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Effects of starvation and streptozotocin-induced diabetes on the activity of phosphofructokinase in the epithelial cells of rat colon.

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Abstract

The regulation of phosphofructokinase in the colonic mucosa of 48 h-starved and streptozotocin-induced diabetic rats was investigated. The specific activities of phosphofructokinase from colonic mucosa of starved and diabetic rats were found to be diminished compared with normal controls. The enzyme obtained from the colonic mucosa of normal, diabetic and starved rats showed sigmoidal velocity curves with respect to fructose-6-phosphate, with apparent K_m values of 0.6, 0.62 and 0.7 mM, respectively. However, the present results indicated that phosphofructokinase from the epithelial cells of rat colon is not regulated in a manner similar to that of the intestinal enzyme, which was shown to be highly regulated