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# Antioxidants and chronic pancreatitis: theory of oxidative stress and trials of antioxidant therapy

Brianna Grigsby, Horacio Rodriguez-Rilo, Khalid Khan
Affiliations

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## Abstract

Chronic pancreatitis (CP) is an inflammatory disease characterized by the progressive destruction of pancreatic tissue and resulting in pancreatic exocrine and endocrine insufficiency. Increased oxidative stress has been implicated as a potential mechanism in its etiology and pathology. A number of studies have demonstrated that CP patients have a compromised antioxidant status, which may be a contributing factor to the enhanced oxidative state associated with the disease. Nutrition is an essential consideration in the treatment of CP, especially since diet is a source of several antioxidants and cofactors required for the production of cellular antioxidant enzymes. Many CP patients have an inadequate intake of macro and micronutrients because of abdominal pain and discomfort, which often increase postprandially and discourage eating. Exocrine insufficiency leads to further complications by preventing adequate digestion and absorption of ingested food, thus causing even greater deficiencies and impairment of antioxidant status. The aims of this article are to review the oxidative stress model of CP and to examine the evidence for nutrition, and, particularly, antioxidants, in the treatment of CP.

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