

SUBJECT: ICS Physical Activity Programme 3

DATE: January 15, 2012

INTRODUCTION

As of January 15th 2012 the first Physical Activity Programme for bowel cancer survivors was officially completed. Marie Murphy, the programme designer and director, contracted by the Irish Cancer Society February 25th 2011, implemented her work as Exercise Specialist, to train a group of women and men diagnosed with bowel cancer. Marie trained a total of 39 participants (20 women, 19 men) in both cardiovascular exercise and resistance training exercise for a period of four months. 34 participants completed the training (17 women, 17 men) and met or surpassed the goals of the programme.

The following documents/data were record by the Exercise Specialist for each of the participants to show their progress throughout the course of the third Physical Activity Programme, which began on September 3rd 2011.

Data enclosed:

- VO2 progress (1st-5th-10th-15th week)
- Weekly training METs (15 weeks)
- Body Fat Analysis (1st-8th-16th week)
- Weekly training schedule (Mon.-Tues-Thurs-Sat.)
- Resistance training workouts (supervised)
- Resistance training 2nd workout (at home)
- Resistance training volume (progress chart)
- Resistance training appointments (ICS-ARC)

REFLECTION ON STUDY

There are four areas on which I would like to reflect regarding the third Physical Activity Programme, which are;

- Aims
- Objectives
- Performance
- Projective future

AIMS

The aims of the first Physical Activity Programme for bowel cancer survivors was to safely train each participant (male and female) in achieving a minimum of 9 MET/hours a week of cardiovascular exercise. Studies as mentioned previously have shown that both men and women who have been diagnosed with bowel cancer and exercise at least 9 MET/hours a week lower their risk of recurrence. A fifteen week walking programme was designed specifically for each man and woman, based on the results of their fitness test. As the enclosed data shows, 31/34 participants achieved the goal by accomplishing a minimum of ≥ 9 MET/hours a week over the course of the fifteen weeks training and an average of 16 MET/hours a week for the combined 34 who completed the programme. We should also keep in mind that the guidelines for prevention of disease from the USA Surgeon General is 15-20 MET/hours a week and of those partaking in the programme, two thirds achieved such fitness level successfully. It should also be mentioned that this group although having an older age average than the two previous studies achieved a higher MET average, 21 compared to 17.

The aims of the Resistance Training Programme was to recruit similar numbers, as in the previous two studies to engage in a two day a week weight training programme involving upper and lower body resistance training for a period of 12 weeks. This was the first study to combine an upper and lower body training programme over the course of the four months. The previous two studies for breast cancer survivors focused specifically in upper body strength. 33 signed up (17 women, 16 men) and 30 (15 women, 15 men) completed the programme. It is also worth noting that 36 women completed the first study.

The programme was designed to safely improve each participant's flexibility, range of motion and muscular endurance. One weekly workout was supervised by the Exercise Specialist and a second by the women and men at their own homes. There were a total of 19 exercises in this workout, 10 upper body exercises and 9 lower body exercises which incorporated the major muscles of the body. Each participant progressed at their own pace in reps, sets and weight lifted and no individual had any complications throughout the entire programme (which was the main priority in the resistance programme). Two male participants both of which had colonoscopy bags did not do 1 of the 9 exercises for the lower body due to weaker muscles in the abdominal region and safety precautions by the Exercise Specialist.

The data enclosed shows each of the participant's progress throughout the programme, the volume of weight achieved over the period of twelve weeks and the positive changes that occurred in their body composition. Over two thirds of the participant's lifted above a volume of 1,800kg in a given workout by the end of the programme. To put this in perspective, the participant's started the programme lifting a volume of 300kg.

OBJECTIVES

The main objective of the Exercise Specialist was to empower each participant in their health and well-being and to help those overcome their fears in relation to resistance training.

On completion of the cardiovascular programme, Marie's objectives were for each participant to have a greater understanding of METs, in relation to prevention/recurrence of disease and

be given the tools to maintain or improve upon their fitness level, to lower their risk of a bowel cancer recurrence.

On completion of the resistance training programme Marie's objectives were for all who engaged in the programme to have a greater knowledge on the safety issues of resistance, the importance of maintaining proper technique to lower the risk of injuries and the tools to confidently continue with their programme, improve their strength and decrease side effects that may be associated with treatment/surgery.

PERFORMANCE

The Exercise Specialist was able to perform her duties at the highest standards due to her receiving full support and communication from the Irish Cancer Society (ICS). Compliance on the programme was a team effort from ICS, ARC Cancer Support Centre and Marie Murphy combined.

Appointments for resistance training took place every Monday and Thursday at the ICS and Tuesday's at ARC for a total of twelve weeks. Marie supervised smaller groups (4-7 women) at a time for her appointments at the ICS while at ARC on Tuesday's she supervised up to 10 women at a given time. In Marie's estimation she would say that the evaluation process and conditioning phase of the programme went smoother than the previous pilot study due to the smaller group of women at ARC. Things moved equally well at both locations.

The schedule for the cardiovascular programme followed the same routine as the previous pilot study which took place every Saturday morning at 10:00am in the Phoenix Park and every Tuesday afternoons at 2:00pm at Blessington St Basin near ARC. Fitness testing took place at both locations where each woman walked a mile as fast as she could and was evaluated for her fitness level measured in VO₂/METs (volume of oxygen used for a given workload). Women were assigned a training programme (1-2-3) and level (beginner-intermediate-advanced) based on the results of their fitness test, which we saw change as their fitness improved (Data enclosed shows all women's cardiovascular improvements and changes in their programme levels).

Saturday mornings was where the majority of women came to train and began their programme by walking 30 minutes, advancing to one hour and thirty minutes by programme end. As mentioned in the pilot study, the Phoenix Park is a perfect environment and our second study group also enjoyed meeting and training there. For Tuesday afternoons the women walked approximately 30 minutes at Blessington St Basin before their resistance training. Again comments were made regarding the surroundings of the park with its bird and plant life, which gave them a safe and uplifting feeling. In the Exercise Specialist's estimation both locations continued to work very well for the programme and everything that was needed to perform at our best was enhanced by these locations.

It should also be noted that the success of Programme 2 was very much a collaboration, with important and valued input by Ms. Joanne Vance and Ms. Eimear Cotter of ICS, without whom the role of the Exercise Specialist could not have been performed to the levels achieved.

PROJECTED FUTURE

Overall, as the Exercise Specialist, I am very happy with the results of the second Physical Activity Programme/Study. The women did a wonderful job in maintaining their commitment to the programme; which carried through the summer holidays/school breaks. 35/36 women achieved/surpassed the goal of ≥ 9 MET/hours a week of cardiovascular exercise, to lower their risk of a recurrence with breast cancer.

The cardiovascular programme is designed for one year, which allows an individual adequate time to accomplish 15-20 MET/hours a week and achieve the goal of prevention of disease as mentioned above. Two thirds of the women in the Study achieved this level of fitness over the course of the fifteen weeks, while the remaining one third needed more time to accomplish this level. The second phase of the one year training programme resumes August 27th which will allow the remaining one third of the women to achieve this level of fitness. As mentioned in the initial proposal to the ICS, this programme can be rolled out as an online programme to target a greater audience. It is my understanding that the ICS are considering this option for 2012.

The resistance training programme saw 35 women achieve wonderful improvements in their flexibility, range of motion, and muscular endurance. The programme has shown positive benefits and will continue to the second phase on August 27th 2011 which will allow for each woman's technique to be reviewed and any advancements/changes to be made in their programme. Consideration is being given for Marie to 'teach instructors' in guiding the women through resistance training classes, which is currently being discussed with the ICS.

Two nutrition seminars were given by the Exercise Specialist/Sports Nutritionist during the first and second phase of the second Physical Activity Training Programme. The seminars covered a great deal of information and provided tools which the women could apply. The review seminar was an addition to the second Physical Activity Programme, to provide an opportunity for feedback from the women and also allow for nutrition to be taken into account, when analyzing differences in performance and body composition. Feedback data from the nutrition seminars are held with the ICS.