



STAYING ACTIVE, REGARDLESS

Many patients who enter dialysis programs have been chronically ill, as a result of diabetes or hypertension, and have concerns as to whether it is safe to increase exercise activity. The facts and observations suggest that dialysis patients can also remain active. Dr Stephen Z. Fadem reports.

Patients on dialysis have a lower exercise capacity than the normal population. It is estimated that 74 percent of patients who enter a dialysis program have evidence of a large heart (left ventricular hypertrophy). A certain percentage of the problem is probably related to anemia and an additional percentage may be secondary to deconditioning. Within the past 12 years, the ability to achieve higher hemoglobin levels in dialysis patients has improved exercise capacity.

Ongoing medical concerns such as diabetes control, adequacy of dialysis, cardiac arrhythmias, hypertension and volume control must be treated appropriately. Vigorous exercise increases the risk of a cardiac event in those with latent heart disease who are unaccustomed to exercise. The risk of a heart attack in patients who are in exercise training is 1 per 112,000 patient hours, which is lower than the risk of heart attack during dialysis (1 per 11,570 dialysis sessions or 1 in 46,280 hours assuming four hour treatments). Most patients do not tolerate vigorous exercise, anyway, and we do not recommend offering it in a dialysis setting.

Patients who begin an exercise program should “warm up” first with stretching exercises. There is a higher risk of thigh tendon rupture in dialysis patients and although this is associated with osteitis fibrosa, the predisposing causes are not known. It is advised that those who wish to exercise during dialysis take their binders and adhere to their diets. Exercise conditioning may reduce the risk of injury from falls, sudden movement and from the training program itself.

Should exercise stress testing be performed prior to a dialysis patient without any heart symptoms enrolling in an exercise program? The test is of questionable sensitivity and there is limited experience with it in the dialysis population. Many dialysis patients have a left ventricular strain pattern on their EKG and have a blunted heart-rate response to exercise, reducing its diagnostic usefulness. A normal exercise test does not rule out the possibility of a heart problem at a later date. It is safer to presume that a dialysis patient has some degree of heart disease when developing an exercise plan. There is general agreement that low or moderate exercise intensity does not require an exercise

stress test. Moderate exercise intensity involves exercising at approximately 60 percent of one’s maximal exercise capacity. Since decreased maximal exercise capacity is present in dialysis patients, there is no need for high levels of exertion to achieve cardiovascular benefit.⁵

The ideal exercise program not only achieves cardiovascular fitness but also enables increased physical activity and improves physical functioning in day-to-day activities. Our experience with low and moderate intensity exercise suggests that the ideal time to exercise is during therapy. Patients are achieving their ideal body weight, are not under the cardiac strain of fluid overload and do not have the drained feeling that sometimes occurs immediately after dialysis. The goal for exercise is 30 minutes per session and patients often need to build up to this. Remember, dialysis patients should not be prescribed exercise based upon their heart rate. Instead, one must monitor for signs and symptoms of exertion.

Patients must be able to converse comfortably during the exercise therapy. Lightheadedness, dizziness, leg cramps, palpitations, nausea, chest discomfort, pain or pressure and unusual breathlessness are indicators that exercise should immediately be discontinued and the patient be reevaluated. In addition to the warm up mentioned above, the patient should cool down for a few minutes rather than stopping exercise abruptly. This avoids blood pooling. Dialysis patients are undergoing simultaneous ultrafiltration to reach their dry weight and pooling can lead to hypotension with dizziness, light headedness and even fainting. Diabetics taking insulin must adjust their dose downward when exercising since activity increases glucose uptake by cells. Hypoglycemia may occur up to 24 hours following activity and patients should monitor their blood sugars frequently when initiating any new program that involves activity.

The advantages of exercise far outweigh its risks and not only from a cardiovascular standpoint - exercise improves the feeling of well being. Regardless of one’s level of illness, a program to maximise activity is generally rewarding.

References:

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