heart “stopped”
  - My heart “aches”

## Evidence

“**Anxious heart**” – 6 times more likely to die of sudden heart failure than non-anxious

“**Lonely heart**” (patients who live alone) 2 times more likely to have a heart attack than those who live with a partner.

Patients with “**angry heart**” and “**depressed heart**” have more complications and greater incidence of heart failures.

Ischemic Heart Disease (IHD)

“...Controlled prospective evidence now indicates that anger, depression, and anxiety play a major role in the genesis of IHD. The strongest form of evidence, a controlled clinical trial that used randomly assigned subjects exists, implicating anger as a strong predictor in the development of IHD.”

Source: Ketterer, Mark W. (1993) Psychosomatics, 1993, Nov. Dec. Vol 34 (6) 478-484.

**Lifetime Prevalence % of Anxiety Disorders (2494 patients)**

Primary Illness	GAD	Phobia	Any Anx. Disorder
Heart Disease	22.8 $\pm$ 3.4	11.6 $\pm$ 3.1	27.8 $\pm$ 3.7
Hypertension	22.6 $\pm$ 1.7	9.7 $\pm$ 1.2	28.0 $\pm$ 1.8
Diabetes	20.6 $\pm$ 3.3	8.1 $\pm$ 1.6	25.8 $\pm$ 3.4

(Sherbourne et al., 1996)

**Current Prevalence % of Anxiety Disorders (2494 patients)**

Primary Illness	GAD	Phobia	Any Anx. Disorder
Heart Disease	12.4 $\pm$ 3.0	9.2 $\pm$ 2.8	17.8 $\pm$ 3.6
Hypertension	10.4 $\pm$ 1.3	5.5 $\pm$ 1.0	14.6 $\pm$ 1.5
Diabetes	11.9 $\pm$ 2.3	4.8 $\pm$ 1.3	15.5 $\pm$ 2.5

(Sherbourne et al., 1996)

Treatment Needs for Co-morbid Conditions

Primary Illness	Perceived Need	Unmet Need
Heart Disease	33.4 +/- 13.7	72.9 +/- 17.9
Hypertension	25.9 +/- 5.3	63.2 +/- 7.7
Diabetes	20.9 +/- 7.1	71.9 +/- 11.6

(Sherbourne et al., 1996)

# Prevalence of anxiety disorders within specific medical Groups

- Cardio-myopathy: 83% panic disorder
- Post MI heart failure: 16% panic disorder
- Parkinson's disease: 21% panic;  
17% social phobia
- Grave's Disease: 62% generalized anxiety
- Chronic Pulmonary  
Obstructive Disease: 24% panic  
(cited by Cassera, 1990)

DEPRESSION WEARS A MASK AND A DISGUISE

(Findings from Montreal Heart Institute Study)

The following symptoms were observed as a result of heart condition, drug’s side effects, confinement, and also due to depression.

	<b>Heart condition Drug’s side effects &amp; confinement</b>	<b>Depression</b>
<b>Anxiety</b>	<b>X</b> _____	<b>X</b> _____
<b>Lethargy</b>	<b>X</b> _____	<b>X</b> _____
<b>Insomnia</b>	<b>X</b> _____	<b>X</b> _____
<b>Tiredness</b>	<b>X</b> _____	<b>X</b> _____
<b>Loss of appetite</b>	<b>X</b> _____	<b>X</b> _____
<b>Loss of interest</b>	<b>X</b> _____	<b>X</b> _____
<b>Sleep disturbance</b>	<b>X</b> _____	<b>X</b> _____

\*When a heart attack survivor complains of the above symptoms, do not assume them to be “physical,” inquire regarding depression.

Psychological Predictors of Heart Disease

- Type A behavior
- Depression
- Anger/hostility/aggression
- Anxiety
- “The picture of coronary-proneness...is not one of a hurried, impatient, workaholic but instead, is of a person with one or more negative emotions.”

Source: Booth-Kewley, Stephanie; Friedman, Howard J.  
(1987) Psychological Bulletin, 1987, May Vol. 101 (3) 343-382

EMOTIONS AND HYPERTENSION

- 33 hypertensives and 21 normotensive adults

Hypertensive patients scored significantly higher than normotensives in the following:

- Type A behavior
- Hostility
- Anxiety
- Physical symptoms
- General psychopathology

Lazaro, M. Louisa; Valdes, Manuel; Marcos Tedoro; Guarch, Joana (1993) Stress Medicine, Oct. Vol. 9 (4) 215-220.

Resignation and denial affect health and return to work after a Myocardial Infraction (MI)

- 12 month follow-up of 243 MI patients under 60 years
- Depressive resignation and Denial of Illness were the best separate predictors of both return to work and self-rated health, after 12 months.

Julkunen Jubani; Saarinen, Timo (1994), Irish Journal of Psychology, Vol.15 (1), 67-83.