

## عنوان مقاله:

The Effect of Intermittent Intradialytic Aerobic Exercise Training on Plasma Homocysteine Levels and Physical Performance in Hemodialysis Patients

## محل انتشار:

مجله علمی پژوهشی دانشگاه علوم پزشکی زنجان، دوره 25، شماره 110 (سال: 1396)

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## خلاصه مقاله:

**Background and Objective:** Increased homocysteine levels resulting from renal failure and physical inactivity in hemodialysis patients can put them at risk for cardiovascular diseases. On the other hand, exercise training may have a favorable effect on homocysteine levels and physical performance in these patients. Therefore, the aim of the present study was to investigate the effect of eight weeks of intermittent intradialytic aerobic exercise training on plasma homocysteine levels and physical performance in hemodialysis patients. **Materials and Methods:** In this quasi-experimental study, sixteen hemodialysis patients (with a mean age of ۵۴.۷۵ years) were randomly divided into two equal groups: experimental and control. The experimental group performed intermittent intradialytic aerobic exercise training for ۸ weeks, ۳ sessions per week, which corresponded to ۴۰ to ۴۵ percent of their maximum heart rate reserve at the first week and reached to ۶۵ to ۷۰ percent during the final week. Homocysteine levels and physical performance were measured before and after the ۸ weeks of aerobic exercise training. **Results:** Plasma homocysteine levels ( $P=۰.۰۲۹$ ) and physical performance parameters including: Gait speed ( $P=۰.۰۰۱$ ), Chair-rising time for ۵ times ( $P=۰.۰۰۱$ ) and Stair-climbing time ( $P=۰.۰۰۲$ ) significantly improved in the experimental group after eight weeks of intermittent intradialytic aerobic exercise training. **Conclusion:** Intermittent intradialytic aerobic exercise training may have a favorable effect on the cardiovascular condition of hemodialysis patients through reducing homocysteine levels and can improve physical performance in these patients.

## کلمات کلیدی:

Keywords: Hemodialysis, Aerobic exercise, Homocysteine

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