

## Long-Term Ketogenic Diet Accumulates Aged Cells in Normal Tissues



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A strict "keto-friendly" diet, often popular for weight loss and diabetes management, may not be as friendly as it seems, depending on the individual and the specifics of the diet.

Researchers at The University of Texas Health Science Center at San Antonio (UT Health San Antonio) found that a continuous long-term ketogenic diet might induce senescence, or ageing, in normal cells, particularly affecting heart and kidney function. However, an intermittent ketogenic diet, which includes planned breaks, did not show any pro-inflammatory effects due to aged cells. The study is published in *Science Advances*.

These findings suggest that the benefits of a ketogenic diet could be enhanced by incorporating planned breaks.

Approximately 13 million Americans use a ketogenic diet. According to the researchers, it is important to take breaks from this diet or there could be long-term consequences.

A ketogenic diet, also known as keto-friendly, is a high-fat, low-carbohydrate diet that produces ketones, chemicals the liver produces when breaking down fats. While a ketogenic diet can improve certain health conditions and aid in weight loss, it has also been associated with pro-inflammatory effects.

The new study demonstrates that mice on two ketogenic diets at different ages developed cellular senescence in multiple organs, including the heart and kidney. Senolytics, a class of small molecules that can destroy senescent cells, eliminated this cellular senescence, and an intermittent ketogenic diet regimen prevented it.

Cellular senescence is implicated in the pathology of organ disease. These results can thus have important clinical implications for understanding the use of a ketogenic diet. As with other nutrient interventions, it is important to take a keto break.

Source: [University of Texas Health Science Center at San Antonio](#)

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