Utilising a Combined Exercise and Counselling Program to Examine the Relationship Between Emotional Self-Efficacy and Physiological Improvements in Breast Cancer Survivors

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University of Notre Dame Australia

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APPENDIX A

Participant Information Letter, Consent Form, Medical Questionnaire, and PAR-Q
Dear potential participant,

We are so excited that you are interested in being a part of the Get REAL & HEEL Breast Cancer Program. With breast cancer as the most common cancer experienced by Australian women, and survival rates rising, enhanced and extended treatment becomes necessary. By aiding women in developing physical and psychological strength to deal with the debilitating side effects of treatment, recovery and coping may be improved. Developing an approach that addresses both the physical and psychological hardships existing after breast cancer treatment aids in developing this strength. Exercise and counselling have been shown to be two such useful strategies. Therefore, the aim of this project is to provide valuable information on the benefits of a combined exercise and counselling program on the health and well-being of breast cancer survivors.

Certain participant requirements exist, as outlined below:

1. This study is a 5-month combined exercise and counselling program. Each participant will be required to undergo a battery of psychological assessments including fatigue, body esteem, depression and quality of life scales. Each subject will also be required to undergo fitness assessments including cardiovascular fitness, strength, balance, flexibility and body composition.

2. Subjects will then be randomly assigned to one of four groups: an exercise-only group, a counselling-only group, an exercise and counselling group, or a delayed-treatment control group. The control group will undergo normal care as directed by your doctor. At the end of a two-month period, the control subjects will then be enrolled in a personalised exercise and counselling program for the remaining 3 months. Subjects in the exercise-only group will participate in prescriptive exercise 3 times per week for the first 2 months before adding the counselling component one time a week for the remaining 3 months. Subjects in the counselling-only group will partake in individual counselling sessions one time a week for the first 2 months, then add an exercise program 3 times a week for the remaining 3 months. With the exercise and counselling group, participants will undertake prescriptive exercise 3 times per week and one session of counselling per week for the full 5 months.

3. This study is voluntary and you are under no obligation to take part in the study. You may withdraw from the study at any time with no hindrance of access to appropriate care.

4. Data will be stored securely in the School of Health Sciences at The University of Notre Dame Australia for five years.

5. All testing and training sessions will be performed on campus at the University of Notre Dame Australia, Fremantle Campus, at the Institute for Health and Rehabilitation Research.
Due to the physical demand associated with undertaking an exercise program, a slight risk exists for soreness, injury, and acute medical complications. To minimize this, all exercise sessions will be closely monitored by trained and competent staff. Additionally, for those assigned to the combination exercise and counselling group, short-term emotional distress may result from discussion of your breast cancer experience during the counselling component. Trained counselling staff will be prepared for this possibility and able to assist you in addressing any issues that may arise.

This study is an attempt to support the findings suggesting a positive effect of exercise and examine the benefit of adding a counselling aspect. If implementation of such a program appears successful, it could have applications for breast cancer survivors throughout Australia.

Approval of this study has been obtained from the Human Research Ethics Committee of the University of Notre Dame Australia.

Should you have any further questions about the project or concerns about the manner in which the project is being conducted, please feel free to contact Jena Buchan, program coordinator, or Dr. Fiona Naumann, program director and an accredited Exercise Physiologist:

Jena Buchan
Tel: 045 044 5067
Email: jbuchan1@nd.edu.au

Dr. Fiona Naumann
Tel: (08) 9433 0906
Email: fnaumann@nd.edu.au.

We thank you for your time and consideration look forward to speaking with you soon.

Yours sincerely,

Miss Jena Buchan                     Dr. Fiona Naumann

If participants have any complaint regarding the manner in which a research project is conducted, it may be given to the researcher or, alternatively, to the Provost, The University of Notre Dame Australia, PO Box 1225 Fremantle WA 6959, phone (08) 9433 0846.
The Effects of a Combined Exercise and Counselling Program on Selected Physiological and Psychological Parameters in Post-Treated Breast Cancer Patients

Informed Consent Form

I, (participant’s name) ______________________________________________________________

hereby agree to being a participant in the above research project.

• I have read and understood the Information Sheet about this project and any questions have been answered to my satisfaction.

• I realise that I may withdraw from the project at any time without prejudice.

• I understand that all information gathered will be treated as strictly confidential.

• I agree that research data gathered for the study may be published provided my name or other identifying information is not disclosed.

Signed (participant): _____________________________ Date: __________

Name of researcher: ____________________________

Signed (researcher): _____________________________ Date: __________

If participants have any complaint regarding the manner in which a research project is conducted, it may be given to the researcher or, alternatively, to the Provost, The University of Notre Dame Australia, PO Box 1225 Fremantle WA 6959, phone (08) 9433 0846.
Patient Information / Medical History

Please provide us with the information below to the best of your ability. Check Yes/No when it applies.

**Section A:**

Surname | First Name | Other Given Names
---|---|---

Address | Suburb | Postcode
---|---|---

Home Phone | Work/Mobile
---|---

Email Address | Date of Birth
---|---

Emergency Contact Name | Emergency Contact Phone Number
---|---

Oncologist Name | Oncologist Phone Number
---|---

What is your specific diagnosis?

When were you diagnosed?

When did you complete treatment?

**Race:**

- □ White
- □ Asian/Pacific Islander
- □ Other __________
- □ Black
- □ Hispanic

**Primary Language:**

- □ English
- □ Other __________

**Marital Status:**

- □ Married
- □ Single
- □ Partner
- □ Divorced
- □ Widowed

Spouse/Partner’s Name: __________________________

When is your anniversary? __________________________

Do you have any children? □ Yes □ No

If yes, how many? __________________________

Are you able to write? □ Yes □ No
Are you able to read?  □ Yes  □ No

What is the last year in school you completed? ____________________________

What is your present work status? (check all that apply)
□ Full-time
□ Part-time
□ Student
□ Domestic Work
□ Unemployed
□ Other (Please specify) ____________________________

Will you need assistance with parking?  □ Yes  □ No

Do you have any special needs that we should be aware of?  □ Yes  □ No
If yes, please explain. __________________________________________
______________________________________________________________
______________________________________________________________

How did you learn about the Get R.E.A.L. and Heel Breast Cancer Program?

________________________________________________________________
________________________________________________________________
________________________________________________________________

Section B:

• When was the last time you had a physical examination? ______
  __________________________________________________________________________

• If you are allergic to any medications, foods, or other substances, please name them. ____________________________
  __________________________________________________________________________

• If you have been told that you have any chronic or serious illnesses, please list them. ____________________________
  __________________________________________________________________________

• Give the following information pertaining to the last 3 times you have been hospitalized.  Note: Do not list normal pregnancies.

<table>
<thead>
<tr>
<th>Hospitalization</th>
<th>Hospitalization</th>
<th>Hospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for</td>
<td>Reason for</td>
<td>Reason for</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>Hospitalization</td>
<td>Hospitalization</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

116
Month & Year
Of hospitalization

Hospital

Suburb and State

Section C:

During the past 12 months

1. Has a physician prescribed any form of medication for you?  
   Yes □ No

2. Has your weight fluctuated more than a few pounds?  
   Yes □ No

3. Did you attempt to bring about this weight change through diet or exercise?  
   Yes □ No

4. Have you experienced any faintness, light-headedness, or blackouts?  
   □ Yes □ No

5. Have you occasionally had trouble sleeping?  
   □ Yes □ No

6. Have you experienced any blurred vision?  
   □ Yes □ No

7. Have you had any severe headaches?  
   □ Yes □ No

8. Have you experienced chronic morning cough?  
   □ Yes □ No

9. Have you experienced any temporary change in your speech pattern, such as slurring or loss of speech?  
   Yes □ No

10. Have you felt unusually nervous or anxious for no apparent reason?  
    □ Yes □ No

11. Have you experienced unusual heartbeats such as skipped beats or palpations?  
    □ Yes □ No

12. Have you experienced periods in which your heart felt as though it was racing for no apparent reason?  
    □ Yes □ No

At Present

1. Do you experience shortness or loss of breath while walking with others your own age?  
   □ Yes □ No

2. Do you experience sudden tingling, numbness, or loss of feeling in your arms, hands, legs, feet, or face?  
   □ Yes □ No

3. Have you ever noticed that your hands or feet sometimes feel cooler than other parts of your body?  
   □ Yes □ No
4. Do you experience swelling of your feet and ankles? □ Yes
□ No

5. Do you get pains or cramps in your legs? Yes
□ No

6. Do you experience any pain or discomfort in your chest? Yes
□ No

7. Do you experience any pressure or heaviness in your chest? □ Yes
□ No

8. Have you ever been told your blood pressure is abnormal? Yes
□ No

9. Have you ever been told that your serum cholesterol or triglyceride level was high? □ Yes
□ No

10. Do you have diabetes? □ Yes
□ No

If yes, how is it controlled?
□ Dietary means □ Insulin injection
□ Oral medication □ Uncontrolled

11. How often would you characterize your stress level as being high?
□ Never □ Occasionally □ Frequently □ Constantly

12. Have you ever been told that you have any of the following illnesses?
□ Myocardial Infarction □ Arteriosclerosis □ Heart disease
□ Coronary thrombosis □ Rheumatic heart □ Heart attack
□ Coronary occlusion □ Heart failure □ Heart murmur
□ Heart block □ Aneurysm □ Angina

Section D:
Has any member of your immediate family been treated for or suspected to have had any of these conditions? Please identify their relationship to you (father, mother, sister, brother, etc.).

A. Diabetes

B. Heart disease

C. Stroke

D. High blood pressure
Physician Comments & Recommendations: __________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
PAR - Q & YOU
(A Questionnaire for People Aged 15 to 69)

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most people. However, some people should check with their doctor before they start becoming much more physically active.

If you are planning to become much more physically active than you are now, start by answering the seven questions in the box below. If you are between the ages of 15 and 69, the PAR-Q will tell you if you should check with your doctor before you start. If you are over 69 years of age, and you are not used to being very active, check with your doctor.

Common sense is your best guide when you answer these questions. Please read the questions carefully and answer each one honestly:

check YES or NO.

YES NO
☐ ☐ 1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?
☐ ☐ 2. Do you feel pain in your chest when you do physical activity?
☐ ☐ 3. In the past month, have you had chest pain when you were not doing physical activity?
☐ ☐ 4. Do you lose your balance because of dizziness or do you ever lose consciousness?
☐ ☐ 5. Do you have a bone or joint problem that could be made worse by a change in your physical activity?
☐ ☐ 6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
☐ ☐ 7. Do you know of any other reason why you should not do physical activity?

If you answered NO to all questions, you can be reasonably sure that you can start becoming much more physically active — begin slowly and build up gradually. This is the safest and easiest way to go.

Take part in a fitness appraisal — this is an excellent way to determine your basic fitness so that you can plan the best way for you to live activity. It is also highly recommended that you have your blood pressure evaluated. If your reading is over 144/94, talk with your doctor before you start becoming much more physically active.

DELAY BECOMING MUCH MORE ACTIVE:
• If you are not feeling well because of a temporary illness such as a cold or a fever — wait until you feel better; or
• If you are or may be pregnant — talk to your doctor before you start becoming active.

You are encouraged to copy the PAR-Q but only if you use the entire form.

NOTE: If the PAR-Q is being given to a person before he or she participates in a physical activity program or a fitness appraisal, this section may be used for legal or administrative purposes.

I have read, understood and completed this questionnaire. Any questions I had were answered to my full satisfaction.

NAME__________________________________________DATE_____________________

SIGNATURE__________________________________________DATE_____________________

SIGNATURE OF PARENT of ward/ward/birth (for participants under the age of majority)

WITNESS__________________________________________DATE_____________________

continued on other side...

APPENDIX A.1
...continued from other side

We know that being physically active provides benefits for all of us. Not being physically active is recognized by the Heart and Stroke Foundation of Canada as one of the four modifiable primary risk factors for coronary heart disease (along with high blood pressure, high blood cholesterol, and smoking). People are physically active for many reasons — play, work, competition, health, creativity, enjoying the outdoors, being with friends. There are also as many ways of being active as there are reasons. What we choose to do depends on our own abilities and desires. No matter what the reason or type of activity, physical activity can improve our well-being and quality of life.

Well-being can also be enhanced by integrating physical activity with enjoyable healthy eating and positive self and body image. Together, all three equal VITALITY. So take a fresh approach to living. Check out the VITALITY tips below!

Active Living:
- accumulate 30 minutes or more of moderate physical activity most days of the week
- take the stairs instead of an elevator
- get off the bus early and walk home
- join friends in a sport activity
- take the dog for a walk with the family
- follow a fitness program

Healthy Eating:
- follow Canada’s Food Guide to Healthy Eating
- enjoy a variety of foods
- emphasize cereals, breads, other grain products, vegetables and fruit
- choose lower-fat dairy products, leaner meats and foods prepared with little or no fat
- achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating
- limit salt, alcohol and caffeine
- don’t give up foods you enjoy — aim for moderation and variety

Positive Self and Body Image:
- accept who you are and how you look
- remember, a healthy weight range is one that is realistic for your own body make-up (body fat levels should neither be too high nor too low)
- try a new challenge
- compliment yourself
- reflect positively on your abilities
- laugh a lot

Enjoy eating well, being active and feeling good about yourself. That’s VITALITY.

FITNESS AND HEALTH PROFESSIONALS MAY BE INTERESTED IN THE INFORMATION BELOW.

The following companion forms are available for doctors’ use by contacting the Canadian Society for Exercise Physiology (address below):
The Physical Activity Readiness Medical Examination (PARmed-X) - to be used by doctors who answer YES to one or more questions on the PAR-Q.
The Physical Activity Readiness Medical Examination for Pregnancy (PARmed-X for PREGNANCY) - to be used by doctors with pregnant patients who wish to become more active.

References:

To order multiple printed copies of the PAR-Q, please contact the
Canadian Society for Exercise Physiology
116 Somerset St. West, Suite 202
Ottawa, Ontario CANADA K2P 0J2
Tel. (613) 234-3755 FAX: (613) 234-3965

The original PAR-Q was developed by the British Columbia Ministry of Health. It has been revised by an Expert Advisory Committee assembled by the Canadian Society for Exercise Physiology and Fitness Canada (1994).

Deponible en français sous le titre «Questionnaire sur l’aptitude à l’activité physique - Q-AAP (révisé 1994)».

© Canadian Society for Exercise Physiology
*Constitué de physiothérapeutes du Canada

Supported by: Health Canada Santé Canada

APPENDIX A.1
APPENDIX B
Stanford Emotional Self-Efficacy Scale
Stanford Emotional Self-Efficacy Scale – Cancer

Please rate your confidence in your ability to do each of the following.

<table>
<thead>
<tr>
<th></th>
<th>Not at all confident</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Let my friends know when I am angry because of something they did.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>2. Directly consider the thought that I might die.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>3. Be with people or do things without being distracted by painful emotions or anxious thoughts.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>4. Ask for the emotional support I need from my spouse/partner or closest friend</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>5. Focus my full attention on one thing at a time.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>6. Consider any issue at all while remaining calm and feeling centered.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>7. Express love, affection, caring to my spouse/partner or closest friend</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>8. Talk about my possible death with my spouse/partner or closest friend</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>9. Talk to my doctor about fears that I have about dying.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>10. Stay calm while waiting for the results of medical tests.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Item</td>
<td>Not at all confident</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
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</tr>
<tr>
<td>11. Face my fears about the thought that I might die without feeling anxious all day or all night.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>12. Truly enjoy activities or people that are meaningful to me.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>13. Express sadness or cry with family members</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>14. Cry or express other emotions I feel about dying when I am talking with someone close to me.</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>15. Ask for the emotional support I need from family members</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
<td>90</td>
</tr>
</tbody>
</table>
APPENDIX C

Physiological Assessment Form
Get REAL & HEEL Breast Cancer Program
University of Notre Dame Australia-Fremantle Institute for Health and Rehabilitation Research
INITIAL ASSESSMENT: Data Collection Sheet

Date/Day of Week: ________________
Participant Name: ____________
Trainer: ________________

Attach the Polar Heart Rate monitor immediately after patient arrives. Heart rate monitor should not be removed until the patient completes all tests. Patient should remain seated for 5 minutes while the lowest heart rate measure is observed and recorded.

Start Time: _______ Completion Time: ________________

BP: ________________
RHR: ________________ bpm
Method used for RHR: __________________

Pulse Oximeter Reading: SpO₂ ________________%
Final SpO₂ ________________ %

Height: ________________ cm (no shoes)
Weight: ________________ kg (no shoes)

BMI (weight/height\(^2\)): ________________
Anthropometric and Body Composition Measures

**Body Circumferences:**
Gluteus: ____________
Waist: ________________
Abdominal: ________________
Forearm: R ________________
L ________________
Arm: R ________________
L ________________
Thigh: R ________________ (pants/no pants)
L ________________ (pants/no pants)

**Body Composition:**

Skinfolds:

**Women** (Triceps, chest, subscapular, abdomen, suprailiac, midaxilla, thigh)

Triceps_____________, __________ Avg:______________
Chest_____________, __________ Avg:______________
Subscapular_________, __________ Avg:______________
Suprailiac__________, __________ Avg:______________
Abdomen___________, __________ Avg:______________
Midaxilla___________, __________ Avg:______________
Thigh______________, __________ Avg:______________
Sum:______________

**Generalized Prediction Skinfold Equation for Women (18-55 yr)**
Chest + abdomen + thigh + triceps + subscapular + suprailiac + midaxilla
Density(Db)=1.0970 - 0.00046971 (7SKF) + 0.00000056 (7SKF)² - 0.00012828(age)
To convert to %BF using Siri (1961) equation %BF = [(4.95/Db) - 4.50] x 100
Source: (Jackson et al., 1980)

Density (Db)= 1.0970 - 0.00046971 (7SKF) + 0.00000056 (7SKF)² - 0.00012828 (age)

% Body Fat= [(4.95/__________) - 4.50] x 100
% Body Fat= ____________

Jackson AS, Pollock ML. Practical Assessment of Body Composition, Phys Sport Med 1985; 13(3):
## Body Circumferences

### Standardized sites for circumference measurements

<table>
<thead>
<tr>
<th>Site</th>
<th>Anatomical Reference</th>
<th>Position</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waist</td>
<td>Narrowest part of torso, level of the “natural” waist between ribs and iliac crest</td>
<td>Horizontal</td>
<td>Apply tape snugly around waist at level of narrowest part of torso. An assistant is needed to position tape behind the client. Take measurement at the end of normal respiration.</td>
</tr>
<tr>
<td>Abdominal</td>
<td>Maximum anterior protuberance of abdomen, usually at umbilicus</td>
<td>Horizontal</td>
<td>Apply tape snugly around the abdomen at level of greatest anterior protuberance. An assistant is needed to position tape behind the client. Take measurement at the end of normal respiration.</td>
</tr>
<tr>
<td>Gluteus</td>
<td>Maximum posterior extension of buttocks</td>
<td>Horizontal</td>
<td>Apply tape around buttocks. An assistant is needed to position tape on apposite side of body.</td>
</tr>
<tr>
<td>Arm</td>
<td>Acromion process of scapula and olecranon process of ulna</td>
<td>Perpendicular</td>
<td>With arms hanging freely at sides and palms facing thighs, apply tape snugly around the arm at level midway between the acromion process of scapula and olecranon process of ulna.</td>
</tr>
<tr>
<td>Forearm</td>
<td>Maximum girth of forearm</td>
<td>Perpendicular</td>
<td>With arms flexed in a 90-degree position, apply tape around the largest portion of the forearm.</td>
</tr>
<tr>
<td>Thigh</td>
<td>Gluteal fold</td>
<td>Horizontal</td>
<td>Apply tape snugly around thigh, just distal to the gluteal fold.</td>
</tr>
</tbody>
</table>
Date/Day of Week: ______________________
Participant Name: ____________________
Trainer: ______________________________

Cardio-Respiratory Endurance Test

Modified Bruce Protocol: Treadmill

Karvonen Formula:

\[ \text{Target Heart Rate} = (HR_{\text{max}}) \times \text{percent intensity} \]

Where:
\[ HR_{\text{max}} = 220 - \text{age of the participant} \]
Percent Intensity = Prescribed exercise intensity

Target HR = (_______ - ________) \times 0.75

Target HR = ______________

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<tr>
<th>Stage</th>
<th>Speed</th>
<th>Grade</th>
<th>Stage Time</th>
<th>HR</th>
<th>RPE</th>
<th>Total Time</th>
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<td>Warm-up</td>
<td>2.74</td>
<td>0%</td>
<td>3 min</td>
<td></td>
<td></td>
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<tr>
<td>One</td>
<td>2.74</td>
<td>5%</td>
<td>3 min</td>
<td></td>
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</tr>
<tr>
<td>Two</td>
<td>2.74</td>
<td>10%</td>
<td>3 min</td>
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</tr>
<tr>
<td>Three</td>
<td>4.02</td>
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<td>3 min</td>
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<tr>
<td>Four</td>
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<td>3 min</td>
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</tr>
<tr>
<td>Five</td>
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</tr>
<tr>
<td>Six</td>
<td>8.05</td>
<td>18%</td>
<td>3 min</td>
<td></td>
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</tr>
</tbody>
</table>

\[ \text{VO}_2 \text{ calculation formula: } \text{VO}_{2\text{max}} = 2.282 \times \text{(time in min.)} + 8.545 \]

\[ \text{VO}_{2\text{max}} = 2.282 \times \text{(_______)} + 8.545 \]

\[ \text{VO}_{2\text{max}} = \text{______________} \]

Muscular Strength Test

Hand-Held Dynamometry

Patients will be asked to stand and hold the handgrip dynamometer in one hand lined with the forearm that will be placed beside the body. Maximum grip strength is then determined without swinging the arm and by squeezing the handgrip dynamometer as hard as possible using one brief contraction with no extraneous body movement. The test will be administered three times for each hand with a one-minute rest in between trials. The best score within the three trials will be the one that will be used for analyses.

Handgrip Dynamometry:

Right arm: Trial 1_______, Trial 2_______, Trial 3_______ (Best trial: ___)
Left arm: Trial 1_______, Trial 2_______, Trial 3_______ (Best trial: ___)

Muscular Endurance Test

YMCA Bench Press Test: Start metronome, set at 60 bpm. Subject lies supine on bench, knees bent flat on floor. Researcher hands 35 lb. (15.9 kg.) barbell to subject, who grips bar (overhand) shoulder width. Subject benches with pace of metronome, pressing bar upward so arm is fully extended and then returning bar to chest. Encourage subject to breath regularly and not strain during test. Stop test when subject no longer can keep pace of metronome (a little faster or a little slower rhythm is acceptable). Record successful number of repetitions.

Number of repetitions: __________

http://www.exrx.net/Calculators/YBenchPress.html

1-RM Leg Press: Set leg press recline at a 45-degree angle. Allow the participant to perform 5 reps at a light weight for warm-up, followed by a one-minute rest. Increase the weight to allow for 3-5 reps, followed by a two-minute rest period. Increase the weight to allow for 2-3 repetitions, followed by a two-minute rest. Continue increasing weight until only a 1-RM weight is reached.

Weight (kg): ________________
Flexibility Test

Sit-and-reach: Patient must sit on the floor with feet flat against the box, hip-width apart. Make sure knees are extended (but not locked). Monitor for feet keeping contact with the box while patient extends arms forward with one hand on top of the other. Instruct the participant to slowly push the measurement bar as far as possible while keeping hands together and legs straight. Make sure the patient exhales while leaning forward and keeping the head down. Repeat this for three trials.

Trial 1 __________ cm.
Trial 2 __________ cm.
Trial 3 __________ cm.

Highest Measurement ____________ cm.

Force Plate Balance Assessment

Two-leg eyes open: Participant must be barefoot while testing. Ask participant to stand on both legs with hands on hips. Participant will perform two 20-second trials. Ensure results are labeled and saved on computer.

Two-leg eyes closed: Participant will perform two 20-second trials. Ensure results are labeled and saved on computer.

Single-leg eyes open: Instruct participant to stand with hands on hips and stand on dominant leg upon commencement of 20-second trial. Conduct two trials, and repeat for nondominant leg. Ensure results are labeled and saved on computer.

Leg 1 (R/L) ____________  Leg 2 (R/L) ____________
Shoulder Range of Motion

Instruct participant to stand with back against wall and palms facing forward.

- Range-of-motion assessment in the coronal plane, palms facing forward – maximum 180°

Right ______°     Left __________°

- Evaluation of active external rotation; patient’s elbows and arms are resting at her sides – maximum 90°

Right ______°     Left __________°

- Internal rotation as measured from the vertebral bodies posteriorly.

Right ______ cm     cm     Left ______
APPENDIX D

Sample Exercise Program and Home Exercise Log
<table>
<thead>
<tr>
<th>Date</th>
<th>Area</th>
<th>Exercise</th>
<th>Set, intensity, etc.</th>
<th>Rep</th>
<th>Area</th>
<th>Exercise</th>
<th>Set, intensity, etc.</th>
<th>Rep</th>
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</thead>
<tbody>
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<td>WED</td>
<td>Warm-up/ Cardio</td>
<td>Treadmill bike</td>
<td>Speed</td>
<td></td>
<td>FRI</td>
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<tr>
<td></td>
<td>Pole</td>
<td>Overhead/ back stretches</td>
<td>X1</td>
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<td></td>
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<tr>
<td></td>
<td>BOSU</td>
<td>Knee pushups</td>
<td>X2</td>
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<td></td>
<td>Floor</td>
<td>Walking lunge 10/ leg</td>
<td>X2</td>
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<td></td>
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<tr>
<td></td>
<td>Floor</td>
<td>SL L raises + shoulder press</td>
<td>X2, 3kg</td>
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<td></td>
<td>CARDIO</td>
<td>Rower 2m</td>
<td>20s sprint, 10s rest</td>
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<tr>
<td></td>
<td>Cables</td>
<td>Chest fly</td>
<td>X2, 5 kg</td>
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<td>Mach</td>
<td>Back ext</td>
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<td>Cables</td>
<td>Lat pulldown on fitball</td>
<td>X2, 15 kg (single cables)</td>
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<td></td>
<td>Mach</td>
<td>Single-leg press 10/ leg</td>
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<td>X1, 1.5 springs</td>
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<tr>
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<td>X2/leg</td>
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<td>COMMENTS/ Changes</td>
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Institute for Health and Rehabilitation Research
Semester 2 2009
Trainer/s:
Weeks: 15-16
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<th>Sets, intensity, etc.</th>
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APPENDIX E

Figures for 20-Week Changes
Figure 15. Changes from baseline to 20-week assessment in cardiorespiratory endurance in each group (C, Ex, ExC, and UsC), as assessed by $\dot{V}O_{2\text{max}}$ values (mL·kg$^{-1}$·min$^{-1}$) obtained utilising the Modified Bruce treadmill protocol.

Figure 16. Changes from baseline to 20-week assessment in upper-body strength in each group (C, Ex, ExC, and UsC), as assessed by number of repetitions performed of YMCA bench press.
Figure 17. Changes from baseline to 20-week assessment in lower-body strength in each group (C, Ex, ExC, and UsC), as assessed by a 1-RM leg press.

Figure 18. Changes from baseline to 20-week assessment in flexibility in each group (C, Ex, ExC, and UsC), as assessed by the Sit-and-Reach.
Figure 19. Changes from baseline to 20-week assessment in emotional self-efficacy in each group (C, Ex, ExC, and UsC), as assessed by the Stanford Emotional Self-Efficacy Scale-Cancer (SESES-C).