

## Smoking Paradox at Cardiac Rehabilitation

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### DEAR EDITOR,

Recently, I have read with interest the article by Mosayebi *et al.*<sup>[1]</sup> entitled “The Effects of Cardiac Tertiary Prevention Program after Coronary Artery Bypass Graft Surgery on Health and Quality of Life” in your esteemed journal. The cardiac rehabilitation (CR) program significantly improves the functional capacity in postmyocardial infarction patients, especially those revascularized by coronary artery bypass graft surgery (CABG) or percutaneous coronary intervention (PCI).<sup>[2]</sup> I would like to attract the authors’ and readers’ attention to some points that can be helpful in having high quality research.

The study was a prospective observational study with random sampling, carried out on 80 patients undergoing elective CABG. Half of the patients attended the CR program and the others did not. The outcomes evaluated were level of activity, the patients’ employment status, and restoration to the previous level of performance in social activities after the surgery.<sup>[1]</sup>

As can be observed in Table 1 of the mentioned article<sup>[1]</sup>, at the beginning of the study, there was a significant difference ( $P < 0.05$ ) between the two groups in the number of smokers. This can impact on results of this study surely, so I believe they should match the smoking rate in two groups.

Additionally, in my literature review, I came to an interesting entity that I named it “smoking

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paradox”. Goel *et al.*<sup>[3]</sup> showed that smoking is associated with decreased participation in CR after PCI. Consistently, Kerins *et al.*<sup>[4]</sup> reported that smoking was associated with people who do not attend or do not complete CR programs. In contrast, some robust studies such as the one performed by Fitzpatrick *et al.*<sup>[5]</sup> demonstrated that the CR program leads to sustained improvements in major risk factors, particularly smoking. They reported that in their 3.5-year follow-up, there were significant absolute reductions from the baseline in smoking prevalence. Furthermore, in another robust study,<sup>[6]</sup> 12–16% of patients were smokers at the CR program entry, which decreased to 5–7% at CR program discharge. This decrease had no correlation with the number of sessions attended to the CR program or days enrolled. Colivicchi *et al.*<sup>[7]</sup> showed that participation in a postdischarge CR program was associated with a significant 26% reduction of the relative risk of smoking relapse within 1 year from the acute coronary syndrome (ACS) events. They finally advise that patients with ACS who have quit smoking during hospitalization should be encouraged to participate in the CR program, since they might derive additional benefits from prevention of smoking relapse.

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