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Abstract

Obesity and type 2 diabetes are major public health problems. While exercise and diet can help prevent these diseases, these interventions are difficult to maintain. Therefore, it is important to develop innovative treatment strategies in order to combat these diseases. Manganese tetrakis benzoic acid porphyrin (MnTBAP) is a super oxide dismutase (SOD) mimetic that may improve insulin signaling in diet-induced obese mice. The present study investigated the effects of MnTBAP treatment and a high fat diet on the mRNA expression of inflammatory cytokines and SOD2 in mice. MnTBAP treatment reduced the mRNA expression of SOD2 and increased the mRNA expression of inflammatory cytokines, suggesting that it can reduce oxidative stress while increasing inflammation.