

Recent research indicates that dialysis patients with the highest blood EPA/DHA levels have a significantly lower risk of sudden cardiac death during the first year of treatment when compared to patients with lower levels.

Omega-3 may help reduce the risk of cardiac death during dialysis

The leading cause of death in hemodialysis patients is sudden cardiac death. Previous clinical research has suggested that long-chain omega-3 fatty acids, such as those in fish oil, may be protective against sudden heart disease mortality.

In a new study published online in the journal *Kidney International*, a team of researchers sought to examine the possible association between higher levels of omega-3 fatty acids and a reduced risk of cardiac death among new hemodialysis patients.

Researchers compared EPA/DHA blood levels of 100 patients who died of sudden cardiac death within the first year of dialysis to levels of 300 patients who survived. Individuals were selected from a nationally representative group from over 1000 U.S. hemodialysis units in 2004–2005. Blood levels of omega-3 fatty acids were calculated over the first year of dialysis and the group was divided into quartiles.

Even after adjusting for other factors such as dietary fats and other biochemical markers, researchers found a significant inverse relationship between long-chain n-3 fatty acids and the risk of sudden cardiac death. Patients with blood levels among the top 25 percent had an 80 percent lower risk of cardiac death than the group with the lowest levels. Those with the highest levels had a 63% and 78% lower risk of death than the second and third quartile of blood levels, respectively. The significant inverse relationship was maintained even during the first few months of treatment when the cardiac death risk is the highest.

This research shows that higher levels of EPA/DHA in the blood are significantly associated with a reduced risk of sudden cardiac death during the first year of hemodialysis treatment.

Allon N Friedman et al. Inverse relationship between long-chain n-3 fatty acids and risk of sudden cardiac death in patients starting hemodialysis. *Kidney International* advance online publication 6 February 2013; doi: 10.1038/ki.2013.4

*Note: While these findings are very encouraging, it is important to note that further research to replicate these results and to determine appropriate dosing is necessary before recommending widespread use. Therefore, it is very important to discuss any supplementation during dialysis with a qualified health care professional.