



FIMS Position Statement

Sport Preparticipation Assessment of Subjects Older Than 35 Years: Recommended Minimum Cardiological Evaluation

There is a general consensus in the medical community that everyone over the age of 35 years who wishes to participate in sport or fitness activities should undertake a medical examination. The aim of such an examination is to:

- define the general state of health,
- detect any defects which would contraindicate sports participation,
- recognize and hence avoid situations which could cause cardiac complications.

The assessment should include a detailed cardiovascular history, a general physical examination, and a cardiological evaluation.

Nowadays, an increasing number of people of all ages exercise because of the known health benefits. However, some activities could be potentially harmful for individuals with undetected heart disease. The reported incidence of sudden death in sport is variable. Figures between 0.77 to 8.5/100,000/year have been quoted. The vast majority of these deaths are from ischaemic heart disease. Hypothetically, some of these deaths could be prevented by an adequate program of evaluation but, in practice, it is not

possible to universally implement these programs for several reasons:

1. The cost, in time and money, of the available techniques is high,
2. The efficiency of any complementary technique depends on available expertise and its diagnostic capacity, sensitivity, and specificity. (None of these techniques is 100% reliable),
3. Frequently, potentially dangerous situations occur only on strenuous effort and/or under psychological stress,
4. The use of these techniques in populations with a low prevalence of illness produces problems of diagnostic uncertainty. Also iatrogenic problems may result from sequential tests performed because of an abnormality.

It is, therefore, difficult to specify exactly the minimum requirements to be carried out prior to sports participation in these subjects, but the following information should be obtained:

1. A complete family and personal history to detect suspicious cardiac symptoms. Emphasis should be placed on breathlessness, fainting on

FÈDÈRATION INTERNATIONALE DE MÉDECINE DU SPORT /
THE INTERNATIONAL FEDERATION OF SPORTS MEDICINE



effort, and pain. Prior to the medical examination, it is advisable for subjects to complete a questionnaire,

2. A careful physical examination,
3. A 12-lead resting electrocardiogram,
4. A maximal stress test to determine the adaptation to effort, the functional capacity and the incidence of arrhythmia, hypertension or ECG abnormalities,
5. A chest x-ray

If a murmur, hypertension, or an electrocardiograph abnormality is detected, further evaluation is

mandatory. This includes an echocardiogram to rule out a structural heart defect as well as an assessment by a cardiologist. In cases where there is a minimally abnormal exercise test in an asymptomatic subject, one should be cautious about the interpretation. In such subjects, there is usually a low incidence of coronary heart disease. Risk factors should be considered. In doubtful cases (positive predictive value less than 90%), it is necessary to complete the investigation with a nuclear perfusion test (thallium, Tc99M). If any doubt remains, coronary angiography should be performed.

© FIMS

Note: This statement may be reproduced and distributed with the sole requirement that it be identified clearly as a Position Statement of the International Federation of Sports Medicine.