

BACKGROUND

- Cardiopulmonary rehabilitation is a medically supervised rehab program that is utilized to help patients improve cardiac health before and after a traumatic cardiac event.
- MI is one of the most prevalent cardiac events.²
- Patients who experience heart problems experience a decrease in quality of life due to becoming depressed, anxious, and scared.¹
- Patients experience a decrease in cardiopulmonary fitness after an MI.
- It is recommended to patients who have experienced to join a cardiopulmonary rehab program.
- Early intervention of cardiopulmonary rehab is also shown to improve the efficacy of VO₂max and physical activity in post-MI patients²

PURPOSE

The purpose of this poster is to examine the efficacy of cardiopulmonary rehabilitation on patients who have suffered from an acute MI, assessed by their pre- and post-rehabilitation VO₂max.

METHODS

- At baseline, and 8-weeks after the exercise training program the participant underwent several evaluations in the same sequence and same time of day. The exercise group participated in a 8-week exercise group plus medical care and follow ups, whereas the control group on received education and continued their medical follow ups.³
- One outcome was to measure the cardiorespiratory fitness, body mass, resting blood pressure, rate pressure product, and heart rate.³
- During hospitalization patients received education on healthy lifestyles which include physical activity and improvement in other areas.³

Exercise Intervention

- 10 minutes of warm-up, 30 minutes of aerobic exercise on a cycle ergometer or treadmill at 70% to 85% of the maximal heart rate, and 10 minutes of cool-down.

Table 1. Patient demographics and clinical characteristics.

Variable	Pooled	Exercise	Control
Participants Male/Female	N = 50	N = 25 23/2	N = 25 20/5
Family History	8	6	2
Hypertension	37	18	19
Current Smoker	27	13	14
Hyperlipidemia	50	25	25
Overweight/Obese	38	20	18

RESULTS

Table 2. Changes in VO₂peak, Body weight, blood pressure, and total physical activity

Variables	Exercise n = 25		Percent Change	Control n = 25		Percent Change
	Baseline	Final		Baseline	Final	
VO ₂ peak (ml/kg/min)	30.0	32.8	9.33%	29.4	29.7	1.02%
Body Weight (kg)	84.6	83.2	-1.65%	74.6	74.2	-0.54%
SBP/DPB	124/78	121/74	-2.42%/-5.13%	128/75	126/75	-1.56%/0%
Total Physical activity (counts/minute)	437	502	14.87%	426	435	2.11%

CONCLUSION

- Significant intervention is only observed in the exercise group.³
- At baseline, the number of participants complying to the 30 minutes of moderate to vigorous activity was equal between the exercise and control groups.³
- Study shows that an 8-week intervention of an exercise program increased their time involved in moderate to vigorous physical activity, while the control group decreased or stayed the same.³
- Small amounts of exercise throughout the day was seen to provide the greatest improvement.³
- Cardiorespiratory fitness increased in the exercise group which is indicative of the importance of exercise after undergoing a cardiac event.³
- Increasing VO₂ through exercise may be an important part of maintain efficacy and adherence in cardiac rehab.

REFERENCES

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