

Hemodialysis

- effects muscles, bones, vitamin and mineral blood contain

Exercise benefits for dialysis patients

- Increase in strength and energy
- Improved muscle strength and stronger bones
- Better blood pressure control
- Lowered level of blood fats (cholesterol & triglycerides)
- Better control of body weight
- Normalized ion balance
- Better sleep

Exercise with APT have benefits for Hemodialysis patients:

Disease patients on hemodialysis (HD) are characterized by poor exercise tolerance and debilitation symptoms, despite advances in dialysis procedures and erythropoietin use. Specifically, the muscle strength and endurance are diminished, as result of skeletal muscle dysfunction and atrophy. These changes are presumed to be secondary to uremic toxins, anemia, malnutrition, deconditioning, neurohormonal insults and other disorders. Previous studies have shown that exercise training limits the pathophysiological changes that occur in HD patients, mainly regarding peripheral skeletal muscle. It is supported that significant peripheral adaptations to training occur, as evidenced by the improvement of muscle function. Especially, morphological and metabolic benefits in the skeletal muscles have been well-documented in HD patients following physical rehabilitation programs. Such beneficial adaptations increase endurance and muscle strength and contribute to improved work capacity. The better understanding of these adaptive mechanisms may allow for improved exercise training strategies in these patients.

Guidelines for Exercise

By American National Kidney Foundation (NKF)

- continuous exercises
- low level strength exercises and high repetitions.
- slow, relaxed pace of exercise
- minimum of 3 days per week of exercise.
- exercising 30 minutes/session

Cycling is recommended for dialyses exercise by NKF

