

Glucocorticoids are stress hormones that are naturally secreted to help mobilize the “fight or flight” response. If stress hormone levels are elevated for prolonged periods of time, or if glucocorticoids are given as pharmacological agents to treat a number of immune and inflammatory diseases, they appear to have negative effects on metabolism by altering food choices (causing us to select energy dense high fat and sugary foods) and by reducing insulin sensitivity in skeletal muscle. In this study, D’souza and colleagues show that elevations in glucocorticoids, along with a high fat diet, in young rodents rapidly causes fatty liver disease and several features of the metabolic syndrome and type 2 diabetes. This study is the first to look at the synergistic negative effects of stress hormones and poor dietary choices on liver disease development, showing that severe fatty liver disease can evolve within days of such insult and without the classic activation of the pro-inflammatory pathways. We also learn from this paper that a healthy diet is critical during times of stress to help prevent fatty liver disease and diabetes.

Reference: D'souza AM, Beaudry JL, Szigiato AA, Trumble SJ, Snook LA, Bonen A, Giacca A, Riddell MC. [Consumption of a high-fat diet rapidly exacerbates the development of fatty liver disease that occurs with chronically elevated glucocorticoids.](#) Am J Physiol Gastrointest Liver Physiol. 2012 Apr 15;302(8):G850-63.

[View this article \[PDF\].](#)