Flow by the power of the Gauss curvature

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Abstract. We prove that convex hypersurfaces in $\mathbb{R}^{n+1}$ contracting under the flow by any power $\alpha > \frac{1}{n+2}$ of the Gauss curvature converge (after rescaling to fixed volume) to a limit which is a smooth, uniformly convex self-similar contracting solution of the flow (soliton). Under additional central symmetry of the initial body we prove that the limit is the round sphere for $\alpha \geq 1$. Recent work of Brendle-Choi-Daskalapoulos asserts that the soliton is the round sphere for $\alpha > \frac{1}{n+2}$. This is a joint work with Ben Andrews and Pengfei Guan.