Amyotrophic lateral sclerosis (ALS) also known as Lou Gehrig's disease is a rapidly progressing fatal motor neuron disease. In ALS, the neurons that innervate voluntary muscle are attacked and they eventually degenerate preventing messages from being sent to the muscle from the brain causing the muscles atrophy and fasciculate. Eventually the patient loses the ability to move their arms, legs and body. Ultimately, the diaphragms and chest wall muscles fail and the person cannot breathe on their own resulting in death.

A recent case control study examined the possible association between the dietary intake of polyunsaturated fatty acids (PUFAs) and the risk of developing ALS. Cases were obtained by patients who had definite, probable or possible ALS according to the El Escorial criteria who had a specific ALS referral centre, PUFA intake was assessed by a food frequency questionnaire.

Energy adjusted dietary intake of PUFA's had was associated with a decreased risk of developing ALS, as did vitamin E. Interaction analysis showed that the Odds Ratio (OR) for PUFA was decreased by almost 60%, additionally the OR for vitamin E was also decreased by almost 50%. The authors of this paper suggest that these findings may indicate a synergistic relationship between PUFAs and vitamin E.

This study demonstrated that a 50-60% decreased risk of developing ALS is associated with higher dietary intake of PUFAs and vitamin E independent total energy intake and possible confounding factors.