

## On the occasion of World Heart Day: Do we have an effective period of cardiac rehabilitation program in Iran?

According to the World Heart Federation website, World Heart Day 2015 focused on creating healthy heart environments by ensuring that everyone has the chance to make healthy heart choices. One of these choices is cardiac rehabilitation (CR) and secondary prevention.

Cardiovascular diseases are the number one cause of mortality and morbidity worldwide.<sup>[1]</sup> The main reason of the decrease in mortality due to coronary artery disease is not just the advances in treatment of the acute coronary syndromes, but the advances in the secondary prevention methods as well. CR program is a cost-effective secondary prevention strategy used as an important part of treatment of cardiovascular diseases.<sup>[2]</sup> The benefits of CR include reduction in mortality, symptom relief, smoking cessation, improved physical fitness, risk factor modification, and improved overall psychosocial well-being.<sup>[3]</sup> The main key to CR effectiveness lies in its complete attendance by patients, usually consisting of a 24-session protocol, including hospital or home-based exercise, education, and social and emotional support.<sup>[4]</sup> In the Netherlands CR is a comprehensive multidisciplinary program with a typical duration of 6-12 weeks (2 or 3 sessions in the week), consisting of one or more group-based therapies (education, exercise training, relaxation therapy, and lifestyle modification therapy) supplemented by individual counseling when indicated (e.g., by a psychologist, a dietician, or a social worker).<sup>[3]</sup> According to the American Heart Association, CR sessions are limited to a maximum of two 1 h sessions per day up to 36 sessions furnished over a period of up to 36 weeks with the option for an additional 36 sessions and CR programs to include five components: Physician-prescribed exercise, cardiac risk factor modification (education, counseling, and behavioral intervention), psychosocial assessment, outcomes assessment, and individualized treatment plan.<sup>[5]</sup>

Incomplete participating in CR sessions may lead to the recurrence of cardiac events and its related rehospitalization, increased need for more medication, decreased quality of life, and an increased risk of comorbidity and even mortality. Last studies shows that participation in incomplete CR programs (24 sessions) is necessary to achieve optimal improvement in vital indices such as metabolic equivalents and resting heart rate and, therefore, incomplete CR sessions may not warrant this efficacy.<sup>[6]</sup> Despite its proven benefits, CR referral and participation rates have been very low compared with other evidence-based treatments.<sup>[7]</sup> In Iran, the lack of accessibility to program sites and lack of insurance coverage contributes to the vast underuse of CR services.<sup>[8]</sup> While the majority of insurance companies in the USA cover complete CR for cardiovascular patients,<sup>[9]</sup> major insurance companies in Iran cover only 70% of 10 sessions of hospital-based CR and patients pay the costs for the remaining sessions; a very small number of patients have complementary insurance that cover all rehabilitation sessions. One of the most inhibitive factors for participation of patients in these courses could be elimination by reviewing of insurance policies in the rehabilitation area and for all patients to have an opportunity for participating in these actions.

The importance of comprehensive CR should be strengthened in the future, because of the continuous changes in the population, the increasingly favorable effects obtainable by strict secondary prevention follow-up, and the increasing demand for a better quality of life in the modern society.<sup>[10]</sup>

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