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# Three Weeks or Three Months? Functional and Physiological Outcomes of Concentrated Inpatient and Distributed Outpatient Cardiac Rehabilitation

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**Introduction:** Exercise-based cardiac rehabilitation (ebCR) can be concentrated into a short inpatient programme or distributed over a longer outpatient period.[1,2] We descriptively contrasted functional and physiological findings from two independent cohorts treated at the same centre.

**Patients and Methods:** The inpatient cohort comprised 300 clinically stable cardiac patients (61.0 ± 11.6 years; 70% men) undertaking three weeks of aerobic and low-load resistance exercise, generally 1-2 supervised sessions/day on 6-7 days/week. Mean recorded activity was 2,391 min, including 304 min categorized as high intensity. The outpatient cohort comprised 16 stable post-STEMI patients (53.2 ± 5.2 years) undertaking 36 supervised cycling HIIT sessions over 12 weeks (4 × 4-min intervals at 90% HRpeak, three sessions/week; 576 prescribed interval minutes). Both studies assessed six-minute walk test (6MWT) distance and bioimpedance-derived body composition. The outpatient study additionally included CPET, echocardiography and biomarkers at baseline and every four weeks. No between-cohort hypothesis tests were performed.

**Results:** After inpatient ebCR, median 6MWT distance increased from 540 to 605 m ($p < 0.001$); 77.3% achieved an individual gain ≥30 m. Median body mass, fat mass and body-fat percentage decreased from 86.0 to 84.2 kg, 24.1 to 23.1 kg and 28.7% to 27.8%, respectively (all $p < 0.001$). Exercise volume showed no consistent association with change. In the outpatient cohort, median 6MWT distance increased from 675 m at baseline to 721 m at week 4 and 745 m at week 12 (overall $p < 0.001$). Body-fat percentage decreased from 25.7% to 24.8% at week 12 ($p < 0.001$), with no significant changes in body mass or muscle mass. $VO_2$peak increased from 20.1 to 24.5 $mL \cdot kg^{-1} \cdot min^{-1}$, LVEF from 52.5% to 60.0% (both $p < 0.001$), and CRP decreased from 2.1 to 0.7 mg/L ($p = 0.008$); NT-proBNP was unchanged.

**Conclusion:** Both models were associated with improved walking performance and body composition. The outpatient study additionally documented aerobic and cardiac functional changes. Distinct populations, training doses and assessments preclude claims of equivalent efficacy, faster adaptation or sequential benefit.

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## LITERATURE

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