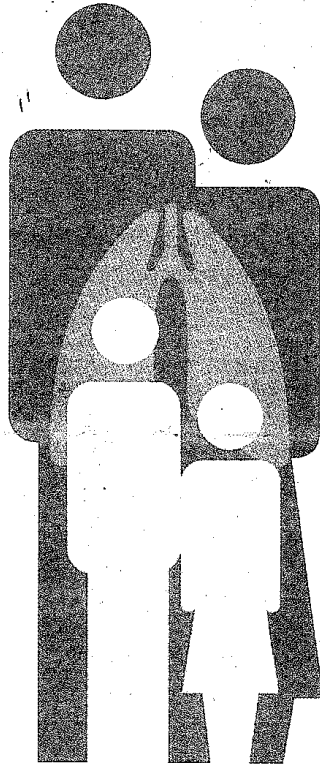




1st IPCRG
South Asian Scientific Conference
SRI LANKA
3 - 5 August 2017

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Respiratory Care in Low Resource Settings: Practical Approaches



Primary Care Respiratory Group Sri Lanka
International Primary Care Respiratory Group

3rd – 5th August 2017
Hotel Galadari
Colombo, Sri Lanka

PP-22. Cardio-pulmonary fitness parameters of healthy school going male athletes in Colombo district, Sri Lanka

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Aim:

Introduction

In Sri Lanka it is compulsory for every school athlete to obtain a valid fitness certificate from a doctor before they engage in competitive sports. The cardiopulmonary fitness assessment is a main component of fitness certification of an athlete. There is a paucity of Sri Lankan data on normal cardiopulmonary fitness parameters for school level, club level or national level athletes.

Objectives

To determine the cardiopulmonary fitness parameters of Sri Lankan school level boy athletes engaged in different sports.

Method

Colombo district school boy athletes (n = 60) age between 10 yrs to 16 yrs were studied. Cardio-Pulmonary fitness parameters (peak O₂ uptake (VO_{2max}), resting heart rate- HR_{rest}, peak heart rate (HR_{peak}), heart rate after 90 seconds and 3 minutes after exercise- HR_{90sec} and HR_{3min}, peripheral oxygen saturation rest – SpO_{2rest}, SpO_{290sec}, SpO_{23min}, resting respiratory rate- RR_{rest}, systolic blood pressure- SBP and diastolic blood pressure- DBP.) were assessed by using the "Queens College Step Test".

Results

The mean height 157cm ± 0.13 and weight 43.68 kg ± 11.26 of the athletes were within the normal growth curves for the above age group. However the BMI of the athletes was 17.3 ± 0.13. The RR_{rest} was 18.5 ± 2.69 breaths per min. Mean VO_{2max} of the athletes was 38.8 ± 5.04 ml/Kg/min. Mean SBP and DBP were 101.00 ± 17.0 mmHg and 71.2 ± 8.3 mmHg. The mean SpO_{2rest}, peak SpO₂, SpO_{290sec}, and SpO_{23min} after exercise, were 99.3% ± 2.5, 100 ± 1.54%, 99.47% ± 1.66 and 99.07 ± 0.8%. HR_{rest} was 79.3 ± 10.12 BPM and HR_{peak} was 172.1 ± 12.91 BPM. The HR_{90seconds} and HR_{3min} were 135.42 ± 19.00 BPM and 119.21 ± 16.58 BPM.

Conclusions

The doctors responsible to issue fitness medical certificates to school level athletes must conduct a cardiopulmonary fitness assessment of the athletes. These preliminary results could be used as normal parameters until a normogram is devised for the Sri Lankan population.

References & Clinical Trial Registry Information

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