

Cardiac Fitness Assessment for Children

兒童心臟健康評估計劃

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 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.

我們應多鼓勵兒童和青少年參加各種體育活動和訓練,從而令他們建立強健的體魄、學習社交技巧 及促進德育發展。可是,不少父母都會擔心子女的體能是否能應付各項體育活動,特別是參加具競 爭性的運動和接受強度訓練等。

在許多發達國家,年輕運動員或年輕準運動員均需通過心臟健康檢查,即運動前健康篩檢評估 (Preparticipation Health Screening)。這些評估目的之一是檢測潛在的心臟或心血管異常,因為這些異常可誘發運動員出現嚴重的心臟問題,甚至猝死。一般來說,導致年輕運動員猝死的主要原因包括肥厚性心肌病、先天性冠狀動脈異常、嚴重的心律失常和馬凡氏綜合症等。由於這些異常屬於較罕見且難以在臨床檢查時被發現出來,因此建議家庭醫生在檢測時可運用標準化的病歷問卷和臨床檢查技巧以作輔助。

計劃涵蓋的服務及特點:

在整個醫學評估過程中,兒童或青少年在父母的陪同下,醫生將逐一詳細詢問有關心臟病和猝死的家族史、孩子個人心臟病史、與運動有關的症狀,特別是暈厥,胸痛和心悸。接著醫生會為孩子安排各類檢查,包括身體檢查(量度血壓及詳細的心臟檢查);在休息和運動期間接受心電圖評估(跑步機運動測試)以排除心律不整的問題;及超聲心動圖檢查以排除心臟功能異常或結構性心臟異常。如在評估結果出現警號或高危表徵的兒童或青少年,則可能需要進一步接受醫學跟進及避免進行某些相對高風險的運動。

Who should join the Assessment?

Children aged 8 - 18 years old

誰應參與此計劃?

8-18歲的兒童



Check-up Items 檢查項目

Resting ECG 靜態心電圖

Treadmill Exercise Stress Test 運動心電圖

2D Echocardiography 二維超聲心動圖檢查

Report interpreted and explained by specialist paediatrician 由兒科專科醫生解釋報告











