

Children and adolescents are encouraged to participate in different sports activities and training to promote their health, to enlarge their social circles and to live a life in pursuit of excellence. However, there is always a concern if a youngster is physically fit to attend sports activities, especially for more competitive sports and intensive training.

In many developed countries, young athletes or athletes-tobe are required to attend cardiac health screening-the preparticipation cardiovascular evaluation. One objective of this evaluation is to detect underlying cardiovascular abnormalities that may predispose an athlete to serious cardiovascular events and sudden death. The leading cardiovascular causes of sudden death in young athletes include hypertrophic cardiomyopathy, congenital coronary artery anomalies, serious forms of arrhythmia, and





儿童心脏健康评估计划







Marfan syndrome. Because these abnormalities are rare and difficult to detect clinically, it is recommended that physicians use standardized history questions and examination techniques during assessment.

## What is included in the Cardiac Fitness Assessment?

Children or adolescents, accompanied by their parents, are asked about family history of cardiac disease and sudden death; personal cardiac history; and exercise-related symptoms, especially syncope, chest pain, and palpitations. The physical examination should include blood pressure measurement and a thorough cardiovascular examination. Electrocardiographic assessment, both at rest and during exercise (treadmill exercise test) will be performed to exclude arrhythmia. Echocardiogram will be done to exclude abnormal cardiac function or structural cardiac anomalies. Children or adolescents with "red flag" signs or symptoms may need activity restriction or special testing.

我们应多鼓励儿童和青少年参加各种体育活动和训练,从而令他们建立强健的体魄、学习社交技巧及促进德育发展。可是,不少父母都会担心子女的体能是否能应付各项体育活动,特别是参加具竞争性的运动和接受强度训练等。

在许多发达国家,年轻运动员或年轻准运动员均需通过心脏健康检查,即运动前健康筛检评估 (Preparticipation Health Screening)。这些评估目的之一是检测潜在的心脏或心血管异常,因为这些异常可诱发运动员出现严重的心脏问题,甚至猝死。一般来说,导致年轻运动员猝死的主要原因包括肥厚性心肌病、先天性冠状动脉异常、严重的心律失常和马凡氏综合症等。由于这些异常属于较罕见且难以在临床检查时被发现出来,因此建议家庭医生在检测时可运用标准化的病历问卷和临床检查技巧以作辅助。

## 计划涵盖的服务及特点

在整个医学评估过程中,儿童或青少年在父母的陪同下,医生将逐一详细询问有关心脏病和猝死的家族史、孩子个人心脏病史、与运动有关的症状,特别是晕厥,胸痛和心悸。接著医生会为孩子安排各类检查,包括身体检查(量度血压及详细的心脏检查);在休息和运动期间接受心电图评估(跑步机运动测试)以排除心律不整的问题;及超声心动图检查以排除心脏功能异常或结构性心脏异常。如在评估结果出现警号或高危表徵的儿童或青少年,则可能需要进一步接受医学跟进及避免进行某些相对高风险的运动。

## Who should join the Assessment?

Children aged 8 - 18 years old

谁应参与此计划? 8 - 18 岁的儿童



## Check-up Items 检查项目

Resting ECG 静态心电图

Treadmill Exercise Stress Test 运动心电图

2D Echocardiography 二维超声心动图检查

Report interpreted and explained by specialist paediatrician 由儿科专科医生解释报告











