Successful mood stabilizing treatments reduce intracellular sodium in an activity-dependent manner. This can also be achieved with acidification of the blood, as is the case with the ketogenic diet. Two women with type II bipolar disorder were able to maintain ketosis for prolonged periods of time (2 and 3 years, respectively). Both experienced mood stabilization that exceeded that achieved with medication; experienced a significant subjective improvement that was distinctly related to ketosis; and tolerated the diet well. There were no significant adverse effects in either case. These cases demonstrate that the ketogenic diet is a potentially sustainable option for mood stabilization in type II bipolar illness. They also support the hypothesis that acidic plasma may stabilize mood, perhaps by reducing intracellular sodium and calcium.