

Non-alcoholic fatty liver disease (NAFLD) is a chronic liver disease among children characterized by fat deposits on the liver. Given that NAFLD develops in obese children, with childhood obesity becoming more prevalent, NAFLD is also becoming more common in children. NAFLD may lead to non-alcoholic steatohepatitis, cirrhosis of the liver, and liver failure. The primary treatment for NAFLD is physical activity and weight loss, however non-compliance issues make this treatment unreliable. Currently research is focusing on using vitamin E treatment to counter the oxidative stress that promotes NAFLD. The objective of this systematic review was to analyze the efficiency of vitamin E treatment for obesity related liver disease. Medline, Health Source, and Science Direct searches were conducted using the search terms “NAFLD, NASH, and vitamin E treatment.” Inclusion criteria included human clinical trials, published within the last 12 years, involving participants who suffered from obesity-related liver disease. Exclusion criteria included non-human trials, non-English publications, and study duration less than three-months. Of the six studies examined (four randomized controlled trials, 2 non-randomized controlled trials) four showed normalization or improvement of aminotransferase levels with adherence to vitamin E supplement treatment: one study found that weight loss with or without exercise as treatment had comparative improvement to treatment with vitamin E alone; and one found vitamin E to have no significant additional improvement to alanine aminotransferase levels with weight loss. With further clinical trials, vitamin E supplementation may be a recommended treatment method for obese children when weight loss is unattainable.