



**Service Priorities and Programmes**  
**Electronic Presentations**

**Convention ID:** 564

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**Exercise prescriptions by Physiotherapist in General Out Patient setting improved physical fitness of Pre-Diabetes Patients**

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**Keywords:**

Physiotherapist

Pre-Diabetes

Exercise

Fitness

**Introduction**

A multidisciplinary Pre Diabetes program has been set up by Enhanced Primary Public Service (EK EPPS) of East Kowloon general outpatient clinic (EK GOPC) since April 2012. Individuals, who have fasting glucose > 5.6, are invited to join the program for early intervention and prevention of disease progression. Physiotherapist performs physical fitness tests, teaches home base exercises and carries out exercise classes. Patients are found to have improvement in physical fitness after the completion of program.

**Objectives**

The roles of Physiotherapist in Pre DM program hold by EK EPPS were: - To promote health by improving physical fitness level - To decrease correlated cardiovascular risks including sedentary lifestyle and obesity

**Methodology**

Medical history was examined and physical fitness was tested by physiotherapist. Upper limb / lower limb strength and aerobic capacity were tested by measuring 30 second biceps curl, 30 second sit-to-stand and 2 minute stepping. Test results were compared to the age met standard and recorded for self-comparison. Individualized aerobic exercise and resistance training were prescribed accordingly for home base training. Knowledge of exercise physiology (concept of energy expenditure), exercise precaution (importance of self-monitoring of signs and symptoms during exercise, use of Rate Perceived Exertion (RPE) scale etc) and exercise training principle (Frequency, Intensity, Time and Type (FITT)) were taught during consultation. Questionnaires, Self-Efficacy for Exercise Scale (SEE-C), were distributed to check confidence to perform exercises. Exercise classes with aerobic and resistance training were coached in group sessions. Exercise precaution was reinforced and progression of exercise was taught during the class.

**Result**

189 Pre DM patients were recruited to the Pre DM program from April 2012 to

December 2013 in EK EPPS. 130 patients completed the individual and group sessions held by physiotherapist. The average age and fasting glucose level of the patients was 60.4 and 6. Pre- and post- program upper limb strength / lower strength / aerobic capacity were found significantly improved by paired T-test. Post-test SEE-C score was improved but not statistically significant. The result implied the needs of further reinforcement of psychological strength for self-exercise. Conclusion Exercise prescription by physiotherapist in general outpatient settings improved physical fitness of Pre DM patients who had high risk to develop metabolic diseases. Health was promoted and cardiovascular risks were reduced by efficient and safe home base exercise training.