

SUBJECT: ICS Physical Activity Programme 2

DATE: August 10, 2011

INTRODUCTION

As of July 9th 2011 the second Physical Activity Programme for breast 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 diagnosed with breast cancer. Marie trained a total of 39 women in both cardiovascular exercise and resistance training exercise for a period of four months. 36 women completed the training and met or surpassed the goals of the programme.

The following documents/data were recorded by the Exercise Specialist for each of the participants to show their progress throughout the course of the second Physical Activity Programme, which began on March 26th 2011.

Data Recorded:

- VO2 progress (1st-5th-10th-15th week)
- Weekly training METs (15 weeks)
- Fitness testing (1st-5th-10th-15th week)
- 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)
- Arm Measurements Lymphedema (1st-6th-12th week)
- Resistance training appointments (ICS-ARC)

REFLECTION ON STUDY

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

- Aims
- Objectives
- Performance
- Projective future

AIMS

The aims of the second Physical Activity Programme was to safely train each woman in achieving a minimum of 9 MET/hours a week of cardiovascular exercise. Studies as mentioned previously have shown that women who have been diagnosed with breast cancer and exercise at least 9 MET/hours a week lower their risk of recurrence by as much as 64%-67% two years after diagnosis and 94%-97% five years after a diagnosis. A fifteen week walking programme was designed specifically for each woman, based on the results of her fitness test. As the enclosed data shows, 35/36 women 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 14 MET/hours a week for the combined 36 women 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.

The aims of the Resistance Training Programme was to recruit similar numbers, as in the first study of women, with or at risk of lymphedema, to engage in a two day a week weight training programme for a period of 12 weeks. 38 women signed up and 36 completed the programme. It is also worth noting that 36 women completed the first study.

The programme was designed to safely improve each woman's flexibility, range of motion and muscular endurance. One weekly workout was supervised by the Exercise Specialist and a second by the women at their own homes. There were a total of ten exercises in this workout which incorporated the ten major muscles of the upper body. Each woman progressed at her own pace in reps, sets and weight lifted and no woman had a lymphedema flare-up throughout the entire programme (which was the main priority in the resistance programme).

The data enclosed shows each of the women'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. Half of the women lifted above a volume of 4,000lbs in a given workout by the end of the programme. To put this in perspective, the same women started the programme lifting a volume of 440lbs. It is also worth mentioning that the programme saw substantial positive changes in the women's affected arm.

OBJECTIVES

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

On completion of the cardiovascular programme, Marie's objectives were for each woman to have a greater understanding of METs, in relation to prevention/recurrence of disease and be given the tools to maintain or improve upon her fitness level, to lower her risk of a breast 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 training and breast cancer, 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.